

PEARSON



**FUTURE-PROOFING YOUR SIS:
WHY OPEN AND INTEROPERABLE
SOLUTIONS ARE CRITICAL**

As stakeholders in the education industry, we know that implementing the appropriate technology infrastructure is critical to the future success of today's schools and districts. With student information systems (SIS) becoming the streamlined, interconnected backbone of an entire school or district's infrastructure, it is vital that educators and administrators find a solution that can grow alongside a district's needs and adapt to the ever-evolving technology landscape. Not only will this protect the longevity of technology investments, but it will ensure schools and districts remain at the vanguard of technology and education innovation rather than impeded by outdated technologies.

For CIOs and IT managers seeking to initiate a forward-looking technology roadmap for their schools and districts, an assessment of the existing SIS is a common starting point. While there is much to consider in such an undertaking, schools and districts will need to evaluate the open nature of their system and consider future-proof technology solutions that rely on interoperability, customization and flexibility. Ultimately, this will allow educators to analyze student performance data and ultimately power academic performance.

Faced with a litany of end-user considerations, investing in a SIS can be a lengthy and pressure-filled decision process for technology coordinators. And while there are many options, schools and districts need to consider the impact that the right SIS can have on individualized learning as this is where the future of education is heading. Individualized learning ensures that the talents of each student are maximized and that the individual challenges are overcome. The fundamental technology consideration in this quest is interoperability and the critical role it plays in the longevity, performance and acceptance of the core applications that create an open system for schools and districts.

Pearson has adopted Schools Interoperability Framework (SIF) for its award-winning student information systems, PowerSchool Premier and Chancery SMS. SIF is an industry-supported open standard that allows schools to choose their own best-of-breed applications for managing a wide variety of data. Fully SIF-compliant, Pearson's SIS products are uniquely positioned to work together seamlessly with other critical applications so that educators and administrators can focus on building next-generation schools.

INTEROPERABILITY RESCUE

As educators, legislators, and parents press for educational excellence through No Child Left Behind (NCLB) and other initiatives, the growing "accountability" movement seeks to improve learning through the effective use of school data. Increasingly, this data is spread across multiple applications and databases. However, in most schools the process of simply sharing data between disparate applications is a labor-intensive and time-consuming process, fraught with inaccuracies and security concerns. Exploding student population growth in many regions of the country compounds the problem of data management and reporting.

These increasing data management and accountability-reporting demands come at a time when education is ever more resource constrained. Rarely do

"NCLB has changed everything. It has kicked open the door and it can never be closed. It has shined a spotlight on data and on subgroups in a way that is irreversible."

—Ross C. Santy, Deputy Assistant Secretary for Data and Information, US Department of Education

schools and districts have the funding to add administrative and IT headcount to manually support growing data sets and manage data consistency between disparate systems. Most schools have found that no one vendor can nor will ever provide a single application that does everything—and does everything well. Further, budget constraints are driving schools to look for ways to maximize their existing technology investment; rarely can schools afford a wholesale replacement of existing applications with pre-integrated or “all-in-one” solutions. Schools really need an open, vendor-neutral system for application interoperability that supports them in deploying and integrating best-of-breed applications according to each district’s unique needs.

WHY SIF?

Pearson recommends utilizing the Schools Interoperability Framework (SIF) for data exchange and application interoperability. SIF is truly open—a vendor-neutral consortium called the SIF Association develops the standards and publishes them for royalty free use by anyone. SIF is robust by design and proven in years of field experience from the smallest schools to statewide deployments in some of America’s largest states.

SIF allows schools and districts to select and integrate various best-of-breed applications into a single enterprise-level system with the capability and scalability to grow along with the needs of the education agency. SIF simplifies data exchange among all types of instructional and administrative applications: Student Information Systems (SIS) software, transportation and food service software, library automation systems, learning management systems, assessment management, state reporting and directory management systems can seamlessly interoperate. Quite simply, with SIF data is entered once and all systems are populated—seamlessly and securely—with the same data. SIF guarantees interoperability between best-of-breed applications, meaning schools can leverage their existing technology investment in SIF-compliant applications, rather than solution compromise. For example, should a district need to add new applications to the education enterprise, SIF assures interoperability between other SIF-enabled applications, allowing schools to choose the software that best meets their unique needs without spending money on custom or vendor-unique integration work.

HOW SIF WORKS

First proposed in 1997, SIF is an open technical standard that describes how information can be exchanged among applications in education. SIF views an education agency (school, district or state) as a single system of data in which the software applications make up the component parts. This logical grouping of software applications is known as a SIF Zone. A SIF Zone could comprise a single school, a school district, even an entire state—a testament to the scalability of SIF.

At the center of the SIF Zone is a software application called a Zone Integration Server (ZIS). This program

“Interoperability eliminates redundant data entry and reduces labor costs. Saved labor and increased productivity are expanded with SIF as well, since any changes update immediately and then are available system-wide. The result is a wide variety of different efficiencies.”

—Tim Magner, Director of the Office of Educational Technology, U.S. Department of Education (DOE), January 2007

serves as the central messaging component of the Zone, transporting messages between applications and tasked with the security, authentication, and guaranteed delivery of those messages.

SIF Agents are extensions of individual software applications, such as PowerSchool, and serve as intermediaries between the application and the ZIS. For example, when a data new data, changes or corrections are made in PowerSchool, the SIF Agent for PowerSchool publishes a message to the ZIS. That message (or “SIF Event”) is processed through the ZIS to SIF agents for other applications that are set up to “subscribe” to specific messages, meaning they can receive and react to new information.

The ZIS’ role as a third-party message handler between each application’s SIF Agent means the SIF framework is very expandable. Schools who have the SIF “plumbing” in place can add, as needed, other SIF-enabled applications that communicate to the SIS and other applications in a plug-and-play manner, eliminating the need to develop costly custom “point-to-point” interfaces in the future.

CREATING NEXT-GENERATION SCHOOLS TODAY

SIF is the present and future of school application interoperability and the key to future-proofing your technology investment. The increased reliability, security, and efficiency of SIF’s standards-based approach means that education agencies save time, money and headaches while delivering more accurate data. SIF lets educators:

- ▶ Close the gap by integrating data across applications and physical sites
- ▶ Protect existing investment in expensive applications software
- ▶ Gain access to timely, accurate information when and where it’s needed
- ▶ Save time, effort and expense while gaining new, powerful capabilities from more timely data, more accurate data and more well-integrated data
- ▶ Impact student performance

This type of open technology solution allows us to transform data into information and information into action. The performance infrastructure of the future must feature technologies capable of growing alongside a district’s needs and have the appropriate flexibility in place to seamlessly adapt to the ever-evolving technology landscape. Not only will this protect the longevity of technology investments, but it will ensure schools and districts remain at the vanguard of technology and education innovation rather than impeded by outdated technologies.

“Data collection systems must be transparent and accurate so that we can understand what is working and what isn’t and for whom. But it’s not enough just to collect data. We also need to use the data we collect to implement change, including by personalizing learning to make it more relevant and engaging for students—and thereby truly ensure that no child is left behind. ”

–Bill Gates, Chairman, Microsoft, March 2007



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