

The Forgotten Gifted Child

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In an increasingly competitive global economy, it is apparent that America's future rests on nurturing its most talented, innovative thinkers. Yet on many levels—financially, legislatively, academically and socially—those children who are most capable of providing new ideas and intelligent leadership are being forgotten, ignored, and in some cases, even reviled and bullied.

This is in stark contrast to what many top students experience overseas. As President of the Center for Excellence in Education (CEE), an organization that I founded nearly 30 years ago with Admiral H.G. Rickover, father of the nuclear Navy, I have traveled the globe speaking with government officials, educators and some of the world's brightest students. Many of these students have taken part in the Center's signature program, the Research Science Institute (RSI), a six-week summer enrichment program in critical science, technology, engineering and math subjects (STEM), done in conjunction with the Massachusetts Institute of Technology. I have found that in many cases, the commitment, respect and resources devoted to high-achieving students abroad, even in developing countries, far exceeds what is done here.

For instance, China has invested millions in brand-new laboratories, enhanced teacher training and other initiatives at the secondary school level to prepare students for science and technology careers. It has paid off: According to Amber Winkler, Vice President for Research at the Fordham Institute, the "Chinese readily accept that some students and some teachers will perform at higher standards than others. They don't condemn or begrudge those individuals. They don't think that recognizing a handful of exceptional teachers kills collaboration for the entire group. They aren't overly enamored with equity at the expense of common sense. Rather, they admire and respect the standouts."

India, too, is focusing on improving education, ramping up its investment to \$44 billion in 2008 from \$11 billion in the late 1980s. While only about a third of the country's students finish in high school today, the World Bank estimates that in five years, nearly half will.

The Indian government is committed to enrolling 40 million students in college by 2020 and conferring 8 million bachelor's degrees, or four times as many as the United States. The country already confers more bachelor's degrees than the United States. Meanwhile, more than half of American college students drop out before they receive a degree.

Other countries have awakened to the fact that education is the key to competitiveness and they are willing to sacrifice to invest in its youth. Although the U.S. spends more per pupil than any other country in the world, it is far down the list of developed nations in terms of expenditure per pupil as a percentage of GDP per capita; a measure of the value people place on education. According to the World Bank, on the secondary school level, in 2009 the U.S. spent 25.2% of GDP per capita. But the same year, Cyprus spent 40.7%, Portugal 38.8%, Finland 36.1%, Sweden 33.2% ; Denmark 32.9%; Latvia 32.3%; France 29.3%; Argentina 27.1%, and Italy 26.5%. However, no nation surpasses the U.S. in private philanthropy augmenting government expenditures.

Lost Momentum

While other countries are concentrating on developing their most academically talented to become future leaders, innovators and scientists, America seems to be turning away from supporting meritocracy. It wasn't this way a generation or two ago. Indeed, the Soviet Union's launch of Sputnik in 1957 stirred U.S. fears of falling behind, leading to a new emphasis on gifted education, particularly in math and the so-called "hard" sciences. A year after the spiky satellite took to the skies, the federal government passed its first large-scale initiative in gifted education, the National Defense Education Act. The legislation provided funds for a host of programs aimed at identifying and supporting talented students from kindergarten through college, including specialized high schools, acceleration initiatives, and talent searches. Over four years, more than \$1 billion was channeled into 40,000 loans, 40,000 scholarships, and 1,500 graduate fellowships, primarily to academic achievers in STEM subjects.

Yet the momentum, which helped channel great numbers of Boomers into STEM careers throughout the 1960s and 1970s, did not last. While the Office of the Gifted and Talented at the U.S. Office of Education was finally given official status in 1974, the next year, when Public Law 94-142 was established to help children with special education needs, the gifted and talented were not included. That situation was somewhat rectified by the passage of the Jacob Javits Gifted and Talented Students Education Act in 1988, the

only federal program dedicated specifically to gifted and talented students, which underwrote research, demonstration projects and other strategies to help schools support these students, though it did not fund local gifted education programs themselves. The Young Scholars Program, funded by the National Science Foundation specifically for academic achievers in K-12 education, was defunded and dropped in 1996.

In 2001, the Javits Act was expanded as part of the No Child Left Behind Act to include competitive grants to school districts and state agencies to enhance gifted programs, with certain restrictions. The amount appropriated to fund these initiatives was never very impressive, reaching just over \$11 million at its peak a decade ago. However, even that modest sum became a target of federal belt-tightening in a worsening economy. Funding fell from \$9.6 million in 2006 to \$7.46 million in 2010. Last year, the Javits Act was completely defunded.

With no federal law mandating or funding gifted education, states have had to find their own ways. Predictably, the results have been uneven. Just 26 states require some sort of programs for gifted and talented students, and of these, only six provide funding for these programs, according to a report by the National Association for Gifted Children (NAGC). The same report showed that 12 states do nothing to monitor or audit what local schools do for high achievers.

Another worrisome fact from the report: only six states require all teachers to have training in gifted and talented education. Concerned about the quality of teacher training, particularly in underserved rural and urban areas, CEE recently rolled out the Teacher Enrichment Program. Using public/private partnerships, the program offers teachers a clearinghouse of science resources with content from more than 1,000 STEM sites; a blog; roundtables; a lab bench with cost-effective activities; and a Bite of Science, an informal dinner where teachers listen to and interact with researchers from industry, academia and government. The Bite of Science events are limited to about 25 teachers to maximize personal interactions; even so, since each teacher impacts an average of 137 students a year, at each event, the education of an estimated 3,425 students a year is enriched. Launched this fall, Bite of Science dinners have been held in Virginia, Indiana and Illinois and will be launched in California and Texas in Spring 2013. By leveraging the power of teacher training, the education of some 71,925 students will be enhanced throughout 2013.

While public/private partnerships can make a difference in the education of gifted students, schools also need to do more. It will not be easy. According to the Center on Budget and Policy Priorities, 26 states will spend less per student than in 2013 than they did in 2012, while 35 are still spending less per pupil than they did before the recession, adjusted for inflation.

However, spending only shows part of the picture. Nationwide, the percentage of public high schools that offer Advanced Placement or International Baccalaureate courses is abysmally low—just slightly more than a third, according to the College Board Advocacy and Policy Center. Yet the wealthiest and most densely populated states aren't necessarily the ones with the highest concentration of these schools. Rather, it is the ones with the most commitment to improving education—and Arkansas leads the way at 84.2%

Talent Wasted

Although many assume that intellectually advanced children need little help or guidance, often the opposite is the case. Peer groups place much emphasis on blending in, yet gifted students inevitably stand out due to their extensive vocabulary, easy grasp of complex concepts, highly developed ethical sense, creativity and curiosity. Sometimes seen as teachers' pets, gifted children are often lightning rods for their peers' criticisms; some react by trying to hide their talents or deliberately fail in order to fit in. If they are also bored by the curriculum, gifted students may disengage or give up. Although estimates of how many gifted students drop out vary widely, in 1995, psychologist Sylvia Rimm suggested that as many as one out of five high school dropouts come from the gifted population.

Furthermore, gifted children are often more sensitive to outside stimuli, and may have problems with processing the many levels of experience they are taking in. This can lead to asynchronous development, according to Polish psychiatrist Kazimierz Dabrowski, French psychologist Jean Charles Terrasier and others, which means that while they may be years ahead of their fellow students in terms of intellectual understanding, they may mature more slowly in others; Albert Einstein, for instance, did not speak until the age of four.

Moreover, the advanced ethical sense that many gifted students possess can also make them seem self-righteous or opinionated to their peers. "If we view giftedness only within a competitive framework, then the most gifted among us are certainly the most cursed, because they cannot fit into society as it currently is, nor can they succeed by its standards," writes psychologist Linda Kreger Silverman, Director of the Gifted Development Center at the Institute for the Study of Advanced Development. More interested in

broad issues of fairness than winning at all costs, they are likely to be seen by others as “defective,” she writes, because they cannot ignore “power plays and moral infractions.”

All of these factors—along with simple peer envy of the child’s intellectual gifts-- isolate the gifted child. In 2006, Purdue University researcher Jean Sunde Peterson found that by eighth grade, two-thirds of the 432 gifted students she studied had become the victims of bullying, such as name-calling, teasing and even acts of violence: "Many are intense, sensitive and stressed by their own and others' high expectations, and their ability, interests and behavior may make them vulnerable," she wrote. “Additionally, social justice issues are very important to them, and they struggle to make sense of cruelty and aggression. Perfectionists may become even more self-critical, trying to avoid mistakes that might draw attention to themselves.” Responses to the bullying ranged from depression and rage to school absenteeism.

America cannot afford to lose its most intelligent students to these difficulties, which is why it is so important to nurture gifted students by putting them in contact with their academic peers, even for short periods. Many times over the years, I have heard RSI students express their joy at finally being in a setting where they finally feel like they belong--not just academically, but also socially. This bond, which the Center encourages and reinforces through frequent reunions, holiday parties and an online social network, inspires alumni to self-identify as “Rickoids” years after their high school summer experience is over and they have reached the pinnacles of their professions. Clearly, meeting others who are literally like-minded at a pivotal time in their young lives has a profoundly positive and lasting impact.

Given the potential and vulnerabilities of gifted students, it is critical for educators to provide them with the mental and social stimulation they need. While exam, charter and magnet schools serve an important role in providing this help, they do not serve everyone who needs them. Therefore, all schools need to take the initiative to find out what practices serving the gifted work best for their budgets and student populations, whether they are accelerated or differentiated classes for high-achieving students, flexible groupings for certain courses, or simply after-school programs like science fairs. Much can be done by enlisting parental and corporate support; and schools should certainly encourage the same booster spirit for chess club competitions that they do for football games.

There is certainly a thirst for such challenges, and independently run programs can do much to supplement what happens in the classroom. The USA Biology Olympiad that CEE sponsors in partnership with Purdue University routinely attracts more than 10,000 students a year who voluntarily compete by taking an exam. The top scorers are rewarded with the chance to learn more through intensive mentoring; then they compete against the best STEM students in the world. Since the program was launched a decade ago, Team USA has brought home medals every year, demonstrating how motivating goal-oriented competitions can be when high achievers are given appropriate attention and support. Indeed, it has been so successful that CEE recently partnered with the American Association of Physics Teachers to sponsor the USA Physics Olympiad beginning in 2013.

Gifted students must be afforded an educational environment that allows them to develop their talents fully. Underwritten by corporations, foundations, government grants and private donations, CEE provides all of its programs at no cost to participants—and this is important to ensure diversity and universal access. In a time of diminished public funding for education, it may be that the private sector will need to do more to ensure a workforce that is intellectually sophisticated enough to keep their industries competitive. Certainly, educators, parents and others concerned with the gifted should be alert and open to every cost-effective opportunity to enrich these children’s educations and to nourish their social development. We cannot afford to squander their gifts and the significant contribution they can make to the STEM workforce.