Making K-12 Mobile Learning Affordable and Easy to Implement: Wireless Campus Manager™ available from Sprint
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INTRODUCTION

Today’s K-12 educational segment is under significant pressure to improve student academic achievement. Unfortunately, the resources necessary to implement these improvements remain scarce. Mobile learning programs are a case in point.

Mobile learning can increase student engagement, improve thinking skills, and offer compelling ways to collaborate and investigate at every grade level. Despite these advantages, a clear barrier to implementation exists: Many school districts do not have the IT resources available to create mLearning programs from the ground up and then manage them on a day-to-day basis in an effective and secure fashion.

Mobile learning presents a complex, highly integrated technology challenge—one that can benefit from outside assistance provided by mobility experts. Rather than straining their already-slim budgets and in-house staffs, or pulling administrators and teachers into technology management issues, CTOs are advised to select an expert mobility partner—preferably one that has assembled a turnkey mobile learning program that addresses each of the many components necessary for mobile learning success.

This paper examines the current mobile learning environment, defines the specific issues that need addressing, and then explores a comprehensive, hosted and affordable solution recently introduced by one of the top U.S. wireless carriers—Wireless Campus Manager™ available from Sprint.

MOBILE LEARNING: A REVOLUTION IN EDUCATION DELIVERY

For more than a decade, the concept of “mobile learning” has both intrigued and frustrated K-12 educators. The idea is straightforward: Use mobile technology to capture student interest and make learning a more compelling and even enjoyable experience.

Figure 1: Pros and Cons of Mobile Devices in Mobile Learning Environment

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<th><strong>Pros</strong></th>
<th><strong>Cons</strong></th>
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<tr>
<td><strong>Notebook Computers</strong></td>
<td>• Processing power</td>
<td>• Cost</td>
</tr>
<tr>
<td></td>
<td>• Large Screen</td>
<td>• Not as portable as alternatives</td>
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<tr>
<td></td>
<td>• Sizeable learning apps library</td>
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<tr>
<td><strong>Smartphones</strong></td>
<td>• Extremely portable</td>
<td>• Very small screen</td>
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<td></td>
<td>• Growing number of learning apps</td>
<td>• Easy to lose</td>
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<tr>
<td><strong>Tablets</strong></td>
<td>• Very portable</td>
<td>• App library still growing</td>
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<tr>
<td></td>
<td>• Large screen</td>
<td></td>
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<td></td>
<td>• Crisp resolution</td>
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*Source: Frost & Sullivan analysis*
Each of the three major form factors used for mobile learning—the laptop computer, smartphone, and tablet—has its benefits. A decade ago, school systems began edging away from hard-wired, big-box computers—instead purchasing laptop computers for their students as part of the 1:1 goal of giving every child a personalized learning experience. Then smartphones caught fire, with their lightning-fast adoption rates and ultra-portability. Now, the new tablet products, with their larger screens and crisp graphics, are earning well-deserved consideration and praise.

Clearly, today’s 55 million K-12 students have come a long way from the original desktop computer lab of yester-year.

What has been the impact of the mobile learning initiative to date? For students, industry studies point to more engaged learning, better critical-thinking skills, fewer disciplinary problems, and enhanced technology skills. For school districts, a wide range of cost-efficiencies can be enjoyed, including the savings from fewer textbook purchases, reduced paperwork requirements, decreased assessment expense, and even a lowered need for disciplinary actions.

However, to experience these benefits, schools must take care to implement mobile learning properly in the classroom. From an educational perspective, that means true buy-in from teachers and administrators. The schools that succeed are the schools that:

- Carve out regular time for teacher training and discussion.
- Set clear standards for incorporating mobile tools into targeted classes.
- Require student participation on a daily basis.

In other words, schools must be actively engaged as educators—sharing ideas, attending training, evaluating available application software, collaborating on solutions, and encouraging students to leverage this powerful technology in creative and effective ways.

Unfortunately, instead of focusing on educational issues, many administrators, IT staff and teachers become overwhelmed by technological concerns. They take their eye off of the academic ball.

**A COMPLEX TECHNOLOGICAL MISSION**

Instead of focusing on their core duty—i.e., educating students—teachers, administrators and already-strained IT personnel can become ensnared in the behind-the-scenes complexity of launching and managing the required mobile technology.

Mobilization can be a complex process, with multiple components that present real risk. For example, the mobile devices themselves can be lost or damaged. Internet usage can violate security policies. Wireless data usage can exceed contractual commitments and destroy monthly budgets. Managing multiple vendors can quickly deplete resources, both dollars and manpower. Lack of meaningful reports can keep CTOs, administrators and teachers unaware of lurking dangers.
Without real mobility expertise and dedicated manpower, these potential problems can become very real, very quickly.

Consider all of the moving parts that must be managed in a mobile learning environment:

- **Policy development** – What type of warranty and acceptable use policies should be developed for the mobile devices? How will warranty and break/fix situations be handled? What will the specific student pledge be?

- **Device procurement** – Which specific mobile devices are approved for use? Who is authorized to place an order for a device? What is the specific step-by-step order process? Who is authorized to approve these orders? How does the district interface with the supplier?

- **Imaging, staging and logistics** – How will these devices be activated and set up to meet school requirements? Who will charge and test the devices, load approved software and imaging, and label the devices? How will the devices be shipped to the school? How will the school be notified of the shipment, complete the process, and deliver the devices to the correct student?

- **Asset management** – How will the devices and software licenses be managed? Who will track and monitor each asset, the serial numbers, ESNs, etc.?

- **Mobile device security** – What type of MDM (mobile device management) system will be put in place to manage mobile security, email, software and content? Who will manage the MDM process on a day-to-day basis?

- **CIPA (Children’s Internet Protection Act) compliance** – How can safe Internet access be assured? How will inappropriate content be blocked on devices? Should Web traffic be limited or prioritized in any way?

- **Data usage monitoring** – Can wireless data usage be tracked and monitored? Who will manage this function? Can proactive alerts be issued to warn of potential overages?

- **Break/fix and RMA management** – What will the process be to repair and/or replace broken or defective devices? If a device is under warranty, who handles its return and credit?

- **Reports and analysis** – How will all of the above policies and activities be distilled into clear, actionable reports?

- **Affordability** – With the availability of multiple devices, data plans and carriers, what is the best way to manage multiple contracts and points of contact, all within current manpower and funding constraints?

- **Management** – Who will assess and then manage the multiple vendors and contracts that are required to create a high-quality mobile learning solution?

- **Help Desk** – How will day-to-day IT and user issues be solved?
All of the above mobile learning requirements can easily overwhelm school districts and their IT staffs. As a result, an increasing number of CTOs are realizing the value of working with an external mobility partner.

**WIRELESS CAMPUS MANAGER AVAILABLE FROM SPRINT**

Mobile learning holds significant promise in the K-12 educational sector; however, delivering on that promise depends on the expert design, deployment, and ongoing management of the mobile technology behind it. In each school district, the CIO has to determine whether he or she has the personnel and resources to accomplish this task. Inherent in that discussion is deciding if and when to bring in an external partner to assist.

Frost & Sullivan research reveals that wireless carriers continue to be the most popular mobility partner among North American mobile and wireless decision-makers. One of the ways that best-in-class carriers have earned this high ranking is by creating solutions designed to meet the unique needs of specific vertical industries.

**Figure 2: Preferred Mobility Partner – Top Choices in North America**

![Graph showing preferred mobility partners with Wireless carrier at 27%, Major corporate software vendor at 18%, Mobile device manufacturer at 13%, Systems integrator or professional services firm at 12%, and Mobile application developer at 11%.](source: Frost & Sullivan Mobile Enterprise Application Survey, 2012)

For today’s K-12 sector, Sprint recently introduced a comprehensive infrastructure solution that manages the behind-the-scenes technology of mobile learning. This turnkey program is called Wireless Campus Manager available from Sprint.

Wireless Campus Manager is cloud-based, which removes the need for on-premise equipment and reduces capital expense outlays. Hosted solutions of this type also provide quick, easy software and curriculum updates across a district’s hundreds or thousands of mobile devices.

Sprint’s objective is to simplify the mobile learning process by providing the school district CIO with one contact, one contract, and the best in technology services. The complete bundle of Wireless Campus Manager services is included in the carrier’s Mobile Learning 3G/4G data plans for education:

**Policies and procedures** – Wireless Campus Manager available from Sprint works together with the school district to create a customized set of mobile learning policies and documents. Often, a school has little precedent to turn to for establishing appropriate mLearning policies.
Sprint brings proven best practices to the table. The resulting documents anticipate and define the full array of behind-the-scene processes, including the warranty, return and repair procedures for mobile devices. Sprint also builds out the policy enforcement process for students by creating the student pledge and a comprehensive set of acceptable use guidelines.

**E-procurement** – Wireless Campus Manager available from Sprint builds a procurement system that automates the entire purchase order process and works with whatever provisioning method the schools prefer; they can buy devices directly, through Sprint, or through some hybrid mix of the two approaches. An online Wireless Campus Manager portal allows CTOs to quickly review and approve requests.

**Staging and logistics** – Sprint's Wireless Campus Manager partner, Manage Mobility, operates a 15,000-square-foot staging facility in Atlanta, where mobile devices are tested, loaded with specified educational applications and MDM software, and then shipped directly to the designated school within days of the initial order.

**Asset tracking** – The solution’s asset tracker tool provides schools with the means to manage both the students’ and teachers’ mobile devices and software licenses. It allows the school to determine individual device ownership, scan any device details, and assemble a tracking history for each tablet and/or laptop computer.

**Mobile Device Management (MDM)** – MDM software provided by Airwatch manages security, email, content, and software applications on a variety of mobile platforms. Currently, these platforms are Android™, Apple® iOS, BlackBerry®, Mac® OS X, Symbian™, Windows Mobile®, and Windows® Phone devices. This MDM solution can also be used on user-owned devices that are brought to school. While the student is on campus, the MDM program can lock down the device so that non-learning sites (such as Facebook, Twitter, etc.) are blocked. Using locationing technology, these restrictions are then released once the student leaves the school premises.

**CIPA-compliant filtering** – CIPA-compliant Web filtering blocks inappropriate content and is provided by Lightspeed Systems. This system is designed to give teachers and IT personnel the ability to build customized block lists and to limit and prioritize Web traffic.

**Data usage monitoring and alerts** – For districts that are using Sprint wireless services, actual wireless data usage can be monitored on a real-time basis. A daily usage report is provided. And email alerts are triggered when the customer has reached 50, 75 and 90 percent usage on their devices. At 100 percent utilization, the mobile devices are automatically cut off in order to avoid overage charges.

**Break/fix management** – Sprint’s WCM partner, Manage Mobility, acts as the single point of contact for replacing or repairing both in-warranty and out-of-warranty devices.

**E-reports** – A variety of clear, graphical usage and trend reports are provided. These are designed to ensure and document USAC and E-rate compliance.

**E-rate eligible** – A portion of the Wireless Campus Manager recurring data plan cost can be eligible for E-rate.
In addition, Sprint provides:

**Learning management software** – This gives the school a ready-made educational resource library for use by teachers, students, and even parents. It includes videos, websites, and documents. And it provides the means to collaborate via blogging, closed messaging, discussions, and online assignments.

**Help desk support** – Sprint acts as the single point of contact for the school district’s IT team when any questions arise. Help desk personnel provide assistance on technical issues and account inquiries. They will also provide quick access to partners Manage Mobility, Lightspeed Systems, and Airwatch as required. A help desk option for parents and students to use is also available for an additional fee.

**Universal Connection Manager** – This optional proprietary tool interfaces with all of the cellular and Wi-Fi networks being utilized by the school district. It then automatically switches connections from Wi-Fi to 3G and back again according to policy guidelines, as the student or teacher moves from location to location. It can also enforce CIPA filtering on and off campus, and can be used on both school-provided and BYOD (user-owned) devices.

All of the basic services are bundled into the Sprint data plan price for education customers. There is a 100-device minimum requirement.

The Wireless Campus Manager solution provides an excellent example of how school districts can leverage a third-party mobility partner to expertly create and manage the required mobile learning infrastructure. A bundled program of this type provides genuine assistance in key areas:

- It is simple to administer with one contract and one point of contact.
- It is easy to deploy with Sprint and its partners having refined the necessary processes over a number of years and in a variety of complex mobile environments.
• It is safe and secure, utilizing content filtering and device management tools and solutions developed by best-in-class vendors.

• It is scalable and flexible, being device-agnostic and able to integrate with other solutions that may already be in place.

• It is affordable, with the Wireless Campus Manager bundle of services included in Sprint’s fixed-price 3G/4G data plans for educators. The program also has optional add-on services to manage telecom invoices, carrier disputes, split billing, etc., which reduces IT headaches and avoids surprise overages and penalties. And a portion of the WCM recurring data plan cost can be eligible for E-rate.

This bundled solution allows the district’s IT department to keep its focus on its core functions, reducing the need for (and expense of) additional personnel to manage the complex mobile learning environment.

**INNOVATIVE PROGRAMS REQUIRE INNOVATIVE PARTNERS**

Today’s K-12 schools are at an exciting tipping point in education delivery, including evaluating and deploying innovative new mobile learning solutions. While wireless technology can enable more individualized, engaged and effective instruction, it presents a set of deployment and management challenges that can quickly exhaust a school district’s IT resources.

Educators are encouraged to consider partnering with a mobility expert to avoid a drain on both money and manpower.

Further information on Wireless Campus Manager available from Sprint can be found at www.sprint.com/k12.

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