Engaging POL 1080 Students with Echo 360
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Use of Technology in Large Classrooms as a Tool to Engage Students
Engaging students in large introductory courses is considered key for their successful performance in these classes which consequently has significant impact on recruitment, retention and graduation rates across disciplines.

Research Question: How does personal response software (such as PRS, Echo 360) impact student performance in large introductory classes?
The analysis draws data from 7 offerings of POL 1080 Introduction to International Relations offered in the College of Arts and Sciences at UC: in two of those cases no technology was used; three sections used Turning Technologies Personal Response System (PRS); and two other sections used Echo 360. This study tests how technology, along with supplemental instruction from undergraduate assistants, impacts student performance in POL 1080 throughout the semester. It also accounts for the effect of other variables such as gender, major (Political Science and International Affairs vs. non-majors), class size (large vs small offering) and rank, (freshmen, sophomores, juniors and seniors). We find that:

1. Technology has widespread positive effect on student success across all exams during the semester (e.g. midterm & final exams) and overall course performance.
2. Control variables have displayed limited or no impact on student performance.

Figures 1 and 2 show student performance in terms of mean scores and DFW rates over the semester (Midterm 1, Midterm 2, Final Exam and Final Essay). *Echo 360* was used in Fall 2016 and Spring 2017. *Turning Points PRS* (known as clickers) was used in Spring 2014, Spring 2015 and Spring 2016. *No engagement technology* (PRS, Echo 360) was used in the Fall 2012 and Spring 2013.

Other Recommendations about Echo 360 and Supplemental Instruction:

1. Echo 360 impacts positively overall performance in large classrooms, as well as mean scores, DFW grades, final and cumulative scores. Faculty should feel confident to incorporate it in their large classes.
2. Data indicate tempered enthusiasm about Echo 360’s impact on critical thinking and analytical skills.
3. Supplemental instruction can supplement technology when it comes to critical thinking & application skills.