

CASE STUDY

Harmony Public Schools “Race to the Top” With Math Program *ALEKS*[®]



PROFILE

Name

Harmony Public Schools

Location

Statewide usage in Texas

Grades

5–10



Harmony Public Schools, headquartered in Houston, is a charter school system that serves more than 30,000 Texas students. Its mission is to break down educational barriers for minority and low-income students in the Science, Technology, Engineering, and Math (STEM) fields.

Harmony schools consistently outperform regional and state averages in all four core subject areas, and all passed or exceeded Texas academic standards in 2016. Six of its campuses have earned seven available academic distinctions, and two of its districts have earned the postsecondary readiness distinction.

As part of their commitment to excellence in STEM, Harmony Public Schools rely on *ALEKS*, a web-based assessment and math learning system that uses adaptive questioning to quickly and accurately determine exactly what a student knows and doesn't know in a course. *ALEKS* then instructs the student on the topics they are most ready to learn.

Implementation

In December of 2012, Harmony Public Schools was awarded a four-year "Race to the Top" grant from the U.S. Department of Education. The grants were created to encourage and reward schools that focus on educational innovation.

Burak Yilmaz, Project Director at Harmony Public Schools, was brought on in February of 2013 to help design a student-centered, personalized learning program worthy of the nearly \$30 million in funds. By the fall of 2013, he and his team were deep in the planning phase and weighing their options for EdTech solutions.

"There were a lot of companies reaching out to us and pitching their products, but *ALEKS* really stood out in the market," says Mr. Yilmaz. "After a semester of carefully reviewing options, we kept coming back to *ALEKS*."

Mr. Yilmaz gives three key reasons why they eventually chose *ALEKS*:

1. The program is completely web-based and provided the hardware and software support Harmony needed to implement successfully.
2. *ALEKS* uses open-response questioning versus multiple-choice, eliminating the possibility that students would play the guessing game. ("You can't game *ALEKS*!" says Mr. Yilmaz.)
3. Mr. Yilmaz and his colleagues were blown away by the science and research behind *ALEKS*.

"*ALEKS* merges cognitive science and artificial intelligence (AI)," says Mr. Yilmaz. "Other solutions don't even come close."

"There were a lot of companies reaching out to us and pitching their products, but *ALEKS* really stood out in the market."

"Custom Days" are a major component of the Harmony program, which focused on personalized learning in a blended learning setting.

"Custom Day is a lot different than a whole-classroom setting," says Ladonna Bivens, 3–8 math teacher at the School of Science (Bravewood). "On Custom Days, students work independently and at their own levels on *ALEKS*. This frees me to do individual teaching or to pull groups of students for cooperative learning."

The goal of Custom Day is to focus on each student's individual needs by zeroing in on any foundational skills that they may have missed and then addressing them with differentiated lessons.

"Before we piloted *ALEKS*, only 84 percent of our fifth-grade students passed the State of Texas Assessments of Academic Readiness (STAAR) exam," says Ms. Bivens. "Texas students have to pass fifth and eighth-grade exams to move forward, so that was a big deal. *ALEKS* gave us the tools to go back and address those knowledge gaps by assigning level-appropriate topics. If a student is in fifth grade but working at a third-grade level, *ALEKS* can adapt to that. If a student is advanced, the program adapts to ensure that student keeps growing, too."

Student Engagement

Abdullah Tatir, Secondary Math Curriculum and Instructional Coach at Harmony Public Schools, believes that the real-time responsiveness of *ALEKS* is what makes it such a powerful program for engaging students.

“*ALEKS* can make instant decisions about what students should learn next, based on previous responses,” he says. “This allows us to adjust assignments to meet the goals of the student. For instance, we can ask on-level students to do 20 topics, advanced students to complete 30, and intervention students to complete 10. All of those students are challenged at their own levels.”

“*ALEKS* can make instant decisions about what students should learn next, based on previous responses. This allows us to adjust assignments to meet the goals of the student.”

Mr. Yilmaz adds that teaching to a student’s knowledge level is the best way to get them up to state-mandated levels of learning.

“If a sixth-grade student is lacking foundational skills, we simply can’t teach what the state mandates until we address what’s missing,” he says. “*ALEKS* identifies learning gaps through short and accurate assessments and creates a personalized learning map that addresses what’s most urgent so that students don’t fall further behind.”

But *ALEKS* is about more than just addressing learning gaps. It also challenges students to take control of their own learning.

“When we started using *ALEKS*, teachers were afraid it was just one more thing they were going to have to do,” says Ms. Bivens. “But, *ALEKS* takes care of itself. If students are stuck, they can ask a peer, or what we call a shoulder partner, or find help inside the program. That makes students responsible for their progress, and it allows me to pull students who really need one-on-one help.”

Ms. Bivens adds that students have not only embraced the challenge but that *ALEKS* has made them more competitive about their progress.

“I post student results on our *ALEKS* Wall of Fame, which features laminated certificates of achievement,” says Ms. Bivens. “My students see how their peers are progressing, and they challenge themselves to complete just as many topics. I have some seventh-graders in pre-algebra and eighth-graders in Algebra 1 and Geometry, because they are motivated to push themselves and each other.”

She adds that *ALEKS* is especially helpful for Spanish-speaking students because they can switch back and forth between languages when they have questions.

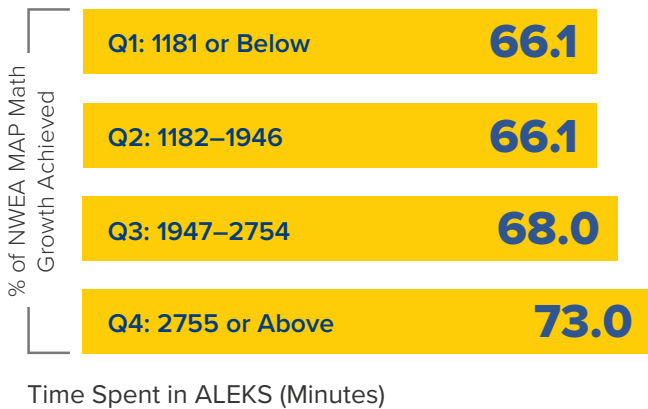
“The way *ALEKS* is presented, with bold words, different colors, and even chunks of information, makes it easier for my ESL students to digest,” says Ms. Bivens. “I had a student who could barely read English, and when he had questions for me, he could show them to me in Spanish, and *ALEKS* would translate. The experience helped me see through his eyes how difficult the language barrier is, and how powerful *ALEKS* is for closing that gap.”

Results

In 2014–15, Harmony Public Schools conducted a study to evaluate the association between the use of *ALEKS* and Northwest Evaluation Association Measures of Academic Progress (NWEA MAP) math growth for its fifth through tenth-grade students. The results showed that about seven in ten *ALEKS* users achieved mathematical growth on NWEA MAP tests. Students who spent more time in *ALEKS* were more likely to achieve NWEA MAP math growth.

Growth Based on Time Spent in *ALEKS* for All Students

MAP Growth from Fall to Winter = 1



Harmony Public Schools continued to show positive results during the 2016–2017 school year. On average, students in Harmony Public Schools raised their math scores 25 percent over the school year.

Ms. Bivens has seen this growth first-hand. “Last year, 96 percent of eighth-grade students passed the STARR, so they could move on to high school. 94 percent of our ESL students [ELLs] passed that same test. That’s something to be proud of.”

“Since we were awarded the “Race to the Top” grant to buy *ALEKS* and other programs in 2013, *ALEKS* is the only program we have retained,” says Mr. Yilmaz. “All of the other programs were short-lived. We were happy

with them for a year, but in the second year, the performance declined as kids got bored with them. With *ALEKS*, kids don’t get bored. They can use it from sixth to tenth grade, and they still like it.”

ALEKS Usage and Performance Data for Harmony Public Schools During the 2016–2017 School Year

	Number of Schools	Average Improvement
Harmony School of Science and Technology	9	18%
Harmony Austin	8	28%
Harmony Dallas	16	28%
Harmony El Paso	7	34%
Harmony Houston North	10	27%
Harmony Houston South	16	16%
Harmony San Antonio	11	27%
Total Improvement		25%

NOTE: Analysis only included *ALEKS* courses with 20 or more students.

“Last year, 96 percent of eighth-grade students passed the STARR, so they could move on to high school. 94 percent of our ESL students [ELLs] passed that same test. That’s something to be proud of.”

The Future

“Mr. Yilmaz says that Harmony Public Schools will continue to use *ALEKS* because it empowers teachers with powerful data and provides students with more choice and voice.

“*ALEKS* grows with our kids because it allows them to progress as they wish,” says Mr. Yilmaz. “A teacher may give them 100 objectives, but

not in a given order, so, for example, they can choose to do graphs and measurements or algebraic reasoning. Being able to set and meet their own goals keeps students motivated.”

Ms. Bivens agrees that *ALEKS* is a unique program that allows students to progress in ways other supplemental curriculum programs do not.

“I would fight for *ALEKS*,” she says. “I would give up other resources to keep *ALEKS*. If you want adaptive learning that caters to all students, *ALEKS* is the answer.”

“I would give up other resources to keep *ALEKS*.”

About *ALEKS*®

ALEKS is an adaptive, online math learning program that delivers a personalized learning path for each student. This robust, digital resource adapts to each student’s level by delivering periodic assessments that determine what each student is most ready to learn. *ALEKS* challenges students while keeping them fully engaged, guiding students on their personalized learning path while eliminating frustration and boredom. For complete details, visit aleks.com/k12.

ALEKS®



To learn more, please visit: mheonline.com/ALEKS-Case-Harmony