

America in the Creative and Innovative Economy

By John M. Eger, president of the World Foundation for Smart Communities

In *The World is Flat*, author and *New York Times* columnist Thomas Friedman uses the book title as a metaphor for globalization. The book stresses the fact that America and its entire view of education and the education system is badly in need of an overhaul.

If we fail to do what is needed, we will not meet the challenges of a new and different world; our young people will not find the work they want and need; the purchasing power of the average family will continue its downward spiral; and the state of America's prowess in both the economic and political arena will be lost.

Most economists now seem to agree we are in the midst of a so-called "creative and innovative" economy.

"The game is changing," *BusinessWeek* magazine recently reported. "It isn't just about math and science anymore—although these are surely important disciplines. It's about creativity, imagination and, above all, innovation."

As a whole new economy based upon creativity and innovation emerges—the dawn of the "creative age," as the Nomura Research Institute put it—the importance of reinventing our business strategies, our corporations, our communities and our schools is critical. Nothing can remain the same if we are to survive, let alone succeed in this new global economy.

We need to redesign our high school and college curricula, in particular, to focus on preparing students for this new competition.

While creative industries, according to the Americans for the Arts are defined as "arts-related," creativity and innovation are vital to the success of all businesses. We need to focus more on training the next generation of leaders for this creative age.

Pleasure, beauty and wonder

While addressing a Fordham Foundation education conference in early 2007, Dana Gioia, chairman of the National Endowments for the Arts, said, "If the United States is to compete effectively with the rest of the world in the new global marketplace, we need a system that grounds all students in pleasure, beauty and wonder. It is the best way to create citizens who are awakened not only to their humanity, but to the human enterprise that they inherit and will—for good or ill—perpetuate."

He argued that America's success would not be through "cheap labor, cheap raw materials or the free flow of capital or a streamlined industrial base," but through "creativity, ingenuity and innovation."

Gioia's formula for success is simple enough: Nurture a love of reading, find wonder in the mystery of birth, prehistoric life or the DNA of life itself; and ensure the arts play a central role in our lives.

So what is the role of the arts in modern education? If left unchecked and unchallenged, the persistent belief that arts are a frill—nice, but not necessary—might spell the continued decline of our system of education.

Richard Deasy, director of the Arts Education Partnership, once complained, "The fundamental problem we confront in making the arts an unquestioned part of the learning required of students and teachers is the position of the arts in the broader culture." Deasy suggested what's most valued in America is muscularity, or toughness. The math and science curricula carry with them this sense of muscularity through inherent formulas, truisms and theories. By comparison, the arts experience seems less tough, softer and more anecdotal.

Math, science as frontrunners

Today, in the rush to confront the wave of outsourcing and off-shoring caused by the globalization of the economy, it is math and science alone that are pushed on the young. But this narrow emphasis, while important in many respects, fails to produce the kind of entrepreneurship and inventiveness that enable our young people to succeed.

Last summer, President Bush signed into law a bill called the America Competes Act. The bill authorizes \$151 million to help students earn a bachelor's degree in math or science, \$125 million to help math and science teachers get teaching credentials and additional monies to help align K-12 math and science curricula to better prepare students for college.

Chester E. Finn Jr. and Diane Ravitch, both assistant secretaries of education in the Clinton administration, complained loudly: "This is a mistake that will ill serve our children while misconstruing the true nature of American competitiveness and the challenges we face in the 21st century. Worthy though these skills are, they ignore at least half of what has long been regarded as a well-rounded education in Western civilization: literature, art, music, history, civics and geography."

Not long ago, Robert Root-Bernstein, a biochemist and MacArthur prizewinner, completed a study of 150 eminent scientists from Pasteur to Einstein. His findings were startling to those educators lobbying for more emphasis on the sciences. He discovered that nearly all of the great inventors and scientists were also musicians, artists, writers or poets. Galileo, for example, was a poet and literary critic. Einstein was a passionate student of the violin. Samuel Morse, the father of telecommunications and inventor of the telegraph, was a portrait painter.

Root-Bernstein and his wife Michelle co-authored the book *Sparks of Genius*, which examines the minds of inventive people and shows that creativity is something that both artists and scientists can learn and, more importantly, that the seemingly disparate disciplines of art and science, music and math complement and enhance one another.

In truth, we need a huge infusion of capital and a change in attitude for both art and music, and math and science. Importantly, we need to define a well-rounded education and to make the case for its importance in a global innovation economy. At every level, we need to find a way to marry art and science, make learning more interactive and eliminate the silos of our curriculum.

School examples

Perhaps as a consequence of Howard Gardner's pioneering research on multiple intelligences and the idea that all children learn differently, schools are recognizing art as a vital part of the learning process.

More than 10 years ago in New York's South Bronx, the poorest congressional district in the nation, a small school called St. Augustine boasted that 95% of its students read at or above grade level and 95% met New York state academic standards. These were highly significant achievements, particularly for a student population that was 100% minority, with many of the children living in single-parent homes in communities plagued by AIDS, crime, substance abuse and violence. What was the secret of the school's success?

St. Augustine infused every discipline—math, history, science and biology—with dance, music, creative writing and visual arts. Sadly, as the parish was located in an extremely poor neighborhood, the school was eventually closed for lack of funds.

Five years ago, the Los Angeles County Board of Supervisors adopted "Arts for All: A Regional Blueprint for Arts Education." The county's hope is that all of its school

districts will eventually acknowledge that exposure to and participation in the arts will accomplish the following:

- Strengthen a child's academic development and growth as an individual.
- Prepare the child to feel a part of and make a contribution to the community.
- Ensure a creative and competent workforce to meet the economic opportunities of both the present and the future.

Thus, sequential instruction in the multiple arts disciplines will be scheduled into each school day and accounted for in the budget of every Los Angeles County public school.

In 2002, a unique consortium of arts organizations embraced "Authentic Connections: Interdisciplinary Work in the Arts" to enable students to "identify and apply authentic connections, promote learning by providing students with opportunities between disciplines and understand, solve problems and make meaningful connections within the arts across disciplines on essential concepts that transcend individual disciplines."

The interdisciplinary curriculum suggestions encourage students to develop new insights and synthesize new relationships between ideas. While not a manifesto for arts infusion, these recommendations go far in fostering curriculum integration and offering a way for teachers of traditional, disparate disciplines to collaborate.

These efforts are an important beginning, but only a beginning of an urgent call for radical reform. Sadly, if America does not capture the high ground in this latest effort to transform education—by meeting the global, economic demand for creativity and innovation—America will forever lose the lead it currently enjoys forever.

The hearse is now at the back door of our educational enterprise. Our current economic situation will only get worse.

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