Ancient Athens Can Teach Us Education Fundamentals Today

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As 2012 winds down, I find myself thinking about what impact simulation will have in the future.

Simulation is the process of imitating something, and humans have been doing simulations for centuries. In my field, simulation is a training tool for understanding time, place and scale, and with advanced computers the possibilities of imitating have grown exponentially.

This week Orlando is hosting one of the largest simulation conferences in the world. The Interservice/Industry Training Simulation and Education Conference brought approximately 20,000 attendees here from more than 50 countries to learn about the hardware, software and engaging scenarios that create effective simulation training and learning.

The technology is cutting-edge with an emphasis on both the scientific functionality and the engaging artistry that combine to create learner engagement.

As I ponder that future, it makes me think about past civilizations, ancient Greece and specifically Athens, and how the fundamentals of learning have not changed even as technology explodes in this current state of constant change.

In ancient Athens, education blended the creativity, imagination and design skills achieved by studying the arts with thoughtful reasoning, hypothesis exploration and problem-solving achieved by studying the sciences. Educated citizens, therefore, were those knowledgeable about both the sciences and the arts.

We would do well to remember Athens as we discuss strategic changes to degree-program structures in state universities. The current discourse that I see from various
entities seems like there is the possibility of making some degree programs into what I would term "second-class citizens" in the structure of their programs. It makes no sense to charge more for arts and humanities degrees – including digital media, art, film, psychology, political science, and history – than degrees in the sciences, math and engineering.

The thought is that by reducing the cost of STEM degrees (science, technology, engineering and math), the number of folks taking those degree programs would rise. That may be true, but to do that appears to put a “tax” on the artistic and humanities degrees. And that is troublesome to me.

We cannot sustain our $8 billion modeling and simulation industry in Central Florida without the artistic and humanities side of the coin. The human-centric simulation activities here – military, medical, learning and entertainment, to name a few sectors – require the engagement of the imagination. That engagement is a human-to-human activity, where our primary sense of vision is augmented by rich audio and interactive media.

The workforce needs professionals skilled in designing and developing those experiences from both the technical side and the artistic side, comprised of not simply very talented folks, but professionals skilled by studying the arts, humanities and design.

We have a challenge in our STEM education pipeline in the United States, and the challenge is greater for women and minorities in many of the scientific disciplines. Part of that reason is that the theoretical study of science and math often does not engage them. They want to better their world somehow, and many leave traditional science and math degree programs for sociology, psychology and the arts.

I was very interested in math and science growing up, yet I was not engaged in early college and ended up changing my major to speech and communications, with a sociology minor. Thirty years later I’ve come full circle back to a modeling and simulation environment, and my humanities training was absolutely essential for my understanding of where my research priorities can make a difference.

Students need to see the application of the disciplines to become or stay motivated to get that degree. Simulation is already written into Florida’s Common Core State Standards for K-12 education. When someone begins to create those learning simulations, they
immediately realize they need both the scientific/technical minds and the artistic/humanities minds.

My simulation lab team represents the next generation of creative talent in both the sciences and arts. We could not produce engaging simulations without that breadth of talent.

It’s the evolution of storytelling. As humans, we inherently want to create narrative around new knowledge so we can understand how to incorporate that knowledge into our existing cognitive library.

Simulation in the early 21st century uses ever-advancing computer technology, but without artistic design and narrative building, the technology does nothing.