



Preparing students to become “life-ready”

Henrico County Public Schools pioneered student-centered learning enabled by technology and continues to deepen that model with a special focus on professional learning for teachers



Pre-K–12 Education

United States

Organization needs

With more than 51,000 students in 72 schools, Henrico County Public Schools wanted to continue the innovative transformation of its instructional model, so its teachers and curriculum could help students become more “life-ready” with skills in communications, character, citizenship, and critical and creative thinking.

Solutions at a glance

[Dell Technologies Professional Learning Services for K–12 Educators](#)

Client Solutions

- [Dell Chromebook 3180 Education laptops](#)
- [Dell Latitude 3380 laptops](#)

Infrastructure Solutions

- [Dell EMC VxRail Hyperconverged Appliance](#)
- [Dell EMC Data Protection](#)
- [Dell EMC Avamar](#)
- [Dell EMC Data Domain](#)

Organization results

- Enhances student-directed learning
- Boosts teachers’ technology competencies
- Gains guidance on instructional development
- Improves infrastructure reliability and resiliency

Reduces device repair rates by

67%



Saves

IT staff time



More and more, K–12 school districts across the U.S. are turning away from long-standing instructional approaches that date back to the one-room schoolhouse. Instead, they're adopting student-centered approaches. Virginia-based Henrico County Public Schools is one district leading the way, having started its transformational journey almost 20 years ago.

"Given the dynamic, ever-changing world our students will graduate into, we have to go beyond the traditional textbook-driven model of 'sit-and-get' with desks in rows," says Kourtney Bostain, who is the district's director for innovative learning. "We're creating a much deeper learning model by building teacher competencies and making content much more interactive, engaging and fun, while encouraging student collaboration."

In fact, the district, with more than 50,000 students and nearly 4,000 teachers across 72 schools, was one of the first in the nation to enact a 1:1 initiative, providing students with their own laptops. The goal then was to enhance learning by means of technology instead of the technology being either an object of learning or a way to automate memorization and animate textbooks.

Getting students "life-ready"

In Bostain's view, the worlds of today and tomorrow—with shifting social, economic, political and technological landscapes—will challenge students in new, often complex and unpredictable ways. "As adults, students will have to come up with creative solutions to complicated problems, think critically, collaborate with others, communicate well and be responsible citizens," she says. "That's what we mean by being 'life-ready' and why we are continually evaluating the knowledge, skills, attributes and experiences our students need to achieve that and become lifelong learners."

For assistance in further developing its student-centered learning model—and recognizing the critical roles that teachers must play in its success—the district turned to Dell Technologies Education Strategists. These consultants, all former educators themselves, can provide district support designing transformational learning models and integrating technology in transformative ways.

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Kourtney Bostain
Director, Innovative Learning
Henrico County Public Schools

"We've been able to reduce our annual device repair rates by two-thirds, to just 15 percent, with Dell's continuing improvements in resilient and rugged design, engineering and manufacturing."

Tony Patterson
IT Manager, Client Services,
Henrico County Public Schools

“With 99 percent of our workloads virtualized, we save time and simplify operations by having compute, networking, storage and VMware hypervisor altogether on the Dell EMC VxRail platform.”

Brian Maddox
Chief Information Officer
Henrico County Public Schools

“To facilitate our teachers integrating technology into instruction and content effectively, our Dell Technologies education consultant’s broad experience accelerated the process.”

Kourtney Bostain
Director, Innovative Learning
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Henrico also engaged with Dell Technologies Professional Learning consultants for leadership and curriculum development, as well as virtual and on-site coaching for teachers. The goal of all engagements is to establish a sustainable professional learning (PL) program across a district by accelerating instructional leadership capacity among classroom teachers and school administrators.

Such was the case for Henrico County Public Schools. Years ago, the district began asking itself what a 21st-century classroom would look like, with guidance from Dell Technologies Education Strategists and Professional Learning consultants. It then interviewed groups of teachers and students for their inputs. “The district needed a common language to describe the use of technology to support good instruction practices and content,” Bostain says. “While technology is important, it’s only in support of learning.”

Facilitating teachers’ professional learning

Based on that discovery and with help from its Dell Technologies consultants, the district developed the Teaching Innovation Progression Chart—TIP-C—to help teachers map their own PL as well as the growth in their students’ learning. “We want every child, every day, engaged in deep learning, which is driven by the PL framework that our Dell Technologies education consultant helped us develop,” Bostain says.

Next, to support TIP-C’s adoption and build competencies in its classroom implementation, the district worked with its Dell Technologies consultant to develop a teacher-coaching model. “To facilitate our teachers integrating technology into instruction and content effectively, our Dell Technologies education consultant’s broad experience accelerated the process,” Bostain says.

But TIP-C was just a starting point for Henrico. The district engaged the Dell Technologies Education Strategy team and their professional learning partner to help it rewrite it as the new Henrico Learner Profile. Within this framework, it was even more imperative that all students had a device to support their learning activities.

Behind the scenes, district CIO Brian Maddox and his staff of just 77 IT professionals work hard to ensure the reliability and availability of the classroom technology—17,000 Dell Chromebook 3180 Education laptops in grades 2–5 and 34,500 Dell Latitude 3380 laptops for secondary students and all teachers and staff. “Resilience in our end-user devices is critical to achieving our instructional goals,” he says. “If they’re not working, they’re disrupting our student-centered learning model, making it harder to implement.”

Enhancing reliability and availability

Tony Patterson is the district’s IT manager in charge of client services, especially keeping the Dell Chromebooks and Latitude laptops updated, patched and ready for students and teachers. Elementary students use the former, while higher grades use the latter. According to Patterson, the choice of both Dell laptop models came down to features, value and the combination of durability and reliability.

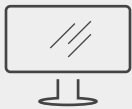
“Of course, students are tough on laptops,” he says. “But we’ve been able to reduce our annual device repair rates by two-thirds, to just 15 percent, with Dell’s continuing improvements in resilient and rugged design, engineering and manufacturing. With those time-savings, my team can be more available and approachable in the schools beyond just fixing hardware.”

Maddox and his staff also stay busy ensuring that the district’s back-office applications and learning application platforms, plus their associated data, are always available. During the most recent summer, they conducted a complete data center refresh, deploying two Dell EMC VxRail Hyperconverged Appliances.

The production unit has six compute nodes holding 192 cores and 167TB of storage for production; the five-node disaster recovery unit has 35TB of storage. For additional data protection, the IT team installed a Dell EMC Data Domain DD6300 system with Avamar backup, recovery and deduplication software.

“With 99 percent of our workloads virtualized, we save time and simplify operations by having compute, networking, storage and VMware hypervisor altogether on the Dell EMC VxRail platform,” Maddox says. “And the Data Domain with Avamar helps automate our data protection, while accelerating backups.”

Both Bostain and Maddox agree about how technology can support student-centered learning that can prepare students for an increasingly complex world. “But, ultimately, technology is a means to this end,” says Bostain. “And it’s clear that, between its technology stack and professional learning services for educators, Dell Technologies understands this important distinction.”



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