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Humanities, Sciences Must be United -- for Our Collective Success

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Humanities, Sciences Must be United -- for Our Collective Success

By Carla Poindexter
UCF Forum columnist

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When Pablo Picasso presented his first cubist paintings to the world, even most educated people thought them hideous and irrational, yet his peers saw them to be ingenious.

Likewise, Albert Einstein's theory of relativity was equally baffling to the uninitiated.

But to those who were knowledgeable about both art and physics, parallels would have been recognized between Einstein's new visions of reality and Picasso's paintings that could be viewed from multiple points of view in simultaneous space and time. They also would have guessed correctly that Picasso's revolutionary paintings were influenced by Einstein's visionary physics.

And it has become evident to me, after working with science and art students for two years on collaborative projects, that the humanities and sciences must be united – for our collective future success.

At the highest levels of innovative thought, art and physics share one common goal: the investigation of reality.

Art tends to communicate through metaphor and poetics. Science communicates through logic and mathematics. Both disciplines seek to foster and produce creative and innovative problem solvers.

One way students of the arts and sciences can communicate with one another to enhance opportunities for success and educational enrichment is through collaborative activities.

Two almost overlapping events in Orlando – a UCF/National Science Foundation-sponsored art exhibition and a national physics-students convention – serve as examples where both disciplines were enhanced by the other.

One event is a STEAM Exhibition, “Searching for Ultimate Truth in Science and Art,” to be held Thursday, Nov. 15, from 5:30 to 9 p.m. at UCF’s Center for Emerging Media in downtown Orlando. STEAM stands for Science, Technology, Engineering, Arts and Mathematics, and the exhibition of paintings, posters and sculptures responds to and attempts to interpret current breakthroughs and issues in science.

The posters are a result of collaborations between science and art students. The works attempt to visually illustrate the complex concepts behind cutting-edge scientific research, some literally and others abstractly.

The paintings and sculptures are inspired by various presentations in science and engineering by UCF scientists and their students. In these pieces the art students have attempted to communicate their own imaginative conceptions of reality through visual metaphor. Some serve as commentaries on the potentials for both good and harm to humanity and the earth.

The other event was the Quadrennial Physics Congress, “Connecting Worlds through Science and Service,” this past weekend in Orlando. The theme was “Scientific Citizenship.”

As a brochure announced: “From global warming to Facebook to the International Space Station, we’re realizing now, more than ever, how connected we all are – as physicists, as scientists, as members of society, as humans, and as part of a vast universe.”

At the congress, it was repeatedly acknowledged that as scientific research and knowledge become increasingly more specialized and complex, outreach and education becomes more important.

Two popular sessions during the gathering highlighted that one way to communicate complex ideas is through art and emerging media.

An example of a professional who has crossed both disciplines is Henry Reich, the creator and animator of a popular YouTube video series called “MinutePhysics” that

explains “cool topics in physics.” Another example in which science and the humanities converge in contemporary pop culture is the TV sitcom “The Big Bang Theory.” At the Physics Congress we met David Saltzberg, who is the science consultant to the show. His contribution is to work with the artists – the script writers, art directors, prop designers and actors – to make sure the science behind the show is correct.

University undergraduate and graduate arts programs across the country are encouraging and teaching students to reach out into their communities to initiate and facilitate public art and collaborative art-related activities among citizens.

Like scientists, artists realize their discipline is in no way isolated.

Jordan Guzman, a Bachelor of Fine Arts painting major, won a first-place award in the art contest at the Physics Congress in the category of “Connecting Worlds.” She and many other art students at UCF are becoming increasingly intrigued with science, especially physics, because of educational collaborations between the arts and sciences through UCF’s 2-year-old STEAM project.

The first UCF STEAM exhibition of science-themed artworks was last spring. More than 500 visitors attended the two-day exhibition, many of whom were K-12 students.

The artworks provided a visual doorway to the science behind the images, sparking enthusiasm and conversation about both the science and the art. The show illustrated how images that emerge from collaborations between science and art students can provide provocative points of view to contemplate and discuss outside the traditional science classroom.

As Florida and other states wrestle with current pressing issues of how best to fund and facilitate effective educational preparedness for future students, perhaps legislators could take a larger view of the long-term issues facing our young people.

A solid education offers opportunities for students to become innovative problem solvers by encouraging them to seek out unanticipated interdisciplinary connectedness and by exposing students to more – not less – diversity.

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