Tech Revolution

The Technology Offices on the bottom floor of Scott Hall appear an unlikely spot for a revolution. The halls are bright and spare, save for a couple of monitors stacked against the wall, and the quiet hum of conversation is punctuated only by the tapping of computer keys.

Robert Golden
Website/SIS Project Manager

Scott Hall is the site of what technology consultant Norman Harber calls "the biggest project on campus, a groundbreaking transformation of a grand nature."

In other words? Revolution.

The headliner is the Student Information System, or SIS for short. SIS is not just a new website or Wildcat Web portal, notes Project Consultant Robert Golden. It's a technology ecosystem made of trillions of bytes of data, all working together to revolutionize the way every student, parent, employee and alumnus experiences Westminster.

In the past, Westminster had more than 60 different data systems, none of which could talk to each other. If you were a parent and an alum, you'd have to go to two different places – one for parents and one for alumni – to log in and see information. "It was like being in a house where you had to use a different key to get into every room. SIS will give you one key that will open any door in the house," Robert says.

Seeds of Change

To fully appreciate how transformational SIS will be, pause and rewind to 2010. That year, Westminster's forward-thinking Board of Trustees began exploring the idea of becoming a 1:1 laptop school (pairing each student with a laptop) in order to create a 21st century learning environment.

Norman was summoned to campus to consult on the challenge. "What we found was that Westminster did not have the technological infrastructure in place to support 1:1," Norman recalls. "So we rolled up our sleeves and got to work."

In just 14 months, IT replaced every piece of fiber-optic cable on the ground and every phone and computer on every desk, and increased campus Internet capacity by a factor of five. Wireless users could see and hear the difference right away: YouTube videos no longer fluttered or stalled out, and audio clips of piano concertos played as smoothly as they did at Carnegie Hall.

The IT team also moved a lot of data into the Cloud (think of it as a hard drive in the sky), and added a disaster recovery site in Norcross to back up and recover data – an insurance policy of sorts against an unavoidable calamity wiping out those final exam grades on the campus network.

"All of these changes made our technology environment easier to manage, more powerful and more reliable," Norman explains. "It gave us the platform we needed to create 1:1 for students and build SIS for everyone."

Building the Revolution

Work on SIS began in April 2012. Flipping through a five inch-thick binder sandwiched with dozens of colorful section dividers and sticky notes jutting from the top, Robert smiles, "This documents all the work we've done. And we're still not finished."
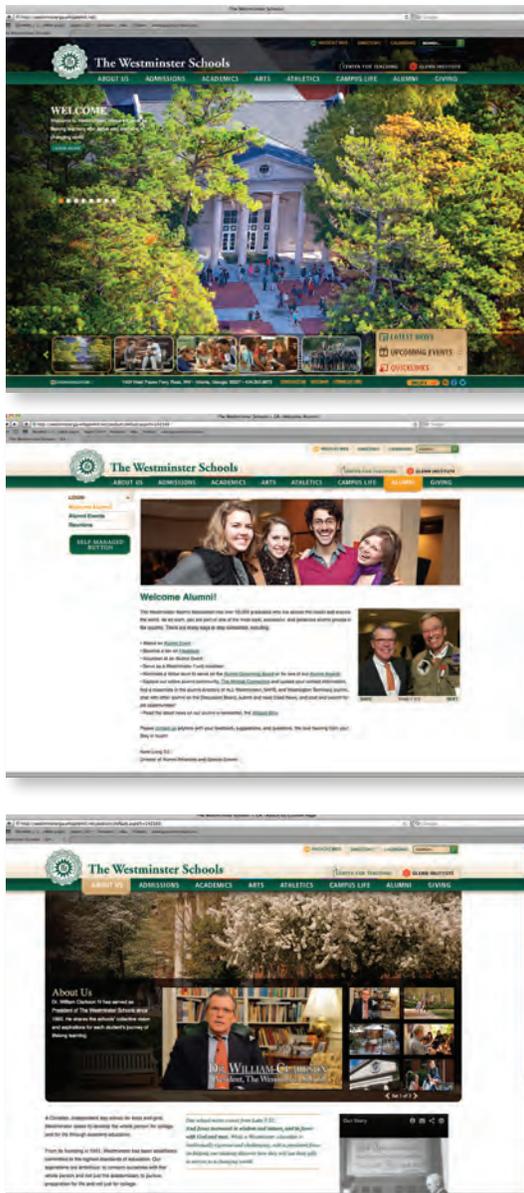
The Herculean labor began with an exhaustive four-month study of Westminster's needs and of best practices in the marketplace and other schools. "It's tremendous that Westminster has made this kind of investment," Robert said. "SIS will put the school way ahead of the technology curve and keep it there."

Phase 1 will launch at the beginning of June with a sleeker, redesigned website and streamlined portal, or Wildcat Web. Besides providing a single key for students, parents and staff to unlock their Westminster experience, SIS allows users to customize that experience however they wish. For the first time, they will be able to select the information they want and the format they want it in.

Robert likens the new experience to a fast food drive-through – you can have it your way. Users can log on, choose what they want from the menu and serve themselves easily, quickly and securely. Students can go to one place to get their homework assignments, instead of having to look up six different classroom websites. Parents can look up their billing statements online instead of calling the business office. With a click of a button, teachers can run reports on how well this year's students did compared to last year's, instead of laboring through old grade books. And alumni can see school news in the same place they donate to The Westminster Fund.

Phase 2 will roll out in the fall, when school is back in session, with a more robust database system. It's a central storing house for all kinds of data, including grades, financials, demographics and giving history. User categories will have access to different information, and all data will be private and secure.

"It's as complex a database system as electronic medical records," notes Robert. "It won't catch your eye the way the new website and portal do, but it is critical. If you think of the website and portal as the façade of a house, this database is everything inside."

"When fully implemented, SIS will give students more tools for creative problem-solving and expression, equip teachers to be more efficient and effective in the classroom, empower parents to be more involved with the school, and help alumni stay better connected," Robert says.

The 21st Century Learning Environment

Beyond providing faster, easier access to Westminster, SIS will help bring to life the 21st century learning environment. Imagine students rewinding and fast-forwarding through a Calculus class as they like, getting help from a professor in Paris on the physics of the Eiffel Tower, or having the ability to study a subject based on their learning style instead of just what is presented in class.

Colleen Glaude
Dean of Instructional Technology

Colleen Glaude, Dean of Instructional Technology, describes SIS as "hitting the heart of our Learning for Life vision." It creates new learning experiences and spaces outside of the classroom, freeing students to learn anywhere at any time.

"We're not too far from the day when students will be able to customize their education to their own pace and strengths, and access all the experts and

resources in the world," says Colleen. "SIS puts in place the technology we need to make that happen. The days of rote learning are coming to an end."

Adds Norman, "SIS gives kids the digital tools they need to gather information outside of a textbook, problem-solve, and work creatively and collaboratively with people across the world. It will allow students to be more informed and more engaged with their own education."

SIS also gives teachers a better toolkit to enhance learning. For example, history teachers can use the new technology to assign readings, coupled with online quizzes. In the morning, they can pull up the quiz results and immediately see if they need to review the material or move on. This helps teachers adjust to the speed of their students' learning, and also empowers them to spend more class time coaching through difficult problems or projects.

While many teachers are already using technology effectively in the classroom, Colleen expects this number to skyrocket once SIS launches. "Before, teachers had to rely on their own creativity and comfort with technology to incorporate it into learning," she says. "They would download their own tools, some of which might crash and none of which were supported by IT. Now, SIS gives every teacher reliable, dependable and integrated tools. This means the information they store on that tool will always be backed up, and they can call for help if they ever have an issue."

The Future

As with any good revolution, this is just the beginning. The tools that have been built into SIS will update themselves in the Cloud, so the system will always remain cutting-edge. New tools, meanwhile, can be added quickly and easily.

"There is a lot of room for growth," says Colleen. "We can link in The Glenn Institute, Alert Now Emergency System and Naviance College Counseling so the entire Westminster experience is more unified and integrated. At the end of the day, people will have more ways than ever before to interact with Westminster from wherever they are, whenever they want. And the educational experience we offer will expand beyond what we even know is possible today, because of the technology we have in place."

For future updates on the revolution … just log on to SIS. ∎

Log on to Learn

In the past, teachers downloaded their own web tools, and students would have to navigate half a dozen wikis, blogs and websites on their own – a sometimes overwhelming task for one night of homework. SIS carefully curates the best learning tools available and puts them all under one roof. Meet these head-of-class tech superstars:

• **Moodle** is a 24/7 online classroom that offers an experience similar to Global Online Academy, the non-profit consortium of schools around the world that Westminster currently uses. With Moodle, teachers can upload lessons, give homework, quizzes and grades, or set up chats and forum discussions. Students can complete lesson activities, submit assignments and work with classmates even when they're out sick or traveling.

• **Wikispaces** provides a secure platform to share work and ideas in the form of pictures, links, video and other media. It's best for collaborative work that involves sharing many different types of content, and is easy for even the youngest learners to use.

• **Schoolpress**, the souped-up smarter cousin of Wordpress, has many of the same features as the popular blogging site, but provides more reliable and better-tested plugins and widgets. Teachers can publish classroom blogs without worrying about crashes and frozen screens, and students can build an online magazine or newspaper. It's an ideal space for creating, collaborating and reflecting.