

ALEXANDRIA CITY PUBLIC SCHOOLS

Using HP notebook technology to drive student achievement higher



Alexandria City
Public Schools

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HP customer case study: HP technology transforms high school program

Industry: K-12 education

Objective:

Integrate PC technology into the high school instructional program

Approach:

Alexandria City Public Schools has equipped every student and teacher with an HP Notebook PC, enabling use of a learning management system and a variety of computer-based instructional resources

Business benefits:

- Improved technology literacy
- Ability to test, re-teach and re-test on state standardized tests
- Near-paperless workflow
- Access to external instructional resources, including a virtual teaching consortia
- Guaranteed quick turnaround or immediate swap for notebook PC hardware service needs
- Three-year lease program through HP Financial Services meets school district’s cash flow needs, while helping to assure regular technology refresh



In the Alexandria City Public Schools (ACPS), where every high school student and teacher has an HP Notebook PC, the reality of 1:1 technology access is living up to the promise.

“We use technology in instruction to help student achievement and deepen student understanding,” asserts Elizabeth Hoover, Ph.D., executive director of Technology Services for the Alexandria City Public Schools. “Technology doesn’t drive instruction, but instead, supports it.”

Technology is treated as an integral part of ACPS curriculum and practices. The department of Technology Services coordinates implementation of the system’s technology plan, with input and involvement from students, teachers, staff, administrators, parents and citizens.

Customer solution at a glance

Primary applications

1:1 technology program for high school

Primary hardware

- HP Compaq 6715b Notebook PC
- HP Compaq 6735b Notebook PC
- HP Compaq 2510p Notebook PC

Primary software

- Genuine Windows® XP Professional
- Microsoft® Office
- Numerous specialized instructional applications

HP Services

- HP Financial Services
- Hardware support through Software Productivity Strategists, Inc., an HP partner

Windows®. Life without Walls™. HP recommends Windows.

The selection of HP Notebook PCs for the 1:1 deployment came naturally. “We chose HP products in part because we have experience with HP products. We know they’re durable and provide good value,” Hoover notes. “And we chose HP because of our existing relationship with SPS (Software Productivity Strategists, Inc. of Rockville, Md.), our local HP dealer and technology partner who seems equally invested in helping us reach our goals.”

SPS began assisting the school system with infrastructure support, set up a help desk for administrative and IT staff, and evolved into supporting the 1:1 program with procurement deployment and custom imaging.

1:1 technology matures

The City of Alexandria, Va., was recently named one of the top 100 communities for young people by America’s Promise, partly because of the quality of its schools. The new T.C. Williams High School is on the cutting edge, both inside and out.

The district’s 1:1 technology program for high school students began in 2003, and is currently in its second generation. The school has had five years to fine tune its approach to choosing technology, integrating it into the curriculum, and deriving the greatest instructional benefit. Among the foundations of the program:

- Integration of a web-based learning management system throughout the district
- Online testing of all high school Standards of Learning (SOL) tests since spring 2005
- Middle school online SOL testing began in spring 2007
- A Technology Integration Education (TIE) program for instructional staff that offers individualized and flexible options for participation
- Virginia’s Technology Standards for Instructional Personnel met by 98% of teachers

During 2008-2009, the department of Technology Services led a major revision of the ACPS technology plan. “Today we’re more mature in our instructional model; we have paid more attention to student and teacher input, and as a result, we’ve had fewer issues and problems because things have been really well thought out,” says Hoover.

The current standard student notebook is an HP Compaq Notebook PC that comes equipped with genuine Windows® XP Professional, Microsoft® Office and standard utilities. It is configured with a 12.1-inch diagonal display and an optional Ultra Capacity Battery in lieu of an internal CD/DVD drive. The school makes available a variety of instructional applications, most of which are installed directly on the notebook hard drives based on the individual student’s needs. Roughly 25% of the instructional applications are available only over the school’s 54 MB wireless network, which students also use to access email, the Internet and printing services.

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The technology team at ACPS gathered extensive feedback from teachers before selecting the HP Notebook PC. They were concerned with durability, portability, wireless ability, size of the hard drive, cost, and viability over the three-year expected lifecycle. “When we considered all those factors, the HP Notebook PC seemed to offer a very good value and match our needs.”

In the first few years of the program, teachers shared the same model as students. But with the second generation of technology, the district opted to equip teachers with the HP Compaq 6715b and 6735b laptops, also running genuine Windows XP, giving them a larger (15.4-inch) diagonal screen, larger (120 GB) hard drive, and internal DVD drive.

Integrating technology with instruction

To integrate technology into the curriculum, the district chose an online learning management system. Teachers use it to post the course syllabus, tests, quizzes, and interactive blogs. Students can log in and access resources for each of their courses.

Many teachers use the online tool to facilitate a paperless classroom. They create a set of pickup and drop-off folders. Teachers leave assignments

or templates in their “out” folder, where students can retrieve them. Students can then drop off completed assignments in the “in” folder for each class.

A server at the school provides each student with a 100 MB personal work folder where they can store all their assignments, course notes and other resources. Also, each student can have an email account on the ACPS email server.

The schools integrate all instruction and also use the system for standardized state achievement testing and advanced placement (AP) testing. Over time, the 1:1 program’s emphasis has shifted from the notebook PCs themselves to the instructional resources and strategies that enhance educational results.

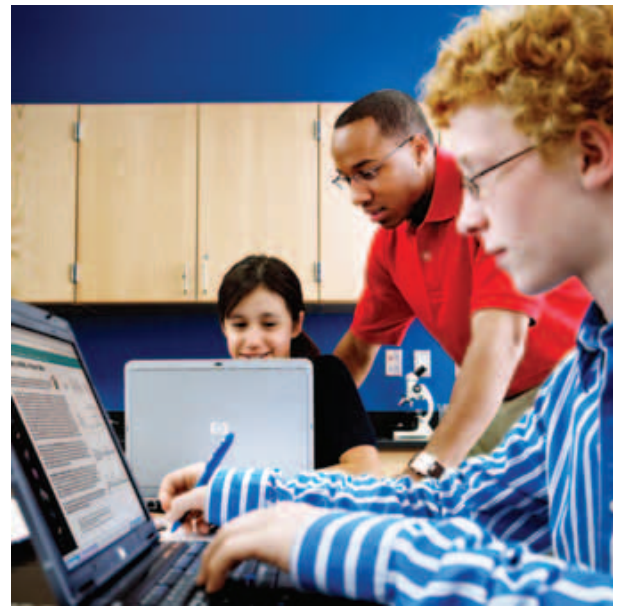
Those instructional resources aren’t all based at the school. Students at T.C. Williams also have the opportunity to take virtual classes through Virtual Virginia and Virtual High School. The programs offer AP courses and study in specialty areas that might not make it into the regular curriculum—like Chinese language courses.

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Using the notebook PCs for standardized testing also helps students. Initial anxiety among teachers about using the notebook PCs for state testing gave way when they considered the benefits. “When teachers received scores within 48 hours, and had the opportunity to re-teach and have their students re-take the test a few weeks later, we found the test data became instructional data. It’s been a big help,” Hoover notes.

A key to the success of the 1:1 program in Alexandria is professional development. Teachers not only get initial training and orientation in the learning management system and using their notebook PC to teach, but have continuous access to further training as needed. “The fact that they use an embedded model



for professional development is really important,” says Mark Weinel of SPS. “It’s not just a couple of weeks at the beginning of the year. It’s all year round.”

The professional development program helps teachers make progress each year both in their core knowledge and instructional strategies. Some faculty report they can’t imagine teaching without their laptops now.

Three-year refresh cycle

When the 1:1 program began in 2003, the district planned for student notebook PCs to last four years. Now it has shortened the expected lifespan to three years, coinciding with the standard warranty period on the notebooks.

“Four years is expecting a lot from a notebook in a school environment, especially when you consider changing memory requirements, processor evolution and other technology advances,” explains Weinel. “We thought it was in the best interest of the school to adopt a three-year cycle and worked with them to make it happen.”

The school’s help desk is both a general problem-solving destination and hardware service center. SPS employees handle the service. Students can leave their notebooks with the help desk for any repair that can be completed within 24 hours; or, if the problem will

take longer to fix, swap it at the help desk for a different notebook. "We wanted to make sure students were never separated from their computer for more than 24 hours," Weinel says.

Leasing with HP Financial Services

All of the notebooks acquired for the 1:1 program are leased through HP Financial Services. "Leasing through HP Financial Services is an affordable way to acquire technology, and it matches the school's cash flow model," says Hoover. "The budget is done annually, not over a three-year period. This way, we know the technology cost will remain fairly steady from one year to the next. We aren't facing the need to come up with a large amount of money every three years."

Most of the notebooks were returned following the first lease cycle, and the return process is straightforward and simple, Hoover notes.

Looking back, Hoover has sage advice for schools just beginning their 1:1 programs. First, she says, start with instructional goals and build the program around them. Second, look at tools that will help you achieve those goals—both in terms of durability and functionality. Finally, find a technology partner that brings technical strengths and a flexible attitude to your program.

Contact the
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