



MATHEMATICS at Work™

EVIDENCE OF EFFECTIVENESS

Phoenix Union High School District

PHOENIX, ARIZONA

From 2003 to 2013, ninth-grade students enrolled in below grade-level mathematics fell from 60% to 2%. Ninth-grade students enrolled in geometry and higher-level courses nearly doubled during that time.



DEMOGRAPHICS

- 1670 Teachers
- 27,031 Students
- 84.7% Free and reduced lunch
- 11.4% Special education
- 80.1% Hispanic
- 9% African American
- 2.5% Native American
- 2% Asian/Pacific Islander
- 5.3% White
- 1.2% Other
- 3.6% Limited English proficient
- 47.9% Spanish primary language

Phoenix Union High School District is one of the largest high school districts in the United States, with 16 schools and nearly 3,000 employees. Phoenix Union covers 220 square miles of Arizona's capital city. The district has 11 comprehensive high schools, two specialty small schools, and three alternative schools.

CHALLENGE

Ten years ago, 60% of incoming freshmen were placed in below grade-level mathematics courses, while access to upper-level courses were for a select few (less than 15%). When Phoenix Union's vision was updated in the spring of 2008 to *Preparing every student for success in college, career, and life*, the district

needed to create structures to support students in junior- and senior-level courses. The district also needed to bridge the gap between eighth-grade outcomes and freshman readiness to ensure student success in the first year of high school.

IMPLEMENTATION

In 2004, the district contracted with Dr. Timothy D. Kanold and the Mathematics at Work™ team to support mathematics teachers in creating and implementing a professional learning community. The first year of training focused on developing engaging student learning opportunities and discovering how to work in collaborative teams. The second year focused on building teacher capacity to implement high-quality mathematics instruction and assessment through leadership training and on-site work at several targeted high schools.

On-site school coaches from the Mathematics at Work™ team, including Dr. Kanold, Donna Simpson Leak, and Kit Norris, worked with Phoenix Union's school leaders and course-based collaborative teams to develop:

- **Intro to high school summer program**
Increasing the number of students ready for algebra
- **Algebra and geometry qualifying tests**
Increasing the number of students entering beyond Algebra I as ninth graders to increase upper-level mathematics enrollment
- **Collaborative team time**
Increasing collaborative team time to develop common assessments and common homework expectations that promote academic advancement in mathematics for all students
- **Tier 1 and Tier 2 formative assessment interventions**
Supporting students at all levels of learning by increasing accessibility to higher-level mathematics courses
- **Leadership training**
Training for every high school mathematics team leader in the district
- **Assessment training**
Training for all mathematics teachers on how to create high-quality unit assessments aligned with the standards and how to use those assessments for formative student learning and accurate grading



“As a brand-new leader, I had the support from Tim Kanold and other leaders across the district to have an open and honest conversation about our reality and how we could improve. Every time I got back from leadership training I was rejuvenated for the next cycle of teaching.”

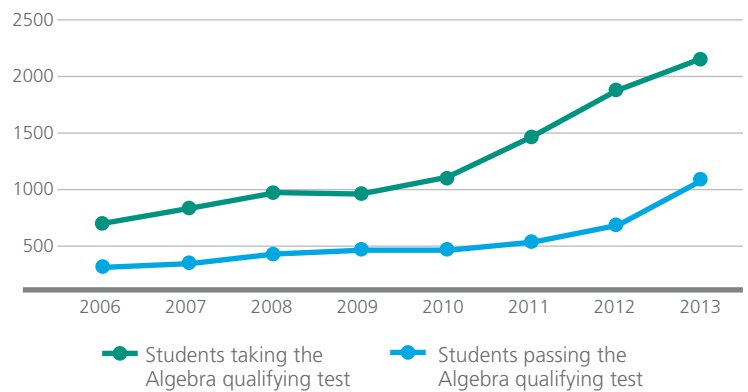
—Jeanette Scott, instructional leader, Cesar Chavez High School, Phoenix Union High School District

RESULTS

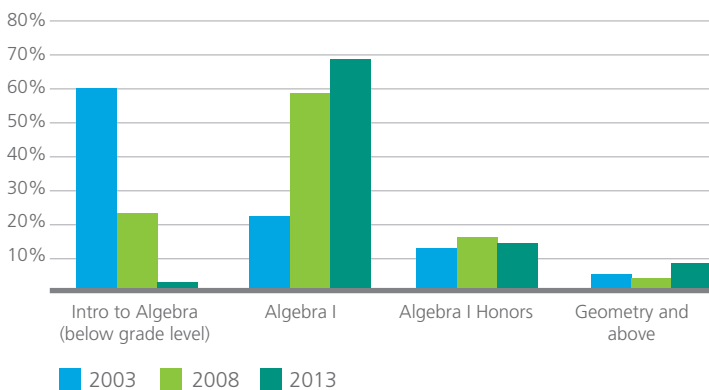
With support from the Mathematics at Work™ team, Phoenix Union focused on giving students access to the full range of mathematics courses offered by the district. The mantra changed from “Only a few will be college and career ready,” to “What support can we provide so that all students are college and career ready?” These gains reflect collaborative efforts to ensure high-quality instruction, timely and effective interventions, and clear communication of expectations for academic behaviors.

In 2008, the district began offering the ACT to all juniors, and in 2013, Metro Tech High School was recognized as a model PLC school for their academic gains (see allthingsplc.info/MetroTechHS).

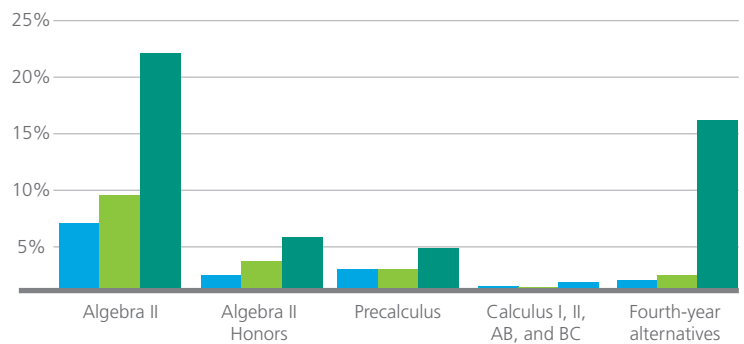
Eighth-Grade Algebra Qualifying Test



Ninth-Grade Mathematics Enrollment



Upper-Level Mathematics Enrollment



What sets this PD apart?

Integrated, responsive mathematics PD

Find out why an increasing number of educators are choosing to partner with Dr. Kanold and his colleagues. Tailored to satisfy the rigorous demands of the Common Core, their approach to mathematics stands out because it supports implementation that is:

Research affirmed

Gain implementation strategies informed by research that's been proven to impact and increase student achievement.

Practical

Maximize the impact of your implementation by assessing current practices and utilizing recommended strategies and helpful tools.

Paced unit by unit

Find out how to address the needs of your students, and work as a collaborative team before a unit begins, throughout its duration, and after it ends.

Rigorous and relevant

Adjust your current practices to satisfy the more challenging demands of the CCSS while ensuring content coherence, rigor, and focus.

Collaborative and sustainable

Make the most of your implementation by framing it within a professional learning community and the pursuit of equity for every child.

PD for every budget and schedule

Choose from a variety of options for maximum flexibility:

- General overview
- Half-day workshop
- All-day workshop
- Long-term, monthly on-campus coaching
- Long-term, yearly on-campus coaching

Find your rep!
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