By Dennis Pierce
Editor in Chief,
@eSN_Dennis

Fostering Continuous Improvement

With help from decision support tools, a growing number of districts are focusing on continuous improvement throughout their schools

Over the last several years, the Aldine Independent School District in Texas has raised students' average reading scores by 18 percent, brought up math scores by 29 percent, increased its four-year graduation rate by 11 percentage points, and saved more than $100,000 per year in transportation costs alone.

Each of these successes was achieved by adhering to a simple concept, district leaders say: focusing on continuous improvement.

"Our district has been extremely successful in implementing and sustaining a continuous improvement model," said Janet Ray, director of strategic planning and school improvement for the 66,000-student district.

The concept might be simple, but putting it into practice is not.

"Continuous organizational improvement is accomplished by letting data drive all decisions, aligning objectives and goals throughout the district, and focusing on achievable goals through district, department, and campus improvement plans—while monitoring results," Ray said.

Improvement, page 18

Improvement...

continued from page 17

Aldine ISD, which was recognized for its achievements by winning the Broad Prize for Urban Education in 2009, is one of a growing number of K-12 districts that have adopted a formal plan to drive continuous improvement throughout their schools.

"It's about redesigning processes to be more efficient," said Fred Bentsen, senior vice president of sales and marketing for APQC Education, the school-focused arm of the nonprofit American Productivity and Quality Center.

Bentsen's organization helps schools adopt a continuous improvement plan. Its "North Star" community now includes 85 school districts, including Aldine, that have made this shift—and that figure is growing every year.

"Schools need to break out of the model of, 'Well, we've always done it this way,'" Bentsen noted. Focusing on continuous improvement "is giving them permission to break the model."

A focus on making processes more efficient is key to continuous improvement.

What continuous improvement looks like

There are many paths to continuous improvement, but they tend to follow the same basic approach: analyze, plan, implement, evaluate—then start the cycle all over again.

At Aldine, a large, diverse urban district with a poverty rate of 84 percent, district leaders developed five major goals that would define their actions: (1) improve student achievement; (2) develop safe learning environments; (3) increase the satisfaction of students, staff, and parents; (4) maintain fiscal solvency by making smart decisions; and (5) manage assets in an effective manner.

In tackling the first goal, a team of senior district leaders, curriculum specialists, principals, and teachers analyzed student data from state assessments and the Iowa Test of Basic Skills. They identified gaps in instruction, then refined the district's curriculum and designed professional development to address these needs. They also created a district-wide Model of Instruction (MOI), placing students at the center of the learning process, and established a management system to make sure this MOI was implemented across the district with fidelity.

Processes that support this MOI are evaluated every year and revisited as needed, based on what the data say. Since the MOI was implemented in 2003, average reading scores have increased 18 percent, Ray said; math scores have increased 29 percent; social studies achievement has grown 20 percent; science, 50 percent; and writing, 12 percent.

In analyzing student data, Aldine officials realized at-risk students weren't graduating from high school within four years, because they lacked enough credits to earn their degree. This led to the development of an online credit recovery program, which has been instrumental in raising the district's four-year graduation rate from 69 percent in 2008 to 80 percent in 2012.

Looking at trend data from Aldine's transportation department, district officials realized their costs were going up because of a string of school bus accidents. "The average was one at-fault bus accident for every 274,000 miles," Ray said.

Transportation officials gathered information on school bus discipline, bus drivers' attitudes with students, safe driving records, the stated cause of accidents, times of the accidents, and more. They sifted through the information and discovered the root causes included driver inattention, turning, backing up, drivers following too close, and failure to control speed.

In response to these findings, district officials developed a new bus driver training program that includes video footage to enhance driver awareness. They also convened monthly Accident Review Board meetings, increased driver safety meetings to six times per year, and initiated online driver training. As with other district operations, this process is monitored and evaluated yearly, and revisions are made based on stakeholder surveys and new accident data.

Since Aldine launched its accident reduction program, "the yearly at-fault school bus accident rate has decreased from 43 in 2008 to 18 in 2012, with a savings of over $100,000 per year," Ray said.

Improvement, page 20

Learn from Yesterday... Understand Today... Plan for Tomorrow

TEMPLETON DEMOGRAPHICS

- Demographic Studies • Enrollment Projections
- New Home Reports: Inventory and Analysis
- Build-Out Scenarios • Boundary Planning
- GIS Mapping Services • School Zone Finder

Templeton Demographics is a consulting firm specializing in demographic studies, attendance zone planning and enrollment forecasting that helps school districts establish enrollment projections, make recommendations for new schools, establish attendance boundary changes, and accommodate growth at existing schools.

INFO@TDEMOGRAPHICS.COM • WWW.TDEMOGRAPHICS.COM

Improvement...

continued from page 18

Decision support tools are key

Focusing on continuous improvement means collecting lots of information to determine what is working and what isn't, and decision support tools play a key role in this process.

Aldine ISD pulls data from its web-based student management system, PowerSchool SMS, and other administrative software to create customized scorecards for each department. The Calcasieu Parish Public Schools, a 33,000-student district in southwestern Louisiana, uses a cloud-based geovisual analytics program called GuideK12 to support its continuous improvement plan.

"For over a decade, we've been using the Baldrige quality principles to drive continuous improvement, and our district leaders are trained in the Baldrige method," said Chief Technology Officer Sheryl Abshire. "We've done a lot of work around process management, and what helps is being able to parse the data in a visually analytical way."

GuideK12 allows users to take information from any school district database, such as a student information system, and depict it visually on a map of the community. All students and resources are geo-coded, so they appear as dots on the map.

"You can query and filter the information by any student characteristic, like special needs or English as a Second Language," said Chuck Amos, CEO of GuideK12. Users also can overlay many types of data on top of each other, and each data set is color-coded to distinguish it from other information.

Linking student data with household and geographical information provides a whole new dimension to strategic planning, Amos said—and it has tremendous implications for resource allocation.

"Geovisual analytics provides a unique way to see trends and deploy resources that schools haven't had in the past," he said.

Calcasieu Parish uses the software to study the migration patterns of students in order to anticipate future needs. For instance, district officials can see where the third-graders who struggle with reading live, and they can plan accordingly, such as by provisioning an extra reading specialist at the middle schools these students are most likely to attend. This allows the district to be proactive instead of reactive in addressing key challenges, Abshire said.

"To be able to visualize that information in real time has made us much more informed and efficient," she said.

What's more, GuideK12 enables users to run different "what if" scenarios to see what the effects of a decision would be. All scenarios are saved within the system for future discussion.

Abshire's district uses this functionality to make difficult choices about boundary changes or school closings with as little disruption as possible. With the click of a mouse, officials can visualize the populations of students who would be affected—simply by drawing different boundary lines or choosing different schools to close.

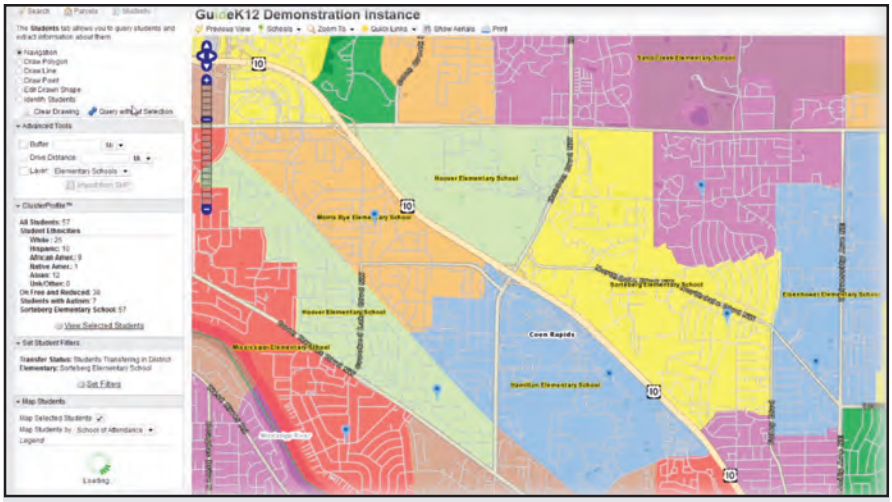
"So often, school boards make decisions like these based on politics," she said. "Now, we're able to present the facts. And if someone asks a question, like 'What about this option,' we can run that scenario in about 20 seconds. We don't have to say, 'Well, we don't know—let us look at the data and get back to you at the next board meeting.'"

What typically becomes a long, emotionally charged discussion "is nipped in the bud," Amos said, "because you have the data at your fingertips."

Abshire said her district has been using GuideK12 for about a year and a half, and district leaders keep finding new ways it can support their continuous improvement processes.

"As we continue to run reports and test various scenarios, we're creating

Improvement, page 22



GuideK12 allows users to take information from any school district database, such as a student information system, and depict it visually on a map of the community. All students and resources are geo-coded, so they appear as dots on the map.

SKYWARD EMPOWERS YOUR DISTRICT TO STAY IN TUNE WITH STUDENT SUCCESS

Data-driven analytics to improve your students' achievements.

Streamline workflow processes to reduce non-instructional costs.

Enhanced communication tools to increase parent involvement.

Digital tools to support learning in today's students' hands.

Manage personnel data to retain quality staff, improve professional development, and provide exceptional services to your employees.

SKYWARD®

With Skyward's leading K-12 administrative software solution, you can get the results you need to make positive changes in your district.

Learn more at www.skyward.com

Improvement...

continued from page 20

new efficiencies," she said. "I have people tell me, what used to take a few weeks to figure out now takes 15 minutes. In a school district, time is money—and for our people to be churning and churning, trying to find answers, that's just not efficient."

She added: "We're working hard, but now we feel like we're working *smarter* as well."

Districts need leading, not lagging, data

Amos said GuideK12 was build on open standards, so school districts can import any geospatial data set, or "shapefile," from other sources to help with their planning and decision making.

For instance, local law enforcement officials typically keep shapefiles on gang activity and crime trends in their communities, Amos said. District officials easily could import these files into the software to help them visualize high crime zones when planning walking routes, or deploying school resource officers.

Local immunization records from the state board of health can be imported to see where it makes the most sense to set up clinics to boost immunization rates. Weather tracking data from the National Oceanic and Atmospheric Administration can be used to overlay the projected path of a hurricane on top of a school resource map, helping officials figure out how best to shift resources to facilities that can serve as temporary shelters.

"If it can be represented in a geographical way, it can be brought into the system," Amos said.

For districts that have shapefiles indicating the development of new housing, the software can help them anticipate future growth and plan new school sites. That's one of many ways the Northwest Independent School District in Texas is using the software, with help from demographer Templeton Demographics.

Today's schools are "rich in data, but most of this is lagging data," said Bentsen of APQC Education. For continuous improvement to work, "schools need *leading* data," Bentsen said.

Bob Templeton, president of Templeton Demographics, found that to be true when he worked as the director of demographics and planning for another Texas school system. "Having accurate enrollment projections is very important," he said, "because a district's funding depends on its student population." And funding, in turn, affects all other plans.

At the time, Templeton's district was relying on yearly demographic reports to project enrollment. But the district was growing by about 2,000 students per year. To stay ahead of this rapid growth, "we needed to see the data more frequently," he said.

Templeton began purchasing quarterly snapshots of local housing development, and he built a shapefile with this information. His school district had so much success in anticipating future growth that other nearby districts asked for help, and Templeton left in 2006 to form his own demographics company.

"We provide reports, maps, and analysis," he said. "We stand ready to help school districts throughout the year."

To plan their staffing needs properly, school districts ought to have an accurate sense of next year's enrollment by December, so they can start budgeting and interviewing candidates, Templeton said. He added: "Having quarterly reports better positions schools to build staff."

From a facilities planning standpoint, it takes two to three years to build a new school from conception to ribbon cutting. "Districts need as much notice as possible, because it takes so long to build these schools," he said. "If you get reports only yearly instead of quarterly, you're already behind."

Northwest ISD uses the demographic information from Templeton's company—which includes new home-building activity, as well as information about vacant lots on the market—in conjunction with GuideK12 to provide a powerful decision support tool. The combination is helping Northwest ISD accommodate an 8-percent annual growth in students.

Superintendent Karen Rue attributes the district's success to "being able to make decisions that anticipate" emerging challenges.

Seven years ago, Northwest ISD had 7,700 students; today, that figure stands at 19,000. Without a focus on planning and continuous improvement, Rue said, such enormous growth would not have been possible.

The idea of continuous improvement underlies everything the district does, from how it designs learning experiences for students to how it delivers professional development to teachers. Each student has his or her own learning device, and students are producing authentic work that is peer-reviewed.

"We know we're better today than we were last week," Rue said, "and we'll be better next week than we are today."

Data also must be reliable

Having reliable data that can support continuous improvement was so important to Florida's Seminole County Public Schools that the district created a new position around this concept, said Tim Harper, director of staffing and state reporting.

Seminole County has focused on continuous improvement for the last decade, Harper said—and that's a big reason why it's one of the few "A"-rated school systems in the state.

For the last two years, Seminole County has had a "Data Quality Administrator" position. This person reports to Harper, and she's responsible for monitoring the quality of data, making sure teachers and administrators have accurate, up-to-date information on which to base their decisions.

Seminole County also uses a soft-

Improvement, page 23

Improvement...

continued from page 22

ware program called Certify, which is a data validation tool from Certica Solutions, to ensure the accuracy and completeness of the data it collects.

District officials hold monthly data quality meetings with representatives from each school. These meetings offer "a forum where we have a chance to go over any concerns, changes that we need to make in our processes, and other needs," Harper said. An instructional support team also meets every Monday to discuss students' progress toward learning goals.

"In my opinion, you have to have a good student data system as well," Harper said. Seminole County went through a comprehensive search process before choosing Skyward's School Management System as its data management tool.

"It's very streamlined, and we don't need many workarounds," Harper said of the system. "Before, we had many hands touching the data—and that introduced too many potential failure points."

With the district's old software, he explained, as many as 10 people were involved in data entry and reporting; now, "we've cut that number in half."

Until now, Skyward hasn't included a data analytics tool as part of its School Management System. (To analyze achievement data and monitor students' progress toward state standards, Seminole County uses a program called EdInsight, from OnHand Schools.)

But that will change this spring, when Skyward plans to introduce a program called myDistrict360, said Ray Ackerlund, vice president of marketing and product management for the company.

Having frequent, reliable data is key.

A customizable information dashboard, myDistrict360 will enable teachers and administrators to look at student achievement data in graphical form, then drill down by class, student, or standard to see how students might be struggling.

"At Skyward, continuous improvement is something we've focused on as a company for several years," Ackerlund said. "We think it's great to see this type of approach playing out in schools now, too."

Other tips for success

For districts that are new to continuous improvement, it can be daunting figuring out where to start.

Bentsen addresses this question with one of his own. "How would you eat an elephant?" he asks. The answer: "One bite at a time."

Pick some areas that are causing your schools pain, Bentsen said. Look at what the data say, and identify two or three processes that lead to those outcomes. Then, commit to changing those processes.

This commitment to change is important to Abshire. "We're not sitting still and satisfied," she said. "We're continually looking at our processes and improving them."

Involve as many people as you can in the decision-making process, Rue suggested—including students. "Having that student voice is so powerful," she said. "We literally changed our vision statement based on student feedback." It was the students themselves who suggested that Northwest ISD focus on "graduating future-ready students."

Ray agreed that continuous improvement is a big endeavor. "Start slow," she said, echoing Bentsen's advice. "Pick a handful of areas you want to improve."

Data will tell you what your needs are, she said, adding: "Look at data frequently. … Those data have to be your guide to planning, monitoring, and revamping as needed." eSN

Dennis Pierce is the Editor in Chief of eSchool News. Follow him on Twitter: @eSN_Dennis.

GuideK12 maps your way to more informed district decisions

Easy

Our web-based, tool is interactive and easy to implement and use with no technical expertise required. From superintendents, to business managers to school board members, district leaders in any role can find answers with a few clicks. Role-based security settings ensure the right information is available to the right people quickly and easily.

Real-Time

No more waiting weeks for others to painstakingly unearth important details hidden in static spreadsheets. GuideK12 allows users to filter any student or household characteristic and see instant results displayed on the map, bringing a variety of disparate data sources together in one interactive picture.

Transparent

It's easy to earn trust and support from diverse stakeholders in the community when a wealth of scenarios can be shown with current data. GuideK12 records all the steps for every scenario, allowing for a fact-based dialogue to emerge.

Versatile

GuideK12 simplifies some of the most complex decisions a district can make; changing attendance boundaries, examining resource needs, analyzing school choice movement, mapping academic performance or emergency preparedness. GuideK12 simplifies these decisions by providing deeper insight.

Dr Sheryl Abshire, CTO
Calcasieu Parish
Public Schools, LA
33,000 students

> *We are now able to see data that wasn't previously available to us all in one interactive map. We make decisions with current data in the best interest of our students with GuideK12. It allows us the ability to create scenarios and instantly see how the changes affect the make-up of the school. What used to take weeks now takes minutes.*

VISUALIZE | **ANALYZE** | **PREDICT**

COOL TOOL AWARD 2013 THE digest

District Administration TOP 100 PRODUCTS

NSBA INNOVATOR SHOWCASE WINNER

//CODiE// 2013 SIIA CODiE FINALIST

Request a demo today

GuideK12™
Geovisual Analytics for Education