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We Can't Wait for the Next Sputnik

By Senator Elaine Alquist (D-San Jose)

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This year's 50th anniversary of Sputnik reminds us that the race to space was the beginning of our nation's technological revolution. Russia's launch of the world's first satellite on October 4, 1957 motivated us as a nation to prioritize and strengthen math and science instruction. Like so many of my classmates of that generation, I became an Algebra & Trigonometry teacher. Our educational system of that era supported, nurtured, and created an entire generation of scientists, mathematicians, and engineers.

As we enjoy the results of that education revolution of the 1950s, it is time to take stock of where we now stand on math and science education. Today, there is no Sputnik to awaken us as we face tougher challenges than those of a generation ago. California, and the nation as a whole, is operating in an increasingly competitive global economy, where countries who a decade ago only manufactured technology are now designing it as well.

Our economic growth is dependent on a highly-skilled and well-educated workforce. Yet our schools produce fewer and fewer native-born scientists, engineers, and mathematicians to fuel the next technological revolution. The numbers are stark and our research institutions and business community have sounded the alarm. If current trends continue, by 2010, 90% of all PhD scientists and engineers will be living in Asia. Furthermore, South Korea, with one-sixth of our nation's population, graduates as many engineers as we do. Perhaps most disquieting is that our students are losing interest; in 2002 barely 6% of students entering college indicated they were pursuing a degree in engineering, a steep decline from 33% in 1992.

It is no coincidence that our funding and emphasis on math and science fifty years ago was followed by a technological and innovative revolution thirty years later. The children, who were learning in those classrooms mid-century, were the ones to develop technologies in places like Silicon Valley in the late-century. Sputnik was a wake up call that we could do better, that we must change our priorities if we wanted our children to live a better life. California cannot afford to wait for a 21st century Sputnik to motivate us; we must act now.

Many federal, state, and private proposals are attempting to solve this problem, but none of them are as comprehensive as the initiative undertaken after Sputnik. An all-inclusive, long-term plan is needed to fully cultivate science, technology, engineering and math education. This must involve federal and state governments, the business community and the people who stand to lose and gain the most; the citizens of this nation.

We are on the cusp of another innovation revolution today for I believe we will soon see self-cleaning clothes, cars fueled by algae, and houses fully powered by the sun. But where are the scientists, engineers and mathematicians to develop these technologies and the math, science, and engineering teachers to inspire them to do so? If we do not act soon and invest in math and science education, they may all be beyond our shores.

Representing San Jose, Sunnyvale, Santa Clara, Mountain View and Gilroy

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