

1096-L5-2471 **Ron Buckmire*** (ron@oxy.edu), Fowler 313, Mathematics Department, 1600 Campus Road, Los Angeles, CA 90041. *Investigating the effects of classroom voting and peer instruction on teaching and learning in an introductory differential equations course.* Preliminary report.

Classroom voting and peer instruction were implemented via the frequent use of electronic personal response devices (more commonly known as “clickers”) in an upper-division Differential Equations course at a liberal arts college with small class sizes. The course was taught in four fall semesters (2008, 2009, 2010, 2013) by the same professor using nearly identical teaching materials and an identical summative assessment. For three of the four semesters, clickers were used to assess student learning, implement classroom voting and stimulate peer instruction. The impact of the use of clickers on differences in the teaching and learning of differential equations is being investigated, using various metrics and measures. Preliminary results suggest that overall student course grades as well as student performance on the common summative assessment instrument indicate improvement in student learning outcomes in the semesters when clickers were used. (Received September 17, 2013)