

1116-Q5-2933 **Guadalupe I Lozano*** (guada@math.arizona.edu). *A model for implementing interactive-engaged practices in calculus: effects on performance and conceptual learning*. Preliminary report.

Interventions for engaging undergraduates in the learning of concepts (not just skills) and the creation of instruments to evaluate the success of such interventions have received a fair amount of attention in various STEM disciplines, including undergraduate mathematics.

The Calculus Concept Inventory (CCI), for instance, has been used in a number US calculus classrooms specifically as a measure of conceptual calculus learning. Further, gains on this instrument are often analyzed as means to validate posited positive associations between conceptual learning and interactive-engaged (IE) classroom practices, a type of “flipped-classroom” instruction.

In this talk, I will provide some background on the problem of knowledge measurement, and discuss results from one of my studies exploring effects of IE supplemental instruction on undergraduate calculus learning, based on the use of Hierarchical Linear Models (HLM). (Received September 23, 2015)