

# Technology Tips

T H E H I G H S C H O O L O F C O M M E R C E

## STATES TACKLE GLOBAL COMPETITIVENESS

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The following is taken directly from the eSchool News Online. It's a very interesting read.

### Governors seek to boost math, science, and technology education in their State of the State addresses

*From eSchool News staff and wire service reports*

In their State of the State addresses this year, many U.S. governors have proposed new education programs that aim to raise high school graduation rates and ensure the global competitiveness of their students--and many of these proposals rely on the use of educational technology.

January 26, 2007—As eSchool News reported on Jan. 24, President Bush cited the competitiveness of American students as a critical challenge in his 2007 State of the Union address (see story: Bush to Congress: Renew NCLB this year). It's a challenge that also has resonated with governors and other high-ranking state officials from coast to coast. From increasing the rigor of the high school curriculum, to focusing

more attention on math, science, and technology instruction, many U.S. governors this year have proposed new education programs that aim to raise high school graduation rates and better prepare students for success in the 21st century. And many of these proposals, in turn, rely on the use of educational technology.

### Laptops and individual learning plans

In Arizona, for instance, students in seven high schools would be given laptop computers under a \$5 million pilot project floated Jan. 24 by state Superintendent of Public Instruction Tom Horne.

The idea is that teachers "can better prepare students for the digital economy in a context where every student has his or her own laptop," Horne said in a "state of education" address delivered to state lawmakers.

Horne said he wanted to build on the success of Empire High School in Arizona's Vail School District (see story: All-digital school passes first test) but was

proposing only a limited pilot program for now "to avoid the pitfalls of failures experienced by other states."

The program's costs would be split between the state and participating schools, Horne said as he requested a \$2.5 million state appropriation. He added: "It will be an important investment in keeping Arizona on the cutting edge of technology in education, and doing so carefully and successfully."

Participating schools would be Benson High School in Cochise County, Vail High School Charter School in Pima County, Rio Rico High School in Santa Cruz County, Florence High School in Pinal County, Cyber High School in the Phoenix Union High School District, Gilbert Classical Academy in the Gilbert Unified School District, and Coconino High School in the Flagstaff Unified School District.

Horne's annual address also requested a \$400,000 appropriation for a state web-based system for all students in grades 7-12 to have individualized learning

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## STATES TACKLE GLOBAL COMPETITIVENESS (continued)

plans.

"Principals would be responsible to see that all students had these plans, and they would be a requirement for graduation, to assure that they were universal," he said.

The purpose of the plans is to ensure that every student gets one-on-one advice from educators in identifying a career path. Currently, some students rarely meet with guidance counselors, who are overwhelmed with demand. Arizona reportedly averages one counselor for every 783 students, one of the highest ratios in the country.

The personal learning plans would require teachers to assume the role of academic guidance counselor, checking students' academic progress and helping them focus on a realistic career path. The plans would be updated each year.

*Even if you're on the right track, you'll get run over if you just sit there.*

**Will Rogers**  
US humorist & showman (1879 - 1935)

A program resembling what Horne wants is running at Arizona's Glendale High School. Counselors there meet each year with students to update their personal learning plans. The web-based system includes career testing,

as well as links to career information and job mentors, colleges and technical schools, and financial aid.

Last fall, eSchool News reported that Kentucky had launched a similar web-based program of its own to help students map out their academic careers (see story: Program creates ILPs for all students).

#### **Model ed-tech program could be expanded**

In Missouri, Gov. Matt Blunt, a Republican, has proposed spending an extra \$4 million to get students and teachers focused on math and science.

Blunt is proposing \$2.9 million to expand the eMINTS (Enhancing Missouri's Instructional Networked Teaching Strategies) program to 100 additional classrooms across the state. The program

incorporates the internet and other technology into class work and is driven more by students' inquiries than by textbooks and teacher lectures (see story: Study: Missouri's ed-tech program is raising student achievement).

Already, more than 500 schools in about 230 districts covering 20,000 students have been using the program after receiving federal funds, but this would be the first state revenue directed to it, if the Legislature agrees.

Blunt also wants to spend \$1 million on after-school programs focused on math, science, and health, and \$250,000 to cover up to half of students' costs to take Advanced Placement (AP) tests in math and science, which can earn them college credit.

"To keep our economy growing, and to provide Missourians with good family-supporting jobs, we will need to ensure all Missourians are equipped with advanced skills in math and science," Blunt said in a written statement.

The programs would be administered by the state Department of Elementary and Secondary Education, which also has pledged to dedicate \$250,000 of its professional development funding toward getting teachers versed in the technology program and \$100,000 to get more teachers certified to teach AP courses.

Blunt's proposals follow a summit and special committee he organized to search for ways to improve math and science education and careers. The panel's key recommendations included improving technology in the classroom and ensuring that teachers know how to make it part of their lessons.

#### **Rigor, relevance, and results**

In Minnesota, which enjoys a \$2.2 billion budget surplus this year, Republican Gov. Tim Pawlenty has recommended a 9.3 percent boost in spending that includes \$1.4 billion in additional funding for education. Pawlenty's plans include incentives for schools to offer more demanding courses and money to improve infrastructure and classroom technology at state colleges and universities.

Portions of the new money are tied to performance goals, which Pawlenty said reflected the demand by taxpayers that government dollars get results.

Pawlenty recommends adding 2 percent onto the basic per-pupil education formula for all schools. Schools that get three or more stars on their state report cards—which are based largely on student test results—would qualify for an additional 2-percent increase each year, though they couldn't use this extra money to

fund permanent salary increases.

High schools that adopt stronger college-level course requirements for their students could tap into another \$75 million bonus pot, part of Pawlenty's push for reforms that he calls the new 3 Rs—rigor, relevance, and results. In addition, college-bound students from families that earn less than \$100,000 could earn free university tuition if they take rigorous college-prep courses while still in high school, through a new \$92 million scholarship fund.

Pawlenty's plans also call for \$67 million in new funding for advances in higher-education infrastructure and classroom technology.

#### **Preparing students for 21st-century industries**

In Colorado, Democratic Gov. Bill Ritter used his first State of the State address to link economic development with high-quality education.

"The best economic-development tool is a well-educated workforce," he said. "But too many of our kids are dropping out of high school. Our achievement gap is too wide, and we aren't doing enough to partner with teachers to help them improve student learning."

Ritter said he wants to cut the state's dropout rate—about 30 percent for the general student population, and more than 50 percent for black, Latino, and American Indian students—in half within 10 years. "I also want to keep the emerging technology gap from widening, so we don't leave poor and rural kids behind," he added.

#### **Facing 21st-century problems**

In Washington, Gov. Christine Gregoire, a Democrat, also cited the need to prepare kids for what she called "the globally competitive job market of the 21st century." "That's why my No. 1 priority this session is education. I ask that you join me in addressing this priority," she said. "There is no better example of where we have held on to a 20th-century system while we face 21st-century problems."

Most of Gregoire's proposals focused on strengthening math, science, and technology education.

"This nation met the challenge of President Kennedy in the 1960s to be the first to put a man on the moon. Our modern-day moon challenge is to meet the math and science crisis facing our state and nation," she said. "Three-quarters of Americans believe that if our next generation fails to improve skills in

STATES TACKLE GLOBAL COMPETITIVENESS (continued)

math, science, and engineering, it risks becoming the first generation of Americans who are worse off economically than their parents."

Gregoire proposed reducing math and science class sizes to no more than 25 students for each teacher; offering additional training and coaching for math and science teachers, so all have a degree in their fields; recruiting 750 new math and science teachers by offering college scholarships, loan forgiveness, and luring those in the private sector who want to contribute to education; and standardizing the math and science curricula across the state, so students moving from one district to another learn the same material.

"We should have no more than three curricula options in the state, and we need to tie our math and science education to international standards so we know our kids can compete with anyone," Gregoire said. She also referenced the need for more students to study computer science and other "high-demand" subjects.

"A survey of Washington businesses shows that we are not keeping pace with employer needs--especially in fields like computer science, engineering, and construction," she said. "We're importing workers for good-paying jobs. Don't you think our sons and daughters should get a shot at those jobs?" Classrooms for the future

In Pennsylvania, Gov. Edward G. Rendell, a Democrat, has announced a \$20 million, "classroom for the future" program. Designed to outfit the state's 611 high schools with state-of-the-art technology, the program also is expected to include a statewide network of teacher mentors and \$6 million for professional development to help educators integrate the new technology into classrooms. Technology supplier CDW-G will be a primary

provider of equipment. According to the company, Pennsylvania's Classrooms for the Future solution includes:

- "Lenovo® ThinkPad Notebooks
- "Futurekids, Inc. professional development and training
- "Microsoft Office 2007
- "Inspiration Software
- "Adobe Creative Suite
- "Promethean interactive white boards
- "Polyvision interactive white boards
- "D-Link access points
- "HP multimedia printer and digital camera
- "Canon video camera
- "Bretford mobile laptop carts
- "Epson projector
- "Logitech webcam and speakers

- Links:
- Arizona Department of Education  
<http://www.ade.state.az.us>
  - Missouri's METS (Math, Engineering, Technology, and Science) Initiative  
<http://gov.mo.gov/mets>
  - Minnesota Department of Education  
<http://children.state.mn.us/mde/index.html>
  - Colorado Department of Education  
<http://www.cde.state.co.us>
  - South Dakota's "2010 Education"  
<http://www.2010education.com>
  - Washington's Office of the Superintendent of Public Instruction  
<http://www.k12.wa.us>
  - Pennsylvania's Classrooms for the Future Overview  
[http://www.pde.state.pa.us/ed\\_Tech/cwp/view.asp?a=169&q=118828](http://www.pde.state.pa.us/ed_Tech/cwp/view.asp?a=169&q=118828)
  - CDW-G Classroom for the Future page  
<http://www.cdwg.com/>
  - PAclassroomsforthefuture

"Few things are harder to put up with than the annoyance of a good example."

*Mark Twain,*  
Pudd'nhead Wilson (1894)  
US humorist, novelist, short story author, & wit (1835 - 1910)

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"It could probably be shown by facts and figures that there is no distinctly American criminal class except Congress."

*Mark Twain*  
US humorist, novelist, short story author, & wit (1835 - 1910)

CHEESEBURGERS AND TECHNOLOGY

I was thinking about what I'd like to talk to everyone about this issue and I came up with something I thought might be a bit appropriate this week. It's all about finishing your cheeseburger. Wait a minute! Here me out.

This weekend I went to dinner with my, "gasp", grandkids (not really since it's more like step-grandkids, but you get the picture) and whilst eating our reasonably decent food, I noticed grandkid #2 slowing down noticeably on her cheeseburger. When she asked for more peanuts and rolls, her father said, "If you want more, you have to finish your cheeseburger".

I leaned across the table and said to her, "Do you remember this morning when we

were trying to figure out how many bites it would take you to finish your eggs?" She dutifully nodded (this is a very well-behaved kid here I thought), "Well, why don't we try and count how many bites it'll take you to finish just that half of your burger? Then we'll have some peanuts and count out the other half. Whaddaya think?" I said conspiratorially. She gave me a sly wink and took a bite of her cheeseburger. It took her six bites to finish the half cheeseburger while she and grandkid #1 gleefully counted out the bites.

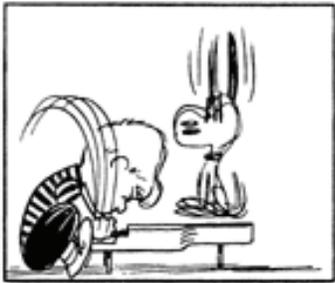
Now I know what you're thinking, "What in the (insert unprintable word here) does that have to do with technology here at Commerce Ed? Well, both Grandkid 1 and 2 need to learn that sometimes when you finish with what you have,

what you said you wanted might not really mean all that much when you consider you can have dessert instead. Now what kid is going to turn down dessert?

Here at Commerce we have many resources available to us and our technology might be just as simple as the burger, but if we do and learn as much as we can with what we have (sometimes as difficult as eating those last six bites to a kid), then we might find that dessert tastes even better.



# Tech lessons in comics



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