



REACH Project – large-scale transformations to enhance student learning in high-enrollment, lecture-based courses – Spring 2017

Primary Objectives

- Transform large, introductory, lecture-based courses into more active and inclusive learning environments that can be sustained by academic departments
- Inspire greater student responsibility for learning
- Improve student learning

Participating Units (2016-17)

- 12 courses, 6 depts., 3 schools/colleges

Impact Summary Across Courses

General

- REACH course structures and practices becoming more consistent, active and inclusive
- *Early indications* of improved student inquiry, engagement and learning

By Numbers

- 30-40 faculty and staff; 125-150 TAs per semester
- Impacting nearly 9,000 student enrollees per semester (not including summer)

Course Attendance

- Lecture attendance before REACH: 15-50%; after: 80-90%

Course Structure, Materials, Pedagogy

- Progress toward, common, co-created learning objectives, curriculums and assessments, with unified course structures in Canvas.
- Modularized, active-learning curriculums that integrate lecture content, discussions, labs, and pre- and post-class activities, with increased low- and medium-stakes, graded assessments
- Instructors systematically experimenting with interactive teaching and innovative technologies
- Comprehensive, on-going TA REACH-targeted training and development
- Increased student cost savings via open texts

Faculty/Instructor Response

- Indicate increased skill in designing active learning courses
- Report increased collaboration with colleagues about their teaching
- Plan to incorporate active learning in other courses

Example Early Indicators – Math 221 (Calculus 1)

- Small reduction in course drops
- Improved results on midterm and final exams (see next page for graphs)
- Improved grades

Early Indicators of Increased Student Learning in Math 221 (Calculus 1)

Fig. 1. Final exam scores improved from fall 2015 to fall 2016

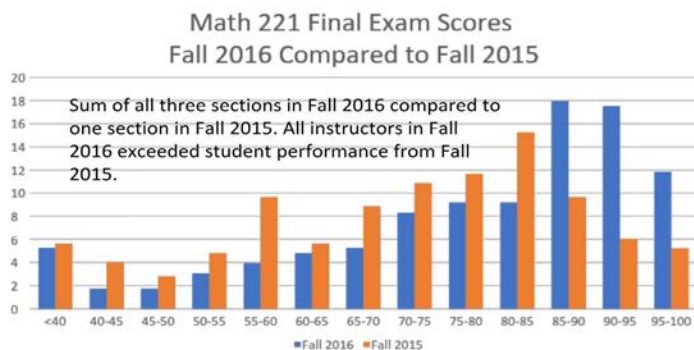


Fig. 2. Midterm exam 2 scores improved from fall 2015 to fall 2016

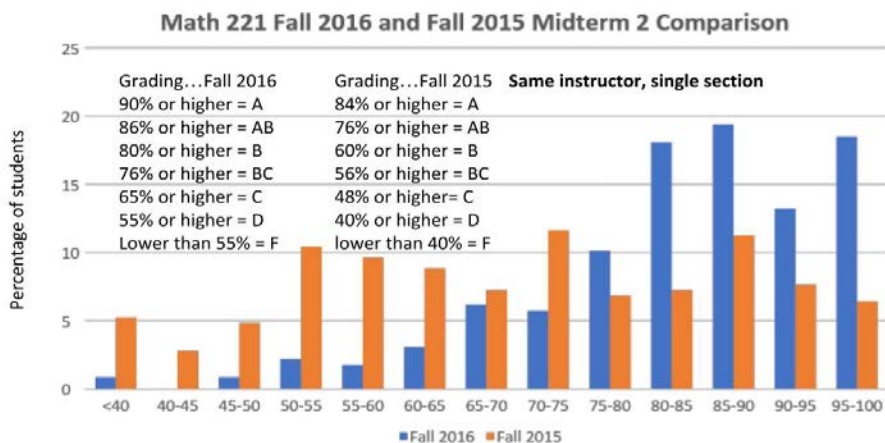
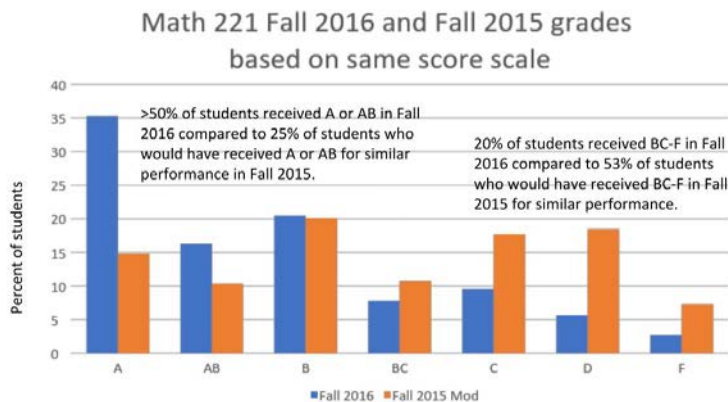


Fig. 3. Grades (adjusted) improved from fall 2015 to fall 2016



Estimated by G. Moses, 1/11/2017