

# Intensified Algebra I: Program and Research Update



Algebra I has the highest failure rate of any high school course nationally, and many district leaders identify algebra as their most pressing mathematics improvement priority. *Intensified Algebra I* was developed to help districts transform learning outcomes—and thereby avoid the high cost of reteaching students and the negative consequences (including high absenteeism and dropout rates) associated with chronic failure in this critical gateway to advanced mathematics.

*Intensified Algebra I* is a comprehensive, extended-period course that is designed to help students who are one to two years behind in mathematics re-engage as motivated learners and succeed in Algebra I within a single academic year. The intervention arms teachers and learners with cohesive, integrated resources for struggling students, including

- A challenging but well-scaffolded curriculum
- Protocols to optimize additional instructional time
- Strategies to build students' engagement, confidence, and commitment to learning
- Job-embedded professional development for teachers—support so powerful that 88% of teachers say the experience has positively influenced how they teach mathematics (Inverness Research, Inc. External Evaluation Brief, 2012).

*Intensified Algebra I* is a major research and development initiative of the Charles A. Dana Center at The University of Texas at Austin, the Learning Sciences Research Institute at the University of Illinois at Chicago, and Agile Mind.

“ The Intensified Algebra program humbled me. It allowed me to bring much more to the classroom than I ever could have done on my own. The results speak for themselves: my students made huge, measurable gains, and I became a much better teacher. ”

– Jeremy Jackson,  
Mathematics Teacher, Illinois

# Case Studies of Success in Schools and Districts

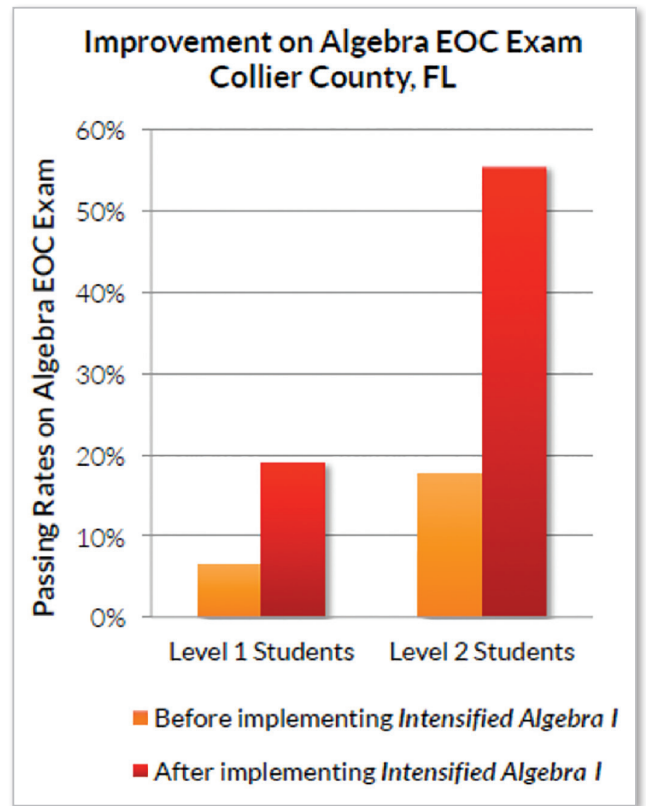
## Collier County Public Schools, Florida

Collier County, located on the southwestern tip of Florida, is served by the Collier County Public Schools. The district includes 48 schools serving 43,793 students, 63% of whom qualify for Free and Reduced Lunch. The student population is 46% Hispanic, 38% White, and 12% Black.

In 2012-13, the district enacted *Intensified Algebra I*, targeting students who had scored at the lowest levels (Levels 1 and 2) in Mathematics on the Florida Comprehensive Assessment Test, or FCAT. The district then examined the growth of students participating in *Intensified Algebra I* by comparing their performance to the performance of the Level 1 and 2 students from the year prior.

### Results:

The number of Collier County students passing the Algebra End-of-Course exam increased after the implementation of *Intensified Algebra I*. Almost three times the percentage of Level 1 students and more than triple the percentage of Level 2 students passed the Algebra EOC exam in 2013, an achievement marked by scoring at Level 3 or higher.



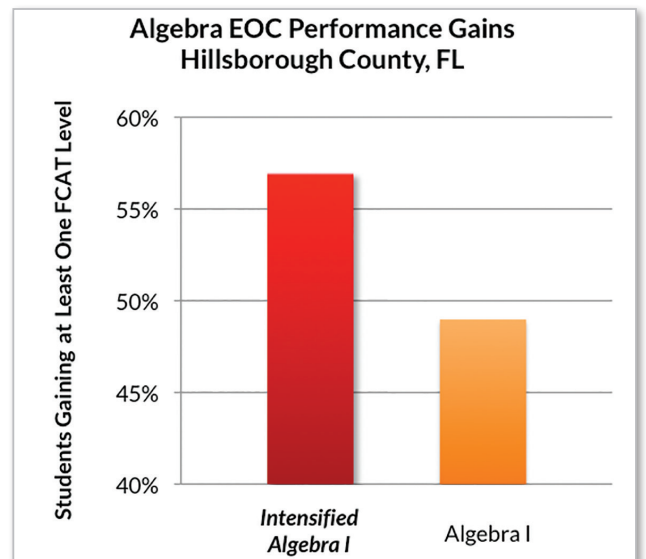
## Hillsborough County Public Schools, Florida

Serving the Tampa area, the Hillsborough County Public School district includes over 200,000 students in 266 schools. Its student population is diverse, including 39% White, 31% Hispanic, and 22% Black students. More than half (56%) of the students qualify for Free and Reduced Lunch.

*Intensified Algebra I* was first implemented in six Hillsborough high schools in 2012-13. Incoming 9th-grade students who had scored at the lowest level (Level 1) in Mathematics on the FCAT were targeted for inclusion.

### Results:

Fifty-seven percent of the students participating in *Intensified Algebra I* achieved an improvement of one or more levels on the 2013 FCAT Math exam. In contrast, only 49% of the higher-achieving Level 2 and up students (who participated in Algebra IB) gained one level or more.



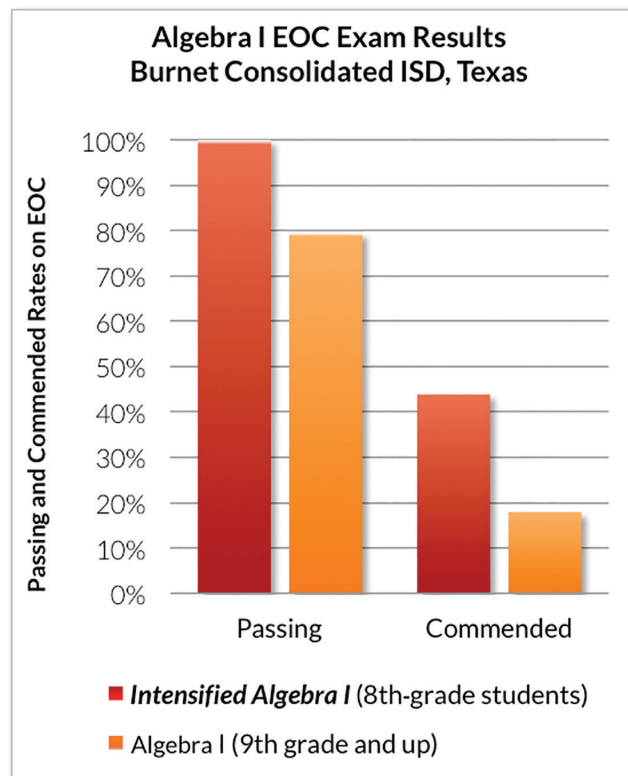
### Burnet Consolidated Independent School District, Texas

Burnet, a small town in Central Texas, is home to the Burnet Consolidated Independent School District (CISD). The district serves a total of 3,265 students, 59% of whom are economically disadvantaged.

In 2012-13, Burnet CISD implemented *Intensified Algebra I* with some 8th-grade students. This was a change in policy for the district, as Algebra I had not been an option for 8th-grade students the prior year.

#### Results:

The middle school students directly benefited from this change. Every 8th-grade student enrolled in Intensified Algebra I passed the state-administered Algebra I End-of-Course exam (100%), while the high school students achieved a passing rate of 79.6%. Even more notably, more than twice as many of the Intensified Algebra I middle school students performed at the commended level as compared to the high school Algebra I students.



### Leyden Community High School District 212, Illinois

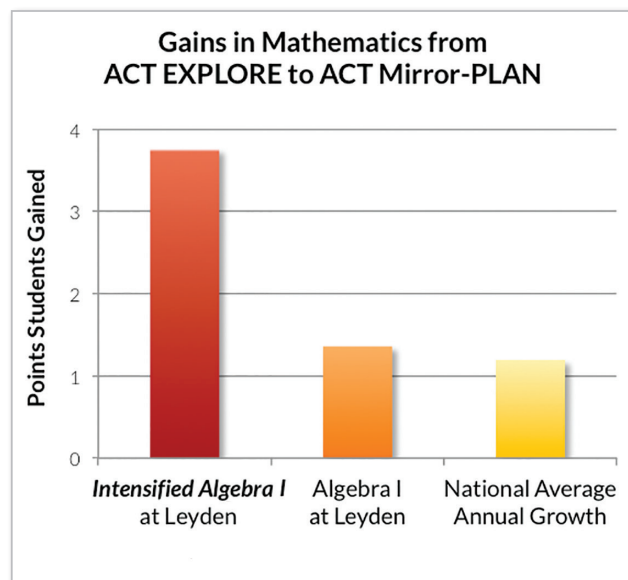
The Leyden Community High School District 212 is a small district in Franklin Park, a suburb of Chicago. The district serves 3,500 students, of whom 59% are Hispanic and 35% are White. Almost half of the district's students (47%) are from low-income families.

In 2012-13, the district implemented *Intensified Algebra I* for its incoming 9th-grade students who had performed at the lowest levels on the 8th-grade ACT EXPLORE exam.

#### Results:

Intensified Algebra I students achieved a gain of 3.77 points—more than double the growth achieved by other Algebra I students—on the spring 2013 administration of the ACT Mirror-PLAN exam (a test with a top score of 36 points).

The performance of the Intensified Algebra I students is even more impressive when compared to the national growth rate in mathematics: Intensified Algebra I students increased their scores by more than three times the national average (Principles for Measuring Growth Towards College and Career Readiness, ACT Research Policy and Issue Brief, September 2011).





It's just an amazing program...Our Level 1 students are showing they can [compete] with Level 3, 4 and 5 students. Our students are more successful than a lot of students in Algebra I classrooms.



– Kimberley Buechner,  
Mathematics Teacher, Florida

### **Transforming Achievement in Mathematics and Science—for All Students.**

Agile Mind is committed to enhancing equity and high achievement in mathematics and science in our nation's middle and high schools. Founded in 2002, the company works in collaboration with leading educators to develop comprehensive programs, tools and services that enable educators and education systems to support rigorous instructional experiences for all students.

Agile Mind offers comprehensive programs—encompassing job-embedded professional development, course curricula, student practice, formative assessment, and data analytics and reporting—for middle school mathematics through AP Calculus and Statistics, as well as high school Biology and a unique family of programs designed to enhance students' persistence, effective effort, and growth mindsets.

**Agile educators. Agile learners. Agile tools to support high achievement.**

