

# ARTS = MORE education than you think

OP-ED piece published in the Fayetteville Observer

Cuts in arts education threaten yet again. The arts, its supporters say, help students achieve the elusive and desirable goal of being “well-rounded.” In today’s world, I’m not sure this rounding even exists. Most people, me included, don’t start going to the symphony or watching public television until much later in life.

But what kids do want is to figure out what they love doing and to learn how to do it well. For that, the arts are indispensable.

Many folks worry about the supply of scientists and engineers in America. Rightfully so: the youngsters in Asia work harder, outnumber us, and have an educational system that prepares them better. Still, I remain optimistic about American science and scientists, because we continue to produce Googles and iPods at a pretty good clip.

Maybe I’m overly optimistic about our creative side. I admit that not every scientist grew up in the theater and spent his whole life playing in a band. Still, the distinguishing feature of science in America compared to the rest of the world is its unwavering – you might say relentless – emphasis on originality.

I spend a lot of time teaching college students to work word problems. Some number of grams of propane plus so much oxygen produces an amount of carbon dioxide. (FYI, this goes on in your gas grill when you’re cooking out.) On the surface, not a very artistic process.

But there’s an intellectual leap between the simple acts of writing down a formula and punching the right numbers in your calculator and the more complex processes of reading the problem correctly and visualizing all those atoms shuffling around. Getting the combustion problem right requires some creativity.

Mental processes upgrade again to get you from solving the propane combustion problem to doing an experiment in the lab, translating your mental picture to doing it with your hands. Another big jump occurs when you muster the courage to try something new in the research lab.

The biggest leap of all crosses the chasm from the research experiment to a cure for cancer or a better hybrid car.

A giant New Yorker cartoon that hangs in my office shows a co-worker speaking to his boss across the desk while holding a memo in his hand. The caption reads “I’ll be happy to give you innovative thinking. What are the guidelines?”

Dilbert cartoonist Scott Adams put it differently: “Creativity is allowing yourself to make mistakes,” he said. “Art is knowing which ones to keep.”

The arts contribute more to education than making students well-rounded or giving a handful of kids what they need to be career artists. Learning the arts teaches kids to create, shows them beauty, and illustrates emotion. Creativity, beauty and emotion are not just nice-to-haves, they’re essential.

# ARTS = MORE education than you think

Solutions to global warming and world hunger require this squishy stuff. Math textbooks don't cover getting people to do things together and visualizing new options when things seem bad.

But art does. Art fills. Art creates. Art loves.

I've spent big money going to executive education classes that teach leaders to be creative. Know what they do for all that money? Put groups in a room with boxes of crayons and tell them to produce images that lead to new ideas. This kind of imaging aids solving social problems, leading others, and doing science.

Science, by definition, has no soul. But scientists do. Science without scientists is static, an intolerable condition while diseases rage on and energy supplies dwindle. Only soul-equipped scientists can produce more knowledge, and only emotional human innovators can take that knowledge and generate solutions.

As the arts fade from public education, blame standardized testing. Not on the tests, the arts sit fearfully, waiting to be cut. If they came along today, Mozart, Shakespeare, and Da Vinci would be children left behind. One more reason for folks who can afford it to put their kids in private school, just as the voucher advocates want.

I try to remember that college freshmen are high-school seniors only 2 months or so before they come to Chapel Hill. So what happens in K-12 matters to us – a lot. We must exhibit the will to hang on to arts education if we want solutions for society, if we want leaders, if we want know-how with a soul.

*Holden Thorp is chair of the department of chemistry at the University of North Carolina*