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Feature

The Arts in Contemporary Education

Reinventing schools to meet the challenges of the global innovation economy by John M. Eger

The demand for a new workforce to meet the challenges of a global knowledge economy is rapidly increasing. As a special report in *Business Week* magazine observed last year: “The game is changing. It isn’t just about math and science anymore. It’s about creativity, imagination, and, above all, innovation.”

Most analysts studying the new global economy agree that the growing “creative and innovative” economy represents America’s salvation. But how do we make someone innovative and creative? What must our schools and our communities be doing to ensure we are nurturing and attracting the most innovative and creative workers?

Former U.S. Secretary of Education Richard Riley predicted the jobs in greatest demand in the future don’t yet exist. In fact, he said, they will require workers to use technologies that have not yet been invented to solve problems that we don’t yet even know are problems.

Clearly we are headed into a new and uncertain future, yet many of the critical questions are not being asked, let alone answered, in the public debate over K-12 education.

America’s Success

Addressing a Fordham Foundation education conference in early 2007, Dana Gioia, chairman of the National Endowments for the Arts, said, “If the U.S. 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 will not be through “cheap labor, cheap raw materials, or the free flow of capital or a streamlined industrial base,” but through “creativity, ingenuity, innovation.”

Gioia’s formula for success is simple enough: Nurture a love of reading and marvel at the beauty of a sunset or a tree in bloom; 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 — may spell the continued decline of our system of education.

Overlooked Elements

A little over a decade ago, a study by the Lila Wallace-Reader's Digest Fund found that while eight of 10 Americans believed the arts were life-enriching, only half as many said the arts had much to do with their daily lives. This attitude, which has improved somewhat according to more recent polls, pervades the thinking in most of our schools and in the public arena as well. Thus when budgets are cut, as increasingly they are, the arts are often the first to go.

Richard Deasy, director of the Arts Education Partnership, once complained that “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 their inherent formulas, truisms and theories. By comparison, the arts experience seems less tough, softer, more anecdotal.

Why the Arts Change the Learning Experience

Although the researchers behind the Arts Education Partnership's “Champions of Change” report conducted their investigations independently, a remarkable consensus emerged among their findings: Issued in 2000, in conjunction with the President's Committee on the Arts and Humanities, the report made these points about K-12 arts education:

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As chair of a City of the Future initiative launched by former San Diego Mayor Susan Golding, I called for the need to reinvent our communities for a new and uncertain global economy and spoke about establishing a “creative community,” one that understands and optimizes the links between art and culture and commerce. The self-identified artists loved the idea. The business community, indeed the public, did not see any linkage at all.

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 that are urged upon our young — an emphasis, I argue, that is to our peril.

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.

In a commentary in *The Wall Street Journal* last August, Chester E. Finn Jr. and Diane Ravitch, both assistant secretaries of education in the first Bush 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,” they argued. “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.”

Marrying Disciplines

In truth, we need a huge infusion of capital and a change in attitude about art and music, math and science. We need to define a well-rounded education and to make the case for its importance in a global innovation economy. Evidence of such efforts is slowly mounting.

In 2000, the Arts Education Partnership, together with the President's Committee on the Arts and Humanities, published a groundbreaking report called "Champions of Change." According to the report, research shows that learners can reach higher levels of achievement through their engagement with the arts. In addition, learning in and through the arts can help level the playing field for disadvantaged youth.

"Champions of Change" also reports that sustained involvement in music and theater are highly correlated with success in mathematics and reading and that "the arts provide young people with authentic learning experiences that engage their minds, hearts and bodies."

Robert Root-Bernstein, a biochemist and MacArthur prize winner, studied 150 eminent scientists from Pasteur to Einstein. His findings were startling to those educators lobbying for more emphasis on the sciences for he discovered that nearly all of the great inventors and scientists were also musicians, artists, writers or poets.

Galileo was a poet and literary critic. Einstein was a passionate student of the violin. And Samuel Morse, the father of telecommunications and inventor of the telegraph, was a portrait painter. Albert Schweitzer, the humanitarian and medical doctor, was a world-class organist and Bach expert.

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. More importantly, the authors show that the seemingly disparate disciplines of art and science, music and math complement and enhance one another.

Model Programs

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 percent of its students read at or above grade level and 95 percent met New York state academic standards. These were highly significant achievements especially for a student population that was 100 percent 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 "strengthens a child's academic development and growth as an individual; prepares the child to feel a part of and make a contribution to the community; and ensures 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/or to 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.

High Tech High in San Diego is another remarkable example of art infusion. HTH is a charter school well funded by the Bill and Melinda Gates Foundation, the Gary Jacobs family (founders of Qualcomm) and many San Diego businesses. It consists of six schools — three high schools, two middle schools and one elementary school — with a total of 2,500 students and 200 employees. Every graduate has been admitted to college; 80 percent are admitted to four-year institutions of higher learning.

High Tech High is unique among charter schools in that it provides personalized, project-based learning environments where all students are known well and challenged to meet high expectations. Each semester the entire faculty and student body work together on an assigned topic that draws on all the disciplines, forcing students to work collaboratively on real-world problems. There are no math or art classes. Rather, those disciplines are infused throughout the curriculum that examines the larger questions: How does the world work? Who lives here? Why do things matter?

Larry Rosenstock, CEO of High Tech High, points with pride to these projects as they bring all the disciplines and all the energy and intellect of the class together, unifying the design principles of the school: personalization, adult-world connection and common intellectual mission.

Clearly concerned about nurturing the creative and innovative spirit America’s workforce so vitally needs if we are to succeed in the new world economy, Rosenstock quotes Sir Ken Robinson, an international expert in the field of creativity and innovation in education, who said, “Creativity is as important as literacy and should be given equal status.”

Rosenstock has been accused of running “an art school in disguise.” Indeed, High Tech High is not a school many of us would immediately recognize. It is a place and a curriculum that has turned the K-12 world upside down. Yet HTH’s supporters are obviously pleased. There are plans to create 10 more such schools throughout California. In addition, HTH has created a graduate school of education to train teachers in these new techniques.

Changing Lenses

Maybe we really need to go back to basics to examine the true purpose of public education and what we consider an educated person to be. Maybe we need to change the vocabulary of the educational establishment, change the lenses in the camera and, in the process, awaken to the competitive demands of this new age.

Clearly, something radical is needed. Unless we dramatically change our K-12 system of education, 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.

John Eger is the Van Deerlin endowed chair of communications and public policy at San Diego State University and the author of *The Creative Community: Linking Art, Culture, Commerce and Community*. E-mail: jeeger@mail.sdsu.edu

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