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## **Risk & Reward**

**Both businesses and school districts face risks as they navigate an emerging and highly competitive market for data tools.**

**By Rhea R. Borja**

With the federal No Child Left Behind Act requiring school districts to show how their students are—or are not—improving, the past few years have seen the commercial marketplace for K-12 data-management systems crack wide open.

Technology companies are scrambling to create or revamp Web-based products in a bid to provide fast, efficient, user-friendly data tools that will help educators bolster the bottom line for schools: student academic performance.

Both schools and companies potentially stand to gain from online data management. The nation's nearly 15,000 school districts could be a lucrative niche for data-oriented software companies and their nonprofit counterparts. And accountability-conscious districts can use technology-based assessment and analytical tools to delve deeper into how students learn and then target and improve instruction accordingly.

But both educators and vendors face risks and challenges as they navigate the choppy waters of an emerging and highly competitive market.

School districts, especially small ones, often lack the money or staff to manage comprehensive data systems. And once a district decides to invest in such a system, its leaders are often under pressure to dramatically change the district's culture: to coax and train already-burdened teachers to tap into new information and then adjust what they do in the classroom.

Companies, for their part, are trying to predict and produce the data tools schools need to make good showings on local, state, and federal accountability measures, as well as make Web-based systems customizable and affordable. They must also provide districts with technical support, training, and general hand-holding.

The K-12 market for computerized student-data and business-management systems is steadily growing, says Catherine Burdt, the lead technology analyst for Eduventures Inc., a Boston market-research firm that tracks education businesses. Sales in that broad area are expected to reach about \$973 million this year, an increase of 4.6 percent from last year. In addition, Burdt forecasts that sales will grow another 5.8 percent in 2007.

"This market is very dynamic right now," says Anne Wujcik, an education analyst and editor for Quality Education Data, a marketing and consulting company owned by New York City-based publisher Scholastic Inc. "The [ground] is morphing underneath the players themselves."



A whiteboard at the Colorado headquarters of Executive Intelligence Inc. shows the shipment status of the software company's data-management products.

—Michael S. Lewis for Education Week

## System Types Blend Together

The variety of commercial data systems available to schools is staggering. Dozens of companies and organizations—from small start-ups to large, established companies whose client lists include multinational corporations and government agencies—offer a wealth of data tools.

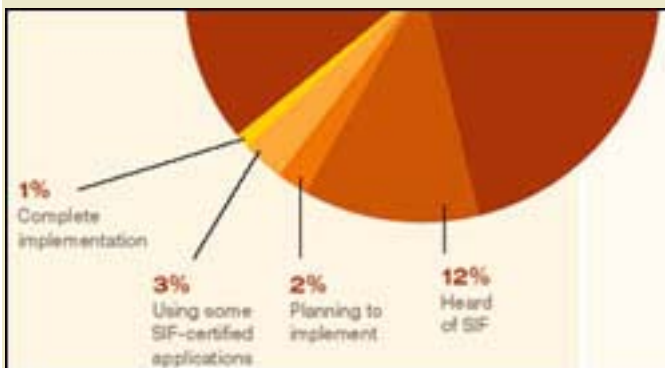
Jeffrey C. Wayman, a professor in the educational administration department of the University of Texas at Austin, divides K-12 data systems into three broad categories: student-information systems, assessment systems, and data warehouses. But he and other experts say the lines between those categories are blurring rapidly.

Student-information systems, such as Apple Computer Inc.'s PowerSchool, Chancery Software Ltd.'s Chancery SMS, and Pearson School Systems' SASI, compile and manage demographic data, attendance, and grades, as well as other daily operations. Those systems can also do limited data analysis and reporting.

## What is SIF?

Through the Schools Interoperability Framework (SIF) initiative, developers and users of data-management software are working to establish a common set of rules, definitions, and specifications that will enable software programs from different educational organizations to share information. Currently, the vast majority of schools have either very little familiarity with SIF or none at all. Only about 4 percent of schools have started to implement SIF-certified applications in their data systems.

\*Click image to see the full chart.



SOURCE: Market Data Retrieval, "The K-12 Technology Review 2005"

"Users have real-time access to attendance, grades, homework assignments," says Mary McCaffrey, the chief operating officer of Folsom, Calif.-based PowerSchool. "We're looking to make teachers' work easier."

In Wyoming's Lincoln County District 2, for example, teachers take attendance and input student grades in PowerSchool. Principals can easily see how many students receiving free or reduced-price lunches, for instance, missed classes in a given week.

Students in the rural, 2,500-student Lincoln County district can also log in to the secure server from home and see their grades. In a typical week, 87 percent of students in the district check their grades online. In addition, 15 percent of parents have signed up for e-mail messages from the district—sent through PowerSchool—to inform them of their children's grades and attendance, says Bart Kunz, the district's technology director.

"Before, parents didn't have access to how their kids are doing," he says. "Now, they have immediate feedback. When a teacher marks a student absent in class, that parent knows immediately."

### **Benchmark-Test Market Blossoms**

Assessment systems, such as Plato eduTest by Bloomington, Minn.-based Plato Learning Inc., allow educators to give frequent benchmark tests and see the results right away.

Such systems organize students' scores according to how well they performed on the district and state standards that they were tested on, but at such a granular level that teachers can instantly see how students did in such specific areas as reading comprehension and vocabulary.

Another is Measures of Academic Progress, or MAP, by the Northwest Evaluation Association, based in Lake Oswego, Ore. MAP is a computerized, adaptive test system that provides information on student growth from year to year.

The 33,000-student Poway Unified School District in California's San Diego County has used MAP since 2000 as part of an overall data-warehouse system created by Cary, N.C.-based SAS Institute Inc. The system organizes not just student academic and demographic data, but also district finances, personnel, and other "back office" information. ("**District Initiative**," this report)

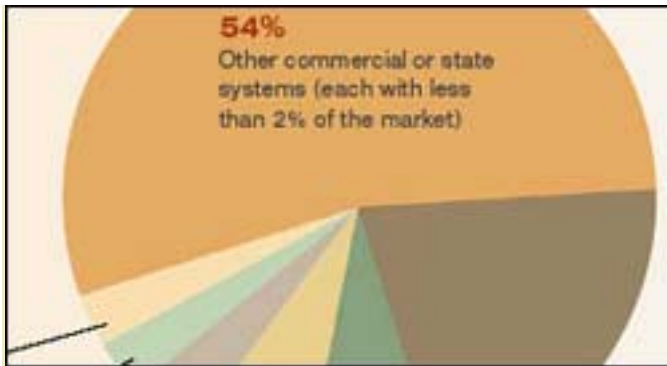
"I don't need a test that tells me a student can't read," says John Collins, Poway's deputy superintendent. "I already know that. I need a test that shows where a student is in learning [how to read]. One test is an autopsy, and the other is a physical."

Data-warehousing systems, offered by companies such as Lakewood, Colo.-based Executive Intelligence Inc.; White Plains, N.Y.-based eScholar LLC; and SAS Institute, compile and clean up data from a district's various databases, house the information on company servers, and offer some analytical and presentation tools.

### **A Fragmented Market**

Only a handful of student-information-system (SIS) platforms have captured a measurable slice of the data-management market. Over half of all public schools use a data-management program with very low market share (one adopted by fewer than 2 percent of all schools).

\*Click image to see the full chart.



SOURCE: Market Data Retrieval, 2005 Public School Technology Survey

It's not easy to gather the information, which often is contained in outdated computer databases, filing cabinets in scattered offices or buildings, and stacks of three-ring binders collecting dust on shelves in district headquarters.

Nor is it easy to then ensure that the information doesn't contain mismatches or mistakes, data experts and company officials say. "We collect the broadest scope of data available," says Shawn Bay, the chief executive officer of eScholar. "We put your data in the light of day, and we tend to find errors and inconsistencies."

That process can take weeks, if not months. And some districts find that if they do the task themselves, they tend to redo it several times because of the breadth of data they have, according to company officials.

But once administrators have the data at their fingertips, company representatives say, they can sort and analyze the information in a variety of ways to figure out how to manage their districts more effectively and, most important, improve student achievement.

"What we want to do is help districts have a floodlight on [their data] so they can see a holistic view of their districts' operations," says David Van Wolde, an education consultant for SAS inSchool, the education arm of SAS.

"But then we want a laser focus on that individual student, so we can understand how each child is doing. That's where data warehousing comes into play," he continues. "Our goal is to show quick value, quick return."

### One-Stop Shop?

No one company offers the "killer application," a one-stop-shop solution, though some claim they do, says Wayman, the University of Texas professor. He points out that companies tend to be stronger in their core businesses and weaker in their add-on capabilities. ("**Aware of All Students**," this report)

As a result, some districts contract with more than one data provider. Poway Unified, for example, works with both SAS Institute Inc. and NWEA, while the Irvine, Calif., school district contracts with Plato Learning and Executive Intelligence, which offers data-warehousing and -analysis tools to corporations, government agencies, and school districts.

Some companies partner with each other to provide more comprehensive data packages to schools. For example, New York City-based Wireless Generation Inc., which provides online early-reading assessments, partners with New York City-based SchoolNet Inc. to run the data-management system of the 180,000-student Judson Independent School District in Texas.

Still others offer two or more types of data solutions. For example, Achieve Data Solutions LLC, based in San Bernardino, Calif., offers data-warehouse and assessment tools, such as a 1,000-item test bank whose questions are aligned to state standards. Soon, the company will

roll out Iris, a student-information system that will work in tandem with its other data tools. ("[Finding the Funding](#)," this report)

NWEA also started offering a data-warehouse and student-information system, called the Dynamic Reporting Suite, that districts can link to the organization's MAP adaptive benchmarking system.

SchoolNet, which works with big urban districts such as Chicago, Philadelphia, and New York, offers all three: data warehousing, analysis, and benchmark assessments. The company calls its data products "instructional-management solutions." Competitors include Princeton, N.J.-based ETS with its Instructional Data Management System and San Diego, Calif.-based EDMin, which offers INFORM, a "standards-based learning management system."

SchoolNet, like other companies, offers professional development for teachers, but in a more structured way with PD Planner. The Web-based software product helps administrators implement mentoring programs and align teacher training to district initiatives and state standards.

Professional development focused on data management and analysis is critical and should be done at the school level, educators and technology experts say, for a district's data initiative to take root and grow. "There needs to be a lot of professional development [for both schools and businesses]," says Burdt of Eduventures Inc. "Teachers may not be necessarily mandated to go to training, but they are mandated to use the data system. That's a recipe for dashed expectations."

### **Cost Can Be an Obstacle**

Other challenges for districts, as well as companies, are funding and human capital. Data systems can run in the millions of dollars, with some costing more than \$12 per student and others less than \$3 a student.

Price limits what companies can offer. Companies may only be able to offer districts prebuilt data systems, instead of more flexible, customizable systems.

And a district needs at least a small, trained staff to help manage its data system and be principal contacts for data-system providers. Even larger districts tend to fall short on human resources, experts say, and as a result, companies offer schools much more technical support and hand-holding than they do for their corporate clients.

"When you see how unlike schools are from big businesses, you start seeing problems," says Wujcik of QED. But she says the K-12 data market is "very invigorating" and will be "ultimately profitable" for companies. "The market is still embryonic," adds Mark S. Williams, the president of Executive Intelligence Inc. "Everybody is still learning what works."