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States Struggle to Computerize School Records

By SAM DILLON

Nearly all states are building high-tech student data systems to collect, categorize and crunch the endless gigabytes of attendance logs, test scores and other information collected in public schools — and the projects in some states seem to have gone haywire.

In North Carolina, a statewide school computer system known as NC WISE is years behind schedule, and estimated costs have risen to $250 million. Teachers have nicknamed it NC Stupid. California has spent $60 million on a system, and officials estimated that the state would spend an additional $60 million in coming years to help school districts connect to it.

And in Idaho, a private foundation spent $21 million on a data system for the public schools but pulled out when estimated completion costs hit $180 million.

"It metastasized way beyond the original concept," said Jason Hancock, an education analyst for the Idaho Legislature. "Costs ballooned, and the funders just pulled the plug."

The state-by-state drive is one of the nation's largest computerization efforts. Many states began planning initiatives after President Bush's signature education law, No Child Left Behind, was signed in 2002, requiring schools to report rivers of student data.

A number of states also hoped that by tracking the achievement of individual students from year to year, they could make the data more useful and more accurately answer questions like which schools were producing the strongest growth and how many students drop out of high school. With projects under way from Maine to Hawaii, the efforts are costing taxpayers several billion dollars a year.

The problems have been especially severe in North Carolina and Idaho, but efforts in many states have cost more or taken longer than expected.

There are success stories. Georgia has a running system that will track grades and test results for each of the state's 1.3 million students from year to year and school to school, allowing administrators to compare student achievement with factors like school expenditures.

Begun in 2003, the system cost $14.5 million, said Howard Woodard, chief information officer for the Georgia Department of Education. But the state spent at least $85 million on unsuccessful earlier efforts, including one championed by Roy E. Barnes when he was governor.

"I spent $50 million trying to put together a student information system that would work, and it frustrated the heck out of me," said Mr. Barnes, a Democrat who served from 1998 to 2002 and is now a co-chairman of

a private bipartisan commission reviewing the workings of the No Child Left Behind law.

Mr. Barnes, a supporter of annual testing, says he remains convinced that statewide data systems are crucial for making the federal law's accountability provisions work.

"But many states can never quite get it together," he said. "These systems are expensive, arcane, and some principals and teachers groups don't want them to work." He urged the federal government to offer increased technical help to states building the systems.

Valerie Smith, a spokeswoman, said the federal Department of Education frequently invited state data managers to meetings to offer technical assistance. And in November, the Education Department awarded $52.8 million in grants to 14 states to help them build computer systems that are described as longitudinal because they track student records from year to year.

Mary Ann Wolf, executive director of the State Education Technology Directors Association, said her organization saw in the new data systems the potential to help teachers zone in on individual students' learning needs. The federal aid, she said, is a "great beginning," but "only a drop in the bucket" relative to what it costs even one state to develop a full-blown student data system.

"These systems are incredibly costly," Ms. Wolf said.

Most large computerization projects are complex and challenging. But building a data system to collect information from all the schools in a state can be extraordinarily daunting, involving the integration of computer systems used in hundreds of districts, each of which may have multiple databases using distinct operating systems.

The National Center for Educational Accountability, a group affiliated with the University of Texas, conducted a survey last year of states' educational technology plans and found that at least 48 states were building longitudinal student data systems.

The survey found Florida, Georgia, Louisiana, Ohio, Tennessee, Texas and Utah to have some of the most advanced statewide data systems.

The projects vary, but 36 states have assigned a statewide number to every student, a prerequisite for tracking individual student data year to year and school to school. Schools often keep information on tests, grades, discipline, finances and teachers in separate databases, and many states are now building data warehouses that enable them to integrate with one another. New York, for instance, is spending $32.1 million over several years to build a state data repository system.

Some states also want to give parents the ability to track their child's attendance and achievement through a secure Web site.

North Carolina officials have been working for years to build NC WISE, short for Windows of Information on Student Education, to manage student attendance, grades and test reports; schedule classes; and give teachers and principals quick access to a student's entire record, from kindergarten through 12th grade.

Glitches had already appeared in the system when I.B.M. bought out an original contractor in 2002. By last fall, NC WISE had been extended to one-third of the state's 2,200 schools at a cost of $110 million and had built a reputation for sluggishness and freezing. In February, North Carolina canceled I.B.M.'s contract, and state officials said they hoped to finish the system by 2008, at an additional cost of $140 million.

Clint Roswell, an I.B.M. spokesman, said the company had helped develop "a highly comprehensive system" and had fulfilled its contractual obligations.

But Tito Craige, chairman of the social studies department at East Chapel Hill High School, said the system had infuriated teachers by requiring multiple passwords in a session, by losing enrollment and grading data, by reporting late students as absent, and by crashing when thousands of teachers across the state signed on simultaneously.

Philip Price, an associate superintendent in the North Carolina Department of Education, said the state had learned from the project.

"The lesson is, don't bite off more than you can chew," Mr. Price said.

Officials at the J. A. and Kathryn Albertson Foundation described a similarly painful learning experience in December 2004.

"We underestimated the challenges and overpromised on results," the foundation said.

The foundation had sought to link Idaho's 114 school districts in a system that would help teachers log attendance and record grades, and parents to monitor test scores and attendance from a home computer. But after 29 districts had been wired in at a cost of $21 million, a consultant warned that the project would cost $180 million to complete.

Shawn Bay, the founder and chief executive of eScholar, a software company that has helped build successful student data warehouses in 20 states, said that efforts to build educational data warehouses failed no more frequently than similarly large-scale efforts in the corporate world. He pointed out, though, that student data is harder to collect and manipulate than product data.

"If you're tracking boxes of toothpaste, all are essentially the same size and flavor," Mr. Bay said. "But every student is different, and tying together all the information schools collect about them is incredibly complex."

In several states, school computerization projects have run off the rails because the officials designing them failed to consult with the schools. In North Dakota, for instance, many of the state's 218 districts, many of them with only one tiny rural school, rebelled after Department of Public Instruction officials spent $2.4 million on a system that teachers and administrators found clumsy to use.

In December, under pressure from the Legislature, the department canceled its contract with the company that built the system. A report in March by Robert R. Peterson, the state auditor, said the department "did not encourage input from the school districts in the planning."

The California Legislature has spent $60 million since 1997 to develop an "electronic statewide school

information system."

Maine officials said they had spent five years building the Maine Education Data Management System, at a cost of about $5 million, and are still working kinks out of it.

"It's been a painful few years," said Charlotte Ellis, a systems analyst for the Maine Department of Education.