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FEATURE

Textbooks to Tablets

Preparing for digital education by 2017.

By Dawn Reiss — District Administration, Feb 2013
1/14/2013

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For years, there's been an ongoing discussion about the digital divide between the "haves" and the "have nots." As technology has advanced, so has that gap, which is driving fundamental changes in how we work, learn, and live.



A Griegos Elementary School student in Albuquerque uses an iPad in the library, which has a portable cart of about 30 iPads—known as Computers on Wheels.

Administrators, educators, and nonprofit entities nationwide have been trying to lessen that gap over the past decade. With newer, lighter technologies like tablets and ultra-light laptops like the MacBook Air, some schools are considering getting rid of textbooks altogether and going digital.

"This is a long time coming; we've been talking about digital education for many, many years," says Aaron E. Walsh, director of Boston College's Immersive Education Initiative (iED), a nonprofit international collaboration of universities, districts, research institutes, companies and other entities, that are working toward a digital education world. "The iPad was the catalyst of this because the potential a tablet has to replace a book just makes sense. The price point is reasonable, it's durable and can be dropped or put in a backpack. Plus, there is a lot of immersive content online now that is highly interactive and useful for education."

According to the U.S. Department of Education and recent studies by the National Training and Simulation Association, technology-based instruction can reduce the time students take to reach a learning objective by up to 80 percent. Last year, Federal Communications Commission Chairman Julius Genachowski and Secretary of Education Arne Duncan jointly unveiled a five-year challenge and the "Digital Textbook Playbook" to help transform American classrooms into digital learning labs by modifying the textbook adoption process, by allowing K12 schools to use taxpayer funding once reserved for printed books to be used on iPads, Kindles, and other devices, as well as software.

The hope is to help students access more current information while preparing them for an increasingly digital age. "We spend \$7 billion a year on textbooks, and for many students around the country, they're out of date," Genachowski noted in the press conference last year announcing the change.

Such a philosophy is backed by the State Educational Technology Directors Association (SETDA) which also released its own report called "Out of Print: Reimagining the Textbook in a Digital Age" that recommends all schools switch to digital instructional materials by 2017. Last November, helped by a grant from the Bill & Melinda Gates Foundation, SETDA launched the State Education Policy Center (SEPC) to help "school reform and improvement efforts" by aggregating information about the most current technology-related education policies and practices.

To make that leap means a major shift in U.S. education standards. Even though states and districts spend \$5.5 billion a year in core instructional content, many students still use textbooks instead of digital content, which can be frequently updated and offers more learning avenues to help all students.

Much of that shift to a more technology-based curriculum also helps facilitate education trends and goals. When students use computers, it offers workplace-like situations that require independent, self-directed learning, thus preparing students with college and career readiness skills, according to Doug Levin, SETDA's executive director.

The Digital Divide

Meanwhile, Digital Promise, an independent nonprofit authorized by Congress to help the advancement of digital learning in the United States, has already created the Digital Promise League of Innovative Schools, a national coalition that partners start-ups, research institutions, and a network that includes 2.5 million students within 28 districts like the District of Columbia Public Schools, High Tech High in San Diego, and Mooresville Graded School District in North Carolina spread across 18 states. The league's goal is to unite people who run and manage a district with the people who are developing digital solutions, and the people who are studying what works.

"I'm certainly not one who thinks technology is a silver bullet," says Adam Frankel, executive director of Digital Promise. "If it is used well, it allows teachers and schools to personalize education. That is the dream of education, to help students be taught in the way they need to be taught."

Increasing Support

Because of the ability to constantly customize, update, and tailor learning, numerous government agencies, companies, and organizations are behind the idea of going digital. The Federal Communications Commission (FCC) is considering creating a "Digital Literacy Corps" to help train parents, students and other community members with computer skills at local schools and libraries. Connect2Compete (C2C), which is a nonprofit supported by the FCC, Intel, Best Buy, and other organizations, was created this past year to focus on narrowing the digital divide by making high-speed internet access, computers, and digital literacy training more accessible for Americans.

For example, last fall, C2C, which has nonprofit and private sector partners, including the nation's largest cable internet companies, offered families of students in 23 Bibb County (Ga.) Schools access to reduced-cost internet service, affordable computers, and free digital literacy training during a pilot program.



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Early Adopters

Schools across the U.S. are adapting the "go digital" call in a variety of ways to fit their specific budgets and needs. Six years ago, Zuni Elementary School, a magnet school for communications and technology in the Albuquerque (N.M.) Public Schools, was lagging behind in test scores and technology. So Principal Deborah Elder challenged her teachers and staff to infuse instruction with technology. First she tried to find funding for a school where 64 percent of her students were on a free or reduced-price lunch. Elder worked with state legislators in New Mexico to access some special appropriations. And when a new high school was being built in Albuquerque she was able to acquire their outdated, first-generation Promethean whiteboards, which they no longer needed.

Next, Elder focused on what she calls the "click here" training, that taught teachers how to log on to computers, where to click on the keyboards and how to use whiteboards as more than just projectors.

Elder then gathered a team of teachers interested in developing their school as a true digital-savvy school. They read the U.S. Department of Education's National Education Technology Plan 2010 and the book "Disrupting Class." "And then we started to dream," Elder says.

From there, Elder and her team developed a mission statement of having project-based, technology-infused learning.

In 2011, Zuni Elementary School piloted a digital program with Discovery Education, which provides digital and non-digital tools for science, social studies and health classes. The company also partnered with Digital Promise for "techbooks," or online lessons, videos, and games for teachers and which can replace many textbooks as a more interactive tool for learning.

Teachers review indexed video clips, which Elder says optimizes their time by pinpointing relevant information instead of spending hours wading through Google searches when creating lesson plans.

Although it's only on its second year of going digital, Elder says reading proficiency at Zuni was up 2 percent at the end of 2011, compared to 2010. "I'm seeing students are just learning on a deeper level because they are using digital media," she says.

That means the role of the teacher is changing. "In the past, the school was where the knowledge was," Elder says. Because learning in a digital age means access to more information, more raw data, Elder says the role of the teacher is about giving context and helping students discern if they have good information and, if they find conflicting information, how to decide what is accurate, and "teaching them how to become a literate digital citizen."

Also in Florida, state education officials rolled out a five-year proposal in 2011 that calls for all K12 students to use only "electronic materials" by 2015. It's something Clearwater High School in the Pinellas County (Fla.) Schools started doing in 2011, by giving Kindles to all high school students instead of textbooks. Like checking out a library book, students can check out Kindle Fires for the year or use more than 1,000 Kindles that are permanent classroom sets.

Unlike Zuni, there wasn't a pilot year to get teacher "buy-in" says Andy Shaw, the school's Kindle program coordinator. "It was difficult at first," Shaw admits. "But then teachers realized it's a fantastic tool that students love to use."

Optimistic Goal

While some schools are early adopters, the 2017 deadline laid out by SETDA for digital conversion is likely more of a hopeful goal than a realistic feat, say some experts. "The U.S. schools system is huge, so it seems a bit over-optimistic to me," says Boston College's Walsh.

Even if the deadline is technically feasible, Walsh says it will likely ensure progress is made in part in terms of training and technical know-how as the transition happens.

"Just having the technology doesn't make you achieve. You need technology coupled with educators who know how to apply it," Walsh says. "I would prefer a good traditional experience over a bad digital experience." DA

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