

Educators Have A Role To Play In Making Vital Science And Technology Careers Attractive To Their Students.

By Dr. Mel Schiavelli

The inspiration to learn and succeed comes from many sources. Mine was Mr. Wizard, the 1950s-era TV scientist who espoused the importance of science and promoted careers in this field. Yours might be a good teacher who endorses the study of sciences.

Most young middle school and high school students don't see the career paths and opportunities that a science or technology education offers because it is not communicated. Simply put, students are not motivated to study science, such as biotechnology, geospatial physics, chemistry, and computer and information sciences.

This is unfortunate, because more than half of the careers that will be created over the next 10 years will require a science, technology, engineering, or mathematics education, and the number of science-related career positions will increase at a rate faster than the current national average between now and 2016.

Educators must teach science and technology in the context of their importance and relevance to students' futures and the competitiveness of the United States. In essence, students must be able to see the "Point A to Point B path" that such an education affords.

And seeing real-life examples motivates, too. Many young innovators have fostered a new kind of "cool" and can serve as role models. Facebook developer Mark Zuckerberg invented the social-networking site at age 19. Bill Gates was 19 when he started the first microcomputer software company. Napster file-sharing software was developed by 19-year-old Shawn Fanning. Apple was founded by 21-year-old Steve Jobs and 25-year-old Steve Wozniak.

Majoring in a science or technology discipline does not guarantee a Porsche in the future, but it also does not limit successful careers to so-called techno-geeks.

K-12 and higher-education institutions can link the classroom to careers by creating experiential learning models and programs. It is a blunder to teach these types of courses in isolation from the real world. It may require more internships, field studies, hands-on experiments, and trips to area businesses so students can see how science and technology are opening doors to careers outside education.

If trips beyond the classroom to the corporate world are impractical, then seek ways to bring the corporate world to the classroom. For example, our institution incorporates "corporate faculty" into the classes. They are scientists, chief executive officers, project leaders and clinicians. Their experience and wisdom enable our students to see how our science and technology majors connect to the career world.

This experiential learning model addresses a public relations problem facing science and technology education: Students think these majors and courses are difficult. The reality: They are. If students struggled through science classes in high school, however, it does not mean they can't succeed in college.

Science and technology majors can be challenging, but educators can make science and technology programs fun, hands-on and widely accessible. This requires more academic support services, such as mentors and tutors, and smaller student-to-faculty ratios.

Every generation has a seminal moment, an event of permanence that earns a prominent spot in history. For the United States, renewing our innovative spirit, revitalizing our standing in the global economy, and strengthening our participation in high-growth industries are top priorities right now.

Only by encouraging students to combine strong science skills, problem-solving abilities, and creative thinking will we be able to develop that workforce to achieve these goals.

It's time to think differently about science and technology education.

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