The Power of Mobile Learning in K-12: Success Stories Outside the Classroom

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The growing adoption of mobile technology in K-12 education is producing tangible results, enabling students to move beyond the classroom walls and the regular school day to learn anytime and anywhere. Here are some success stories reflecting improved learning outcomes through the use of laptops, tablets and other mobile technologies. Whether you work in a public or private school, hopefully they will inspire you to find creative ways to incorporate mobility-based learning.

Illinois High School District Bridges Digital Divide

Niles Township High School (NTHS) District, located in Skokie, Illinois, has a diverse population of 66,000 students, 31 percent of which are on free or reduced-price lunch programs. Despite its economic challenges, the district’s 92 percent graduation rate is a sign of relatively high performance.

One reflection of its commitment to success is the introduction of a new mobile learning program. Indeed, the district’s Anywhere/Anytime Learning (AAL) plan—ensuring every student a laptop or mobile device by 2014—is designed to meet rigorous standards, particularly in relation to Science, Technology, Engineering and Math (STEM).

The AAL program revolves around providing affordable ultra-lightweight netbook computers to students. These lightweight PCs allow student personalization and promote digital literacy, often seen as one of the key “21st century skills.” Having piloted netbook usage with small groups in 2009 and 2010, the program is now underway with all incoming freshman being issued computers.

The key elements of the Anywhere/Anytime Learning initiative are:

- **Pedagogical Support**: Teachers receive professional development classes, which are offered by the district’s professional development centers (PDCs) and supported by facilitators of technology integration (FTIs). Training focuses on helping teachers understand methods for developing appropriate course work to leverage the PCs.

- **Hardware Deployment and Support**: Students receive a full orientation on the use and care of their netbooks. The district, meanwhile, provides technical support services (including a student help desk, enabling students to participate in tasks requiring moderate technical assistance).

- **Infrastructure and Network Considerations**: Given the age of school buildings, the IT team paid careful attention to setting up wireless access points to minimize the necessity for cabling. Moreover, students are required to charge their own computers—though schools are equipped with battery charging stations.

The district has set a series of objectives. In addition to full deployment by 2014, it intends to increase the use of computer-based instruction, particularly online instruction, by 20 percent per year. And, by the fall of 2014, every student is expected to demonstrate 75 percent proficiency in the use of 21st century literacy skills as measured by the International Society of Technology in Education (ISTE).

As the district’s plan states, “Anytime-anywhere learning, facilitated by a 1-to-1 deployment, bridges the digital divide where all students have equal access to information, learning resources and the digital tools that will make the difference in their success in the 21st century working and learning environment.”

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San Francisco Private School Puts Students First

The Urban School, an independent private college preparatory high school located in the Haight-Ashbury district of San Francisco, is intent on maintaining its reputation for being innovative and student-centered. With these objectives in mind, the school introduced its laptop program more than a decade ago. Now, the school is focused on further integrating the technology with the learning process to support teachers and students.

According to the school’s vision statement, “Students use computer technology as a natural tool of the learning process. Computers are available to all students whenever and wherever they are needed—providing exponential advantages to learning over pen and paper tools. The result de-emphasizes the specialization of computer technology as use becomes seamless, ubiquitous and normal.”

Under the leadership of technology director Howard Levin, the program has emphasized the need for students to become creators, not just consumers, of relevant and engaging content. Meanwhile, teachers are professionally trained on the technology to support a project-based curriculum. Technology-enabled projects include an award-winning student newsletter, The Urban Legend, and the online production, Telling Their Stories, which draws on interviews with witnesses to the Holocaust and the Civil Rights Era.

With approximately 450 computers in use at this 350-student campus, the school has relied on wireless capabilities to further enhance the seamless and ubiquitous use of the technology.

In a presentation called Making the Laptop Disappear, Levin states, “If the goal of implementing laptops is ‘seamless integration,’ and if the tools bring with them capability far beyond anything that students and teachers have had in the past, then we need to look at the impact on learning.” It’s his view that five key factors can enhance learning: organization, communication, information, conceptual understanding, and production. As he sees it, all five factors are strengthened by offering universal student access to mobile devices and Internet connections.

Cary Academy Succeeds with Tablet PCs

With their skyrocketing popularity among consumers, tablet computers are rapidly making their way into many classrooms. Cary Academy, a North Carolina private prep school supporting grades 6-12, provides its students with convertible mobile tablet PCs that can be operated with a stylus or keyboard. In addition to the tablets, students and parents have access 24/7 to the school’s internal network where they can download course materials, read student blogs and check out completed projects.

School officials say the tablets enable students to learn the way they learn best. “Our shift of focus has become more about student creativity and learning,” says Sam Morris, former instructional technology director for the school. “The tablets allow for a more authentic learning environment.”

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Virginia Elementary Streamlines and Individualizes Learning

Jamestown Elementary School in Arlington, Virginia, is another school that has actively employed mobile technology to enhance student learning, even for its younger students. The school first embraced notebook devices in 2004 to support writing instruction. More recently, the school has begun providing device “tool kits” for every grade level. The tool kits support an array of wireless devices including tablets, notebooks and digital audio players.

“We use these in a variety of ways, with a special focus on content delivery skills, creativity and collaboration,” says Camilla Gagliolo, the school’s instructional technology director. “Using the devices provides an immediate and transparent way to do research, practice math facts, take notes and create presentations as well as access the ever growing number of available learning apps. We are trying to tap into their interests and enthusiasm for the technology that they use on a daily basis.”

Now, students can use their mobile devices during a language arts lesson to read an article or book of their choosing. Working through the reading assignment, they can discuss the story with classmates, take notes, or create visual documents for a final presentation shared with other students.

“Students complete the entire assignment on the mobile device, streamlining the entire process and giving students the ability to quickly organize their thoughts and presentation in a way that works best for each of them individually,” adds Gagliolo. “If we apply the ways students learn outside of school inside school, we have a better chance of reaching them. And we are seeing parents purchasing more of the educational applications that we are using during school for learning outside school.”

While the school originally began by applying mobile technology to a specific subject area that needed instructional improvement, the program has now grown to encompass many subject areas. Rolling out the program incrementally proved much easier than trying to introduce it upfront across the curriculum, explains Gagliolo.

Ohio School District Enhances Motivation and Performance

In St. Mary’s City School District in Ohio, teachers use a special tool kit to create lessons designed for an array of mobile devices. One subject area where mobile tools have been actively applied is mathematics. Students can use their devices to create concept maps, take photographs of math shapes and create group presentations. Students then share their presentations with classmates—making the work part of their electronic portfolios.

“Our experience is that teachers are looking for ways to become more effective in the classroom and mobile learning is a great tool to facilitate this.”

—Kyle Menchhofer, district technology coordinator, St. Mary’s City School District

Mobile devices provided by the district are introduced by grade level to minimize disruption and teachers are actively supported in their efforts to integrate the tools into their educational plans. To support teachers, the district invests heavily in professional development. But teachers also meet on their own weekly or monthly to trade experiences and insights about advanced uses of the tools.
“Our experience is that teachers are looking for ways to become more effective in the classroom and mobile learning is a great tool to facilitate this,” says Kyle Menchhofer, district technology coordinator, St. Mary’s City School District. “The positive energy that is being generated has infiltrated our district, and it has been awesome.”

And while administrators were initially concerned about possible theft or student misuse in relation to the mobile devices, this has not proved to be a problem. In the district, all devices are registered and texting or cell services are not made available to students. Should a device be stolen, district IT staff can shut down the device and render it useless.

The district also has found effective ways of offloading tedious IT tasks that might otherwise have proved distracting. For instance, the district now relies on a broadband service provider to manage added network traffic and Internet filters attributed to mobile devices. This enabled the district’s IT staff to remain focused on other projects that deliver a high impact.

Ultimately, the mobile learning program has enabled the district to increase teacher productivity while enhancing the motivation and performance of students. “Mobile devices are modernizing the way that students communicate and work with their teachers,” concludes Menchhofer. “Today, when a teacher assigns something, students are asking to use a mobile learning device or a drawing program to draw something out or create a chart or concept map. So now kids have a real impact on how and where they are going to learn.”

**Conclusion**

Whether the gains revolve around increasing digital equity or raising levels of academic achievement, the evidence is mounting that mobile technology can strengthen school and student performance. As a result, the drive to enable “anytime, anywhere” learning appears irreversible.

**Sources:**
“Making the Case for Mobile Computing,” Education Week, June 2009.