

Chairperson's Message – December 2008

As we look forward to celebrating Engineers Week In February 2009, we're moving closer to the culmination of another engineering year. Reflecting over these past months, there are two National Academy of Engineering reports that come to my mind. NAE has proposed 14 Grand Challenges in broad realms of human concern — sustainability, health, vulnerability, and joy of living. (www.engineeringchallenges.org) These are significant challenges such as providing access to clean water, improving urban infrastructure, and making solar energy economical. Addressing these goals will energize engineers far into the future.



As an educator, I am constantly looking at the challenges of attracting young students so that we have the engineers of the future. To that end, a second report issued by the NAE in June caught my attention. The report recognizes that encouraging young people to make a difference in the world through an engineering career is more likely to attract them than emphasizing the challenge of math and science skills.

The report, Changing the Conversation: Messages for Improving Public Understanding of Engineering, recommends that the engineering community begin using tested messages in a coordinated communications strategy. The four messages that tested best are:

- Engineers make a world of difference.
- Engineers are creative problem-solvers.
- Engineers help shape the future.
- Engineering is essential to our health, happiness, and safety.

These messages reposition engineering as a satisfying profession that involves creative ideas and teamwork -- not just personal benefits and technical skills. This project represents the first-ever NAE effort to use market research techniques to improve the public image of the engineering profession. While less than 15 percent of adults or teens described engineers using the common stereotypes, such as "boring" or "nerdy," the research showed that many students don't enjoy math and science enough to become engineers.

The findings show that young people want jobs that make a difference. Additional recommendations from the research study included:

- Stop reinforcing the images of 'nerdy and boring.'
- Stop focusing on math and science as the needed inputs and instead focus on the outputs, career opportunities, and making a difference in the world.
- Use the word 'create' not 'build.'
- Use images of people, not just things.
- Use the following 5 words in describing engineering: discovery, design, imagination, innovation, contribution.

We need to improve public understanding of engineering. Students must make more informed decisions about their careers, and we want to encourage them to consider engineering. By improving the strength of our pipeline for the future, we will be working to sustain the U.S. capacity for technological innovation.

I challenge all of us to consider the message that we carry to students and the public in our engineering lives.

Regards,

A handwritten signature in black ink that reads "Dianne Dorland".

Dianne Dorland

