ONE OF THE GREAT ADVANTAGES OF HAVING YOUNG CHILDREN IS THAT YOU STILL KNOW ENOUGH TO HELP THEM WITH THEIR HOMEWORK. I’ve seen the work my older nieces and nephews did while they were in high school—and too much of it seems like what little I remember of my university work.

In a powerful address at this year’s Structures Congress, ASCE President William F. Marcuson, III challenged civil engineers to reinvent the profession or risk going the way of telephone operators in the mid-1960s. Marcuson noted that before 1965, when you placed a call it went through an operator. But automated switching equipment did away with that entire profession. And he worries that civil engineering is becoming a commodity that relies either on outsourcing or automated design programs.

“Engineering is starting to be priced as a commodity rather than a profession,” he stated, partially as a result of the “globalization of engineering.” At the same time, he’s concerned that we’re not doing enough to prepare our children for a future in engineering. Among 21 developed countries, he stated, U.S. high school seniors ranked below average in both math and science. We’re also seeing more tort suits and less research in the U.S. And only three U.S. companies ranked in the top 10 for the number of patents filed.

Even if every high school student in the U.S. took the type of highly competitive math and science classes I’ve seen my nieces and nephews take, we’d still be behind the eight ball. As Marcuson pointed out, China and India (with three billion people, combined) are producing more engineers than we ever could.

So what will allow the American civil engineer of the future to demand higher pay than their counterpart in India or China? Marcuson states that it is essential for all U.S. civil engineers to have advanced knowledge and attitude, and to be better prepared as a global technology leader.

His words ring particularly true when you consider the difficulty in hiring good project managers today—not to mention finding the right people to manage engineering firms. So what does he suggest? Education, training, specialization, and preparation alone are not enough. Today’s civil engineers need continuing and continuous education on leadership. They need to be proactive, not reactive, to understand and participate in the civil policy process; they need to communicate—both with the technical and non-technical audience; and they need to teach, coach, and mentor other engineers.

P.S. On a personal note, I’d like to offer my condolences on the passing of one of the industry’s true giants, William J. LeMessurier. Some people will remember him best for his large body of significant projects. Many people will long remember him for the ethical dilemma he overcame in warning about and fixing the flawed design of the Citicorp Tower in New York City.

Others will remember him for his marvelous innovations, such as the development of the staggered truss framing system. I’ll remember him for a long conversation in 1983, when as a new grad I was assigned the task of writing an article about a proposal for what would then be the world’s tallest building.

Unfortunately, neither the developer nor the design team were willing to make any comments or release any details—rather hinting the writing of an article for any publication this side of the National Enquirer. Out of desperation, I called Bill—who I had never spoken to before and who had nothing to do with the project. But being the special person he was, he spent more than an hour on the phone discussing high-rise design and hypothesizing about potential systems.

Needless to say, it turned out to be a much more interesting article than anything I could have written about the actual proposal (which never was built). When AISC gave him the J. Lloyd Kimbrough Award (AISC’s highest honor) in 1999, I reminded him of the conversation—and how I was one of the many people that he so naturally helped over the years.