

steven paine

West Virginia's superintendent of schools argues that classroom technology use is at the core of 21st-century learning.

by Dan Gordon

Steven Paine was especially pleased with one sentence from President Obama's opening gambit on public education.

"I'm calling on our nation's governors and state education chiefs to develop standards and assessments that don't simply measure whether students can fill in a bubble on a test," the new president said in a speech delivered March 10 in Washington, DC, "but whether they possess 21st-century skills like problem solving and critical thinking, and entrepreneurship and creativity."

To Paine, West Virginia's superintendent of schools, the remarks were an endorsement of the foundation he has laid since assuming the helm as the Mountain State's top education official in 2005. That year, West Virginia became the second state in the nation—eight more have followed suit—to enter into the Partnership for 21st Century Skills (www.21stcenturyskills.org), a coalition of business, education, and policy leaders that advocates for instilling in K-12 students skills that go beyond traditional content standards to include global and civic awareness, critical thinking, problem solving, and technology literacy.

Under Paine's leadership, West Virginia's Department of Education launched the 21st Century Learning Initiative and revamped the state's content standards and objectives to emphasize these skills. Other states seeking to take similar steps have turned to West Virginia for guidance. The state's path to incorporating 21st-century skills into the classroom is now outlined on the department's website in a document, "A Chronicle of West Virginia 21st Century Learning Initiative" (<http://wvde.state.wv.us/tt/2008/21stChronicle082008.pdf>). The cornerstone of the effort is technology, which Paine believes is "at the core of 21st-century learning."

Critics of the approach argue that the focus should be on bringing more rigor to teaching the customary content—English, math, social studies—as opposed to imparting these so-called soft skills. Paine, preferring to call them "performance" skills, disagrees. "Go talk to the kids," he says. "They'll tell you that simply raising the rigor of the traditional experience isn't going to improve their outcomes. We have to help them understand the relevance of the content to their lives and to the world in which they live."

When Paine wants to go talk to the kids, he doesn't have to go far. His son is a high school junior, part of the generation of digital natives who have never known a world without computers, the internet, and cell phones. "He and his buddies

are unbelievable in their ability to use their iPhones and their MacBooks to link to information instantly," Paine says. "It's second nature to them, part of their world."

Two days after Obama's education speech, and less than a month after passage

of the \$787 billion stimulus bill that includes \$650 million for education technology, Paine had breakfast with 15 West Virginia secondary school students. At the meeting, he asked them what they would do if they were in charge of spending the stimulus money allocated to education.

"Their answers were pretty interesting," Paine says. "Things like, 'More technology tools in classrooms; we want to be engaged in learning. Our teachers are good, but they need more training in how to use technology to facilitate learning.' One student said, 'That's just how I learn. That's my world when I go home.' These kids were dead-on. We talked about how there is this explosion of information out there, and that in addition to using these technology tools to teach the content that is traditionally taught, teachers should be working with students to acquire new information and helping them learn how to discern what is useful and what is not."

The son of educators, his father a middle school principal and his mother an accomplished pianist who taught music in the public schools, the 53-year-old Paine grew up in Berea, OH, a suburb 10 miles southwest of Cleveland. It was his athletic prowess that carried him to West Virginia, recruited by Fairmont State College as a swimmer. He lettered in the sport, but has since left it behind. "Right now I might sink," he says.

Paine went on to West Virginia University to pursue an education career. He began teaching in the late 1970s, and after two decades-plus working across the state as a teacher, curriculum director, assistant principal, and principal, he became the state's deputy superintendent of schools in 2003, ascending two years later to state superintendent. He has guided the forging of partnerships with tech companies such as Intel (www.intel.com), Cisco (www.cisco.com), Oracle (www.oracle.com), and SAS Curriculum Pathways (www.sas.com).



sascurriculumpathways.com). Thinkfinity (www.thinkfinity.org), a tool created by Verizon (www22.verizon.com), provides West Virginia's K-12 teachers with a free online portal to 55,000 educational resources aligned with the state's academic standards, including grade-specific lesson plans and other interactive tools and materials for students. TechSteps (www.techsteps.com), a framework for teaching technology literacy, is instituted in all of the state's K-8 schools through a partnership with SchoolKit (www.schoolkit.com) and emphasizes project-based learning—as well as assessments that move away from the multiple-choice tests that Paine believes can be inadequate for measuring student progress.

He has made inroads, but Paine says he still has much to do to fulfill his vision for West Virginia's schools. The challenge is

ing the gap between the haves and the have-nots," Paine says.

On the issue of professional development, West Virginia has now trained several hundred teachers to serve as technology integration specialists who can mentor their colleagues and teach them research-based strategies for incorporating technology into lesson plans. The ultimate goal is to have one such individual in every school.

Technology integration specialists go through an intensive 40-day training program developed by the US Department of Education. The program is designed to break down the reluctance among some teachers, particularly those less sure with technology, to change their practices. To further that effort, Paine hopes—again, with the benefit of the stimulus funding—to implement a concept he calls "building the back porch":

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threefold: equipping every classroom in the state with basic technology tools, developing the broadband infrastructure to ensure their use, and providing professional development so teachers can make the most of these resources.

"Yesterday's tools were the chalk and chalkboard; today's tools are a laptop, projection device, and a digital whiteboard," Paine says. Together, these instruments can vitalize classroom content and facilitate meaningful interaction between teachers and students. The failure of state and local budgets to allow for these tools "shows how far behind we in American public education are in providing support for our teachers," Paine adds. He hopes that a combination of state and local funding,

Steven Paine delivered the keynote speech at the first FETC Virtual Conference & Expo, a free education technology event held online April 23. Visit www.thejournal.com/fetcvirtual to find coverage of the best of FETC Virtual, as well as links to event archives, including Paine's keynote address and informational sessions.

along with the new federal stimulus money, will help to address the deficiency.

A heavily rural state, West Virginia has a lack of sufficient bandwidth in many of its schools; thus, the promise of

about \$7 billion in stimulus money for high-speed internet initiatives in rural and underserved urban areas leaves Paine hopeful. Expanded bandwidth would enhance a wide variety of technology-based programs and online resources that the state's education department currently offers through its Teach 21 website (<http://wvde.state.wv.us/teach21>). "It's a real equity issue, because it's our poorest areas that don't have the bandwidth access, and this digital divide is increas-

creating a virtual space where teachers can informally share practices and exchange ideas on effective methods of instruction for today's tech-oriented generation of students.

Although he didn't call it that at the time, Paine first came up with the idea of training a technology integration specialist in the early 1990s, when he was working as a middle school principal. "Multimedia computers with CD-ROM drives had just come out, and we had networked computer labs with instruction programs that kids would engage in at their own pace," he recalls. "But we had very few teachers who understood how to use these tools. So I freed up an eighth-grade social studies teacher to spend half of her days exploring the technology and to then begin working with her colleagues."

He stops, as if reflecting on a prehistoric era. "Boy, have we come a long way."

And yet, Paine insists there is considerable catching up to do if educators wish to join the world inhabited by the digital natives who comprise West Virginia's student population.

"The technology is continuing to emerge," he says. "It's not just laptops. There is now so much that you can do with a BlackBerry or an iPhone, or even a simple cell phone—and yet, here we are, banning cell phones from schools."

He recently read with interest about Romania's commitment to bringing universal access to high-speed broadband to every one of its citizens, seeing the country's efforts to use technology to boost its standard of living as analogous to his goals with West Virginia's students. "Our kids can be as competitive as any kids in the world if we can extend the right bandwidth and technology access to them," he says. "Technology today is the great equalizer of educational opportunity." **THE**

Dan Gordon is a freelance writer based in Los Angeles.



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