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*Improving algebra skills of university students through participation in academic service-learning.*

Seattle University has a long history and a solid institutional structure for implementing academic service-learning in its courses. For the present study, we developed a Precalculus course with a service-learning component, allowing university students to work in the tutoring labs at a local middle school, an immigrant assistance center, and a community college, and to tutor algebra prerequisites to middle-school students and to adults returning to complete their GED diploma. One of the primary goals of the project was to improve basic algebra skills of the student tutors by explaining foundational material to others 2-3 hours per week over the course of the quarter. Through weekly pedagogical diaries, the student tutors analyzed the source and nature of mathematical successes or misconceptions of their own students. Review of the final exams via a special rubric revealed a significant reduction in the number of fundamental mistakes between the Precalculus section with the service-learning component and the control section of the same course. In our talk, we discuss the collaboration with community partners, the course structure and the key components that enhanced student learning, and academic and non-academic benefits to the participants. (Received August 26, 2015)