

Oakland Unity reaches 94th percentile in 9th grade algebra among California high schools to become most improved school in California over 2 years

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Oakland Unity High School had a big problem. Our 2010 geometry score on the state test for 9th graders ranked us at the 7th percentile. Our freshmen algebra scores were not much better, at the 20th percentile. Major changes were required at this charter school in East Oakland, CA, with 275 mostly Latino students. The short version of our story is that we made those changes, and moved up to the 94th percentile, the largest improvement in California algebra scores over the last two years.

The more interesting part of the story is that some of our successful approaches were actually controversial within the ongoing school reform discussion. We want to share those approaches, and maybe brag a little, too.

Our first step was recognizing that most of our students were not ready for geometry. Many had taken algebra in middle school, but our assessments showed they had not learned it. So, we reprogrammed our master schedule and ordered new books. We would teach them what they did not know rather than the next course on the curriculum. A few months later we realized that even algebra was too challenging for some students and added a pre-algebra course. With little funding and no available staff, our principal, David Castillo, stepped in to teach the course.

A year later we made another schedule change to address the significant learning gap for most of these students. We replaced a health course with a learning lab to provide a second period of math. We staffed this new class with a talented tutor, Kallie Berg, who had been working with our students after school. Our simple, common sense changes to curriculum and staffing might have been impossible to implement within the rigid structures of a large district and staffing rules of a teachers' union. We certainly could not have made them as rapidly.

We complemented our schedule changes with an emphasis on fractions, decimals and negative numbers. More importantly we stressed student responsibility, homework and attentiveness in class. Many urban students have struggled in math for years, and the resulting learning gap is only part of their problem. Their first reaction to a difficult math problem has often been to see it as just more evidence that they were not very smart. Unsurprisingly, lazy habits developed as they stopped doing work they did not understand. Then, as they were passed each year, often with good grades for material they had not learned, they lost any sense of responsibility.

Lack of responsibility, effort and confidence. Many educators seem uncomfortable naming these character issues, or worse, use them as excuses for failed initiatives. We believe building student character is our most important job.

In 2011 the 9th grade algebra tests ranking increased to the 76th percentile. After a brief celebration we did some soul searching. Despite our improvements, only 32% of the students were scoring above the proficient level (60%). This still seemed like a poor result against a low hurdle. Too many students were still tuning us out in the classroom, and, although homework had improved, it was still insufficient (and often copied.) We were better, but, honestly, we were still failing.

We continued our traditional algebra class, but introduced Khan Academy in the new learning lab class mentioned above. Randomly generated problems eliminated copying homework and free-response answers prevented the guessing common on systems with multiple-choice questions. Khan solved our homework problem and became an important tool in our efforts to engage our students and develop their character.

We do not understand the few loud critics of Khan. Some educators have spent decades looking for better ways to deliver content to urban students, but seem to have ignored the fact that many of these students are increasingly apathetic about receiving any content. These critics ... miss Khan's power in overcoming that apathy and encouraging engagement. Khan was the perfect tool in our learning lab, and our algebra test results for 2012 improved to the 94th percentile, with 58% of the students above the proficient range, 13% in the advanced range (80%).