Project Abstract

This project proposes to improve teacher content knowledge and teaching skills in mathematics in order to improve student math learning, grades K-8. The Concord School District intends to partner with Sanborn Regional School District, Nashua School District, Marge Petit's Ongoing Assessment Project, University of Vermont's Vermont Mathematics Initiative and Southern New Hampshire University to provide intensive professional development to classroom teachers, special educators, English-Language Teachers, Title 1 staff and school administrators centered on the use of OGAP–a research-based approach to support teaching and learning math through the use of formative assessment and learning progressions. The three school districts, two universities and Marge Petit and her associates will work closely together to support one another to plan, implement and sustain professional learning that will lead to improved performance in math for students in our districts.

This project will involve approximately 140 teachers in Concord, 90 in Sanborn and Fremont, and 410 in Nashua and the 7600 students they teach. In addition, administrators and teachers from several other districts in New Hampshire, including Pittsfield and Rochester will shadow our work, and participate in some of our professional development offerings. Each of our teachers will receive between 3 and 8 days of intensive professional development through OGAP training sessions, followed by twice-monthly school-based coaching sessions with grade-level peers. In addition, teachers will have opportunities to participate in summer courses, institutes and refresher workshops. Finally, Southern New Hampshire University will help us provide professional development opportunities in math for teachers who work with some of our most impacted learners, including students with IEPs.

We are not satisfied with the performance of our students in mathematics. As expectations for college and career readiness increase, we know that our students must receive rigorous, focused and coherent instruction in mathematics. In order to do this, each of our teachers need to develop solid understanding of math content, a deeper understanding of the learning trajectories for key mathematics concepts, and knowledge and skills to analyze evidence in student work and make instructional decisions to move their students to higher levels of math understanding. OGAP provides a system for this work.

The goals of our partnership include to:

- Improve the math performance of our students, from kindergarten to grade 8 and beyond.
- Train elementary and middle school teachers in the use of OGAP in their classrooms in four areas: additive reasoning, multiplicative reasoning, fractions and proportionality—all key focus areas for career and college readiness in mathematics.
- Increase the math content knowledge and pedagogical skills of our classroom teachers and others who teach mathematics, including special educators, English-Language Teachers and Title 1 staff
- develop a cohort of highly trained teacher leaders/coaches who will facilitate OGAP professional development to build capacity and provide sustainability for this work

During each of the three years of the project, grade level cohorts of teachers and coaches will participate in intensive professional development during the school year and summer, including direct instruction through institutes and courses, in-school and classroom embedded coaching and modeling, and grade level collaborative sessions. This partnership will collaborate with evaluators from the University of Pennsylvania, who will complete a comprehensive three-year evaluation study of our work.