

“A Nation at Risk” – The Educational Imperative
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Twenty-five years after the U.S. Department of Education issued its landmark report entitled, “A Nation At Risk,” concerns persist about our preeminence in science and technology innovation. Without inspiring a greater number of students today to become scientists and engineers tomorrow, the ability of the United States to keep pace with the rest of the world will be challenged.

This is both an economic and national security issue. The economic implications are obvious in an increasingly competitive world, but we need to step back and anticipate the effect which this erosion will also have on the ability of government to retain and attract the best talent.

Looming on the horizon, the current “baby boom” generation of engineers and scientists is moving ever closer toward -- and even beginning to reach -- retirement age. According to the Social Security Administration, “Over the next two decades, nearly 80 million Americans will become eligible for Social Security benefits, more than 10,000 per day.” That’s seven boomers every minute.

How well we address this generational transition will help determine the security of the nation’s scientific and technical talent pipeline in the future.

We believe that a key part of the answer is to inspire students in their middle school years to develop and sustain an interest in math and science, which are gating disciplines for careers later in engineering and science.

It is in these formative years that interest and proficiency in math and science typically wanes. According to the U.S. government’s National Assessment of Educational Progress of 2007, 82 percent of fourth graders score in the basic and above range for math, while only 71 percent of eighth graders score in the basic and above range.

The participation of government, business, universities, schools, teachers and parents is essential. Many are already taking leadership roles and we are proud to be among them. We need even more involvement. Business and academia alike need to take a greater leadership role and partner with teachers and the entire educational community to encourage interest and passion in math and science, especially in the critical middle school years.

Short of another “Sputnik” to spur our country into action, we must find a way to transform the recruitment, retention and renewal of our nation’s math and science teachers -- and to thank them every day for their heroic efforts in the classroom.

We also need to work directly with students to unlock their potential. Children need to be coached and encouraged, and need to understand how continued interest in math and science can lead them into exciting careers in every aspect of our economy. Engineers and scientists are in a wonderful position to inspire students as mentors and tutors. Such direct engagement can reignite student interest and replenish our pipeline of future engineers.

Twenty-five years after “A Nation At Risk,” the educational imperative is even greater -- to sustain the technical talent needed to keep our country strong and economically competitive. A major national security headache with daunting economic ramifications is literally creeping up on us as a nation. The time to act is now.

Together, we call on our colleagues in business and academia to join us in making this issue a top priority in the coming year. The health and vitality of our nation’s youth and their viability as our future workforce is a responsibility we all share.

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