



Agile educators
Agile learners
Agile tools to support high achievement



The University of Texas at Austin
Charles A. Dana Center

UIC LEARNING SCIENCES
RESEARCH INSTITUTE

***Intensified Algebra I* Program and Research Update**

A Briefing for Educators, Spring 2017

Algebra I has the highest failure rate of any high school course nationally, and many school and district leaders identify it as among their most pressing improvement priorities. ***Intensified Algebra I*** was developed to help educators transform learning outcomes for those students most at risk of failing—and thereby avoid the high cost of re-teaching students and the negative consequences (including high absenteeism and dropout rates) associated with chronic failure in this critical gateway to advanced mathematics and high school success.

Intensified Algebra I is a comprehensive, double-period course designed to help students who are 1 to 3 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 services for teachers—support so powerful that 90% of teachers say the experience has positively influenced how they teach mathematics (Inverness Research, Inc. External Evaluation Brief, 2015).

Intensified Algebra I is a major 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.

Case Studies from Districts

Las Cruces Public Schools, Las Cruces, New Mexico

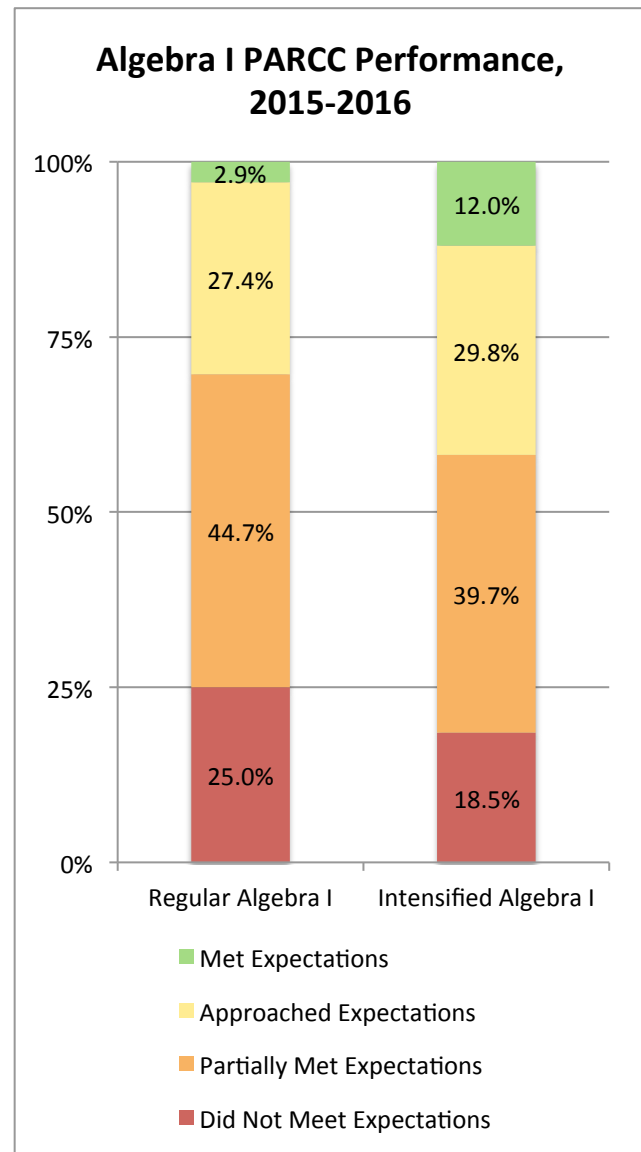
Las Cruces Public Schools is a comprehensive school district serving more than 24,000 students in Las Cruces, NM. The population of students served by the district includes 75% Hispanic and 75% Economically Disadvantaged learners. More than 10% of students are English Language Learners.

During the 2015-2016 school year, 2 high schools in the district, Centennial High School and Oñate High School, enacted Agile Mind's **Intensified Algebra I** program to support students who struggle in mathematics, selecting those whose proficiency range was 1-3 years below grade level.

Program participants made dramatic gains in achievement, outperforming 'regular' Algebra I students across the district.

- **Intensified Algebra I** students achieved an average PARCC score of 721, compared to 712 for the regular Algebra I students.
- **Intensified Algebra I** students were more than 4 times as likely as the regular Algebra I students to meet expectations on PARCC (achieve a score of 4 or higher).

Because of these transformative results, the district has chosen to adopt **Intensified Algebra I** as the core curriculum for all regular Algebra I classes for the 2017-2018 school year.

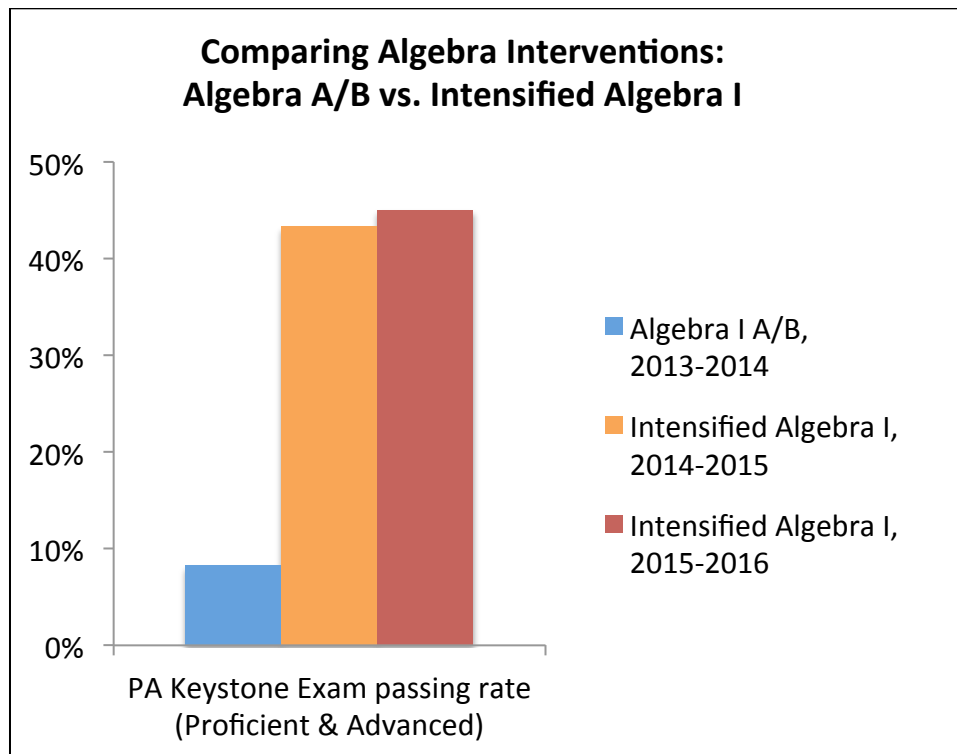


York County School of Technology, York, Pennsylvania

York County School of Technology in Pennsylvania is a comprehensive technical high school that serves 1700 students from 14 different school districts in the county. The school serves a diverse population that approximates our national demography: 62.3% White, 18.3% Hispanic, 10.2% Multiracial, 8.5% Black/African American, and .7% Asian. Almost 54% of students are identified as Economically Disadvantaged and 19.2% as Special Education. Many have struggled in their prior academic experiences in mathematics.

To strengthen student achievement and engagement in mathematics, crucial to success in higher education and in technical certification programs, the school leadership implemented ***Intensified Algebra I*** to replace their existing Algebra I A/B course.

- The passing rate on the Pennsylvania Keystone Exam among students who participated in ***Intensified Algebra I*** in the first year was 5 times that of students who took Algebra I A/B the previous year.
- In Year 2 of ***Intensified Algebra I***, the Keystone Exam passing rate continued to increase among participating students.



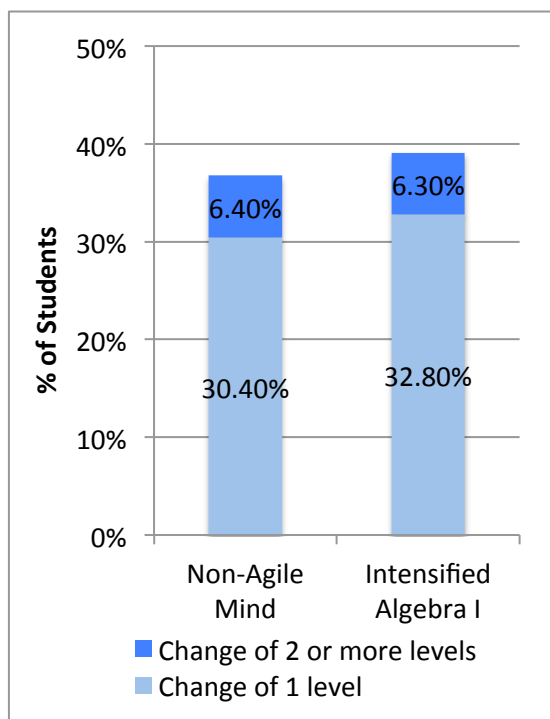
Newark Public Schools, Newark, New Jersey

Newark Public Schools is a comprehensive public school district—the largest in the state of New Jersey—that serves the entire city of Newark. Its population of students is 35,000, 90% of them African American or Hispanic, and more than 70% designated as Economically Disadvantaged.

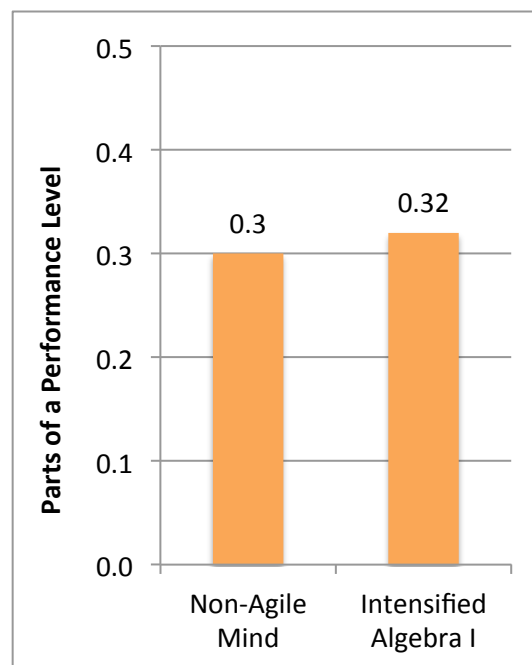
During the 2015-2016 school year, the district implemented Agile Mind’s **Intensified Algebra I** program for incoming 9th grade students who were determined to be 2-3 years behind in mathematics as they completed 8th grade; this group encompasses a quarter of the Algebra I students across the district. The graph on the left depicts the achievement of 625 Algebra I students (**Intensified Algebra I** and “regular” Algebra I students) for whom the district has prior year history on the PARCC Assessment.

Change in PARCC Performance Levels, 2014-15 to 2015-16 SY

% Whose performance levels increased



Average performance level change



Despite being placed in the program because of their low performance in middle-school mathematics, 39% of the students participating in **Intensified Algebra I** achieved an improvement of one or more levels over their prior-year performance on the PARCC exam. In comparison, 37% of the higher achieving students who participated in non-Agile Mind programs gained one level or more.

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 6 Hillsborough high schools in 2012-13. Incoming 9th grade students who had scored at the lowest level (Level 1) in Mathematics on the Florida Comprehensive Assessment Test or FCAT were chosen for inclusion. Based on the success these students had with the program, during the 2013-14 school year, Hillsborough implemented **Intensified Algebra I** district wide. To assess the impact of the course, the district compared outcomes on the Florida Algebra I End-of-Course (EOC) exam for students enrolled in IA during the 2013-14 school year to those of similar students enrolled in a traditional Algebra I course during the 2012-13 school year.

- The results of the analysis showed a significantly positive impact for students who participated in **Intensified Algebra I** on student scores on the EOC exam.
- Participation in **Intensified Algebra I** resulted in a more than doubling of the percentage of students achieving a passing score on the test.

