

Gifted Minds We Need to Nurture

By Joann DiGennaro
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At an educators' meeting in Washington last fall, conversation turned to whether the federal government should support programming for this nation's most gifted and talented high school students. Educators overwhelmingly said that top students in secondary schools need no assistance, much to my dismay. Priority must be given to those not meeting the minimal standards in science and math, they reasoned.

The ugly secret is that our most talented students are falling through the cracks. Not one program of such major governmental agencies as the National Institutes of Health, the National Science Foundation or NASA specifically targets the top 5 percent of students who have demonstrated academic excellence and have the greatest potential for becoming our inventors, creators and groundbreaking scientists. An international assessment of math problem-solving skills of 15-year-olds in 2004, along with more recent studies, found that the United States had the fewest top performers and the largest percentage of low performers compared with other participating countries. By the time students reach 12th grade in math and science, they are near the bottom or dead last compared with international competition, according to the Education Department. These are the critical years for supporting students in science and math, for it is when they make career-determining decisions for college studies.

During a trip to China last fall, I visited several Key High Schools, which are dedicated to preparing top young scholars for science and technology careers. The Chinese government has targeted upward of \$20 million to support advanced learning and laboratories in each of the 34 Key High Schools. Some of these labs would make our universities envious. President Hu Jintao said in a July speech that the Chinese are placing a great emphasis on encouraging their brightest students in order to further their country's economic and military development. By explicitly connecting its education policy to its national objectives, China has taken a long-term approach to training its talent for the next century. An analysis of Chinese development in science and technology published last year found that the country's senior scientists and technology experts are expected to make training young people their first priority.

In November, Indian President Abdul Kalam announced that India's economic plan will target support for young scholars as a means of reaching its national economic policy goals. As an emerging success in engineering subjects, particularly information technology, India is emphasizing its IT industries to students with Operation Knowledge, a national campaign to develop the country's push to economic growth.

Our nation is wondering what will happen next. For the United States to compete globally and continue to lead in innovation, it should urgently do the following:

At the strategic level, the United States must establish a policy for nurturing its most talented science and technology students and integrate this policy with a long-term vision of U.S. economic and military development. The White House and State Department science advisers should make this task a priority.

The next step should be a thorough assessment of all government educational programs geared to science and math. Shockingly, there are few assessments and little coordination among governmental agencies for the hundreds of millions of dollars spent on educational programs from kindergarten through the undergraduate level. There is not even a comprehensive system that tracks what educational programs at agencies are sponsored for students from kindergarten through college, how many international students are in the United States under programs of the various government agencies, or what happens to international scholars when they complete their studies here.

Finally, some of the millions of dollars devoted to educational programs and policy must be reallocated for the most talented high school students. The government should support such efforts to enrich learning experiences for the highest-achieving students so that they can maximize their potential. A system of performance measurements would help determine which programs are least effective and could be canceled to provide the funds for this initiative, which would also be guided by performance metrics.

Our young scholars are key to America's future competitive position. The government must provide the strategic support necessary for them, and the country, to excel.

The writer is president and co-founder, with the late Admiral H.G. Rickover, of the Center for Excellence in Education. The center sponsors the Research Science Institute in conjunction with the Massachusetts Institute of Technology. It also sponsors the USA Biology Olympiad and other research and competition opportunities for high-achieving students.