

Leading the Charge for Real-Time Data

An Oklahoma district earns praise for its number sense.

By [Dakarai I. Aarons](#)

Oklahoma City

Well before the idea of using data to manage schools gained prominence on the national stage, Oklahoma's Western Heights school district had made the ideal of real-time, data-driven decisionmaking a reality.

Back in 2001, Superintendent Joe Kitchens was already being spotlighted for his focus on creating a longitudinal-data system that would give teachers in the 3,400-student district the ability to make quick decisions to improve student learning, while reducing the time spent compiling reports.

"If I'm the lead administrator in the district and I know [what's happening], I can galvanize people and ask questions. If you ask people in this district if they think I know when something is happening with a student in a detrimental way, they will tell you yes," Mr. Kitchens said in a recent interview. "It's not so much that I know, but it's that I can begin to galvanize people to take actions on behalf of these kids."

Mr. Kitchens, who has led the [Western Heights district](#) for 15 years, sees improving instruction as the main reason to invest in data systems. But the high-poverty, majority-minority district, which includes Oklahoma City's airport in its boundaries, uses data to manage other operations, including transportation and food service.

"Getting the right information in the teacher's hand at the right time is critically important," Mr. Kitchens said. "That's the main reason in my mind for having this kind of information."

While the ability to gather information in real time improves district operations, Mr. Kitchen says the technology itself is only a piece of the solution. Vital to the process is using the

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A video player interface showing a man in a suit and glasses speaking in an office. The video player has a play button, a progress bar showing 02:06, and the Vimeo logo. The text "ed WEEK" is visible in the top left corner of the video frame.

Well before the idea of using data to manage schools gained prominence on the national stage, Oklahoma's Western Heights school district had made the ideal of real-time data-driven decision-making a reality. [Watch fullscreen video.](#)

"schools interoperability framework," or SIF, which is a set of rules and specifications that allows different school software applications to exchange information with one another. ("**Software Framework Opens Up Data-Sharing**," Feb. 2, 2005.)

Rather than purchase outright a data system from a single vendor, Western Heights found SIF-compliant commercial products it felt best fit its needs and integrated them into a system. Its largest expense was creating the data warehouse, which the district was able to pay for with federal e-rate funding.

Today, the district uses 11 software systems that are bound together using what is called a zone-integration server. It serves as a router, sending data back and forth between the various software programs. Business rules have been put in place that determine who gets access to what information and who "owns" each piece of data, said Daryl McDaniel, the district's chief information officer.

A practical sign of the district's focus on data is its central enrollment office, where all families must come to register children for school. What this arrangement has allowed for is a single point of entry for all data in the district, an approach that maintains integrity and helps ensure that the information being shared by the different users is accurate.

Because that student-information system is able to share information with other software, by the time a family leaves the enrollment office and enters a school, the district's transportation department usually already knows where to drop that student off at the end of the day.

Information entered at the central enrollment office also has allowed the district to find cases in which not all of the children in a low-income family were receiving the free or reduced-price meals they qualified for. In the past, cafeteria workers would just add students to their lists as they came through the line.



The data system in the Western Heights district provides automatic information on which bus stop children will use on the day they enroll in school. —Shane Bevel for Education Week

Mr. McDaniel said the key to making the system work is training employees to understand how valuable the information they collect is.

"They can't just take those records and sit them on a desk," he said. "There are other systems waiting on this data."

Larry L. Fruth II, the executive director and chief executive officer of the Washington-based **SIF Association**, a 2,200-member organization of school districts, software vendors, state education departments, and other education groups, said Mr. Kitchens is the most passionate advocate in the nation among superintendents for using the SIF process to make efficient progress operationally and academically.

"He's been for a long time a showcase of what you can do with data when you get it to the

right person at the right time," he said. "Joe was ahead of the curve and wholly committed to it."

The Austin-based **Data Quality Campaign**, which promotes the development of longitudinal data systems, named Mr. Kitchens its 2008 District Data Leader of the Year "for transforming his district into a continually improving organization that is informed by real-time, accurate data."

Mr. Kitchens has also found a supporter in the **Inasmuch Foundation**, an Oklahoma City-based philanthropy that has pledged \$1.5 million to the district to help it in its efforts to create a common language for school accountability with partners across the country.

Robert J. Ross, the foundation's president and chief executive officer, said he was impressed by the district's capabilities and hopes that other school districts can learn from Western Heights. "They did this when no one else in the state, and few in the country, were looking at this investment," Mr. Ross said.

Kim Race, coordinator of elementary curriculum for the Western Heights district, said having a wealth of data at teachers' fingertips has proved useful for them. Without leaving their classrooms, teachers can look and see how each of their students has performed over time on a variety of assessments. The test-score information they see is not just aggregate scores, but is broken down by content area, so that teachers know where to target interventions.

"You can't do that on paper," Ms. Race said.

Districtwide, the ability to analyze data from multiple sources at once has led to a focus on the issue of student mobility. In examining test scores and high school dropout rates, district officials found the lowest achievement was among students who kept moving from school to school and district to district throughout their education careers.

"For our population of students, what matters is if they attend school," Mr. Kitchens said. "Mobility is a big issue. We have a highly mobile society, and our schools may not be tooled up to manage this. We've got to develop ways to deal with this data."

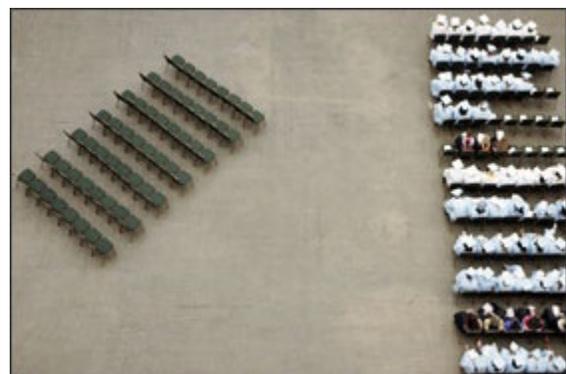
The district has found the difference between mobile and nonmobile students to be the most distinct when it comes to completing high school. The dropout rate among mobile students is nearly twice as high.

Through a campaign to help the community



Superintendent Joe Kitchens says building real-time data systems for teachers to use is simply "the right thing to do."

—Shane Bevel for Education Week



Twenty-nine percent of the members of Western Heights' class of 2009 dropped out. Their absence is symbolized by the empty chairs at graduation last month.

—Shane Bevel for Education Week

understand such data, the district has seen its four-year cohort dropout rate decline from 40 percent in the 2006-07 school year to 29 percent in the 2008-09 school year.

That number is still too high, said Mr. Kitchens, who looks at the latest dropout information every day. "If you don't understand the scope of the problem, to me, it's hard to know if you are making any headway against the problem," he said.

To help address the issue, the district has used technology to create an elaborate set of codes for tracking enrollment. Oklahoma uses 10 codes to explain why students enter and leave school; the Western Heights district has 56. The additional codes came about as school-level staff members found state codes inadequate.

For example, Oklahoma has one code that encompasses not only students who leave the state, but also those who "age out" of school and those who die, said Assistant Superintendent Lisa McLaughlin. "When a child leaves, we know it, and somebody's going to be answering some questions about it," she said.

The district's attendance secretaries were first daunted by such a system, she said, but have since become fans.

"It's given them a lot of information that makes their jobs easier," Ms. McLaughlin said.

Amy J. Cody, a 5th grade teacher at Winds West Elementary School, said having longitudinal data available has helped her in the classroom. "If we see everyone in 4th grade struggled with charts and graphs last year, we incorporate that into our teaching," she said.

When preparing for a parent-teacher-student conference, Ms. Cody goes to her computer and prints out a variety of student-performance data to share with the parents. She's able to show parents the concepts their children have struggled with the most, and provide activities families can do at home to help boost the interventions done during the school day.



Twenty-nine percent of the members of Western Heights' class of 2009 dropped out. But that proportion represents progress from the 40 percent who failed to earn a diploma three years ago.
—Shane Bevel for Education Week

"The parents are grateful, because they get test scores in the mail and they are hard to read. We try to break it down so they are easy to understand," she said.

Having such data has also changed conversations among teachers, Ms. Cody said. She can get together with her peers who teach 6th grade and share the progress her 5th graders are making and get feedback on what will best help them prepare for the next grade.

Teachers also work in smaller groups with students who have trouble with certain content areas.

Jennifer Colvin, the co-principal of Western Heights Middle School, said a data analysis this year allowed the school to figure out that some teachers and students were missing classes too often for extracurricular activities. Class schedules for next year have been rearranged to minimize such disruptions.

Ms. Colvin said such an analysis would have taken forever in the past, as it would have required digging student records out of filing cabinets and looking through each file to find the information needed.

Ms. McLaughlin said even more difficult than setting up the technology has been building a staff committed to using the data systems. To get teachers on board, each school has developed professional learning communities made up of teams that examine the data thoroughly and help pinpoint strengths and weaknesses for the schools.

"The idea being that leadership emerges among the actual people involved at the point of attack," said Cindy Heupel, an educational consultant who works with Western Heights. "One of the things you will feel in this district like I never have before is a tremendous amount of trust."

That trust, she said, has been crucial in having honest conversations about data.

"It always comes back to 'What does the data tell us?' If we know what's real," Ms. Heupel said, "we can make good decisions about students' instruction that support their needs."



Eric Ingle makes his way to a table during lunch hour at Western Winds Elementary School. The district uses its data system to manage its food services, including making sure that all eligible children are enrolled in the federal free and reduced-price meal programs.
—Shane Bevel for Education Week

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