

# The Student Data Life Cycle

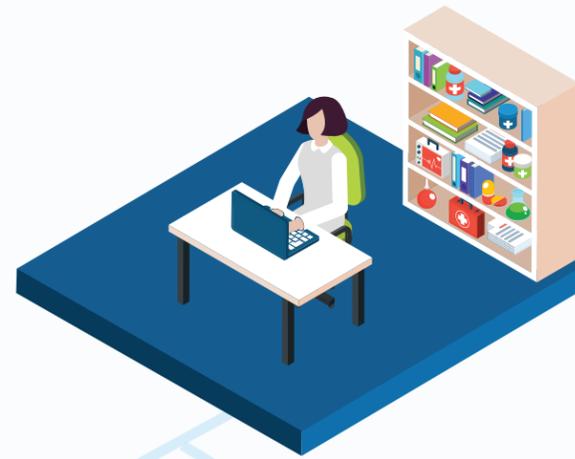
## Classroom Data

- ✓ Assessments/testing
- ✓ Attendance
- ✓ Grades



## Medical Data

- ✓ Medications
- ✓ Illnesses



## Front Office Data

- ✓ Financial records
- ✓ Courses
- ✓ Enrollment
- ✓ Completion rates
- ✓ Graduation rates



## After-School Activity Data

- ✓ Sports
- ✓ Music
- ✓ Art



## Student Data

- ✓ Age
- ✓ Race
- ✓ Gender
- ✓ Economic status
- ✓ Special education needs



## Counseling Data

- ✓ Family history
- ✓ Behavior



## 4 Data Pillars

### Security/Privacy

Using the right tools to secure data throughout the student data life cycle is critical to student privacy, as well as to meet regulations and promote responsible/ethical behavior regarding data distribution and utilization.



### Accessibility

Student data should be accessible to all stakeholders, including administrators, teachers, parents and policymakers, when they need it and wherever they need it.



### Quality

Technology solutions are critical to ensure data is accurate and not redundant.



### Governance

A good data governance plan and strong support from leadership are critical in the journey toward high-quality, actionable student data.



# Managing Student Data: Moving Beyond the Barriers

How school districts are consolidating student data and transforming it into actionable insights



**O**n Aug. 17, 2017, just one week before the start of a new school year, Desert Sands Unified School District in Southern California launched a fully integrated student information system (SIS) and learning management system (LMS). The deployment consolidated the district’s key data repositories on a single platform.

“Our previous system was outdated and was not meeting our needs,” says Dr. Kelly Vollmar, the district’s chief innovation and information officer. “We weren’t able to do what we wanted to do for students, so consolidation was an absolute necessity.”

The idea of leveraging amalgamated data to help improve student outcomes is not new. But many schools lack a consolidated, consistent method to collect and manage data and implement access controls, as well as use data in meaningful and actionable ways. With its new approach, Desert Sands can create a foundation for accurate and accessible data coupled with a sustainable network with security features that can support a variety of end users, including parents and students.

“We believe doing that will translate to more individualized instruction, and that could impact leadership,” says Vollmar. “Our leaders will be more effective because they can access data quickly and easily and make more informed decisions, which impacts student achievement and is the goal of everything we do.”

To explore some of the challenges of consolidating student data systems, the Center for Digital Education (CDE) and Canon USA hosted a roundtable at the 2017

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Dr. Kelly Vollmar, Chief Innovation & Information Officer,  
Desert Sands Unified School District

International Society for Technology in Education (ISTE) conference in San Antonio. This paper examines some of the topics attendees discussed about the life cycle of student data and how school districts can move toward a consolidated system that can help improve learning outcomes.

## Challenges of a Comprehensive Approach

In most schools, student data is captured in numerous systems in both paper and digital formats — from SISs and email to LMSs and testing. To successfully manage and protect this data throughout the student life cycle, there needs to be an effective strategy in place that includes the right tools, a structured approach and data governance. This strategy must be guided by a vision to use data to improve outcomes, otherwise the effort is likely to meet bare minimum standards rather than deliver valuable results for students and districts.

Most ISTE roundtable attendees spoke about the need and desire to have a more unified and centralized approach to manage student data, and how a comprehensive approach can be more effective, despite numerous barriers.

Attendees identified the following barriers:

- ✓ Lack of a data governance plan
- ✓ Limited funding
- ✓ Disagreements over what tool(s) to use
- ✓ Failure to coordinate
- ✓ Inability to move from assessment focus to using data for personalized learning and a whole-child approach
- ✓ Teacher resistance
- ✓ Lack of leadership
- ✓ Concerns about student data security

## Steps in the Right Direction

Moving to a single data platform or seamlessly integrating systems can enable schools to see “the whole student” so they can proactively address issues and challenges. It can also help reduce resistance from teachers frustrated with using numerous platforms.

Although it can be challenging to move to a single system, roundtable attendees shared some of their best practices, including how to determine which system will best meet district needs.

For example, Desert Sands Unified School District instituted a robust selection process that gave multiple stakeholders a voice. With more than 1,500 district employees, engaging stakeholders

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# Managing Student Data for Long-Term Success

The amount of data generated during a typical student's educational tenure is growing exponentially. Managing and protecting that flow of information through the student life cycle (both information that comes with the student and new information generated throughout the learning process) as he/she moves from one phase/grade to another, within a school environment and inter-school (transfer, graduation, college academy, special programs, etc.) is critical.

This infographic highlights the flow of data through a typical student life cycle.

“Canon USA understands the data challenges of today's digital districts, which is why we are taking steps to join the conversation and offer solutions to help education leaders better manage, access and share information, which can ultimately help improve student outcomes.”

Gisela S. Albuquerque Weise, Education Industry Marketing Specialist, Canon USA



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Using the right tools to provide access controls for student data throughout the life cycle is critical to student privacy, as well as to help with a school's compliance strategy and promote responsible/ethical behavior regarding data distribution and utilization.



### Accessibility

Student data should be accessible to all pertinent stakeholders, including administrators, teachers, parents and policymakers, when they need it and wherever they need it.





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was a significant task. The district started with an implementation team comprising employees from different departments across the district.

Vollmar's team then developed a survey to learn more about end-user requirements. Data from the survey was compiled to create a rubric that was included in the district's data platform request for proposal (RFP). Vendors responding to the RFP were required to visit the district and demonstrate how their solution could meet the district's needs.

Once they had a "finalist" list, Vollmar and her team asked 60 end users from across the district to spend three full days with the vendors. During that time, the end users drove the discussion.

"We wanted them to sell us that they could achieve what we needed them to achieve," says Vollmar.

The evaluation team then ranked the vendors, and a winner emerged.

"The system we chose informs instruction and allows us to respond quickly to student needs, whether that student need is academic or physical or emotional," says Vollmar. "The access to the information is immediate and very streamlined."

Now that the system is up and running, Vollmar says the district has high expectations.

"Our hope is that with an intuitive system and information that's easily and quickly accessible, users will utilize the system more often," says Vollmar. "That need motivated us, but making sure everyone had a voice in the process made all the difference because now they are invested in the process."

## Changing the Conversation Before Changing the Technology

Other roundtable attendees said moving to a comprehensive data system required changes to the way they manage assessments.

Mike Sherman, director of data management for West Des Moines Public Schools in Iowa, had experience with that process in his previous position when the district began a dramatic shift to standards-referenced grading.

Sherman says the district looked at 30 to 40 standards per grade level and condensed them down to seven or eight for each course.

"It shifted the conversations with kids, so those conversations slowly became more formative, with assessment based on feedback and collaboration instead of homework and test scores," Sherman says.

“[The dashboard] will be used to guide decisions about district and student needs and help inform funders and parents about the successes and shortfalls we experience.”

William Ollar, CTE/STEM Academic Coordinator, Tulsa Public Schools



"With a transactional model where everything is based on a curve, you only have so many winners in a class regardless of their performance. We ended up splitting hairs for a grade as opposed to looking at who could do something and who couldn't."

Sherman says the district's goal is to eventually adopt a comprehensive data management solution to fit the new model.

West Des Moines School District, where Sherman currently works, is also changing its assessment model. The district formed a taskforce last year to make recommendations to the board for adopting new grading practices. Those plans are still conceptual and have not yet hit the classroom level.

"We have a lot of data, but it's not all in one place where we can make decisions with it," Sherman says. "The systems we work with aren't necessarily in business to work well with each other. If I'm going to personalize my system for every student, I need to be able to put support in place to get each and every kid across the line. I can't do that without data. Our long-term view is to determine an innovative, creative way to put all the information in one place so we can use it effectively."

Elsewhere, William Ollar, CTE/STEM academic coordinator for Tulsa Public Schools in Oklahoma, says since his district's executive administration changed about three years ago, they are seeing more interest in using technology and data to drive instruction and decision-making. Tulsa Public Schools is in the process of forming a data strategy team. One of that team's first tasks will be to create a data collection system and dashboard that will enable stakeholders to more easily

# How Desert Sands Rolled Out Its New Integrated Data System

Choosing a new SIS or LMS is difficult enough, but rolling it out to end users can present an entirely new set of challenges.

Desert Sands approached rollout and training for its new system by job type. That allowed end users to learn the system based on their individual needs. The district ultimately offered more than 30 training sessions tailored to specific job types. It then utilized a “train the trainer” model to continue the rollout throughout the school year, focusing on incremental steps that build on previous lessons.

“We want our teachers to be the most robust users of our system, because they are the ones that will leverage it to individualize instruction for students,” says Vollmar. “Therefore, we are taking extra time to make sure they are comfortable with the system and fully able to use all its functions.”

Though Desert Sands set themselves up for a challenge by launching their new system one week before a new school year began, Vollmar says district leaders felt it was necessary to take the plunge.

“We didn’t want to have two systems working in parallel, so we needed to just go for it. But to lessen the impact we tried to inform users of what was coming months out to get them trained and comfortable with the system,” says Vollmar. “Because we included our stakeholders in this process from the very beginning, they were invested and patient because they believe in the program.”

Vollmar says though the system is new, they are already seeing small successes.

“One thing we are excited about is that we’ve seen a surge in the number of administrators using the system,” says Vollmar. “Because the information is so easily accessible, and the system is so easy to use, our administrators are in there getting the information and data they need on a daily basis. That didn’t happen before.”



review data, catch problems earlier and help students who are falling behind.

“Once the data team has the dashboard in place, it will be used to guide decisions about district and student needs and help inform funders and parents about the successes and shortfalls we experience,” Ollar says.

## Some Keys to Comprehensive Data

A comprehensive data management system can be a good path to actionable data. And while it can be a long journey, there are ways schools can ease the process.

Attendees at the Canon roundtable at ISTE said leadership support for data initiatives is crucial to their success. They also recommend letting teachers “own” the journey. In other words, make teachers part of the process and allow them to test different solutions to find out what works best for them.

Finally, attendees emphasized that protecting student data should be a top priority. School districts can build security and compliance efforts around the Family Educational Rights and Privacy Act (FERPA) and Children’s Online Privacy Protection Act (COPPA) to help safeguard student information. They should also make sure teachers are informed about the laws governing data sharing and protection.

All schools are unique, but most have common challenges and goals, like improving student outcomes and enabling personalized learning. Those efforts are growing more important given the requirements from the Every Student Succeeds Act (ESSA). Getting value out of data requires new tools and a structured approach. Fortunately, a well-planned, comprehensive approach to data management can deliver insight that helps schools better address student needs.



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