

1106-R1-1027 **Jennifer E Clinkenbeard*** (jclinkenbeard@fullerton.edu) and **Cherie Ichinose**
(cichinose@fullerton.edu). *Flipping College Algebra to Increase Student Engagement and
Achievement.*

The flipped learning environment blends the innovation of online learning with student centered face-to-face instruction. In this session, we present a pilot study comparing a flipped college algebra class with a traditional lecture. The data were gathered in spring and summer of 2014. The model for the flipped class engages the student on three distinct occasions: online modular mini-lectures with embedded questions; a pre-assessment; and an in-person math lab discussion facilitated by the professor. Using a pre- and post-test method, we employ standardized assessments and rubrics in both course models to compare both academic and affective domains. Preliminary findings suggest that the passing rates for students in the flipped model were statistically higher than students in the traditional class ($t = 3.701$, $df = 650$, $p < .001$). In addition to comparing the grades of individual students in each classroom model on each major exam as well as their final course grade, we also consider the change in content mastery as demonstrated by the student via the Mathematics Diagnostic Testing Project; the change in reported mathematical beliefs via the 2012 Programme for International Student Assessment; and the comparison of responses with regard to the class setting. (Received September 09, 2014)