States Press Ahead on '21st-Century Skills'

By Catherine Gewertz

In Wisconsin, more students are doing their work by collaborating with peers in other countries. In North Carolina, high school students must now show that they can do an in-depth research project and present it orally to graduate. West Virginia teachers are being trained to infuse skills such as teamwork and creativity into mathematics, social studies, and other core courses.

Those are just some of the ways states are trying to revamp education to meet mounting demands that students possess not only academic skills, but also a range of intellectual, social, and life skills needed to excel in college and the workplace.

Leaders in business and academia increasingly argue that in a highly globalized, technology-driven age, young people need to know how to innovate, solve problems, and work with people from other cultures as much as they need to know algebra and U.S. history. Many educators refer to those and a host of other competencies—such as being literate in finance, civics, media, and technology—as “21st-century skills,” for their importance to students’ future success. ("'Soft Skills' in Big Demand," June 12, 2007.)

The Partnership for 21st Century Skills, a Tucson, Ariz.-based coalition of business leaders, has been helping nine states as they rework their academic standards, curricula, assessments, and other touchstones to ensure that students are well prepared for college or work.

“Fifty years ago, the ticket up the economic ladder was content mastery of four or five subjects,” said Ken Kay, the partnership’s president. “Today, it’s the ability to think critically, solve problems, communicate, collaborate, use technology and be globally competent.”

State-Level Support

While many schools and districts have recognized those needs and begun moving to meet them, large-scale change can’t occur without support at the state level, Mr. Kay said.

In Iowa, for example, in response to a 2007 state law, the state board of education revised its core curriculum in April to include such skills as “employability” and financial, technological, and health literacy.

The curriculum framework outlines a wide range of skills under employability, including students’ being able to work productively with others, demonstrate initiative, integrity, and leadership, and incorporate “different perspectives and cross-cultural understanding” into their work.

The Iowa education department is working to develop model instructional units to acquaint teachers with new ways to cover course content while also infusing those 21st-century skills, said Judy Jeffrey,
the state’s director of public instruction.

It is also offering training to district leadership teams this fall and winter on how to implement the new framework, she said.

“These essential concepts and skills are much more complex for teachers to integrate into their classrooms,” Ms. Jeffrey said. “They’re not content factoids.”

Wisconsin is rewriting its standards in English language arts and mathematics, using both the Washington-based American Diploma Project’s framework for academic rigor and the Partnership for 21st Century Skills’ guidelines for the so-called soft and applied skills, said Paul Sandrock, the assistant director of the department of public instruction’s content and learning team.

The state has a particular interest in expanding students’ knowledge of other countries and cultures, an area of learning sometimes referred to as “global literacy.” An international education council of scholars, activists, and educators, appointed by the governor and the state superintendent of schools, defined global literacy and recommended ways to put it into practice.

Among those recommendations are that all Wisconsin teachers and students learn a foreign language, and that curricula in all content areas include “problem-solving with a global context.”

Wisconsin has established partnerships with France, Germany, Japan, and Thailand and is working on similar links with China and Mexico. Those relationships enable teachers to share ideas about teaching and learning, and offer opportunities for children, Mr. Sandrock said.

One school in Wausau, in central Wisconsin, connected its 8th graders with peers in Chiba, Japan, for a joint study of water-quality issues in their communities, he said.

“We want our students to leave 12th grade knowing that any issue they might tackle, people from around the world might not come at it from the same perspective, and that they need to learn from the perspectives of others,” Mr. Sandrock said.

‘Future Ready’

North Carolina has written standards for what teachers and principals must do to ensure that students are “future ready,” said state board of education member Patricia N. Willoughby. That work will drive changes to the curriculum and to teacher professional development, she said.

The changing standards also inform North Carolina’s exploration of new territory in trying to design assessments to capture hard-to-measure skills.

North Carolina has been working with John D. Bransford, a University of Washington professor of education and psychology, on a prototype to gauge whether students have mastered content as well as work skills such as critical thinking, research, and media literacy, said Cindi Jolly, a consultant to the Center for 21st Century Skills.

The center is an effort launched in 2005 by North Carolina Gov. Michael F. Easley, a Democrat, to form partnerships with business and policy leaders to adopt curricula, assessments, and teaching techniques for the new skills set.

The prototype for a biology assessment, taken in a computer-based “virtual” environment, asks a student to act as a clinician, counseling prospective parents about their odds of having a baby with sickle cell anemia, said Ms. Jolly.

The student interviews the parents, conducts research, and provides that feedback to the parents,
then answers multiple-choice questions and writes longer responses about the process, she said. The assessment could be used in classrooms to guide instruction, or as a test of students’ learning, she said.

“Current assessments do a pretty good job of getting at whether students have specific content, but I don’t think they assess very well whether students can use and apply their knowledge in complex, novel situations,” said Ms. Jolly, a former assistant superintendent of curriculum and instruction in Wake County, N.C. “Assessing this way reflects real-world challenges and real-world decisionmaking.”

**Assessment Challenges**

Arnold Packer, an economist and senior policy fellow at Western Carolina University’s [Institute for the Economy and the Future](http://www.wcu.edu/economy/), said assessing students’ grasp of 21st-century skills is tricky, especially in the context of states’ accountability systems, which rely on standardized tests.

“You really need more subjective assessments of performance on those kinds of skills,” Mr. Packer said.

West Virginia rewrote its standards in 2005, prompted by an intensive examination of shortcomings in curriculum and testing that had led to a dip in scores on the National Assessment of Educational Progress, said state school Superintendent Steven L. Paine. In effect for the first time this year, they feature a “higher level of cognitive demand,” he said.

West Virginia has put together three levels of training to help the system adapt to the changes. State education department personnel got nine days of training a few years ago, and 475 of the state’s 700 principals have attended its leadership institute, Mr. Paine said.

In addition, 1,200 of its 24,000 teachers have been through training, and the state has set up a “Teach 21” Web site featuring resources they can use to teach to the new standards.

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