CASE STUDY: RICHLAND SCHOOL DISTRICT TWO

Samsung Chromebooks Ease the Path to a Computer for Every Student

RICHLAND SCHOOL DISTRICT TWO
INQUIRE~IGNITE~INSPIRE

OVERVIEW

Customer Need

Administrators at Richland School District Two wanted to dramatically expand a program for 1:1 computing to improve instructional quality and educational outcomes. The district also needed to control costs and avoid adding support demands on teachers and IT, even as it deployed thousands of new devices.

Samsung Solution

Samsung Chromebooks delivered a cloud-connected Web client in a laptop form-factor that empowers teachers and lets students easily find information, use online applications and collaborate on assignments throughout the day. Built-in security, automatic updates and a simple user interface mean teachers can focus on the lesson content, not on the device.

Results

By the 2012-13 academic year, the district had smoothly rolled out 14,000 Chromebooks, with positive responses from students, teachers and IT staff alike. The district now benefits from creative and exciting lessons for students, easy-to-adopt technology for teachers, as well as a reduced support burden for IT and better total cost of ownership.

SAMSUNG

THE CUSTOMER

Richland School District Two

Located in Columbia, S.C., Richland School District Two serves more than 26,000 students at 40 locations in a county district that encompasses urban, suburban and rural areas. Since 2000, the district has pursued a 1:1 computing program (called 1TWO1), initially with desktop and laptop computers. However, these traditional computers required a significant amount of IT support, both for initial setup and ongoing maintenance. District IT staff knew that a different type of computing device would be needed to meet 1:1 goals.

"In our district, the responsibility for instructional technology is in IT, not in academics," said Debra Hamm, CIO of Richland Two. "But we all know that while specific devices can make a difference, it's really all about the learning that they enable."

Richland Two has always strived to make a dedicated computer available to all of its K-12 students. Driving this were several educational outcomes the district wanted to achieve:

- Improved instructional quality by teachers
- Improved student engagement and academic achievement
- Increased student graduation rates and post-secondary success

Students from Richland Two on a Chromebook.

THE CUSTOMER NEED

An affordable, simple and portable alternative to traditional PCs

To meet the 1TWO1 goal, the district needed an Internet-ready computer that would be economical, durable and portable for student use while also minimizing maintenance and support requirements for teachers and IT.
"In order to be able to implement a project of this scope, we knew we'd have to drastically reduce the amount of hands-on technical support that the selected devices would need," said Tom Cranmer, executive director of IT. "We couldn't continue with the old model of using technicians to install and maintain standard software images on thousands of individual computers."

Also important for Richland Two were features for all-day use by students, including long battery life, a full keyboard, a full-featured Web browser, and a USB port and SD slot for connecting cameras and memory cards.
To prepare for the implementation of an expanded, district-wide 1TWO1 program, Richland embarked on a year-long process led by a steering committee. No single computing device would be mandated for the rollout but instead individual schools would be able to choose the device type that met their unique needs, whether a traditional laptop or netbook, a Web client or a tablet.

"We involved teachers, principals and district administrators in a two-day demonstration session where they could see and give feedback on potential devices identified by the steering committee," said Donna Teuber, the district's technology integration coordinator.

THE SAMSUNG SOLUTION

Samsung Chromebook Series 5

The committee selected the Samsung Chromebook Series 5 as one of the options available to schools due to its low cost of ownership, long battery life and hardware durability, and the full, familiar Web browser and keyboard. A smooth initial rollout of 6,000 Samsung Chromebooks in January 2012 was followed by distribution of an additional 8,000 Chromebooks to students at the beginning of the 2012-13 academic year.

In the two high schools that chose Chromebooks and are fully 1:1, students are assigned a device and are allowed to take them home. In the middle schools, students pick up a Chromebook first thing in the morning in their homeroom, carry the computers with them throughout the day, then return them to a cart in the homeroom at day's end. In elementary schools, the devices are stored on a classroom cart.

In most cases, the curriculum content available for students is Web-based and will work natively on the Chromebook. Many textbooks used in the district have codes for online access by students.

To post curriculum content for access on the Chromebooks, Richland Two teachers use a variety of content management tools, including Edmodo and Google Sites. Teachers also use Google Drive and Google Calendar (often embedded in a Google Site) to share assignments with students.

A district resources committee reviews Web-based resources, apps and software to ensure they meet curriculum needs and will work on the Chromebooks. Teachers are encouraged to choose from a menu of resources that have been evaluated by the committee. Some resources are purchased for use by all students in the district while others are purchased at the school level. In some instances, software must be licensed and installed on the district's servers for access through the VDI support on the Chromebooks.

For administrators and IT staff, the Chromebooks deliver the advantages of new learning opportunities at a lower cost for purchase, maintenance and support compared to other devices. For a fee of $30 per device, Google provides schools the ability to remotely manage users, apps and policies across the entire fleet of devices via a Web-based console, as well as 24/7 support directly from Google and a limited warranty.

Samsung's Chromebook Series 5 boots up in just seven seconds and wakes up from sleep mode in just one second, so it's always ready for learning. The computer also takes care of itself, with automatic updates for applications and the operating system, built-in virus protection and user files that are safely stored and backed up in the cloud.

Finally, students enjoy the familiarity of a laptop-style device with a full-sized, Web-focused keyboard, a large multi-touch clickpad and a full school day of battery life.

Quick Profile:

SAMSUNG CHROMEBOOK SERIES 5

As used by Richland School District Two

DISPLAY: 12.1-inches; 1280x800 resolution

WEIGHT: Starting at 3.06 lbs

BATTERY LIFE: Up to 8.5 hours[1]

PROCESSOR: Intel Atom N570 Dual Core

Samsung's Latest Offering:

SAMSUNG CHROMEBOOK

DISPLAY: 11.6-inches; 1366x768 resolution; 200nit brightness

WEIGHT: 2.43 lbs.

BATTERY LIFE: Up to 7 hours[1]

PROCESSOR: Samsung Exynos 5250

MEMORY: 2GB[2]

STORAGE: 16GB SSD[3]

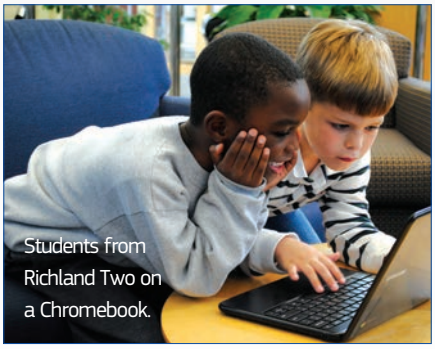
PORTS: 1 USB 3.0, 1 USB 2.0, combo headphone/mic jack, secure digital memory slot

SPEAKER: 1.5W speaker X 2

KEYBOARD: Full-size Chrome keyboard

WIRELESS: 802.11 abg/n 2x2

SECURITY: TPM



Students from Richland Two on a Chromebook.

THE RESULTS

Students, teachers and IT welcome new ways to learn

Richland Two is realizing several benefits from the Chromebook deployment.

Creative and exciting lessons for students. Diane Gilbert, a sixth-grade teacher for language arts and drama at Kelly Mill Middle School, makes extensive use of Chromebooks in all of her classes. "With the mobility of the Chromebooks, we can push together the tables in the classroom or gather in a circle on the floor to allow students to easily work together on a project. This is a much different experience than what I would've had with desktop PCs, which took up a lot of space and couldn't be moved easily," she said.

Easy-to-adopt technology for teachers. Richland Two technology staff understand that supporting new devices at the teachers' level will lead to positive student-level outcomes. "The Chromebook has been wonderful for not requiring a lot from our teachers to use it effectively in class," said Teuber.

Reduced costs and support burden for IT. Both rollouts of the Chromebooks at Richland Two were very smooth. "With the Chromebook, you can take it out of the box and put it in the hands of the student and they can log in and begin working productively right away," said Cranmer.

According to the analyst firm IDC, the district can expect lower ownership costs from the Chromebooks compared to alternative devices. IDC reports that savings over a three-year period could reach as much as $935 per device.[4]

Richland Two CIO Hamm summarizes the success of the district's 1TWO1 program by noting, "With all of our technical and instructional planning, as well as our professional development activities, when we gave the Chromebooks to teachers and students, they were ready and able to use them in a way that is making a very positive impact on our classroom instruction."

Endnotes

1. Battery life will vary depending on the product model, configuration, power management settings, applications used and wireless settings. The maximum capacity of the battery will decrease with time and use.
2. Total amount of available memory may be less based on configuration.
3. Accessible capacity varies; MB = 1 million bytes; GB = 1 billion bytes; TB = 1 trillion bytes. Please note that a portion of the hard drive is reserved for system recovery, operating system and preloaded content software.
4. IDC white paper, "Quantifying the Economic Value of Chromebooks for K-12 Education," http://goo.gl/QoVlZ

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Richland's Strategy for a Successful Rollout

To support a successful rollout of the Chromebooks, the district followed a strategy that encompassed several implementation and training activities.

Network expansion. The 1:1 computing model would not be successful for learning if the network delivered slow performance that stifled student motivation and delayed classroom activity. To meet the higher demand for Internet access by students, the district expanded its Internet access circuit and installed wireless access points in every classroom.

Virtual Desktop Integration (VDI) infrastructure. Some applications used in the schools do not support access via a Web portal. To give students and teachers continued access to those applications with the Chromebooks, the district implemented a third-party VDI solution.

Phased deployment and sustainable support. "We planned a phased rollout because we wanted to make sure that it would be sustainable, both in the initial rollout and for ongoing support," said Cranmer. The IT team also reviewed policies for acceptable use and lost or stolen devices to make any needed adjustments based on the expected use of the Chromebooks.

Professional development for teachers. The district offers professional development workshops for the 1:1 devices as well as support from instructional technology specialists in the schools. "Everyone needs to be on board to make learning through technology effective," said Teuber. "What's nice with the Chromebooks is that in our teacher training we don't have to spend a lot of time on how the device works, and instead we can help teachers learn from each other how to develop effective lesson plans."