

1145-Q5-1142      **Vesna Kilibarda\*** (vkilibar@iun.edu), Indiana University Northwest, Department of Mathematics & Actuarial Science, 3400 Broadway, Gary, IN 46408, and **Yuanying Guan**. *Active Collaborative Learning and Faculty Development in the Redesign of Introductory Mathematics Course.*

Introductory courses enroll twice as many students as all other mathematics courses combined [CBMS, 2000]. These courses have the greatest impact on strengthening students' quantitative and logical reasoning abilities which are needed for informed citizenship and success in the workplace [CUPM, 2004]. A multifaceted innovative redesign of a quantitative course for liberal arts and health professions has the goal of strengthening these abilities in our students.

Our redesign starts with Mathematics Placement peer coaching that precedes carefully calibrated Placement Exams. In the collaborative learning component students explore meaningful problems in groups, test conjectures, find solutions, and explain results. Common Exams are an important assessment component. Attendance and homework are mandatory and built into the grade. The Faculty Development Workshop is a very important part of course redesign. We obtained a grant with stipends for associate faculty to become familiar with the course redesign.

The results have shown an increase of 6% in the means of scores on midterm and final exams, and a 17% increase in retention after a semester, while the DFW rates have not shown a consistent trend. In the paper we share elements of the course design and the latest results. (Received September 19, 2018)