

1086-D1-1052 **Tara C Davis*** (tdavis@hpu.edu), 1164 Bishop Street, UB210A, Honolulu, HI 96813, and **Hung Lu**, 1164 Bishop Street, UB 520, Honolulu, HI 96813. *Student-centered versus instructor-centered approaches to teaching mathematics*. Preliminary report.

This action research study focuses on exploring whether the student-centered approaches such as group work and individual in-class problem solving and presentations are more effective than the traditional instructor-centered lecture approach in our math classes. We are interested in learning whether students have higher levels of confidence and lower levels of math anxiety when taught more actively. The study was conducted with about 70 students at Hawaii Pacific University during the Fall 2011 semester and continues in Fall 2012. Preliminary analysis shows that mean quiz scores are higher in the student-centered group and lower in the lecture group. The median quiz scores are lower in the lecture group. There are fewer zero quiz scores in the student-centered class across all the quizzes; the most at-risk students appear to attend class more and achieve fewer failing quiz marks than the lecture students. The grades in the student-centered class are higher at the lower quantiles. The percentage differences became less and less with increasing quantiles. Our presentation will include some focus on the use of student discussion and presentation during class time, based on responses to surveys as well as our observations of communication. (Received September 18, 2012)