



## Philadelphia Schools Tie Curriculum to Standards, Gain Timely Student Remediation

### Overview

**Country:** United States

**Industry:** Education

### Customer Profile

The School District of Philadelphia serves more than 200,000 students in 276 schools. The district has more than 21,000 employees and a budget of some U.S.\$1.7 million.

### Business Situation

The district **needed** a core curriculum tied to state standards and a way to administer periodic assessments with real-time feedback to guide remediation.

### Solution

The SchoolNet Instructional Management Solution based on Microsoft® Windows Server System™ provides a centralized database for curriculum, learning resources, assessments, and analysis.

### Benefits

- Real-time benchmark results
- Prompt, effective remediation
- Constructive teacher-principal interaction
- Targeted professional development
- Achievement of NCLB goals

“The SchoolNet solution and Microsoft technology have delivered student data to the teacher’s desktop in ways never before possible. And not just data, but curriculum too, linked to that data.”

Dr. Fran Newberg, Project Manager, School District of Philadelphia

As part of a comprehensive school improvement planning process, the School District of Philadelphia is engaged in a district-wide rollout of the SchoolNet® Instructional Management System (IMS), based on Microsoft® Windows Server System™ technology including .NET-connected Web services. SchoolNet has deployed a Microsoft SQL Server™ 2000-based data mart in which to house and integrate the district’s student information, state tests, local benchmark assessment data, curriculum, educational resources, and standards information. As a result, at the beginning of the year and at the conclusion of each instructional unit, teachers can immediately access assessment data tied to the curriculum and can personalize instruction for their students. Principals can become effective coaches to guide planning and remediation. And district-level administrators can tailor professional development programs to real-time district needs and thus better meet the targets of the federal No Child Left Behind Act.



“If a benchmark test is delivered on Friday, adjustments can be made in the instruction by Monday.”

Patricia Renzulli, Chief Information Officer,  
School District of Philadelphia

## Situation

The School District of Philadelphia faces many of the same challenges as other large, urban school districts, including, amongst other issues, a transient student population. Up to 35 percent of students typically move from one school to another within the district in any given year. The district needs to ensure that learning continues seamlessly for such students. That requires the students' new teachers and administrators to have immediate and full access to their students' profiles and for the curricula at district schools to be synchronized to core standards.

Philadelphia realizes that timely access to assessment data is paramount so that teachers can react quickly to student strengths and weaknesses. However, standardized tests—the Pennsylvania Statewide Standardized Assessment (PSSA) and Terra Nova exams—are given only twice a year and the results take months to return. So, students take the tests in the spring and teachers see the results the following fall—when those students are no longer in their classes. Teachers are recognizing the importance of using assessment data to modify lesson plans and to offer remediation. In addition, having digital assessment data at their fingertips highlights teachers' needs to have curriculum and resources aligned to district and state standards.

The enactment of the federal No Child Left Behind (NCLB) Act has placed significant pressure on schools to improve or face consequences. Student profiles, assessment data, and aligned curriculum all lead towards increased academic achievement and school improvement. NCLB sets extensive requirements for assessing student performance and ties federal funding to student achievement. Districts need to measure not just individual performance on standards, but also performance on subjects with subgroups aggregated by ethnicity,

gender, special needs, English as a second language, and other criteria.

Philadelphia's Instructional Management System project was initiated to solve the problems of curriculum alignment and delivery of assessment results for data-driven decision making. The District recognized its need to analyze and collect data, and to gain the access and knowledge to use such information to guide classroom instruction and boost student achievement.

## Solution

“The district has always used data” says Dr. Fran Newberg, Project Manager, School District of Philadelphia “In the past however the District relied on hard copies of standardized test data and yearly summaries that were prepared by district administrators which often reflected data from the previous year. Now, the Instructional Management System puts all relevant student data at the fingertips of teachers and principals, making data driven instructional decisions easier than ever. In addition, the system disseminates interim assessment data. Interim assessments are administered several times a year, enabling teachers and principals to make mid-course corrections to daily instruction and school Improvement Plans.”

To address the need for data-driven decision-making and deployment of an aligned curriculum, the School District of Philadelphia this year rolled out a district-wide implementation of SchoolNet's IMS. The solution takes advantage of the Microsoft® Windows Server System™ and Microsoft .NET-based Web services. It is compatible with the School Interoperability Framework (SIF) and was developed with the Microsoft .NET Framework 1.1 and Visual Studio® .NET 2003 development environment.

“With rich, real-time assessment data on individual students, classes, and entire grades, teachers and principals can have a more collegial, constructive approach to enhancing student performance.”

Dr. Fran Newberg, Project Manager, School District of Philadelphia

The solution centers on a .NET-connected Web portal and a 100GB data warehouse—based on Microsoft SQL Server™ 2000 and hosted at SchoolNet—that provide a single, centralized location to integrate all of the district’s student information, state tests, benchmark assessment data, curriculum, educational resources, and standards information.

Microsoft technology is central to solving the massive integration challenge. For example, SQL Server Data Transformation Services enables the solution to integrate legacy data including student information system data from the district’s mainframe. And Web services pull assessment data into the solution from third-party assessment providers quickly, securely, and without the complexities and costs of alternative technologies.

Key SchoolNet components in the Philadelphia solution are SchoolNet’s Account™, Align™ and Assess™ modules.

- Account is an accountability and analysis solution for district administrators. The module allows users to analyze student assessment data without requiring technical statistical methods. District users can access, analyze, and compare district data to understand trends, target remediation, and allocate resources. A suite of NCLB reports and data analysis tools assist principals and superintendents in understanding the relationship between their assessment data and NCLB’s Adequate Yearly Progress (AYP) requirements.
- Align delivers a teacher dashboard to view differentiated student performance data and to plan individualized instruction including academic standards, pacing calendars, lesson plans, and curricular materials. It also provides a set of tools to enable district curriculum staff to develop

and disseminate state and local standards, curricular guides, and best practices. Teachers use Align to monitor their planning and coverage of required standards, to access standards-aligned curriculum and materials, and to view student mastery of required academic standards.

- Assess is a benchmark testing administration system. It allows districts to integrate a benchmark testing regime delivered by scan forms, plain paper forms, or on-line test entry. Item analysis at building and district levels can help determine efficacy of questions as well as institutional needs for professional development or curriculum enhancement. Data from the assessment solutions flows into SchoolNet’s data warehouse.

The district began its wide rollout of the solution this year after completing a carefully phased pilot program over the past two years. Four schools tested the solution two years ago and a broader group of 21 schools piloted the solution last year. This year, data for more than 200,000 students went live for principals and administrators to analyze. In addition, teachers in 50 schools went online with the solution with full access to the system, and the district’s remaining schools are scheduled for full deployment over the next two years.

The solution takes advantage of the district’s upgrade to fiber to give users real-time access to the applications and data hosted at SchoolNet. The phased SchoolNet deployment has followed the phased rollout of the expanded bandwidth.

Deploying the solution over several years has also given the district time to train teachers and administrators, including some who had never made significant use of computers before. More than 1,500 people throughout the district trained on the solution during

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major education program in October 2003, prior to the 50-school rollout. That training included four-person “principal teams”—including a school principal, a technology lead, a math coach and literacy coach—from the district’s 250-plus schools. Those teams worked with the solution this year and were able to retrieve reports for their teachers, prior to the teachers receiving access to the system.

### Benefits

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### Making Teachers More Effective

The SchoolNet solution gives teachers curriculum that is explicitly linked to standards across grades as well as immediate feedback on benchmark assessments tied to the curriculum and standards. That makes teachers more effective in the classroom, according to Newberg.

“The SchoolNet solution and Microsoft technology have delivered student data to the teacher’s desktop in ways never before possible,” says Newberg. “The system delivers curriculum and instructional resources in addition to student related data. Interim assessment data is linked to the state standards, the district’s core curriculum and instructional resources. The system has the potential to track how many times a particular standard was taught and when in the curriculum they will return to that standard. It makes for far more effective teaching.”

For example, teachers can now administer standard assessments at the end of a teaching unit—approximately every six weeks—and, using reports they access

through the Align module, see in real time which students understand the curriculum, which students don’t, and with which components they have problems. Teachers can then use remediation time built into the teaching schedule to review material as appropriate. The reports also enable teachers to create subsets of students in their classes, organized by the remediation they need, and then implement differentiated learning programs geared to their needs.

“If a benchmark test is delivered on Friday, adjustments can be made in the instruction by Monday,” says Patricia Renzulli, Chief Information Officer, School District of Philadelphia.

“In one recent class, I observed a teacher discussing test results with her students within minutes of the time they took the test,” says Newberg. “The teacher and students were able to discuss right and wrong answers with an immediacy they never had before. A student expressed surprise that he got a particular answer wrong and the teacher asked him why he got it wrong. That led to a discussion about the thought process behind that answer. That’s a very powerful classroom activity.”

### Making Better Decisions throughout the District

Beyond enhancing the interactions of teachers and students in the classroom, the SchoolNet IMS is also enabling principals and district-level administrators to make better decisions affecting the quality of instruction at school-, region-, and district-levels.

For example, principals can be more effective mentors and coaches with their teachers by reviewing the same benchmark assessment data that teachers see for their classes and then working constructively with those teachers to identify additional actions—including remediation for the class or for

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For more information about the School District of Philadelphia, call (215) 299-7000 or visit the Web site at: [www.philsch.k12.pa.us/](http://www.philsch.k12.pa.us/)

specific students. These discussions can take place in one-on-one principal-teacher discussions over proposed lesson plans as well as in the higher-level, monthly meetings that many of the Philadelphia principals have with all teachers in a given grade within their schools. Further, principals can use the assessment information to better direct the efforts of the math and literacy coaches in their schools.

Administrators at the district level, meanwhile, can use the SchoolNet IMS for longitudinal analysis, cohort analysis, value added analysis, and relational analysis to identify weaknesses across grades and schools, and then devise appropriate professional development programs. In addition to meeting their own district goals, district administrators are using SchoolNet to meet the requirements of NCLB.

“With rich, real-time assessment data on individual students, classes, and entire grades, teachers and principals can have the platform on which to build a more collegial, constructive approach to enhancing student performance,” says Newberg.

## Microsoft Windows Server System

Microsoft Windows Server System integrated server infrastructure software is designed to support end-to-end solutions built on Windows Server 2003. It creates an infrastructure based on integrated innovation, Microsoft’s holistic approach to building products and solutions that are intrinsically designed to work together and interact seamlessly with other data and applications across your IT environment. This allows you to reduce the costs of ongoing operations; deliver a more secure and reliable IT infrastructure; and drive valuable new capabilities for the future growth of your business.

For more information about Windows Server System, go to: [www.microsoft.com/windowsserversystem](http://www.microsoft.com/windowsserversystem)

## Software

- Microsoft Windows Server System
  - Microsoft Windows Server 2003 Enterprise Edition
  - Microsoft SQL Server 2000
- Microsoft Visual Studio .NET 2003
- Technologies

- Microsoft .NET Framework
  - Web Services
  - SchoolNet Instructional Management Solutions: Account, Assess, Align
- Partner**
- SchoolNet, Inc.

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