

1086-N5-2826

Warren J Code* (warcode@math.ubc.ca), 121 - 1984 Mathematics Road, Vancouver, BC V6T1Z2, Canada, and **Costanza Piccolo, David Kohler** and **Mark MacLean**. *Better student learning in a large calculus classroom via higher engagement: a comparison of teaching methods.*

Similar to a widely-reported study in Physics Education Research by Deslauriers, Schelew, and Wieman (Science, 2011), we have implemented a classroom methods comparison in Calculus 1: each of two sections (150-200 students per section) of the same course at a research-focused university were subject to an “intervention” week where a less-experienced replacement instructor encouraged a much higher level of student engagement by design. Our instructional choices encouraged active learning (answering “clicker” questions, small-group discussions, worksheets) during a significant amount of class time, building on assigned pre-class tasks. The lesson content and analysis of the assessments were informed by existing research on student learning of mathematics, and further steps were taken to enhance the design of our quasi-experiment. We report improved student performance, on conceptual items in particular, in the higher engagement section in both cases. In this talk, we will briefly introduce the overall comparison design which resulted from our setting as well as some of the key assessment items and results. (Received September 25, 2012)