Hazelwood East High School is part of the Hazelwood School District, which is the second largest school district in the St. Louis metropolitan area. Bounded on the north by the Missouri River and on the south by the Mississippi, the district includes all or part of eight communities and several square miles of unincorporated St. Louis County. While technically a suburban school, Hazelwood East faces urban scenarios and challenges, including a high number of low-income students.
Hazelwood East makes the move to improve

Michael Peoples, Hazelwood East’s associate principal, is in his fifth year at the school. A former high school math teacher and instructional coach, part of his current responsibilities is assessing math performance. Historically, math has been a challenge at the school, which until recently hovered near the bottom of state rankings in math achievement.

Because of the low ranking in math, Hazelwood East became a candidate under No Child Left Behind to receive state funding with the intent to improve student performance. According to Peoples, “The grant specifically targeted math and ELA performance. And we received funding to embed supports and interventions with the intent of making drastic and expeditious changes.”

Among those supports became ALEKS, a McGraw-Hill Education math program.

THE PROBLEM:
The problem

Three consecutive years of ranking among the lowest performing Missouri high schools in math qualified Hazelwood East High School for a government grant focused on intervention with intent on making drastic and expeditious changes.

THE SOLUTION:

Once they received funding, the school began looking for tools to help boost student math performance. According to Principal Michael Peoples, ALEKS stood out from the crowd.

The ALEKS factor

ALEKS is an online math program that uses adaptive, open-response questioning to identify precisely what each student knows and doesn’t know. Through individualized learning and assessment, ALEKS delivers targeted instruction on the exact topics each student is most ready to learn.

“As far as my research, ALEKS was the only diagnostic and prescriptive math-based intervention that I encountered,” Peoples says. “It has a great ability to not only diagnose deficiency where the student demonstrates some areas of concern, but it also prescribes the remedy for addressing that concern at an individual level. I don’t know anything else that can do that in mathematics.”

Rapid math improvement from year one

During the 2012–13 school year, Hazelwood East High School piloted a new curriculum and implemented common assessments, which raised math achievement to 20 percent proficiency in Algebra 1 from the previous 5 percent.

“We saw pretty dramatic improvements in the initial year,” Peoples remembers. “After that year, though, in the interest of continued improvement and a desire to continually strengthen our department, we embarked on a path to utilize the ALEKS intervention in conjunction with the Glencoe Math Common Core Algebra 1 textbook.”
Pairing brings more proficiency

Hazelwood East implemented ALEKS during the 2013-14 school year as a separate component to its mathematics curriculum, and the ensuing 15 percent year-end proficiency growth didn’t disappoint. The school then adopted the Glencoe Math Common Core Algebra 1 textbook in 2014-15. However, the two weren’t fully integrated until 2015-16. Kevin Martin, Hazelwood East’s instructional and data coach at the time, had helped set up the new curriculum.

“We reviewed Glencoe Math Common Core to align with our curriculum, and then we aligned that to the ALEKS program to make sure teachers were using both together and doing formative assessments through the new Glencoe book,” Martin says. “This enables teachers to really use data to drive their instruction.”

Fully integrating ALEKS with Glencoe Math Common Core better allows teachers to do their formative assessments as well as assign remedial and differentiated instruction. And students can easily navigate to their ALEKS accounts through the Glencoe interface. As far as proficiency goes, preliminary results indicated achievement of 41 percent, a drastic change compared with just two years prior.

Flexibility for a change

ALEKS is used in various ways at each level. For example, ALEKS is sometimes used to supplement instruction to the lowest performing ninth graders, while it is used as part of a regular math lab for higher performing students who take algebra every day. ALEKS is used in other contexts at teachers’ discretion.

From a teacher’s standpoint, ALEKS provides a lot of flexibility, according to Hazelwood East math teacher Emily Knight. She says ALEKS is easily adaptable to every student by giving them choices.

“We use it in class, we’ve been able to have students do it on their own at home,” says Knight. “During homeroom, if any of our students say ‘I don’t have any homework; I don’t have anything to do,’ we’ll give them ALEKS. It’s something they can be doing a lot of the time.”

Crunching the numbers with ALEKS

Immediately, math proficiency at Hazelwood East High School went from 5 percent to 20 percent after implementing ALEKS as an intervention support. The next school year, they went from 20 percent to 35 percent after implementing ALEKS as part of the curriculum. When ALEKS was fully integrated with Glencoe Math Common Core Algebra 1, math proficiency increased to 41 percent.

“In addition, the school is scoring better on its Missouri State Improvement Plan results,” Peoples says. “We went from earning zero points in our state scoring system for math scores from the first year, to last year earning 12 of the possible 16 points for mathematics performance,” he says. “We’re on target, if all goes planned, to earn the full 16 points.”

**ALGEBRA 1 PROFICIENCY**

<table>
<thead>
<tr>
<th>Year</th>
<th>Proficiency</th>
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<tr>
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<tr>
<td>2012-2013</td>
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<td>35%</td>
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Preliminary Results
“We went from earning zero points in our state scoring system for math scores from the first year, to last year earning 12 of the possible 16 points for mathematics performance.”

- Michael Peoples, Associate Principal

In the end: a new beginning for Hazelwood East High School

Peoples says Hazelwood East places high expectations on its students. They are expected to come to school with an open mind and with academic achievement their number one priority. They must be willing to learn, display good citizenship and show respect for adults and other students. “Today, those values, along with support tools like ALEKS have the school on an upward trajectory,” Peoples says.

“We have a pretty extensive story to tell, and it speaks to the hard work of folks in our math department,” he says. As for ALEKS “It enables us from an instructional standpoint to place a laser-like focus on the needs of students.”