

1145-VJ-2821      **Anna Aboud\*** (acseitz@iastate.edu), **Heather Bolles** and **Amanda Baker**. *Team-Based Learning Calculus*. Preliminary report.

Team-Based Learning (TBL) is a specific form of active learning designed to collaboratively engage students in significant problem-solving tasks. By means of a flipped classroom, students are able to spend class time working in heterogeneous groups, applying fundamental concepts to a rich applied context. In recent years, the Team-Based Learning structure has been applied with much success to select calculus sections at Iowa State University. Quantitative data has shown that the TBL students performed better on the midterm and final calculus exams, and gave higher quality explanations. A key component of the success of the TBL method is student attitudes. To this end, a qualitative study was performed in the spring of 2018, examining the mathematical mindsets which influence the experiences and attitudes of students in a TBL classroom. In this talk we will explain how the TBL structure was applied to the calculus curriculum at Iowa State University, share samples of the mathematical tasks implemented, and present the results of quantitative and qualitative studies on the efficacy of this method. (Received September 25, 2018)