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BYOD Case Study

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Forsyth County School District
"Quality learning and superior performance for all."

In recent years, Forsyth County Schools in Georgia have created an acceptable use policy, updated their network infrastructure, and developed a BYOD initiative for all of the schools in the county. Yet Forsyth did one thing differently: they let each school determine individual rules about how and when BYOD tools will be used. As a result, the program isn't the same for all schools, with school leaders deciding what works best for their individual goals and school culture. The district has found that increasing technology in the classroom has come with some unexpected strings attached and has also necessitated the training and hiring of teachers who are willing to play the role of facilitator, letting students lead their learning. Administrators at the school say that it's been a challenge to get all teachers on board but that they're working hard to help them learn new ways of interacting with their students. The Forsyth pilot program illuminates both some of the pros and the cons of BYOD programs. BYOD requires much more than just changing tech policies and can sometimes mean overhauling the curriculum and spending money training teachers, though it does help students create a more personal and memorable learning experience.

District Profile

Forsyth County Schools (FCS), located north of Atlanta in Cumming, Georgia, serves about 39,000 students in grades Pre-K through 12. Its 36 schools, including a charter high school and 6-12 virtual school, constitute the largest employer in Forsyth County. For years, FCS has posted the highest CRCT and ACT scores in Georgia, with SAT scores above the national average, while consistently maintaining the lowest millage rate in metro-Atlanta. Caring, highly qualified teachers and staff deliver a wide range of youth and adult services, including programs for gifted students, special education services, and vocational training. Their vision for education is, "Quality learning and superior performance for all."

The Challenge

The instructional technology team at FCS has a vision: "To use classroom technology to engage students in asking questions and choosing tools to facilitate real world problem solving." To meet this vision, the district has implemented a number of technology initiatives, including digital textbooks and education resources, interactive classroom technologies, and online education. The FCS technology services department admits that it is challenging to support an increasing number of classrooms with new instructional technology uses and technology initiatives. Keeping up with technology demands is even more challenging when you consider the district's tremendous growth rate. Since 2000, the district has grown 118% and is the third-fastest growing school district in the country, enrolling 1,605 new students on its roster since August 2011. According to the technology services office, "It's a constant struggle to maintain the standardization and consistency that is necessary to keep the total cost of ownership low while at the same time providing the needed flexibility so that the technology resources can be utilized to their maximum benefit."

The Solution

To keep up with a growing demand for technology devices, while maintaining their traditionally low per-student spending, the district decided to implement a BYOD initiative for all schools in the district. To date, 100% of the schools are participating in the BYOD program, with an average of 35% of classrooms in each school fully engaged in using BYOD on a regular basis.

To meet the growing network demands of student and staff devices, FCS upgraded Internet access to a total of 1.25 Mbps. For network redundancy, the district aggregates three circuits from different providers. This has enabled the district to provide reliable, 24/7 access to the district server and web-based learning applications. Working with local vendors, the school system was able to increase bandwidth for a minimal cost increase. Most schools have dual 1Gbps connections to the WAN, and the wireless network infrastructure was upgraded to the 802.11N protocol.

With a robust network capable of handling large demands from student-owned devices, the district then took measures to ensure its security. To protect the network from viruses and other possible issues related to users bringing in their own devices, FCS established two SSIDs that are accessed by authenticated network users. One is secured by WPA2 and a security certificate on the client network. This wireless network is established for district-provided computing devices that authenticate through a radius server and are connected to the client virtual LAN (VLAN). The second network is open, but sequestered on its own VLAN with access control lists (ACLs) restricting internal access to DHCP and DNS on the public network. Teachers and students use this network to access Internet applications on their personal mobile devices.

To make the BYOD initiative a success, FCS provided comprehensive professional development on teaching and classroom management strategies to effectively incorporate mobile technology devices into daily curricular objectives. Initially, this training involved a core group of 40 teachers, from 7 different schools in the district, representing a range of grade levels. They focused on the use of Web 2.0 tools and project-based centers to facilitate instruction with BYOD in the classroom. Recently, with the influx of smartphones and tablets, they have expanded their professional development program to include a focus on project-based learning and the use of mobile devices to build learning communities for teachers and school leaders. Professional development topics are derived from the district's goal of modeling best practices and pedagogy that they want teachers to adopt in their own classrooms.

In addition to instructional strategies, FCS is also focusing on the level of use of BYOD within the classroom. District leaders want to help teachers move beyond simple technology integration, where students are exposed to technology but, in reality, the devices are not adding value to the learning process. They have adopted Bernajean Porter's Grappling's Technology and Learning Spectrum as an instructional framework for charting categories of technology uses for teaching and learning: (1) Literacy Uses, (2) Adapting Uses, and (3) Transforming Uses. Using this framework as a guide, teachers are supported by instructional technology specialists and media specialists for planning and facilitating BYOD learning experiences.

This district-wide commitment to collaboration and team-based support is extended to both parents and students as well. Communication with parents about the BYOD initiative is a priority, provided through presentations at school council meetings and PTA meetings. At PTA meetings, instructional technology specialists and teachers model activities using mobile devices, such as polling. The district explains, "Parents sometimes just don't know how devices are being used at school. They often purchase devices to entertain their children, and they see them texting or gaming on devices in a solitary way. At school, the devices actually lead to more collaboration and discussion. We let parents know that our students are competing for jobs and education on a global scale, and they need to have more access to the necessary tools to be equipped to be successful now and in the future."

Benefits And Challenges

With any technology initiative, teacher buy-in is essential to a program's success. The BYOD initiative has proven to be additionally challenging because it requires teachers to rethink and restructure their entire educational approach. FCS found that many of its teachers were comfortable with traditional direct instruction; however, the differentiation, collaboration, and inquiry that results from the implementation of project-based learning with BYOD requires a paradigm shift towards more facilitated learning. High expectations by school leaders, a supportive IT team, and classroom visits offer the support needed for change.

FCS has adopted the phrase "Devices Down" to signal when the teacher wants the students to put the devices down and listen for instructions. Many teachers report that classroom management of devices is not as challenging as they anticipated. In fact, the teachers who already incorporate project-based learning and have established a sense of community in their classrooms often describe a seamless transition with BYOD because the management strategies are the same, and the devices just give them more tools to complete the work of the community.

Contrary to expectations, FCS has actually noticed that disciplinary issues regarding technology have gone down since the implementation of BYOD. They report, "It is surprising in some ways how normal it seems with the devices in the school." Another benefit is that the students can lend their expertise in technology to assist with instruction, taking some burden off the teachers needing to know how all the devices work.

A Success Story

The success of BYOD in Forsyth County Schools is due in large part to its strong network of technology advocates. The district school board and local community are very supportive of instructional technology and have high expectations for its use. From the Superintendent to individuals across departments and school levels, FCS educators are excited about the BYOD initiative. Success may also be attributed to the district's supportive approach to BYOD implementation. They state, "We also do not force anyone to implement BYOD, because we realize that every learning community needs a different amount of time to adopt the initiative. Also, we have school-based Instructional Technology Specialists and Media Specialists in every school to help model instruction with BYOD for teachers and to assist in developing new strategies for the use of devices." With this level of support, FCS hopes that its students will continue to excel in all areas through connected learning with each other and their devices, constructing new meaning through personal technology tools.

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