

# Research on Non-university Tertiary Mathematics

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## Description of Activities and Presentations

This session focused on research being conducted at non-university tertiary institutions. Instructors in adult education as well as other non-university postsecondary institutions participated. The participants of the session shared concerns about wanting to know more about the non-university mathematics classroom through classroom-based research by practitioners. Examples of research presently being conducted were shared (Mesa, Wladis, & Watkins, 2014; Sitomer et al., 2012; Wladis, Conway, & Hachey, 2016) and are cited below. The goal for developing collaborative research and/or grant proposals among researchers of similar interest continues.

A presentation of the National Science Foundation grant *Algebra instruction at community colleges: An exploration of its relationship with student success* (Watkins, Strom, Mesa, Kohli, & Duranczyk, 2015) design was shared. The researchers are exploring the impact of students' and instructors' pre-existing and moderating variable on the relationship between student-instructor interaction with mathematics in the classroom and students' performance outcomes. Research on how individual and institutional characteristics factor into failure rates and performance measures exists, but there is little information about the fundamental work of teachers in the classroom, and the interaction that occur between instructors, students, and the mathematical content. A qualitative study (Smith, 2016), provided the student point of view. It explored students' reflections on their experiences (unsuccessful and successful) in mathematics at the community college. Student voices provided essential insights as to how postsecondary educators might foster positive learning transformations, and avoid being the source of needless obstacles to degree attainment. Then the City University of New York

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(CUNY) was presented as an example of a college system in the United States where research by community college faculty has been systematically supported, and the structures to support faculty research were described. A few examples of research projects coming out of this CUNY system were presented: An NSF-funded project exploring factors that predict which characteristics put students at higher risk of dropping out of online versus face-to-face STEM courses (Wladis, Conway, & Hachey, 2014); and a project, instigated by elementary algebra instructors, to create a concept inventory for elementary algebra at the tertiary level.

## References

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