



Creativity, Innovation and Arts Learning Preparing All Students for Success in a Global Economy

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February 3, 2010

The United States is competing in a dynamic global economy in which two assets—a skilled, versatile and highly adaptable workforce and the capacity for creativity, innovation and entrepreneurship—provide a decisive edge. Our economic growth as a nation depends on our ability to generate new ideas and translate those ideas into concrete innovations.

To succeed in today’s economic climate, the U.S. needs a well-educated, technically proficient workforce in all sectors and for nearly every occupation, including entry-level positions. We need workers who possess a deep, expansive knowledge in a broad range of subject areas as well as advanced reading, writing and computational skills. And we need workers with the ability to think analytically, communicate effectively and work collaboratively.

But these high-level knowledge and skills alone are not enough for the U.S. to maintain its global competitive edge. What will set the American workforce apart from other countries with similar levels of knowledge and skills are creativity and innovation, according to the New Commission on the Skills of the American Workforce. The New Commission—a prestigious group of business leaders, governors, school leaders and former secretaries of education and labor convened by the National Center on Education and the Economy—reached this fundamental conclusion in 2008 based on an in-depth analysis of U.S. Department of Labor employment data.¹ Other experts concur, including employers, who, in a recent survey, ranked creativity third among the skills they expect to increase in importance over the next half decade.²

Creativity is a precursor to innovation and the cornerstone of entrepreneurship. It is essential to the design and development of new products, services and processes. But what are the sources for creativity? What are the characteristics of creative people? And how do we encourage and build creative capital among the American workforce?

¹ National Center on Education and the Economy, *Tough Choices or Tough Times: The Report of the New Commission on the Skills of the American Workforce*. CA: Jossey-Bass, 2008.

² The Conference Board, Corporate Voices for Working Families, Partnership for 21st Century Skills, and Society for Human Resource Management, *Are They Really Ready to Work?: Employers’ Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century Workforce*, 2006.

These questions have long been topics of scientific debate, but experts generally agree that, among other things, creativity requires both a depth and a breadth of knowledge. It requires an ability to integrate and synthesize relevant information from across disparate subject areas and combine it in novel ways. It also requires high levels of personal motivation, interest and persistence, as well as a willingness to take risks, even in the face of doubt.³

Perhaps most importantly, creativity requires building upon the capacity of one's imagination to visualize new possibilities for human thought, action and the use of materials. One way to think of creativity is simply as "applied imagination," which is also the title of a 1957 publication by creativity studies guru, Alex Osborn. More recently, in a 2008 interview about education and economic prosperity, Thomas Friedman, author of *The World is Flat*, said this about the all-important role of the imagination: "The school, the state, the country that empowers, nurtures, enables imagination among its students and citizens, that's who's going to be the winner."⁴

Improving our education system to ignite students' imagination, foster their creative drive, stimulate innovative thinking and generate implementable new ideas is vital to the long-term economic interests of our nation.

The arts—both as a stand-alone subject and integrated into the curriculum—must be an integral part of a 21st century education if our students are to succeed in a global economy. Arts learning experiences play a vital role in the development and application of the imagination. They teach persistence and can serve as a primary source of student motivation. These capacities and habits of mind are among the essential ingredients needed for creativity and innovation. Everyone, not just the elite, must cultivate what Daniel Pink in his 2006 book, *A Whole New Mind*, calls an "artistic sensibility."⁵

The arts are also defined in federal legislation as a core academic subject and an important component of a complete and competitive education, a central theme articulated in U.S. Secretary of Education Arne Duncan's August 2009 letter to school and education community leaders.⁶ To compete successfully in the global workplace, it is clear American students must be among the top performers on international assessments of mathematics and science. Yet, it is equally clear they must also possess a deep and broad knowledge of other subject areas, including the arts. The New Commission on the Skills of the American Workforce noted: "In fact, mastery of the arts and humanities is just as closely correlated with high earnings, and, according to our analysis, that will continue to be true. History, music, drawing and painting, and economics will give our students an edge just as surely as math and science will."

In a March 2009 speech to the U.S. Hispanic Chamber of Commerce, President Obama affirmed, "It is time to give all Americans a complete and competitive education from the cradle up through a

³ Adams, Karlyn, *The Sources of Innovation and Creativity*, A Paper Commissioned by the National Center on Education and the Economy for the New Commission on the Skills of the American Workforce, September 2005.

⁴ "Tom Friedman on Education in the 'Flat World'," in *The School Administrator*, February 2008, pages 12-18.

⁵ Pink, Daniel H., *A Whole New Mind: Why Right- Brainers Will Rule the Future*. NY: Riverhead Books, 2006.

⁶ Letter from U.S. Secretary of Education Arne Duncan to School and Education Community Leaders, August 2009.

career.” He exhorted state leaders to take up the challenge of “preparing every child, everywhere in America, to out-compete any worker, anywhere in the world.” To do so, the President made particular note that students must “possess 21st century skills like problem solving and critical thinking and entrepreneurship and creativity.”⁷

An increasing number of states are redesigning their K-12 education systems in myriad ways that respond to that challenge. Some, like Ohio, North Carolina and West Virginia, prescribe changes to curricula and standards to reflect the knowledge and skills young people need in the increasingly globalized, technology-rich future; others, like Wisconsin and Massachusetts, seek to fundamentally recast the various systems of policy and support mechanisms that impact the work of teachers in classrooms. These five states, along with other states on the leading edge of education reform, include the arts as an essential component of their initiatives. (See Appendix for state examples.)

From the statehouse to the schoolhouse, the recognition is growing that the arts are a core component of a comprehensive and well-rounded education for all students. Arts learning experiences contribute in unique ways to developing the creative capacities that lie at the heart of new innovations considered to be so vital to success in today’s global economy. And recent evidence-based research continues to demonstrate that students deeply involved in the arts are more likely to receive better grades, stay in school longer and have fewer behavioral problems than students who are not.⁸

We, as a nation, must work together to ensure that all students—not just some students—are able to reap the full academic and social benefits of learning in and through the arts. We must continue to call for and support federal, state and local education reform efforts that demonstrate, in both policy and practice, that the arts are an indispensable and integral part of providing all students with a competitive education. Without such inclusion of the arts, even our best-intentioned efforts will be simply incomplete.

⁷ Speech delivered at the opening session of the U.S. Hispanic Chamber of Commerce’s annual legislative conference, March 10, 2009.

⁸ James S. Catterall, *Doing Well and Doing Good by Doing Art*, Los Angeles/London: Imagination Group/I-Group Books, 2009.

Appendix: State Examples

The following is a brief summary of five states on the leading edge of state-level redesign efforts for a 21st century education: Massachusetts, Wisconsin, North Carolina, Ohio and West Virginia. While each has crafted a plan uniquely tailored to that state's particular context and history, all share the goal of providing a complete and competitive education for all students. And all have incorporated the arts as an explicit and critical component, integral to the success of their initiatives.

- **Massachusetts:** In 2008, Secretary of Education Paul Reville formed the Task Force on 21st Century Skills to develop recommendations that build on the state's existing high standards by integrating 21st century skills and knowledge in the core educational program. Task Force members included Board of Elementary and Secondary Education members as well as key stakeholders from the Legislature, education, business and technology. The Task Force recommended five broad "levers for change": educator training and development, standards, assessment, accountability and demonstration vehicles. The arts play a prominent role in the recommendations. One demonstration project calls for the creation of a statewide program that would strive to place up to 1,000 artists, scientists and/or engineers-in-residence in K-12 schools over the next five years. The Task Force also recommended the development of a Creative Challenge Index to measure the number and quality of opportunities schools provide for students to engage in creative work. The Massachusetts Board of Higher Education recently created an advisory group to work collaboratively with the state's Task Force on 21st Century Skills. The group is charged with developing recommendations for "more fully integrating 21st century competencies into the undergraduate experience"—with an emphasis on oral and written communication, scientific and quantitative reasoning, critical thinking and information literacy.
- **Wisconsin:** In 2008, Lieutenant Governor Barbara Lawton and State Superintendent of Public Instruction Elizabeth Burmaster announced the establishment of the Wisconsin Task Force on Arts and Creativity in Education. Both served as co-chairs for the 36-member Task Force, which included thought leaders from business, state and local government, education, and community arts organizations. The Task Force was charged with addressing the essential role that arts education and the development of students' creative capacities play in their success in reaching their full potential, in the quality of life of communities and as an animating force in the state's economy. To develop its recommendations, the Task Force held public forums across the state and conducted an extensive review of existing arts education-related policies, programs and practices. Among the top priorities:
 - Ensure that every Wisconsin school uses an interdisciplinary curriculum that systematically integrates creativity development into class work
 - Ensure that all students have access to education in the full spectrum of the arts, taught by qualified instructors
 - Identify and promote best practice-based models for arts and creativity education
 - Make demonstrations of achievement in the arts a factor in deciding admission to public and private postsecondary institutions in Wisconsin

- Create a state-funded program to match the amounts put up by local school districts for new efforts promoting the arts and creativity
- Engage communities, businesses, nonprofit organizations and other entities as full and equal partners in strengthening arts education and developing the creative potential of all students
- Improve the arts and cultural environment as a tool for economic, workforce and community development.

As one follow-up, Wisconsin has comprehensively redesigned content, performance and proficiency standards in reading, language arts, math, science and social studies, and established standards in more than a dozen other subjects, including agricultural, environmental and business education; art and design, music, dance and theater; and information, technology and financial literacy.

- **North Carolina:** In 2005, Governor Mike Easley launched the nation's first Center for 21st Century Skills. The Center is focused on improving North Carolina's education system to ensure that students graduate with the skills needed for success in the global economy. The Center is a public-private partnership that works actively with business leaders, educators and policymakers to create new curricula, new assessments, and new ways to align classroom teaching and learning outcomes with 21st century workforce readiness skills. Most recently, the North Carolina State Board of Education and the Department of Public Instruction adopted a revised Standard Course of Study that establishes content standards and describes the curriculum in a range of subject and skills areas, including arts education. The state also developed a multidisciplinary performance assessment, completed over time, that provides students with the opportunity to demonstrate both proficiency in core subjects and mastery of thinking, problem-solving, communication and technology skills.

The North Carolina Graduation Project provides students the opportunity to demonstrate their ability to apply what they learn in a 21st century context. All North Carolina public school students currently in ninth grade will be required to produce a four-part assessment that showcases their 21st century content knowledge and skills. The project, to be completed in the final year of high school, will include a paper, a reflective portfolio, a product, and a presentation. Additionally, North Carolina has designed and begun putting in place the Professional Educator Standards and Evaluation System, a national prototype for (1) defining what teachers, principals and superintendents need to know and be able to do to meet the needs of 21st century learners and (2) aligning preparation programs, continuing education requirements and performance measures for teachers and administrators with new professional requirements and expectations. The state has developed detailed information and guidance—for classroom teachers, principals and district leaders—on how arts education supports the teaching and learning of advanced skills and competencies, across the curriculum and at all grade levels.

- **Ohio:** In 2007, the Ohio Department of Education established the Committee for the Arts and Innovative Thinking (CAIT) as a 39-member arts advisory group representing more than 30 education, community and cultural organizations from across the state. CAIT represents a

unique mechanism for fostering imagination and creativity across all disciplines—and, in particular, emphasizing the role of the arts in STEM schools and programs at the K-8, high school and university levels. The purpose of the committee is to promote and advance the arts in the lives of all Ohio students through strategic actions, communications and policy recommendations. The initial focus of its work has been (1) promoting collaboration in curriculum design among arts and STEM teachers and (2) increasing the alignment of arts education initiatives with other state board priorities, including improving instructional quality and international benchmarking of K-12 academic standards. The state's 2007 budget included over \$200 million for STEM-related education initiatives with the Department of Education and Board of Regents. A major portion of those funds were to be used for grants to regional consortia with plans to create STEM schools and K-8 "programs of excellence." Requirements for STEM school grants include roles for the arts and humanities.

- **West Virginia:** The West Virginia Department of Education, along with the Governor, state lawmakers and key stakeholders, has embraced a 21st century learning initiative to ensure every child's success as citizens and workers in the 21st century. The Department of Education and the Board of Education developed West Virginia's 21st century learning plan, which aligns with efforts through the West Virginia Jobs Cabinet to link educational improvement and economic development in the state. In proclaiming March 2009 as Arts in West Virginia Schools Month, state Superintendent of Schools Steve Paine said, "Arts education plays an important role in the 21st century classroom. Core subjects like math and science remain the foundation, but arts education also is important. It allows a child to fine-tune other vital skills necessary to succeed today, such as critical thinking and creativity."

As part of the state's 21st century learning initiative, West Virginia has adopted a new set of K-12 standards, objectives and performance descriptors in core academic subject areas—including all four major arts disciplines of music, dance, theater and visual arts—that triangulate challenging content and coursework, learning skills and technology tools. The revised curriculum and proficiency standards were (1) developed collaboratively by interdisciplinary teams comprising state education department staff, master teachers in each content area and university faculty members and (2) extensively reviewed by national experts for clarity, rigor and depth of knowledge. West Virginia also has developed a strong, versatile infrastructure of support for district leaders, principals and classroom teachers. For example, the Teach 21 Web site, offers instructional guides, lesson plans and other resources to help classroom teachers and professional development providers improve their ability to integrate content, learning skills and technology tools. Another key initiative, created in 2008, is the West Virginia Teacher Leadership Institute, a yearlong professional development experience designed to assist selected teams of teachers and district leaders in the collaborative implementation of quality instructional design for 21st century learners. West Virginia has created a specialized strand of professional development aimed at expanding the capacity of arts educators to teach and assess 21st century skills.

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