

Information Builders enables agile information solutions with business intelligence (BI) and integration technologies. WebFOCUS – the most widely utilized business intelligence platform – connects to any enterprise system or application and enables simple and intuitive interaction with information.

Omaha Public Schools

Snapshot

Organization

Omaha Public Schools in Omaha, Nebraska, where more than 6,000 teachers and staff are devoted to the educational needs of 46,000 students at 87 schools.

The Challenge

Accelerate the process of collecting Criterion-Referenced Test (CRT) results; make it easier to present them to teachers and staff throughout the district.

The Strategy

Create a Web-based data entry and reporting environment that pulls many reporting and analysis activities into one streamlined process, delivering reports to authorized users on demand.

The Results

Reduced time required to enter CRT information. Teachers can generate reports directly from the database. The district has better access to assess student performance.

Information Builders Solution

WebFOCUS, Consulting, and Customer Education.



From left to right: Dave Patton, technical support coordinator; Dave Peterson, Web systems lead; Nick Cronick, systems analyst; Jerry Andersen, Web software developer; Tom McClung, executive director of information management services (IMS).

WebFOCUS Makes the Grade

At Omaha Public Schools

Today's K-12 educational institutions are under constant pressure to meet state and federal standards that measure student performance in key academic areas. The most innovative schools are automating the process of administering, recording, and sharing standardized test results so teachers and students don't have to wait for information that can help each student succeed.

Omaha Public Schools (OPS) in Omaha, Nebraska, is a prime example. For the last 20 years, OPS has had a systematic process in place to identify the ideal curriculum, implement effective instruction, and assess the results. One of the primary vehicles the district uses to monitor student progress is the Criterion-Referenced Tests, or CRT.

CRTs are an integral part of the teaching-learning cycle. Unfortunately, with 87 schools and 46,000 students, entering, tracking, and presenting CRT results in a timely fashion is a massive undertaking. To simplify the process, Omaha Public Schools is using the WebFOCUS business intelligence environment from Information Builders.

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“We’re enabling data-driven decision-making for student achievement,” says David Patton, a technical support coordinator in the Information Management Services (IMS) division at Omaha Public Schools. “This will help us improve the overall curriculum as well as determine how to address each child’s needs so they can be more successful in their learning. WebFOCUS helps us pull many reporting and analysis activities into one streamlined process.”

Dedicated to Student Success

The charter of IMS is to provide technology services throughout the Omaha public school district. Dr. Thomas McClung, IMS executive director, heads up a team of 95 IT personnel, some stationed in the central administration building and others at the various schools.

IMS selected WebFOCUS because of its ability to access, combine, and present a wide variety of data – both historical data from the district’s mainframe computers as well as modern data types underlying its client/server information systems, such as Microsoft SQL Server. Their first big WebFOCUS project involved developing an electronic data-entry and reporting system for the district’s CRT program.

“The results of CRTs serve as an important source of information to determine how well students are learning the curriculum and how well the staff is teaching that curriculum,” explains Patton. “For instance, a CRT score might define a student’s proficiency performing basic arithmetic problems or writing a persuasive essay.”

When the content of the CRT matches the content that is taught in the classroom, the district gains important information about its progress meeting academic standards.

According to David Peterson, Web systems lead at OPS, the current method for collecting CRT results is through the use of bubble sheets, also known as scan sheets. It’s a laborious process that involves printing up to 300,000 scan sheets per year. These sheets are distributed to teachers throughout the district who must fill them out manually so the information can be input via an optical scanning device. Personnel in the research department then manipulate the data, import it into a Microsoft Access database, and concatenate the results into a student information system from Pearson School Systems called SASI. Once the results are in the Microsoft Access database, the research department creates reports and delivers them to each teacher.

“The current systems get the job done, but the overall process is a bit tedious and too time-consuming – especially when it comes to sharing the results,” Peterson says. “The main drawback with the current system is the lengthy turnaround time for getting the CRT results back into the teacher’s hands. The information loses its effectiveness over time.”

Devising an Efficient Reporting Curriculum

In the summer of 2005, both the Curriculum & Learning and Research Departments worked with the IMS team to begin laying out specifications for an online reporting system. It would be created with WebFOCUS Maintain, a high-performance solution for building and deploying business intelligence and data maintenance applications. Three IMS developers attended a Maintain Boot Camp conducted by Information Builders’ Customer Education division, who then worked with

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OPS in their environment to help them through a critical phase of the development process. The team completed a prototype of the new CRT reporting system in just two weeks. In addition to Maintain, they used WebFOCUS Developer Studio, an open environment that allows for rapid development of virtually any type of Web-based reporting system.

IMS developers attribute this rapid development cycle to the extensible WebFOCUS environment. They particularly liked being able to jump between the GUI interface of WebFOCUS Developer Studio and the underlying 4GL FOCUS code. “The GUI uses a familiar Windows-like motif that makes it very intuitive for most developers,” says Jerry Andersen, a developer in the Web Systems group at OPS. “We also like the FOCUS 4GL, which is not as cryptic as other languages. WebFOCUS allows us to integrate SQL statements, which gives us additional options.”

To access the new system, users simply need a Web browser and a network connection. Microsoft ASP pages control user authorization. Once authorized, users can select the school, classes, and students they wish to view.

“The online entry screen, created with WebFOCUS Maintain, displays a current list of students in a class and allows for immediate entry of CRT results,” says Patton. “Then, by generating WebFOCUS reports, teachers and administrators can immediately view or analyze the data. Previously, there was no way to view CRT data online. Thus developing individual reports was a manual, paper-driven process.”

New Buzz on Campus

Omaha Public Schools is currently ramping up production for the new reporting system. Currently, the CRT application and associated Microsoft SQL Server database reside on a pair of Dell servers running the Microsoft Windows 2003 operating system. Soon they will be deployed on Dell blade servers to make it easier to scale the system as more users come online.

“The CRT reporting application has been well received by a small test group,” says Patton. “A larger pilot is planned for early November 2005, which will include about 100 teachers.”

Meanwhile, the IMS team is in the process of developing a variety of standard reports, which teachers and staff can access through a Web-based menu system. Eventually, IMS plans to enable ad hoc querying as well. If all goes as planned, the production version will be rolled out in January 2006.

Patton estimates that between 3,500 and 3,800 teachers will use the system. Using WebFOCUS, they will be able to quickly gather feedback about their students. Authorized users will also be able to perform needs-based assessments to better understand the performance of an entire grade, school, or even the whole district. This will help administrators determine which areas they need to target to fulfill the CRT standards.

“From what we have seen so far, we’re hoping to dramatically reduce the time teachers spend inputting CRT data into the new reporting system,” says Andersen. “By entering CRT information online, teachers can generate reports directly from the database whenever they need them.”

Find Out More

To find out how our solutions can help your company succeed, talk to an Information Builders representative today. Contact your local Information Builders office, visit us at **informationbuilders.com**, or in the U.S. and Canada, call **(800) 969-4636**.

Graduating to Other Reporting Initiatives

According to Patton, there are many other reporting, analysis, and information delivery projects on the agenda. "We are gradually training power users outside of IMS to use WebFOCUS," he says. "We want to facilitate self-service reporting wherever it is appropriate."

For example, users in the Student Records Department currently have to gather information from three or four different systems to build historical profiles. Because WebFOCUS can read many types of data simultaneously and manage complex joins behind the scenes, users will be able to automatically combine dissimilar data sources into a single cohesive presentation.

The Retirement Department and the Special Education Department also need more comprehensive reporting options. Additionally, OPS would like to add better reporting capabilities to its PeopleSoft HRMS and PeopleSoft Financials applications. Peterson says WebFOCUS Open Portal services will make it easy to create reports from the PeopleSoft data for display via PeopleSoft Enterprise Portal. "We want to use the WebFOCUS Business Intelligence Dashboard to report against the financial and HR information in these PeopleSoft applications," he adds. "WebFOCUS has the facilities we need to create the reports and quickly integrate them with the PeopleSoft environment."

Patton believes Information Builders' DataMigrator could also be useful for loading information into a data warehouse currently being created by the state of Nebraska – a shared repository that contains information about everything from special education needs to career technology programs. "WebFOCUS is the tool we will use to bring modern reporting functionality to many offices in the district," he says. "We're excited about its potential, both for reporting and application development."

McClung concurs. "We're moving toward an online world in which electronic report cards, lesson plans, and even state reporting are all tightly integrated," he concludes. "WebFOCUS is an important part of realizing this vision."