Science is the Modern Career Ladder

By Dr. Melvyn D. Schiavelli

Every student has somebody who inspires them to learn. For me, it was Mr. Wizard. A regular on television for decades, Don Herbert's show presented the magic and mystery of science in everyday living, becoming the best-known science show on American television.

Growing up in a blue-collar home in Chicago, I tried some of the same experiments he presented—often with very different results that were not always covered by my parents' homeowners insurance. But Mr. Wizard wasn't just about having fun with cool experiments. He always managed to convey in really simple terms, what the science was behind the results.

Additionally, Mr. Wizard's show encouraged youngsters to think of science as a career. He showed generations that science had a future beyond high school. As a professor of chemistry and president of a science and technology-focused university, I am very aware of the pathways created by majoring in science. But it took decades for me to realize that science and technology degrees are passports to global careers.

We need more "Mr. Wizards" as teachers, mentors, and internship providers today to show teenagers that a degree in science and technology allows them to pursue many career options.

U.S. teens, for example, responding to a 2007 Junior Achievement survey focusing on "Kids and Careers" reported the career of businessperson as their most popular ideal career choice. The occupation of doctor was the second-most popular career selection and the top career choice for female teens. The choice of teacher was the third-most popular career selection.

Those are very sweeping career categories but most teens probably don't realize that a science and technology education can lead to a career in business, health & medicine, law or education. K-12 educators should encourage students to check out majors and concentrations in the science and technology fields such as e-business & management, environmental chemistry and biotechnology. Studying computer and information sciences, cyber security, forensics, and geospatial imaging can lead to careers in those fields, too.

A degree in science and technology allows student to keep their options open if they change their minds. They may want to be doctors or teachers or writers. But what if they change their minds? With a degree in science, technology, engineering or mathematics students can easily adapt their career to a changing world.

And our changing world needs their help. Never before have so many of the world's problems needed the benefits that science and technology can provide as we search for ways to make things better. Teenagers responding to the 2006 Lemelson-MIT Invention Index, which gauges Americans' attitudes toward invention and innovation, are optimistic that new inventions and innovations can solve important global issues, such as clean water, world hunger, disease eradication, pollution reduction and energy conservation.

Teenagers responding to the Lemelson-MIT Invention Index believe that gasoline-powered automobiles, compact discs and desktop computers are headed toward the technology scrap heap. A third of the respondents predicted the demise of gasoline-powered cars by the year 2015. One in four expects compact discs to be obsolete within the next decade, and roughly another one in five predicts desktop computers will soon be a thing of the past.

The future is about fields like nanotechnology, biochemistry, 3G cellular systems, and genetics. All around the world companies are using science and technology to create the next generation of big ideas. Major in a science, technology, engineering, or mathematics field and teenagers can help make those discoveries and bring new ideas to light. Biotechnology, computer and information sciences, mathematics, chemistry, and physics form the rungs of the modern career ladder.

Science and technology are the universal language of business, driving economic growth and fueling future careers. Learn that universal language and students can succeed and flourish in a global economy. The U.S., over the next decade, requires educated and technologically savvy workers who can learn new concepts, innovate, and think critically. Graduates that bring the versatility of specialized technical aptitudes, and established business skills to the workforce will enjoy the high tech "gold collar" careers of the future.

Mr. Wizard graduated from college with majors in English and General Science. With this educational background, he'd have no problem climbing the modern career ladder.

-hu-

**** Dr. Melvyn D. Schiavelli is professor of chemistry and president of the Harrisburg University of Science and Technology in Pennsylvania. A private and independent university, Harrisburg University offers applied science and technology degree programs and a dedicated pathway to a career.**