



MATHEMATICS

in a Professional Learning Community

EVIDENCE OF EFFECTIVENESS

Clark County School District

LAS VEGAS, NEVADA

“After two years of mathematics-specific professional development, many district schools have exceeded student performance expectations and reached new levels of achievement.”

—Jhone Ebert, assistant superintendent and chief technology officer,
Clark County School District

DEMOGRAPHICS

- 352 Schools
- 309,476 Students
- 38,523 Staff
- 134 Languages spoken
- 43.2% Free and reduced lunch
- 30% Limited English proficient
- 10.4% Special education
- 34.6% White
- 14.1% African American
- 41% Hispanic
- 9.6% Asian/Pacific Islander

Clark County School District is the fifth-largest school system in the nation.

CHALLENGE

In January 2008, 24,000 students enrolled in grades 6–12 mathematics participated in a districtwide semester common assessment. The exams covered five core college prep mathematics courses: middle school Pre-Algebra and Honors Algebra, and high school Algebra, Geometry, and Advanced Algebra II. Only 9% of the students enrolled in high school Algebra I passed.

The results grabbed headlines and the attention of all stakeholders. The superintendent responded by establishing an expert mathematics committee that partnered building- and district-level staff with national K–12 mathematics education expert Dr. Timothy D. Kanold. The committee was tasked with forging a plan that would lead the entire district on a continuous growth and improvement journey.

Target Outcomes

- Increase high school Algebra I pass-rate performance.
- Decrease middle school Pre-Algebra D/F distribution rate.
- Establish continuous adult professional learning.
- Ensure effective instruction in every classroom.

IMPLEMENTATION

In spring 2008, the district launched efforts to improve mathematics professional development and learning with a clear directive from stakeholders. The mathematics committee anchored their work with nonnegotiable goals established through a collaborative process involving key stakeholders.

The committee examined trend data for student pass-rate performance and grade distribution rates. Then, they used consensus building to establish both long- and short-term goals. Using the SMART goal protocol ensured that goals would fit seamlessly into the established district improvement plan.

Next, the committee studied vital teacher actions linked to improved student achievement and worked to close the knowing-doing gap districtwide. Professional development for department chairs included creating and implementing SMART goal plans, high-performing teacher teams, mathematics-specific instructional designs, and highly effective classroom assessment practices. New and vital district behaviors included changing RTI to be purposeful and nonnegotiable in preparing students early for semester common assessments.



“Our staff benefited greatly from Dr. Kanold’s expertise in creating high-quality assessments, setting SMART goals, determining mathematics course offerings, and fine-tuning the process for student placements into high school mathematics courses.”

—Director of Mathematics and Instructional Technology Eric Johnson

RESULTS

In January 2009 and again in January 2010, the committee led a review of school-by-school performance on SMART goal expectations and action plans for each site and districtwide. The data review included semester grades and the semester common assessment pass rate. Two years of focused efforts resulted in new levels of student performance. **A review of first-semester common assessment data in 2010 revealed that 15,000 more students passed the exams than would have passed based on 2008 levels of proficiency. Paying attention to results and acting on those results was rewarded by short-term improvement.**

The district continues to ensure all aspects of the teaching and learning environment are monitored for improvement. The ongoing challenge is to provide transparency in all areas of such a large district, but the committee believes this is essential to sustain teaching behaviors that impact student learning. Next steps include deep inspection of the teaching culture and learning at schools that need to improve, providing just-in-time resources to classrooms with struggling students. The underlying support to these districtwide improvement efforts will be continuous, job-embedded professional learning, as research indicates top-performing school systems “improve instruction by moving teacher training to the classroom.”

Common Assessment Pass-Rate Goal:

We will increase the high school Algebra I common assessment pass rate to 80% by the 2011–12 school year.

Short-Term Goal Achievement

From 2008 to 2010, Algebra I percent pass rate increased 133%.

Grade Distribution Goal:

We will decrease the middle school Pre-Algebra D/F rate to 10% by the 2011–12 school year.

Short-Term Goal Achievement

From 2008 to 2010, the D/F rate decreased 10.8%.

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 plan
- Long-term, yearly on-campus plan

Find your rep!
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