



## President's Message



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In this month's issue of the *Journal*, we discuss winning the war for talent, a term which means different things to different people. When most people hear that phrase, they think about recruiting, training, and retaining the best employees available. They think about attracting the "brightest and best," providing personal career growth through educational opportunities and working on interesting projects, maintaining employee satisfaction, and keeping abreast of the new tools available to keep employees happy and productive.

And, surely, winning the war for talent involves all of these things; however, it means so much more. If we can't win the battle between the engineering profession and all the other professions who are fighting to attract the "brightest and best," then there just won't be enough talent to go around. We will find ourselves battling over an ever-decreasing number of engineering graduates to fill the void left by an ever-increasing number of people leaving the profession in the next 10 to 15 years—the "baby boomers." Not only is the number of engineering graduates that the US is producing each year declining, but we are becoming a nation that has lost interest in science, math, and engineering, as evidenced by the following statistics:

- Bachelor degrees in engineering in 2001 were 65,195, down from 71,386 in 1988, an 8.6 percent drop.
- Only 18 percent of American high school students were proficient in science in 2000.
- Approximately 25 percent of all freshmen engineering students need remedial math.
- Last year, 46 percent of Chinese students graduated with engineering degrees. In the US, that number was 5 percent.
- Europe graduates three times as many engineering students as the US, and Asia graduates five times as many.
- Less than 2 percent of US high school graduates will earn an engineering degree.
- Less than 15 percent of US students have the math and science prerequisites to participate in the new global high-tech economy.
- In 2000, just 6 percent of US undergraduates received degrees in engineering, ranking us a dismal 23rd in the world.

The numbers are even worse when you look at women and minorities:

- Less than 20 percent of the current engineering enrollment population is female.
- African Americans and Hispanics account for less than 12 percent of all engineering graduates.
- Gender parity has been achieved in law and medicine, but the penetration of women in engineering has stagnated at about 20 percent.

One of the nation's biggest challenges is to encourage the brightest and best students to pursue careers in science and engineering. We need to tap people's interest early on and maintain it from grade school through high school. As I discussed last month, that is why we are putting so much emphasis on our K-12 program. John R. Hall, PE initiated this program 2 years ago and has agreed to chair the K-12 Student Involvement Committee and make it one of his highest priorities this year. John has some great ideas and will be contacting you for help to make them successful.

One thing we have done is to assemble volunteer registries of professional engineers in each FES chapter who have agreed to make just one presentation in a local school during the year. That's a commitment of just a few hours to promote the engineering profession and hopefully spark the interest of a few students. Please consider adding your name to this growing list of engineers who are concerned about the future of our profession. Our MATHCOUNTS® and scholarship committees are also instrumental in attracting and maintaining interest in engineering and will be just two of the tools in our K-12 arsenal.

Once we attract student's interest in engineering, we need to keep and nurture it. That means that universities should focus on improving the quality of their engineering education programs. We need to ensure that undergraduates are receiving the best education we have to offer. We can assist in this area by volunteering on an engineering advisory committee at one of the engineering programs in the state. We can also help to maintain the interest of our engineering students through our Student Professional Development Committee.

So, you can see that winning the war for talent is crucial for the long-term survival of our profession. We must look for innovative ways to gain the interest of students at an early age in the areas of science, technology, engineering, and math. Only then can our aging corps of engineers retire with the peace of mind that our profession is in good hands. ■