

Recently, a group of energetic science and engineering high school students from the Fifth Congressional District visited my Washington office, bringing with them a special guest - a basketball-shooting robot named Pedro. Aside from being a threat at the three-point line, Pedro is no ordinary robot. This engineering wonder was designed and built by the South River High School Robotics Team for the purpose of competing in the Chesapeake FIRST Regional Robotics Competition.

The annual contest, which will be held in Annapolis in March, is geared towards motivating young people to pursue education and career opportunities in science, technology, engineering, and math, or STEM, fields. Every year, students participating in the competition are tasked with solving a common problem; this year's student teams were asked to design a robot that can retrieve and shoot foam balls into a basket up to 30 feet away.

I am encouraged by efforts like these to help students realize the excitement and rewards of careers in STEM fields; not only because it develops confidence and life skills, but also because America is in great need of more students proficient in these areas of study. The fact is America is suffering from a shrinking talent pool of skilled STEM workers, and while we are falling behind, our global competitors are stepping up to the plate.

Today, Asian colleges produce six times the number of engineering degrees produced in the United States; China graduates four times as many; and South Korea graduates the same number as the United States while having only one-sixth of our population. America ranks seventeenth in the proportion of the college-age population earning science and engineering degrees - down from third place several decades ago.

These statistics are troubling and could have dire consequences for America's future economic well-being. The consensus among academic experts, business leaders, and many lawmakers is that we must do more to increase enrollment in STEM areas of study and give the next generation of American workers the tools and skills they need to compete and excel in the 21st century world marketplace. Our global competitors are doing it - we can't afford to stand idly and watch them pass us by.

To address this need, Democrats have developed a plan to secure America's continued leadership in innovation and unleash the next generation of discovery, invention, and growth. In 2005, we unveiled those ideas in our Innovation Agenda, which recognizes that in a globalized, knowledge-based economy, America's greatest resource for innovation and economic growth

resides within our classrooms.

To create a new generation of innovators, our agenda calls for a qualified teacher in every math and science K-12 classroom, and we issue a 'call to action' to engineers and scientists to join the ranks of America's teachers. Our plan would add 100,000 new scientists, mathematicians, and engineers to America's workforce in the next four years by providing scholarships, other financial assistance, and private sector opportunities to college students to achieve this goal.

As we transition to a more service-based U.S. economy, the imperative for building our STEM workforce grows stronger. The number of jobs requiring technical training is growing at five times the rate of other occupations, yet the average number of entrants is static or declining. If we do not act to reverse current trends, the demand for scientists and engineers will far outstrip supply.

As far as the state of Maryland is concerned, educating and training more STEM professionals is a strategic economic imperative. With its close proximity to the center of the Federal government, a large portion of Maryland's workforce is employed in the defense and aerospace industry and at bio-research and medical facilities. As one of the prime beneficiaries of STEM talent, Maryland has a significant stake in ramping up efforts to promote these skilled workers.