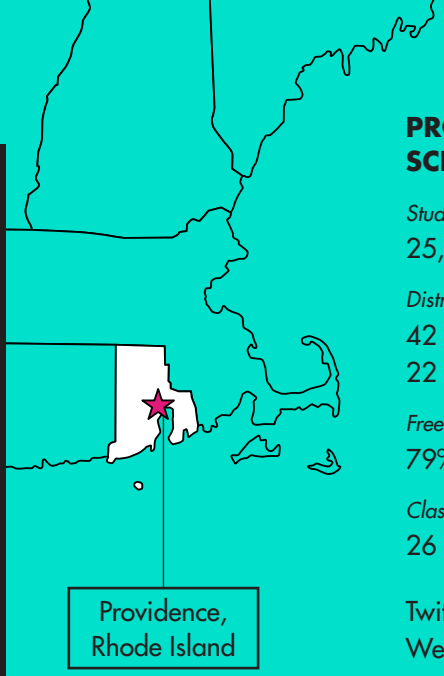
PROVIDENCE PUBLIC SCHOOLS

A Getting Smart Data Interoperability Case Study



PROVIDENCE PUBLIC SCHOOLS AT A GLANCE

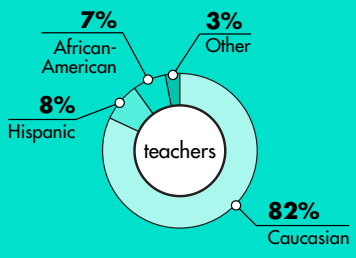
Students served:
25,000

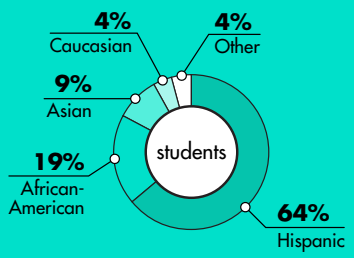
District schools:
42 schools total
22 of which are elementary schools

Free and reduced lunch population:
79%

Classroom size:
26 students per class

Twitter: @pvdschools
Website: Providenceschools.org





PROJECT UNICORN

Project Unicorn is an effort to improve data interoperability within K-12 education. We aim to create a community of innovators who make the broader case for secure interoperability by determining shared priorities, educating school systems and vendors about its importance and benefits, creating a demand-side push for interoperability through partnerships, and educating buyers to consider the total cost of ownership through informed comparison of vendors. Project Unicorn does not endorse a specific product or data standard; instead, it is an educational advocacy initiative dedicated to the secure, controlled interchange of data.

Data Interoperability Defined

Interoperability is a powerful tool to transform teaching and learning and empower parents and students with their own data. At the core of interoperability is a focus on better informing instruction and driving toward student-centered learning experiences.

As the largest school district in Rhode Island, Providence Public Schools makes up 25% of the state's entire elementary and secondary student population. Nearly 1,900 teaching and learning staff are employed in 42 schools, each equipped with various types of technology tools (42 in all).

By the 2013-14 academic year, the large, distributed academic environment had begun to embrace personalized learning (PL) as part of a statewide initiative developed by the governor's Office of Innovation and the (now former) Commissioner of Education for Rhode Island.

Yet challenges presented themselves in a number of areas. There were gaps in student performance, a lack of strategic direction, inconsistent technology sourcing and selection, and little emphasis on data interoperability—some of which persist today. The district has aimed to make significant strides in moving toward a streamlined PL experience for its students and faculty.

Cameron Berube, who began serving as Director of Curriculum and Instruction in 2015, was part of the design team to move the district toward PL. She oversees all content areas, curriculum, instructional practices and assessment, working alongside the district's Superintendent and Chief Academic Officer to engage school leaders and teachers.

Looking Ahead While Instituting Change

As part of this broader team, Berube developed a contextualized strategic direction for the district in creating PL standards that include culturally responsive pedagogy, bolstering teachers' efforts toward blended practices, accommodating a rising English language learning population, and instituting best practices for all learners. A five-year plan was developed, with input from parents, students and community organizations.

While the plan was constructed with a sense of urgency, it wasn't intended to be hastily implemented.

> ***"My belief about change is it's a long, slow process that requires input and buy-in from students and teachers," Berube said. "That's what creates long-lasting change. We need to provide methodical, purposeful support for good instruction – and it has to happen side by side with our teachers."***

Building what Berube calls a "behind-the-scenes" structure to support PL has involved investigating devices and systems and finding innovators and early adopters among the faculty. "Putting tools in teachers' hands to make their jobs easier improves learning."

In partnership with InnovateEDU and Rhode Island's Highlander Institute, leaders from Providence Public Schools agreed to participate in an implementation study during the 2016-17 academic year for a PL tool called Cortex. The study would engage technical staff as well as coaches and programmatic personnel. Teachers were trained in anticipation of a September launch.

Laura Jackson, the Institute's EdTechRI Testbed manager who worked on the project, said: "There's no other district like Providence within the state; more and more they're being recognized as a leader in blended and personalized learning, with a demonstrated willingness to pivot toward reimagined physical space, small-group instruction and leveraging digital content."

A compressed timeline led to technical challenges in terms of data transfer and configuration required for the launch. Miscommunication occurred between the programmatic and technical teams, which were separately in contact with the support team at Cortex. The tool's two-way API also raised red flags for district leaders in terms of privacy – and it wasn't compliant with Providence's existing Student Information System.

Acquiring Tech and Processes That Support All Learners

Could the approach to a rollout have gone more smoothly? Sure. In a fair retrospective, however, one must acknowledge the broader challenges involved. Like many public school districts across the U.S., Providence has budget constraints that impact human resources.

> ***"Our technology office hasn't added staff; nor have we increased the size of our research planning and accountability team," Berube said.***

Without a dedicated staff member to oversee a complex implementation such as in the Cortex pilot, it's easy to see how well-intentioned plans could get forestalled. (Constant collaboration is difficult to achieve when staff members are already overloaded in their day-to-day roles.)

Providence Public Schools also has a higher than average mobility rate for the state – student turnover that has a potentially disruptive effect on the classroom environment and demonstrates the need for automated, real-time data transfers so that student rosters and associated accounts are updated regularly. Berube cited it as a reason for adopting recognized standards, such as the Ed-Fi Data Standard, moving forward.

> "Data interoperability is an imperative for multiple reasons. Regarding the high mobility rate within Providence Public Schools, it allows for students to have immediate access to the curricular tools and resources in their home school at the moment of entry, which ensures that there is no loss in learning time."
>
> *– Cameron Berube, Director of Curriculum and Instruction, Providence Public Schools*

Berube acknowledges that district-level PL processes for adopting or piloting new edtech products must accommodate students at all points in the learning spectrum.

> ***"We have two newer high schools supported by a $3M Carnegie Corporation grant that upon opening had already been thinking about space and standardized instruction; it's my job to ensure that those schools don't get held back by policies we create regarding technology acquisition, adoption or data interoperability."***

Reconsidering Functionality and Usability

In fall 2017, teachers who had previously trained to use Cortex will begin implementation as part of the pilot. Regarding all edtech tools, Providence places priority on standards as a sorting criterion, so that teachers can easily obtain standards-based data. Berube emphasized several other points on this front:

- **Within the tool, teachers have to be able to sort for different sizes of content.** For example, being able to segment a small individual assignment for computer work or segment a group of students versus a class project. Prefabricated playlists exist; however, some teachers prefer to get to the "granular" level, editing, remixing and exporting data that work best for them. "Teachers need alignment to the academic standards they're utilizing at the full breadth of that standard," Berube said.

- **The usability experience with a particular tool or platform must be flexible.** Edtech tools built *without* the input of educators often disappoint in terms of anticipated use cases. "A variety of features is a nice-to-have, but ultimately, the technology must suit our teachers' needs. Does it allow for flexible grouping within instruction modules? Can the tool recommend variations of student groups based on existing performance data? The usability experience is key," Berube said, "and unfortunately often falls short of expectations."

- **End users must be considered from the beginning – including how data reports can be pulled.** "These tools aren't just for our faculty and staff; parents and students need to see it and be able to understand it," Berube explained. "Personalized learning platforms are often a one-stop shop connected to a course that offers access to teachers, students and parents." A lack of consideration about data usage can lead to a lot of manual work and big headaches for teachers and academic coaches.

- **The flow of data must be bidirectional.** When using externally developed tech tools, access to one's own data isn't always a given – and it needs to be. "Most companies only get data going in one direction, and most surprisingly, it's often heading in theirs – whereas my teachers only can access a PDF from," Berube said. "Not only is this inefficient; it's unhelpful for both students and the district at large in the long term." Additionally, security and privacy concerns come into play and can delay implementation, as was the case with the Cortex pilot.

Accessing and interpreting data is critical to assessing progress and making instructional shifts to accommodate students' needs. Providence Public Schools uses adaptive assessments in both reading and math to measure students' growth; these are administered three times a year (at the beginning, middle and end of the academic year). Tests administered at the beginning of the year are used as a baseline, but they only reveal a slice of students' academic journeys. In-class tools can serve to illuminate the rest.

Tackling School Improvement Head-On

> ***"Part of my role involves thinking about where the efficiencies exist," Berube said. "I don't want my teachers staying up at night on Google Docs trying to figure out how things are tagged; I want them immediately seeing what they need ... to know how to structure their lessons. We're collecting cycles of data, and yet the data have not been working for us."***

Berube has instituted professional learning in the form of instructional rounds, which place principals into strategic cohorts that visit each other's schools. They write their own problem of practice, examine patterns and commonalities across schools, and engage in deep conversations about what self-directed learning really looks like for students. They also receive feedback and support from their peers.

"Our principals are able to set their needs based on data within their building, and look deeply at the instructional core," Berube said. "A principal the other day remarked that they were relieved to have "voice and choice" over edtech tools and instructional methods for their school in a way that serves their long-term vision."

Through the district's annual vendor fair, 30 pre-vetted edtech companies (and counting) showcase their tools to principals and teacher leaders, who benefit from negotiations the district has already conducted on their behalf regarding schoolwide licenses and discounted fees. Among the criteria Providence uses is whether or not a company's product has demonstrated impact in an urban district. As of this year, API integration will also be factored into contracts.

Providence's emphasis on distributed leadership echoes in this context as well.

"School-level allocations of discretionary funds have increased, so principals can choose what works best for them, with a focus on standards," Berube said.

The flexibility in technology selection might be especially welcomed by those who are moving forward with the use of devices in the classroom. For example, Providence's Pleasant View Elementary serves as a model for others in the state, as it has transitioned to a fully 1:1 device environment with few books or consumables. Schools such as these undeniably build forward momentum within larger districts.

What does the future hold for Providence Public Schools? If existing progress is is any indication, there will be even greater autonomy in school management, enhanced data access and interoperability, and significantly improved student learning outcomes.

This case study is from a Getting Smart series on interoperability. It is part of a larger collaboration called Project Unicorn, led by InnovateEDU in partnership with Getting Smart, EdSurge, the Michael & Susan Dell Foundation and CommonSense Media. These stories are made publicly available with support from InnovateEDU.

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