



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

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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

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.

creativity? What are the characteristics of creative people? And how do we encourage and build creative capital among the American workforce?

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."

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.

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 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.

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.

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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.