

NSF Supplementary Request for Participant Support

“Computer-Supported Math Discourse Among Teachers and Students.” Award DRL-1118773 to Drexel and collaborative proposal DRL-1118888 to Rutgers from the National Science Foundation Discovery Research K-12 (DR K-12) Program for \$1,800,000 over 5 years on September 1, 2011. Drexel PI: Gerry Stahl; co-PIs: Stephen Weimar, Jason Silverman, Mick Khoo, Sean Goggins. Rutgers, PI: Arthur B. Powell.

The funded grant covers “middle-school and high-school teachers teaching in their classrooms,” using Virtual Math Teams with GeoGebra (VMTwG).

In our successful first year of data collection and analysis, we were able to offer teachers attractive stipends for completing two professional development opportunities, in effect covering a substantial amount of their costs for the courses. In the first, teachers learned the technology and focused on developing collaborative, discursive, and mathematical practices. In the second, teachers engaged their students with VMTwG, attending to their collaborative, discursive, and mathematical practices. The work that teachers do with their students provides the primary source of data for our investigation. The Department of Urban Education at Rutgers University supplemented the participant-support funds provided through the NSF award so that teachers would be willing and able to engage in both professional development courses. We collected data on 34 teachers’ use of the project technology in the first course, as well as various forms of feedback from the teachers. We collected data on over 200 students’ use of the project technology in the second course. This provided a unique and substantial corpus of data suggesting ways to revise our technology and pedagogy in subsequent years of the project.

In the next two years of data collection, the Department is unable to provide further supplemental support. We have found that the level of participant support that we extended to Rutgers students in the past year was essential to motivating the continuing participation of an adequate cohort of teachers for our studies. Therefore, we request an increase in participant support to enable teachers to participate in our data collection efforts in the next two years, as specified in our funded grant proposal.

Participant Support Supplemental Budget Request

Middle and High School Teachers:

Year III: 20 teachers x \$3,000 = \$60,000

Year IV: 20 teachers x \$3,000 = \$60,000

Total Request: \$120,000 to be divided equally between the collaborative grants to Drexel and Rutgers.