

Moving to Mobility:

Step Outside These Four Walls

What is a mobile education environment?

Education today doesn't need to take place within the confines of a school building, thanks to the Internet, wireless communication and mobile computing devices. Students and teachers are no longer required to be "stuck inside these four walls" for learning to take place. Teens whose body clocks don't mesh with 7:15 a.m. class starts can sleep in — then do the work when they are at their mental peak (9 p.m., perhaps). Teachers, too, can gain increased flexibility in organizing their time. Lessons can be more easily tailored for students with whom they can work one-on-one with using interactive online programs.

This is the promise of mobile learning, currently in place in some schools across the country. However, most K-12 schools are just starting to scratch the surface of what mobility can mean for education. Those that adapt to mobile technology will find it easier to reach students; research shows this sort of learning at the K-12 level improves student engagement, enthusiasm and test scores.

Why is it important now?

Online learning at both the higher education and K-12 levels is continuing to rise. The International Association for K-12 Online Learning estimates 1.5 million students were taking one or more online courses in 2010 (compared with 45,000 in 2000). The Innosight Institute predicts 50 percent of high school courses will be delivered online by 2019.¹ More than half the states in the U.S. — 27 plus Washington, D.C. — have at least one full-time online school operating statewide (meanwhile, 39 states have some form of online learning initiative).

Schools that adopt online or blended mobile learning can save money by not having to build or expand schools, computer labs and other facilities. Open courseware and other open source content is free, while low-cost, cloud-based mobile applications and Web 2.0 tools are proliferating, allowing schools to cut back on textbook budgets.

With student retention a problem (one-third of high-schoolers drop out) and test scores lagging, education has room for improvement. Mobile learning allows students to learn the way that suits them best: on their own time, at their own speed and, at times, in their own place, using the tools with which they are most comfortable. Students also need to be ready to jump into a tech-heavy work world; few will avoid computers on their jobs. Schools need to prepare them for this, which will help not only individual students, but also the U.S. overall (an educated workforce is a more globally competitive workforce).



Improved student engagement, learning

Comprehensive, long-term research results aren't available yet, because mobile technology is still too new and spottily implemented. However, early studies in the U.S. and abroad indicate mobile learning is effective. For example, a study of thousands of students in North Carolina showed smartphones and learning apps increased students' collaboration, motivation, and reading and math skills.²

Students and teachers can access school content anywhere, anytime

Work and apps stored in the cloud mean students and teachers are no longer stuck in a brick and mortar classroom and no longer tethered to arbitrary time periods. Depending how a school district chooses to structure itself, students and teachers may be able to "do school" from a tablet at a library, a netbook in a net cafe, or a smartphone on the subway. Mobile learning requires only a Web-enabled device and a connection to the Internet, preferably wireless.

Classrooms can be what and where you want them to be

Many options exist for schools that adopt mobile learning. They can be completely online, so students and teachers never meet face-to-face (not counting video conferencing or augmented reality meet-ups). Or, more commonly, schools can devise blended programs, where students work online at their own pace, but also are required to attend face-to-face classes (the amount of on-ground presence varies widely).

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These arrangements give cash-starved, overcrowded school districts alternatives to new construction or remodeling existing buildings. The investment districts may have made in wireless infrastructure and portable digital devices can pay for itself — and then some.

New technologies are easy to use, simple to maintain and more affordable

Educational apps are being developed at a rapid pace for smartphones and tablet computers. Costs for the devices are relatively low — certainly lower than for the desktop PCs and workstations of the past. Many students already have smartphones (nearly half of high-schoolers and middle-schoolers, according to a 2010 survey).³ School districts that allow “Bring Your Own Device” (BYOD) initiatives can realize savings, since they will only need to purchase devices for those students who don’t have them.

Who’s doing it?

- Chicago Virtual Charter School is a blended, K-9 school with a physical location in downtown Chicago that provides not only a chance to work with teachers, but also a place for students to socialize. Students are required to attend the physical facility one day per week; the approach is individualized, with some group activities. However, science curriculum is done in a traditional, face-to-face manner, because school leaders have found science labs are difficult to do online. Because the school is part of the Chicago Public School System, students receive free use of a loaner computer and printer, plus a stipend for Internet access. In 2009, the school received an Illinois Honor Award for significant gains in academic achievement.⁴
- Katy Independent School District near Houston, Texas, provided specially equipped smartphones to 130 fifth graders last year as part of a pilot project. District officials said they agreed to the project because they saw how much students liked using portable devices. A typical exercise:

students point their phones at the night sky, take pictures of the stars, and have the constellations mapped. Since getting the phones, the Katy students’ math and science scores are up 20 points and reading by 18 points, compared with test scores from fifth graders in past years. The students also have better attendance and fewer discipline problems.⁵

- Florida Virtual School (FLVS) is a charter school that has been active since 1997 and now provides online courses to 100,000 K-12 students both in Florida and outside the state. Students are able to reach teachers seven days per week, by phone or e-mail. Advanced Placement scores are higher for virtual school students (an average of 3.05 out of 5) than for traditional public school students (2.49). FLVS produces its own handheld learning apps in algebra and reading. Its motto: “any time, any place, any path, any pace.”⁶

Where can I find out more?

- “Q2 Converge Special Report on Mobility and Security”
<http://www.convergemag.com/reports/q2-2011/>
- “Keeping Pace with K-12 Online Learning — 2010”
http://kp.bluemarblecreative.net/wp-content/uploads/KeepingPaceK12_2010.pdf
- “Future Schools: Blending face-to-face and online learning”
<http://educationnext.org/future-schools/>
- “A National Primer on K-12 Online Learning”
http://www.inacol.org/research/docs/iNCL_NationalPrimerv22010-web.pdf
- “The Rise of K-12 Blended Learning”
<http://www.innosightinstitute.org/media-room/publications/education-publications/the-rise-of-k-12-blended-learning/>

Endnotes

1. <http://www.innosightinstitute.org/media-room/publications/education-publications/the-rise-of-k-12-blended-learning/>
2. <http://www.edweek.org/ew/articles/2010/03/18/26smartphones.h29.html?r=79428307>
3. http://www.corp.att.com/edu/docs/special_report.pdf
4. http://www.inacol.org/research/promisingpractices/NACOL_PP-BlendedLearning-lr.pdf
5. <http://www.edweek.org/ew/articles/2010/03/18/26research.h29.html?r=294771700>
6. <http://www.flvs.net>

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