TECH WATCH

What Is Augmented Reality?

This "far-term horizon" technology is coming to classrooms faster than you might think.

By Karen D. Schwartz

Elementary school students in Madison, Wis., use global positioning system–enabled handheld computers to play games that help them learn about science and history by interviewing virtual characters, gathering simulated data and integrating observable information. Fourth-graders in San Diego use GPS-equipped smartphones on field trips to museums to guide them, via virtual reality, through the facilities.

Photo: Fuse/Getty Images

All of this, unimaginable a few years ago, is called augmented reality (AR) — an innovation made possible by combining virtual and real-world data using broadband, GPS tools, and video and pattern recognition. Delivered on wireless devices, AR unites the real and imagined to deliver a richer learning experience than is possible with static learning tools.

"These technologies have come together in a way that has enabled augmented-reality applications to hit the mainstream," says James Gurd, a London-based consultant who blogs regularly about digital media.

Real Benefits

The implications for education are tremendous. Although AR applications originated in college classrooms, they have filtered down to some K–12 schools, where they're limited only by the imaginations of administrators, educators and students.

Shawn Mahoney, director of computer development and training at Seymour (Ind.) Community Schools, has made it his mission to educate his colleagues about AR. "Augmented reality brings animation and interest to stagnant material, which facilitates learning," he says.

Augmented reality is poised to be **one of the biggest** disruptive technologies of **2010–2011**.

SOURCE: "2010 Gartner Hype Cycle Special Report" (October 2010)

AR's versatility is especially attractive. By using a Google Earth plug-in with a webcam, for example, 3D structures originating from Google Earth can easily pop up on the desktop. "Kids are used to being on the outside looking in, but AR brings the content into their surroundings," Mahoney says. "When you first start experiencing it, it's incredible."

Lorie Lux is another AR convert. A math teacher at Shelbyville (Ind.) Middle School, Lux is working with an expert who created an AR program at Harvard to develop a program for her students using the new camera-equipped iPod Touch. "We're creating games [that incorporate] state standards to get students excited about learning while [developing] 21st century skills," she says.

Shelbyville's social studies curriculum will be shaken up first. Lux envisions students carrying Wi-Fi–enabled iPod Touches around school, pointing them at markers that would then transmit information to the devices. "They might point the device at the Abe Lincoln statue outside our school, and it would give them a question to answer," she says. "If they answer correctly, a video might pop up commending them and then give the next step in their journey. If their answer is wrong, it might lead them in another direction."

Looking Ahead

Certainly, augmented reality's potential is great, but momentum is only beginning to build within schools.

To learn how augmented reality could change textbooks, visit edtechmag.com/k12/AR111.

According to the New Media Consortium's *2010 Horizon Report: K–12 Edition*, adoption of AR in education will grow

exponentially over the next five years. The technologies behind it also will continue to evolve, opening up new possibilities for interactive learning.

Close Window