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# Attracting Engineering Talent

Ask an average pre-teen what an engineer is and you'll likely hear the answer, "I don't know," or "a train operator." I must confess that when I was about eight years old, I thought an engineer was a train operator. This impression came from a television commercial for Good & Plenty candy, and its lead character, Choo Choo Charlie. It wasn't until years later, when I was in high school, that my guidance counselor sat me down and gave me the "411" on engineering. I had an epiphany — an engineer isn't necessarily a train operator, but is much more broadly defined as a person who optimizes, designs, operates or analyzes a process or system. That counselor convinced me to pursue a career in chemical engineering.

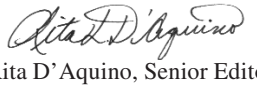
There is a definite need for science and engineering education geared toward our youth, particularly in light of a growing concern among industry professionals that the pool of qualified science and technology workers in the U.S. is shrinking (p. 11). But, students cannot choose a profession they do not know exists. Their exposure to careers in science, technology, engineering and mathematics (STEM) and the extent to which companies in these fields communicate to them the significant opportunities offered by STEM professions will impact the percentage of students that decide to follow the STEM track.

However, there appears to be a disparity between the perceived need to educate and the actions being taken to fulfill this need. According to a recent survey conducted by Bayer Corp. querying the executives of 100 U.S. firms that specialize in biotechnology, computers, life sciences and engineering, only 32% of the participants are doing enough to connect with today's youth (grades K–12). Over half (53%) of the concerned companies are not doing much at all.

Underscoring the country's eroding position in math and science, U.S. Undersecretary of Commerce David McCormick pointed out during a recent speech, in which he cited the Bush administration's proposals to invest more resources in the education of STEM subjects, that 17% of U.S. college graduates receive degrees in science or engineering vs. 52% in China. "For the U.S. to maintain its technological advantage, we must continue to be the magnet for the world's best brains."

The primary constituent of this "magnet" is a stimulating science and engineering curriculum, such as the *Active Chemistry* and *Active Physics* courses from It's About Time, a company that prides itself on teaching math and science the way that practicing scientists and mathematicians do. Nothing livens up the classroom like a teacher who knows how to engage his or her students in the learning process and make the subject matter interesting. "The future of the U.S. is dependent on people's interest in science; otherwise all research may move overseas,"said Ronald Breslow, Columbia Univ. professor, during his acceptance speech for the 2006 Othmer Gold Medal (May 2006, p. 60).

AIChE is considering the use of media such as educational television and radio programs. This could be a landmark opportunity for AIChE. Just imagine if we went though the proper channels and launched a series of educational, yet, entertaining videos for today's youth. Perhaps it could be modeled after "Schoolhouse Rock," which uses music and quick-witted lyrics to teach English grammar, American history, and much more. I think it would positively transform engineering education. What do you think?



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