

PRESS COVERAGE FROM NFAP STUDY ON THE CHILDREN OF IMMIGRANTS IN SCIENCE AND MATH – JULY 2004

- "Give Us Your Nerds," *Wall Street Journal*, Editorial, July 16, 2004
- Stuart Anderson, "Reaping the Benefits of Immigration Policy," *Orlando Sentinel*, July 29, 2004
- "Fewer Visas, Fewer Whiz Kids," *Baltimore Sun*, July 24, 2004
- "Bringing in More Brains," Editorial, *Cleveland Plain Dealer*, July 26, 2004
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- "Pluralism Means Progress," Editorial, *Newark Star-Ledger* (NJ), July 19, 2004
- "Brain Gain, Immigrant Children Excel," Editorial, *Minneapolis Star-Tribune*, July 30, 2004
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- "Reverse Outsourcing," Editorial, *Gainesville Sun* (Florida), July 22, 2004
- "Foreign Students Help America," Editorial, *The Ledger* (Florida), July 24, 2004
- "Immigrants Lead Math, Science Contests," *Fresno Bee*, July 19, 2004. The article also appeared in the *Modesto Bee* (CA), *Star-Tribune* (Caspar, WY), *York Dispatch* (PA), *Merced Sun Star* (CA), *Abilene Reporter News* (TX), *The Sun* (Bremerton, WA), *San Angelo Standard Times* (TX), and *Wichita Falls Times Record* (TX), Cincinnati Post, Journal Inquirer (CT), Potomac News (VA), and Star Press (IN).
- "Immigrants' Children Inhabit Top Ranks of Math, Science Meets," *Education Week*, July 28, 2004
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The Wall Street Journal

Review and Outlook

July 16, 2004

Give Us Your Nerds

If Emma Lazarus were composing her Lady Liberty sonnet today, she might consider that line. But who would have guessed in 1883 that immigrants and their children would be so vital to America's technological prowess more than 100 years later?

So much of today's contentious immigration debate focuses on those arriving from Latin America to work in agriculture or take low-level service jobs that Americans tend to spurn. But a new study by Stuart Anderson of the National Foundation for American Policy reminds us that the contributions of skilled foreign-born professionals and their offspring are no less important to the U.S. Without them the country would be hard pressed to maintain its world-wide advantage in such fields as math and science.

The report, titled "The Multiplier Effect," will be released on Monday and available at www.nfap.net¹. Here are some highlights:

- More than half of the engineers with Ph.D.s working in the U.S., and 45% of the nation's computer science doctorates, are foreign-born.
- Children of immigrants comprise 65% of the 2004 U.S. Math Olympiad's top scorers (13 of 20) and 46% of the U.S. Physics Team (11 of 24).
- At this year's Intel Science Talent Search, which recognizes the nation's top math and science students, 60% of the finalists and seven of the top 10 award winners were immigrants or their children. Last year, three of the top four awardees were foreign-born.

Traditionally, these rigorous competitions have served as a font for the next generation of scientists and mathematicians. More than 95% of Intel Science Talent Search winners pursue science as a career, and 70% go on to earn an advanced degree. But the high rate of success among foreigners is even more extraordinary when you consider the tiny segment of the population that generates it.

While the whiz kids and their parents hail from nations as far-flung as India, Romania, China, Vietnam, Israel, Turkey and Russia, many are here on a very limited number of H-1b visas that are reserved for immigrants with technical skills. These visas are given out to fewer than 100,000 foreigners each year, which is less than .04% of the 293 million individuals who live in the U.S.

Anyone who saw "Spellbound," the captivating documentary about the annual National Spelling Bee, knows that math and science aren't the only subjects in which immigrants excel. And policy makers will surely continue to explore why it is that American students aren't competing better in these areas.

At the same time these findings help illustrate that our economy benefits substantially from immigration, in particular from H-1b visa recipients and their children. Any policy that would depress the influx or close off our borders altogether is not in America's long-term interest, especially in a world where economic growth and competitiveness will depend above all on human capital.

If we had listened to the anti-immigration crowd over the past 20 years, says Mr. Anderson in an interview, "we would have wiped out two-thirds of the top future scientists and mathematicians in the United States because we would have barred their parents from ever entering America."

Orlando Sentinel

Reaping the benefits of immigration policy

By Stuart Anderson
Special to the Sentinel

July 29, 2004

America is a nation of immigrants and its willingness to admit into our society individuals not born here generates controversy. Yet immigration continues to be crucial to America's future.

Simply put, if opponents of immigration had succeeded over the past 20 years, two-thirds of the most outstanding future American scientists and mathematicians would not be here today. U.S. policy would have barred their parents from entering the United States.

That is the finding of a new study from the National Foundation for American Policy. The study (to be published in *International Educator* and available at www.nfap.net) found that 60 percent of the finalists of the Intel Science Talent Search (24 of 40) and 65 percent of the U.S. Math Olympiad's top scorers (13 of 20) are the children of immigrants.

In addition, seven of the top 10 winners at the 2004 Intel Science Talent Search were immigrants or their children. Nearly a quarter of Intel Science Talent Search finalists' parents came to America as international students.

And while some argue that immigrants place new burdens on schools, one forgets that these children grow up to be key forces in our society.

Moreover, immigration is the crucial factor in determining whether labor-force growth in the United States rises or becomes stagnant. Parents of six of the 40 Intel Science Talent Search finalists, including three family-sponsored immigrants and two refugees, arrived through the general openness of the United States' immigration system.

Immigrants are self-selected, meaning those with the most ambition are the ones most likely to take a chance on coming to America. So it is not surprising that we see that drive, ambition and work ethic in their children.

The study found that among finalists of the 2004 Intel Science Talent Search, more children (18) have parents who entered the country on H-1B (professional) visas than parents born in the United States (16). (The same is true for Math Olympiad top scorers.).

To put this finding in perspective, new H-1B visa holders each year represent less than 0.04 percent of the U.S. population.

Today, half of all engineers with Ph.D.s working in the United States are foreign-born.

The irony is that, despite this data, both employment-based immigration and student-visa policy have faced new restrictions that threaten the flow of international students and highly skilled professionals.

The recent 9/11 Commission report concluded that there remain areas to strengthen in our immigration system.

In doing so, it is essential we balance security needs, as well as lobbying from those affected by labor-market competition, with America's economic and technological future.

That future depends on openness toward people with talent, drive and determination.

The National Science Board, a U.S. government advisory body, warned recently that American leadership in science and technology is threatened by global competition.

Yet we should remain optimistic. When immigrants are allowed to come to the United States legally and stay, the nation also benefits.

The question is only whether America will maintain an immigration system that is open enough to attract and integrate that talent into U.S. society.

Stuart Anderson is Executive Director of the National Foundation for American Policy, an Arlington, Va.-based public policy research organization.

Baltimore Sun

July 24, 2004

By Riley McDonald

Fewer visas, fewer whiz kids

Brain drain: Children of immigrants include many of the best math and science students in America. As visa restrictions tighten, U.S. technology will suffer, a report says.

WASHINGTON - For her summer internship last year, 17-year-old Melis Nuray Anahtar built a tiny device that can isolate white blood cells and the DNA inside them 180 times faster than the traditional technique. This fall, as a freshman at the Massachusetts Institute of Technology, she plans to resume the project, in hopes the invention will lead to advances in burn and trauma treatment.

Anahtar's internship this summer, at Georgetown University Medical Center, is only slightly less ambitious. But she managed to take a quick break this week to help illustrate a seldom-recognized byproduct of U.S. immigration: the sterling achievements in math and science that children of foreign-born adults are contributing to the nation.

Her parents, both architects who were born in Turkey, came to the United States on a high-skill work visa in 1985, enticed by a job and the opportunities for their yet-to-be-born children.

Anahtar was spotlighted at a news conference this week by Stuart Anderson, a former federal immigration official who argues that tighter restrictions on U.S. visas, if continued, could threaten America's standing in math, science and technology.

Anderson, executive director of the National Foundation for American Policy, a nonpartisan research group, released a study he conducted of America's premier math and science students. Anahtar, and two foreign-born students with her at the news conference, are Intel Science Talent Search finalists. In fact, children of immigrant families make up more than 60 percent of the finalists.

It's a figure Anderson says he was astonished to arrive at after interviewing the finalists and their parents. He went on to examine the backgrounds of high-achieving students in two other prestigious competitions: the U.S. Math Olympiad and the U.S. Physics Team. The percentages for children of immigrants in those events were 65 percent and 46 percent, respectively.

"American leadership in science and technology," Anderson said in unveiling his study, "is very much tied to our openness to immigration."

Anderson says he is deeply concerned that tougher obstacles for would-be immigrants could have the unintended effect of reducing the number of elite math and science students in America, with serious consequences for such areas as engineering and computer science.

Among the 40 Intel Science finalists, nine had parents who first came to the United States on a student visa; 18 had parents who held high-skill jobs on a work visa before obtaining permanent residency.

But after Sept. 11 and with the economy slowing in recent years, the government made both visas harder to get. Perhaps as a result, fewer people are seeking student visas.

The international student offices at the [Johns Hopkins University](#) and the University of Maryland at College Park reported complaints from students who had trouble passing security checks. Both have seen a sharp decline in graduate school applications from foreign students.

Maryland received 37 percent fewer foreign applications for the coming year, though it admitted the same number of students. Valerie Woolston, director of the school's International Education Services, says she fears that applications will continue to fall because the non-refundable fees charged to all foreign applicants will double, to \$200.

"That's really tough," Woolston said. "In a place like China or Africa, that's horrible."

A spokesman for the U.S. Citizenship and Immigration Services said U.S. security warrants the increased hassle and cost for foreign students, who must await background checks before receiving travel documents.

"We'll do nothing to shortcut the process and potentially jeopardize the United States' security," said the spokesman, Chris Bentley. "We have a long tradition of openness. ... In opening that door, we must make sure we don't allow someone to take advantage of our openness to do harm."

High-skill work visas, on the other hand, have less to do with homeland security and much to do with the economy. Such "H-1B" visas, intended for foreign workers who can perform a high-skill American job that cannot be carried out by a qualified American worker, recently became scarce.

For many years, the cap on those visas was 65,000 a year. But in the technology boom of the late 1990s, Congress raised the cap to 115,000 and then 195,000. The increase had a sunset clause, which arrived last year, bumping the cap back down to 65,000. Some companies now fear a shortage of highly skilled workers.

"It's having a very large adverse impact on some companies," said Lynn Shotwell, director of governmental relations for the American Council for International Personnel, which represents global companies based in America. "I've heard from some companies that because of the cap, they're looking for different ways to fill these jobs. Do they move these jobs overseas?"

Advocates for U.S. workers argue that companies should look to Americans first. The economy has weakened since the cap was first raised, and joblessness is rising in technology fields, said Roy Beck, director of NumbersUSA Education and Research Foundation, which backs tighter immigration rules.

Beck says the skilled work visa program is often abused, with visas handed out to such low-skilled workers as pizza shop owners and no protection built in to ensure that American workers get first shot at a job.

Still, Beck applauded the Intel winners and added, "The parents of those students were probably cream of the crop. Most people who despise the H-1B program would say there's probably room for 10,000 [high-skilled] people who truly add something, and you don't want to keep them out."

Just as their parents contribute to American science and tech industries, many of the children of these immigrant families end up raising the levels of student performance in math and science in the United States. American students, as a whole, consistently rank below students in many other developed countries in math and science.

The Intel winners say their parents encouraged them to excel, particularly in math and science.

"If you're an author, half the people will love what you write and half of them will hate it," Anahtar noted. "When you discover a gene, you discover a gene, and no one can say you didn't."

Anahtar, who just graduated from the magnet program in science, math and computer science at Montgomery Blair High School in Silver Spring, said she sees the same drive in her friends from immigrant families.

"A lot of the most talented students at our school are immigrants," Anahtar said. "The parents of my friends did math and science in their countries. The kids learned from their parents and saw math and science is objective, and it's easy to excel once you have a passion for it."

Cleveland Plain Dealer

July 26, 2004

Editorial

Bringing in More Brains

The United States risks its long-term prosperity when it applies short-sighted immigration policies as a means to enhance homeland security. This message, sounded again and again in recent months by leaders of universities, science and engineering organizations and other academics, won airing in a uniquely crystalline manner in a new report from a Washington-area think tank.

"The Multiplier Effect," from the National Foundation for American Policy, considers the academic achievements of children of immigrants - and finds they are impressive indeed. Nearly two-thirds of the U.S. Math Olympiad's top scorers, and nearly half of the U.S. Physics Team's members, are children of immigrants. Plus, 60 percent of the finalists and 70 percent of the top 10 award winners in the 2004 Intel Science Talent Search were immigrants or children of immigrants.

The strong statistics don't only belong to the young: More than half of engineering doctorate-holders working in the United States are foreign-born, as are nearly half of computer-science Ph.D.s. And yet, in the wake of the Sept. 11, 2001, terrorist attacks, new security measures have discouraged foreign scholars from applying to study or work in the United States, and the results have become quickly apparent. Denials of high-skilled employment visas nearly doubled since 2001; over the same period, denials of student visas climbed by nearly a quarter. International student applications to U.S. graduate schools dropped nearly a third in 2002 and 2003; security checks of those who wish to study in science or engineering have increased by 20 times between 2000 and 2003.

The resulting logjam and delays, Harvard University's President Larry Summers warned in a letter to Secretary of State Colin Powell and Homeland Security chief Tom Ridge, risks "losing some of our most talented scientists and compromising our country's position at the forefront of technological innovation." Powell and others in the federal government have responded to such concerns with promises to streamline the visa process, and report that in the last year, waiting time for certain student and scholar visas has fallen from two months to three weeks.

Massachusetts Congressman Michael Capuano has introduced legislation to improve the system further; Ohio legislators should examine its provisions and consider joining him.

Even beyond the broader, long-term gains described in the Foundation report, consider immediate implications: An annual report from the Institute of International Education noted that in 2002-03, international students and their families had a \$12.8 billion economic impact on the United States; in Ohio, the amount was \$425 million. Great intellectual ability lies beyond U.S. borders. The question is whether we wish to welcome it, or send its benefits elsewhere.

CLEVELAND PLAIN DEALER: Immigrants' kids: Nation's brainy superstars

Tuesday, July 20, 2004
Scott Stephens
Plain Dealer Reporter

Give us your tired, your poor . . . your scientists and your mathematicians.

The children of immigrants are becoming the top math and science students in the United States, dominating academic competitions and representing the strongest hope the nation has of keeping an edge in high-tech and biomedical fields, according to a study released Monday.

The National Foundation for American Policy, based in Arlington, Va., found that foreign-born professionals and students are contributing more to American society than first thought, and that their children are the nation's rising intellectual superstars.

"If opponents of immigration had succeeded over the past 20 years, two-thirds of the most outstanding future American scientists and mathematicians would not be here today because U.S. policy would have barred their parents from entering the United States," NFAP Executive Director Stuart Anderson, who authored the report, said at a news conference.

The study found, for example, that 60 percent of the finalists in the 2004 Intel Science Talent Search, 65 percent of the U.S. Math Olympiad's top scorers and 46 percent of the U.S. Physics Team members are children of immigrants.

One of the members of this year's physics squad is Elena Udovina, 18, of Solon.

The Hathaway Brown graduate was 12 when she came to the United States from Russia.

In 2003, three of the top four Intel awardees were foreign-born.

In many ways, those young math and science whizzes are simply following their elders. Today, more than 50 percent of the engineers with doctorates working in the United States are foreign-born, and 45 percent of the math and computer scientists with doctorates were born outside the country, the study found.

The findings were of no surprise to Jeanette Grasselli Brown. Brown, a member of the Ohio Board of Regents, was the daughter of Hungarian immigrants who settled in Cleveland. She earned a chemistry degree from Ohio University before going to work for the Standard Oil

Co. (Ohio), later BP America. She retired from the company as director of corporate research.

"They get it," she said of the respect immigrants have for education. "In my family, it was simply a mantra. There was no discussion about it. I think that mentality still exists."

That mantra is firmly in place in the household of Taiwanese immigrants Ching-Chih and Meei-Ling Lee. The Hudson couple came to the United States in the early 1980s to pursue graduate degrees at the University of Illinois.

This fall, their son, Benjamin Lee, will begin his first semester at Harvard University. The Hudson High School graduate, one of The Plain Dealer's top 10 Senior Standouts, ranked first in his class and had a perfect SAT score.

His mother, Meei-Ling Lee, said the family's emphasis on education was nothing unusual for immigrant families.

"We ask our children to be hard-working and appreciate all the opportunities given to them," she said. "It's really a gift from God."

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Newark (NJ) Star Ledger

July 19, 2004

Pluralism Means Progress

Editorial

It's no great surprise that this year's edition of the Human Development Report, from the United Nations Development Programme, favors cultural diversity. The most potent avatar of all things multicultural would hardly come down on the side of repression and uniformity. What's notable is that the report links such diversity to development and, therefore, prosperity.

Coincidentally, another report, due for release today by the National Foundation for American Policy, a think tank that analyzes trade and immigration issues, comes to an allied conclusion: that skilled immigrants help maintain U.S. excellence in the sciences and mathematics, especially. The study found that children of immigrants were the biggest winners of the country's heftiest competitions for young scientists and mathematicians, and it looked at ways to foster the competitiveness of American technology by encouraging foreign and immigrant students.

The U.N. report acknowledges that diversity creates conflicts that can hamper development. You don't have to look any farther than Iraq or Afghanistan to see how competing ethnic and religious groups can derail economic progress. But the report argues that accommodating diversity has important payoffs and points to Switzerland, Canada and Belgium as examples of wealthy countries that have been successfully multi-ethnic for generations and to the United States and Britain as prosperous nations that continually absorb immigrants from all over the world.

As our long history attests, absorbing these immigrants is not a seamless or painless process. The policies suggested by the Human Development Report to facilitate diversity -- affirmative action, "asymmetric federalism" for countries with geographically distinct ethnic or language groups (think Quebec), among others -- are fodder for debate. What's not debatable is that both reports detract from the claims of those who warn that cultural pluralism leads to the weakening of National identity, or the clash of cultures. Not only is such pluralism desirable. It turns out that it's necessary.

Minneapolis Star-Tribune

July 30, 2004

Editorial: Brain gain, Immigrant children excel

When immigrants come to America, they want something -- usually a better life for themselves and their families. Once settled, they tend to give as much as they get. As the adults set down roots, they work and raise their children here -- some of whom grow up to become academic stars.

You don't have to go far to find them. Check the lists of top high school graduates in St. Paul and Minneapolis and you'll find a good number of their names. It is true in Minnesota and across the nation, according to a recent analysis of winners' lists from several national awards for outstanding high school math and science students.

The National Foundation for American Policy, based in Arlington, Va., found that foreign-born professionals and students are outstanding assets to American society, and that their children are the nation's rising intellectual superstars.

According to the study, children of immigrants were: 60 percent (24 of 40) of the finalists in the 2004 Intel Science Talent Search; 65 percent (13 of 20) of the U.S. Math Olympiad's top scorers, and 46 percent (11 of 24) of the U.S. Physics Team members.

Some of those academic standouts followed in the footsteps of parents who came to this country and excelled. More than 50 percent of the engineers and 45 percent of the math and computer scientists with Ph.D.s in the United States were born outside the country.

Therefore, the success of immigrant whiz kids should not be surprising, according to researchers at the Urban Institute. Their studies show that students who remember or grow up with stories about the family struggle to leave home for better opportunities are motivated to work hard; immigrants tend to be ambitious self-starters who instill the same values in their children. Immigrant sons and daughters will be major contributors to helping this country keep its edge in high-tech and biomedical fields, among others.

These and many other benefits to America underline the importance of maintaining reasonable entry rules into the United States. As the study noted, if immigration opponents had succeeded during the past 20 years, two-thirds of the most outstanding future American scientists and mathematicians would not be here today.

Therefore it is vital that U.S. immigration policy debates, fueled by legitimate concerns about terrorism, not be dominated by protectionist, xenophobic rhetoric. As recent reports about the 9/11 attacks verify, the United States can and must take stronger steps to guard against the Al-Qaidas of the world. But that does not mean closing our borders, turning good people away and losing opportunities to nurture budding Nobel-caliber scientists.

The phenomenal success of many foreign-born families should also serve as an example and wake-up call for native-born, multiple-generation Americans. Many immigrants excel not only educationally, but economically, too. Among some groups (like Minnesota's Southeast Asians), business and home-ownership rates are rising quickly.

That is no accident; hard work, study, ambition and determination pay off.

When America was first formed, voluntary immigrants from Europe and forced immigrants from Africa built a foundation; their children and grandchildren went on to make the nation great. The values of hard work and ambition should be encouraged today as we attract new waves of residents from Mexico, Southeast Asia, East Africa, Russia, India and elsewhere. It could well be one of their children who will find a cure for cancer or take the next step in computer technology.

Daily Oklahoman (Oklahoma City,OK)

July 24, 2004

Immigrants Need Welcome Mat

Editorial

IT WOULD be easy to belittle the contributions of immigrants to American society, viewing the foreign born only as laborers or guilty of poaching American jobs. The truth, though, is far more complex and paints a picture that immigrants are far more important to America's future than most people recognize.

A new study by the National Foundation for American Policy titled "The Multiplier Effect" found that professionals born in foreign countries make vast contributions to American society, and account for a large percentage of the nation's engineers and math and computer scientists who hold a doctorate. The legacy will continue with the immigrants' children, who make up an astounding number of the country's top students in science and math.

Among the study's findings: Sixty percent of the finalists of the Intel Science Talent Search (24 of 40) and 65 percent of the U.S. Math Olympiad's top scorers (13 of 20) are the children of immigrants. Forty-six percent of U.S. Physics Team members (11 of 24) are the children of immigrants. Seven of the top 10 award winners at the 2004 Intel Science Talent Search were immigrants or their children. In 2003, three of the top four winners were foreign born. The event is widely considered the most prestigious pre-collegiate science competition.

The evidence is clear that many immigrant families place education at the top of their priority list, and America often is the beneficiary. The importance of a new generation of immigrants and their children is especially significant amid fears the nation's dominance in science and technology is at risk. This issue needs more attention, as visa caps and concerns about terrorism have led to more visa rejections for highly skilled professionals seeking to come to America and a decline in the number of foreign students trying to attend U.S. universities.

In Oklahoma, it could very well be the children of immigrants who may help the state achieve its goal of becoming more powerful and influential in biomedical and biotechnology research, among other areas. The contributions of these immigrants and children shouldn't be overlooked, and neither should their potential to be a driving force in technology, research and related fields in the American economy.

Gainesville Sun (Florida)

July 22, 2004

Reverse outsourcing

Editorial

Not long ago, we published an editorial taking note of the degree to which American colleges and universities, including the University of Florida, recruit large numbers of foreign students into their math, science and engineering programs. Those American-trained foreign students, in turn, become an important source of creative talent for American business and industry.

Consider, for example, that the co-founder of Google, Sergey Brin, was born in Russia. And the founder of Intel, Andy Grove, is a native Hungarian. And the co-founder of Sun Microsystems, Vinod Khosla, is from India. That longtime importation of foreign talent into American higher education, and, ultimately, into the nation's high-tech workplace, has been disrupted in recent years.

Since the attacks of 9-11, immigration restrictions have made it more difficult for foreign students to attend American colleges, and even more difficult still for foreign graduates to remain in this country after graduation to perform valuable jobs. The public reaction to all of this is likely to be "So what?" That just means more university slots, and more jobs, for Americans. The problem with that rationale, both university and industry officials say, is that not enough Americans are going into math and science studies to meet the demand.

The extent of that dilemma was underscored this week with the release of a study from the National Foundation for American Policy, a non-profit think tank in Arlington, Va., which found that more than 60 percent of America's top science and math students are themselves the children of immigrants. A disproportionate percentage of American students participating in competitions such as the Intel Science Talent Search and the U.S. Math Olympiad have foreign-born parents. So what is the significance of that finding?

According to Stuart Anderson, executive director of the NFAP, they "provide evidence that maintaining an open policy toward skilled professionals, international students, and legal immigration is vital to America's technological and scientific standing in the world." "If opponents of immigration had succeeded over the past 20 years, two-thirds of the most outstanding future American scientists and mathematicians would not be here today because U.S. policy would have barred their parents from entering the United States," he added. "Efforts to preserve U.S. strength in science and technology should start by recognizing the key role that immigrants and their children play in the nation's leadership in these fields."

There is good reason to worry that overly restrictive immigration policies only contribute to an international "brain drain" that will ultimately cost American higher education and high-tech industries their competitive edge. The NFAP study serves to confirm that the importation and cultivation of math and science talent from around the world is hardly a recent phenomenon. "While some have decried the 'exporting' of U.S. jobs and intellectual capital, many of those individuals also oppose the nation's openness to skilled professionals and students entering the country on temporary visas, ironically, a key source of maintaining and expanding the United States' intellectual base in science, mathematics and technology," Anderson says.

It is a difficult concept to get one's mind around, but it is true nonetheless: The United States retains its position as the world's leading innovator in science and technology to a great extent because it imports, cultivates, trains and employs foreign talent. Doing so is good National education and economic policy, and it's good for American business. As Sandra Boyd, chair of Compete America, a consortium of manufacturers seeking immigration reform, puts it: "America is a stronger nation as a result of the many contributions made by both immigrants and foreign nationals visiting our shores." Call it outsourcing in reverse.

The Ledger (Lakeland FL)

July 31, 2004

Editorial

Foreign Students Help Americans

Not long ago, we published an editorial taking note of the degree to which American colleges and universities, including the University of Florida, recruit large numbers of foreign students into their math, science and engineering programs. Those American-trained foreign students, in turn, become an important source of creative talent for American business and industry.

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"While some have decried the 'exporting' of U.S. jobs and intellectual capital, many of those individuals also oppose the nation's openness to skilled professionals and students entering the country on temporary visas, ironically, a key source of maintaining and expanding the United States intellectual base in science, mathematics and technology," Anderson says.

It is a difficult concept to get one's mind around, but it is true nonetheless: The United States retains its position as the world's leading innovator in science and technology to a great extent because it imports, cultivates, trains and employs foreign talent. Doing so is good national education and economic policy, and it's good for American business.

As Sandra Boyd, chair of Compete America, a consortium of manufacturers seeking immigration reform, puts it: "America is a stronger nation as a result of the many contributions made by both immigrants and foreign nationals visiting our shores."

Call it outsourcing in reverse.

FRESNO BEE (Scripps Howard): Immigrants lead math, science contests

By MICHAEL DOYLE

Fresno Bee

July 19, 2004

WASHINGTON - Immigrant children are dominating the nation's leading math and science contests, a new study released Monday shows.

Daljeet Batth thinks she knows why.

A native of India, Batth has lived in California since she arrived as the bride in an arranged wedding in 1977. Neither she nor her husband Raghbir graduated from college, so their pride was all the greater last year when their son Sunkhjeet earned national recognition as a semifinalist in the Intel Science Talent Search.

Beyond brains and ambition, the new study found, many of Sunkhjeet Batth's fellow high-fliers share an immigrant background.

"They see their parents striving, and they learn from that," Daljeet Batth said in a telephone interview Monday. "Most of the children of immigrants learn from their parents that they have to work hard."

Whatever the reasons, the numbers can certainly be impressive.

Twenty-four of the 40 Intel Science Talent Search finalists this year were children of immigrants, the new study by the pro-immigration National Foundation for American Policy found. That amounted to 60 percent of all the finalists in the nation's most prestigious high school science contest.

Similarly, 13 out of the 20 top scorers in the U.S. Math Olympiad were the children of immigrants this year, as were 11 out of 24 of the U.S. Physics Team members. According to previous research by the National Science Foundation, over half of the engineers with doctorates now working in the United States are foreign-born.

None of this is coincidence, the new study's author believes.

"Immigrants are self-starters," said Stuart Anderson, executive director of the National Foundation for American Policy. "Those with the most drive and ambition tend to come to the United States, and they tend to instill that in their children."

The new study focuses on the very top of the achievement pyramid. Below the rarified realm of math-and-science scholars, poor language proficiency drives up drop-out rates among some immigrant students.

Immigrants themselves may enter with only a sketchy education.

Seven out of 10 Mexican-born immigrants now living in the United States, for instance, never finished high school, according to research by the Migration Policy Institute. By contrast, 9 out of 10 Indian-born immigrants enter with at least a high school diploma, and 3 out of 10 immigrants from India hold advanced degrees.

With the nation's immigration debate revolving around these kinds of contrasting perspectives, Anderson's think tank is lined up emphatically on one side. He supports expanding programs like the H-1B visa, which currently admits about 65,000 foreign-born workers.

By showcasing the high performance of H-1B families, proponents hope further increases might be considered; this year's limit has already been reached.

"American leadership in science and technology is very much tied to an openness immigration," Anderson said.

Overall this year, there were more Intel science fair finalists whose parents entered the country on an H-1B visa than there were finalists whose parents were U.S.-born. Last year, when Sunkhjeet Batth was a semifinalist, three of the top four finalists were foreign-born.

"Just going to competitions, it seemed like there were a large number of students who came from immigrant backgrounds," Sunkhjeet Batth said.

Batth agreed with his mother that watching hard-working parents can spur achievement. The lessons are manifold.

Batth helped his father work hard to raise grapes and almonds at the family's farm near the town of Carruthers. The labor convinced him, he said, that "this is probably not what I want to be doing." He considers it a deliberate lesson passed from immigrant father to the U.S.-born son in whom the family has invested itself.

Education Week

July 28, 2004

Immigrants' Children Inhabit the Top Ranks Of Math, Science Meets

By Sean Cavanagh
Education Week

Washington

The nation's most talented high school seniors in science and mathematics are contemplating Einstein's equations, neutron stars, and elliptical orbits from such recognizably all-American locales as Fresno, Calif.; Athens, Ga.; and Shaker Heights, Ohio.

See Also...

View the accompanying chart, "[High Achievers.](#)"

But many of them live in the United States as a result of their parents' emigration from Turkey, China, Romania, and a host of other foreign nations, a study released last week finds.

Research conducted by the [National Foundation for American Policy](#) shows that 60 percent of the nation's top science students and 65 percent of the top mathematics students are children of recent immigrants, according to an analysis of award winners in three scholastic competitions.

"The Multiplier Effect" is based on an analysis of the 2004 student finalists for the Intel Science Talent Search, the U.S. team for the International Mathematical Olympiad, and the U.S. Physics Team, three prestigious competitions.

"There's a very strong emphasis on education as a way to get ahead among [immigrant] families," said Stuart Anderson, the executive director of the foundation, who wrote the study. The commitment, he said, is "something you can trace throughout history" among new arrivals to the United States.

Mr. Anderson also attributed such students' success partly to their parents' insistence that they manage study time wisely. Many immigrant parents also encouraged their children to pursue mathematics and science interests, believing those skills would lead to strong career opportunities and insulate them from bias and a lack of connections in the workplace, Mr. Anderson said.

For More Information

"[The Multiplier Effect.](#)" is available from the [National Foundation for American Policy](#). (Requires [Adobe's Acrobat Reader](#).)

A strong percentage of the students surveyed had parents who arrived in the United States on H-1B visas, reserved for professional workers. U.S. policymakers who back overly restrictive immigration policies do so at the risk of cutting off a steady infusion of technological and scientific skill, said Mr. Anderson, whose nonprofit Arlington, Va., foundation focuses on immigration, trade, and education issues.

Influx of Talent

The recent arrivals include Andrei Munteanu, 18, a finalist for the 2004 Intel competition whose parents moved from Romania to the United States five years ago. Mr. Munteanu, who graduated from Benjamin Banneker Academic High School in Washington, this year, was named a finalist for his work in exploring the minimum distance between elliptical orbits, specifically how close asteroids can pass by Earth.

He has a prime laboratory: the U.S. Naval Observatory in Washington, where the Harvard University-bound student has been able to hone his theories, while working part time. His original inspiration for the project was not drawn from a textbook, but rather from the big screen: He had seen the 1998 Hollywood doomsday epic "Armageddon," a fictional account of a heroic effort to prevent a massive asteroid from ramming into Earth.

Mr. Munteanu said his lessons in Romanian schools were noticeably more demanding than those he encountered when he began 7th grade in the United States. "The math and science classes [covering the same subject matter] I was taking in Romania ... when I was in 4th grade," he said.

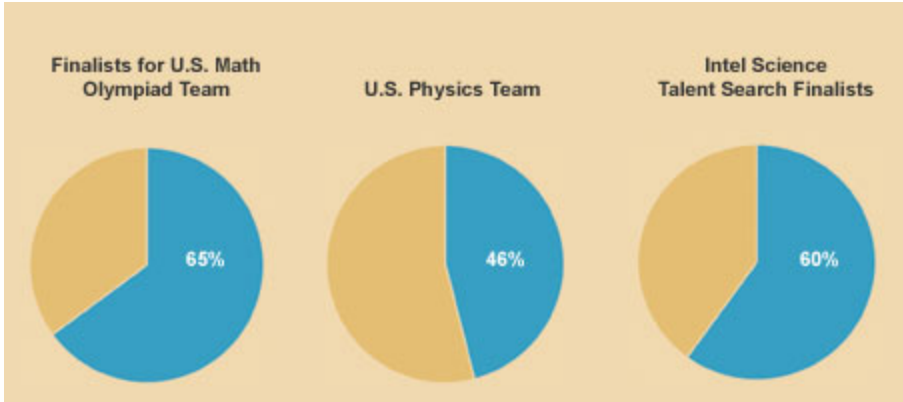
That observation did not surprise Gerald F. Wheeler, the executive director of the National Science Teachers Association, in Arlington, Va. While he cautioned against drawing overly broad conclusions from looking at competitions that measure the skills of the truly elite math and science students, he said he believed that foreign countries were more inclined to push students through increasingly difficult subject matter, at each new grade level.

"We really should be revamping our curriculum," Mr. Wheeler said. "There's a deadly redundancy."

High Achievers

Education Week

The children of recent immigrants to the United States are among the highest achievers in mathematics and science as judged by prestigious nationwide competitions. Such students reached academic heights in three of those competitions this past school year.



SOURCE: National Foundation for American Policy

July 20, 2004

Immigrant Children Dominate in Science and Math, Study Says

by Keith Peters, Washington, D.C., correspondent

America is still the land of opportunity.

Over 60 percent of the nation's top science and math students are children of immigrants. Without them, the nation's technological and scientific standing would be at risk, according to Stuart Anderson, the executive director of the National Foundation for American Policy.

He said many of these young people and their parents come from places like India, Turkey, and Romania on what are called "H-1B visas" — visas reserved for foreigners with technical skills.

"Immigrants are self-selected," Anderson said. "Those with the most drive and ambition are the ones who generally take the chance on coming to the United States and they do instill that (drive and ambition) in their children."

Divya Nettimi, for example, is from India. For the Intel Science talent search, she researched muscle contraction and the protein that drives it. She said her will to achieve comes from her parents.

"They have always encouraged me and helped me," Nettimi said. "When I was little, I remember my mom would sit at home and teach me math if I was getting bored at school or needed more of a challenge, and (I also remember) all the time they spent with me (which) allowed me to advance and challenge myself."

Anderson said the study also says something about opportunity in America.

Press of Atlantic City (Pleasantville,NJ)

July 30, 2004

Editorial

Brain power

The folks who are convinced that immigration will be the ruin of this nation might want to consider the results of a recent survey by the National Foundation for American Policy, a nonprofit, nonpartisan research group. The organization found that 60 percent of the finalists in this year's Intel Science Talent Search, 65 percent of the U.S. Math Olympiad's top scorers and 46 percent of U.S. Physics Team members are the children of parents who were born in another country.

You ask: So what? Here's what: "If opponents of immigration had succeeded over the past 20 years, two-thirds of the most outstanding future American scientists and mathematicians would not be here today because U.S. policy would have barred their parents from entering the United States," says Stuart Anderson, executive director of the Arlington, Va., organization. Anderson might have added: And if these bright students weren't here in the United States, they - and their brains and their talents - would be hard at work someplace else. Of course, the diehards will insist (after a few snickers about how everyone knows how good those people are in math and science) that if these darn immigrant kids weren't taking up two-thirds of the top slots in these prestigious science, math and physics competitions, then more good-old real American students would be finalists. It's hard to argue with that logic. Then again, it does kind of beg the question of why these immigrant students are so much better in math and science.

Maybe true-blue Americans ought to worry more about that. Ironically, many of the same people who think America's borders should be closed also criticize the exporting of U.S. jobs. But, the study noted, skilled immigrants (and their children) are "a key source of maintaining and expanding the United States' intellectual base in science, mathematics and technology." The immigrant finalists in the Intel Science Talent Search, the U.S. Math Olympiad and the U.S. Physics Team have parents from India, China, Taiwan, Russia, Ukraine, Vietnam, Israel, Turkey and South Korea. The study also notes that 50 percent of the engineers with Ph.D.s working in this country and 45 percent of the math and computer scientists with Ph.D.s are foreign-born. Like it or not, America apparently needs these foreign-born professionals and their children. Rather than denying this resource to the nation, we ought to be glad they are here.

Tech Central Station

August 20, 2004

The Brain Gain

By Dominic Basulto

This year's presidential campaign has already seen its fair share of discussion about the perils of IT outsourcing as well as sharp accusations about the thousands of U.S. jobs lost to skilled foreign IT professionals willing to accept positions at significantly lower pay rates. However, any debate over IT outsourcing and possible limits on H-1B visas for highly skilled technology workers should include a more thoughtful discussion of the enormous impact that immigrants -- and their children -- have played in the creation of U.S. technological superiority. Only by keeping its doors open to talented immigrants can the U.S. hope to maintain its competitive advantage over the nations of Southeast Asia.

Consider a new report from the National Foundation for American Policy (NFAP) called "The Multiplier Effect," which forcefully and cogently argues that U.S. economic and technological superiority benefits significantly from immigration. Over time, the children of these immigrants also contribute to U.S. technological know-how, creating an economic "multiplier effect." In short, an open policy toward the legal immigration of skilled IT professionals does not hinder long-term U.S. competitiveness -- it actually improves it.

The basic premise of the report is simple -- immigrants have played an important (but sometimes overlooked) role in the creation of a thriving U.S. high-tech sector that is second to none in the world. Without the continued influx of these talented immigrants, though, the nation's technological and scientific standing is at risk. After all, more than 50% of the engineers with doctorates working in the U.S and approximately 45% of computer science doctorates are foreign-born -- and these foreign-born engineers and scientists tend to out-perform their U.S. peers. So much so, in fact, that a 1997 National Academy of Sciences report analyzing recent winners of prestigious awards such as the Nobel Prize came to the following conclusion: "It is fairly clear that Americans with recent roots are over-represented in any classification of Americans who have brought honor and recognition to the United States."

More importantly, the report argues that the children of these immigrants are America's next superstars in areas ranging from biotech to semiconductors. According to Stuart Anderson, the author of the report and a former staff director of the Senate Immigration Subcommittee, foreign-born high school students recently comprised 50% of the 2004 U.S Math Olympiad's top scorers, 38% of the U.S. Physics Team and 25% of the Intel Science Talent Search finalists. With all likelihood, these emerging superstars will go on to productive careers in the sciences, mathematics or engineering. By some accounts, in

fact, 60% of the top U.S. science students and 65% of the top math students are the children of immigrants.

Followers of the local Silicon Valley start-up scene would not be surprised by these findings. After all, companies such as Intel, Apple, Borland, Compaq, Computer Associates, Sun Microsystems and 3COM all owe their success to the hard work of foreign-born immigrants. Indeed, Sergey Brin, one of the co-founders of the \$30 billion Google juggernaut, is the 30-year-old Russian-born son of a math professor. According to some estimates, nearly one-third of all Silicon Valley engineers are foreign-born, while one-third of the engineers at prestigious R&D labs (e.g. IBM, AT&T) are foreign-born.

Throughout Silicon Valley, in fact, there are hundreds -- if not thousands -- of young Indians, Russians, Vietnamese and Chinese who are starting new companies and developing new technologies that could pave the way for radically new sectors and industries within the next five to ten years. Young immigrant entrepreneurs will run the star companies of the next decade. Already, West Coast networking organizations like TiE (The Indus Entrepreneurs) and CINA (Chinese Information and Networking Association) specialize in providing networking opportunities for foreign-trained immigrants, while venture capital firms like Blue Water Capital in Virginia have set up funds that invest solely in companies run by first- or second-generation immigrants.

Going forward, it is easy to see what the policy implications of this "brain gain" are. In order to retain its technological superiority, the U.S. needs to encourage an open policy toward the immigration of professionals and students. In addition, policymakers should consider ways to boost science & math education within the U.S. and provide incentives for businesses to invest in long-term R&D initiatives. Innovation is the key to future U.S. economic greatness and immigrants arriving in the U.S. recognize this. Open labor markets help to strengthen the U.S. economy and provide the foundation for innovation in future generations. At a time when Silicon Valley is facing a labor shortage of skilled engineers and scientists, the need to embrace skilled immigrant IT professionals is all the more pressing.

Failure to understand these implications could result in a "reverse brain drain," in which the U.S. loses its best and brightest to nations in the developing world. If the rest of the world no longer views the U.S. as the home of innovation and open markets, foreign-born Americans will be free to vote with their feet and move elsewhere. A recent article in The Wall Street Journal ("Give Us Your Nerds") puts it best: "Any policy that would depress the influx or close off our borders altogether is not in America's long-term interest, especially in a world where economic growth and competitiveness will depend above all on human capital."

Open education to innovation

Posted: August 24, 2004
1:00 a.m. Eastern

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An important story of the week past about public schooling reveals a lot about the ongoing dismal state of affairs regarding how we think about education in our country. As we debate technical matters of who can do what and where in schools, and as entrenched interests fight to protect turf, our children – and particularly our children from poor families – remain the sad and pathetic victims.

The widely covered story, which broke on the front page of the New York Times, reported on the first comparison of test results of kids in charter schools with kids in traditional public schools. The report, done by the American Federation of Teachers from data compiled from the National Assessment of Educational Progress, concludes that charter-school performance lags behind that of other public schools.

The test results show, according to the Times story, that "only 25 percent of the fourth-graders attending charters were proficient in reading and math, against 30 percent who were proficient in reading and 32 who were proficient in math, at traditional public schools."

The big news and conclusion here, according to remarks from an AFT spokesperson, is that the "sunny claims" of charter-school advocates do not appear to stand up to the scrutiny of the test results. Charter schools, as a magic bullet for solving our problems with schools and education, do not seem to be all that they've been trumped up to be.

It is hard, of course, not to have a sense that the AFT is pleased by what it reports. As a teachers union, the organization cannot be enthusiastic about charter schools, where private management has a wide range of flexibility in decision making, including hiring nonunion teachers. So, a victory for the status quo and a defeat for innovation is a victory for the AFT.

Various credible analyses quickly came forth after the release of the AFT study, challenging its methodology and conclusions and giving good reason to believe that the AFT study is far from the last word on this matter. However, the attitude

of the AFT and the general manner in which this story has been reported and received tell us more about the nature of our problem than do the data and conclusions in the report.

Public education – charter and otherwise – is in bad shape. Although the data in this particular study seem to point to results in the charters lagging behind the traditional public schools, let's not lose perspective that the results in both are terrible. When we are reporting that less than half of kids tested are proficient in reading and math, this is a crisis. This fundamental point seems to have been lost in the reporting the news comparing charter and traditional school results.

Despite the considerable innovative leeway that is given to charter schools, let's not forget that we do not have anything that approaches freedom and a free market in education. Charters provide a framework for flexibility, but true freedom would open many more dimensions and possibilities for innovation, both in content and form. Although no one disputes that the success of a child's education reflects the child's home life as well as the child's school life, we have severed the fundamental link that ties these two worlds together: values. Teaching moral values and self-control are off limits in the curricula of charter schools as well as public schools.

Consider a fascinating new study recently released by the National Foundation for American Policy that shows that the top prizes in math and science to high-school students are being awarded to foreign-born students. In major national competitions, 60 percent of the finalists in the Intel Science Talent Search, 65 percent of the top scorers in the U.S. Math Olympiads, and 46 percent of the U.S. Physics team are children of immigrants.

The U.S. Physics team consists of 24 of the top high-school students who are selected through a nomination and testing process. From among these, five students are selected to represent the United States in the International Physics Olympiad. Two of the five students who will represent the United States this year in the competition, which will take place in South Korea, are immigrant children.

The NFAP study quotes the Russian immigrant father of one of these five: "I don't like saying this but math and physics are not the strong side of American schools." He says that from what he has observed in his daughter's educational experience here, what U.S. students learn in 12th-grade math classes, Russian students study in eighth and ninth grades.

The U.S. education market should be opened up. The last thing we need, contrary to what the AFT seems to be saying, is to preserve our disastrous status

quo. We need innovation. The United States has shown mankind that that nothing unleashes innovation and creativity like free markets. We cannot continue to insulate our most important problem – education – from our most powerful solution – freedom and its moral foundation.

Star Parker is president and founder of CURE, the [Coalition on Urban Renewal & Education](#), and is author of the WND book "[Uncle Sam's Plantation](#)."

Cordis News (European Communities)

Scientists worry that US science may be in danger of deteriorating

[Date: 2004-08-24]

With US students less and less interested in studying for science and engineering degrees, the top US post-graduate schools have got used to turning increasingly towards Europe and Asia to fill their laboratories with the best students and scientists.

However, a combination of Europe and Asia having recognised that scientific research and innovation are the fuel for a strong economy, and the US decision to apply strict visa restrictions on foreign students following the 11 September 2001 attacks, has left US scientists concerned that the fifty year brain gain in the US might be coming to an end.



According to the National Science Foundation, the US share of worldwide scientific and engineering research publications, Nobel Prize awards, and some types of patents is falling.

Furthermore, since 2002, US universities have experienced a 19 per cent drop in applications from foreign-students from 400,000 to 325,000 per year.

On the other hand, the success of the Chinese government's 'Develop science to save the country' policy lead to Hong Kong University receiving twice as many applications from Chinese students in 2004 as it had done three years previously.

According to the science advisor of former US President Bill Clinton, Neal Lane, the current administration's decision to limit the use of embryonic stem cells in research has harmed US scientists' ability to compete in the biomedical research field. 'The stem cell decision has certainly put us behind at the front end of the curve,' Mr Lane said. 'It's a huge barrier'.

According to Albert Teich, director of science and policy programmes at the American Association for the Advancement of Science, another problem has been the reduction in federal funding for basic science research as the federal budget increasingly focuses on applied military security research.

Although he agrees that US federal science spending is still far greater than in any other country, with the US spending one and a half times more on research and development (R&D) than the EU, Dr Teich insisted that 'it is probably wrong to say US science is

currently in decline, but it is certainly in danger of declining. We're perched on the edge.'

In July, a report by the National Foundation for American Policy (NFAP) warned that in order to retain its technological superiority, the US needed to encourage an open policy towards the immigration of professionals and students. The report also encouraged policymakers to consider ways to boost science and maths education within the US, and to provide incentives for businesses to invest in long-term R&D initiatives.

Open labour markets, it stated, help to strengthen the US economy and provide the foundation for innovation in future generations. At a time when Silicon Valley is facing a labour shortage of skilled engineers and scientists, the need to embrace skilled immigrant IT (information technology) professionals is all the more pressing, the report insisted.

'Failure to understand these implications could result in a 'reverse brain drain', in which the US loses its best and brightest to nations in the developing world. If the rest of the world no longer views the US as the home of innovation and open markets, foreign-born Americans will move elsewhere,' concludes the report.

To read the full NFAP report, please consult the following web address:

<http://www.nfap.net/researchactivities/studies/TheMultiplierEffectNFAP.pdf>

Rediff.com

Indian-American students among the brightest in the US

July 20, 2004 14:04 IST

As many as 60 per cent of the United States' top science students and 65 per cent of those who excelled in mathematics are children of immigrants, a new study has found.

Foreign-born high school students make up 50 per cent of the 2004 US Math Olympiad top scorers, 38 per cent of the US Physics Team and 25 per cent of Intel Science Talent Search finalists, America's most prestigious awards for young scientists and mathematicians, the study said.

The Intel Science Talent Search finalists showed a diverse mix comprising seven students from India, five from China, three from Taiwan, two each from Russia and Ukraine, and one each from Vietnam, Israel, Turkey, and South Korea, the study by the National Foundation for American Policy, a public policy group, found.

Students who topped the prestigious US Math Olympiad include those from South Korea (four), China (four), Russia (three), and India (two).

The foundation conducted more than 50 interviews and examined the immigration backgrounds of top US high school students as part of the study.

The study, *The Multiplier Effect*, is appearing in the coming issue of *International Educator*.

"These findings provide evidence that maintaining an open policy toward skilled professionals, international students, and legal immigration is vital to America's technological and scientific standing in the world," Stuart Anderson, Executive Director of NFAP and author of the report, said.

"If opponents of immigration had succeeded over the past 20 years, two-thirds of the most outstanding future American scientists and mathematicians would not be here today because US policy would have barred their parents from entering the United States," said Anderson.

He said efforts to preserve US strength in science and technology should start by recognising the key role that immigrants and their children play in the nation's leadership in these fields.

"As the research demonstrates, the contributions made by the children of immigrants are beyond that ever considered by policymakers," Anderson said.

Economic Times of India

July 19, 2004

Indians in US shining bright

- Among the 40 finalists in the Intel Science talent search this year, 7 were Indians and two of them won coveted prizes in different categories. That is an amazing success rate, keeping in mind that people of Indian origin make up no more than 0.57 per cent of the total US population!
- In the 2004 United States of America Mathematical Olympiad, Ameya Velingker, one of the youngest, was among the 12 additional winners. Rishi Gupta got an honourable mention along with 11 others.
- Chintan Hossain of Wilmington, Delaware, of Indian parentage, had a place in the six-member 2003 US Physics Team.

Are US's top geniuses of Indian origin? That may be an exaggeration. But, Americans of Indian origin are certainly emerging as the top talent pool in the country. You could say that Indians in the US are producing the country's top science and mathematical talents.

The US authorities are also waking up to the might of the immigrants. The National Foundation for American Policy (NFAP), a non-partisan public policy research group based in Arlington, has decided to present its first major study on the immigration background of the students who have topped the finals in the Intel Science Talent Search, the top scorers of the 2004 US Math Olympiad, and members of the US Physics Team. In short, the United States' most prestigious awards for young scientists and mathematicians.

These searches throwing up future science talents who go on to win Nobel and other coveted prizes, show how important the contribution of recent immigrants is to the American nation.

Over the past 63 years, Intel STS alumni have been recipients of the world's most coveted science and math honors, including five Nobel Prizes, three National Medals of Science, ten MacArthur Foundation Fellowships and two Fields Medals.

The NFAP will release its first major study on the immigration backgrounds of the finalists in the 'Intel Science Talent Search', on Monday, July 19, which will be published in the upcoming issue of International Educator. The study will include international students, skilled professionals, family based immigrants and refugees.

The results of 2004 'Intel Science Talent Search' were declared in March, 2004, when Intel Corporation and Science Service came up with \$100,000 scholarship and top honours for deserving candidates.

A Look At The Talents

Intel science talent search finalist Ryna Karnik of Oregon Episcopal School won the third-place with \$50,000 scholarship for her patent-pending design method for

constructing microchips, which may save developers time and money when creating and testing prototype semiconductor chips. Karnik enjoys tutoring elementary school students and is a Junior Olympics competitor in saber fencing.

Although Ryna plans to study pre-med at Stanford and eventually complete an M.D./Ph.D. program, she says she is an engineer at heart, who hopes to become a medical researcher in the long run.

Another finalist, Divya Netti, born in India, now a resident of Oakton, developed calculations that may enhance the understanding of muscle activity and myosin.

She aims to attend Harvard in the fall and become a research scientist. At her high school, she helped start the Assistive Technology Club that produces reading devices to help children with motor disabilities communicate.

Other finalists of Indian origin included: Arjun Anand Suri, (Clovis West High School) for modeling of predicted tyrosine sulfation sites in seven-transmembrane receptors; Gaurav Subhash Thakur (The Learning Community International) Analysis of Generalised Factorial Functions; Neha Chauhan (Susan E. Wagner High School) Dietary Polyphenolic Compounds Inhibit the Fibrillization of Amyloid BETA-Protein: Structure-Activity Relationship and Preventive Implications for Alzheimer's Disease; Rohini Subhadra Rau-Murthy, (Yorktown High School), Implicit Math Cognition, Sean Dilip Raj, (Hightower High School), Repairing Damaged Heart by Cell Fusion and Transdifferentiation of Peripheral Blood Stem Cells.

Each year, almost 2,000 students accept the challenge of completing an entry for the Intel Science Talent Search, with finalists competing for the top prize, a \$100,000 scholarship. So it is indeed a matter of pride for us when candidates of Indian origin come out with flying colours in this prestigious examination conducted in the US of A.

Immigrants' children are rising intellectual superstars in US

Hindustan Times
Indo-Asian News Service
Washington, July 20

An astounding 60 per cent of the top science students in the US and 65 per cent of the top math students are children of immigrants mainly from India and China, says a new study.

The study, "The Multiplier Effect," released by the National Foundation for American Policy (NFAP), an Arlington, Virginia-based public policy group, says foreign-born professionals and students are contributing more to the US than previously thought -- their children are rising intellectual superstars and without them the nation's technological and scientific standing is at risk.

To make its point, the study says that foreign-born high school students make up 50 per cent of the 2004 US Math Olympiad's top scorers, 38 per cent of the US Physics Team and 25 per cent of the Intel Science Talent Search finalists -- the United States' most prestigious awards for young scientists and mathematicians.

According to the study, the Intel Science Talent Search finalists showed a diverse mix of foreign-born parents, including seven from India, five from China, three from Korea two each from Vietnam, Israel, Turkey and South Korea. The foreign born parents of the 2004 US Math Olympiad's top scorers were divided among South Korea (four) China (four) Russia (three) and India (two).

"These findings provide evidence that maintaining an open policy toward skilled professionals, international students, and legal immigration is vital to America's technological and scientific standing in the world," said Stuart Anderson, Executive Director of NFAP and author of the report while releasing it at a press conference at the National Press Club in Washington DC July 19.

"If opponents of immigration had succeeded over the past 20 years, two-thirds of the most outstanding future American scientists and mathematicians would not be here today because US policy would have barred their parents from entering the United States, Anderson said.

"Efforts to preserve US strength in science and technology should start by recognizing the key role that immigrants and their children play in the nation's leadership in these fields. As the research demonstrates, the contributions made by the children of immigrants are beyond that ever considered by policy makers," Anderson said.

Anderson said due to denials of high-skilled employment visa applications which doubled in recent years, fewer international students are seeking admission into US universities. For the fall 2004 semester there is a 76 per cent decline in applications from Chinese students and 58 per cent from Indian students, according to a survey of 113 graduate schools by the Council of Graduate Schools.

Anderson said that while much recent media attention has been focused on high-skilled foreign-born professionals as a source of competition for native-born computer programmers and systems analysts, little attention has been paid to the enormous contributions -- both individually and collectively -- foreign-born individuals have played in US world leadership in science and technology.

The study also pointed out that today more than 50 per cent of the engineers with PhDs working in the United States are foreign-born, according to the National Science Foundation. In addition, 45 percent of math and computer scientists with PhDs as well as life scientists and physicists are foreign- born.

"These data help illuminate the significant role immigrant scientists and engineers play in the US." Advocating an open immigration policy Anderson said "When immigrants are allowed to come to the US legally and stay, the nation also in many cases gains the future skills of outstanding children who become US citizens.

"The question is whether the US will maintain a student and immigration system that is open enough to integrate that talent into US society -- or will policy makers push or keep that talent out of the United States," he asked.

The study also strongly favours raising the cap for H-1B visas as a key source of maintaining and expanding the United States intellectual base in science, mathematics and technology.

"Closing the door to immigrants, students and skilled professionals hurts the United States today -- and for a generation yet to come," the study said.

Study finds most top US math, science students are children of immigrants

Itar-Tass (Russia)

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WASHINGTON, July 21 (Itar-Tass) -- A recent study confirmed the United States benefits tremendously from the entry of highly skilled foreign-born professionals and international students and the positive trend will spill over into the next generation.

New research released by the National Foundation for American Policy, which is based in Arlington, Virginia, shows that many of America's top science and math students are the children of immigrants. Stuart Anderson, who authored the report, conducted fifty interviews and examined the backgrounds of top U.S. high school students. His work represents what may be the first attempt to document the contributions of immigrants' children.

Many educated and skilled professionals come to the United States on what's known as the H-1B visa, which is designed for those in specialty occupations with at least a bachelor's degree. Even though fewer than 100,000 individuals enter the U.S. each year on H-1B visas, 18 of the 40 students that made it to this year's finals of the Intel Science Talent Search (STS), the most highly regarded pre-college science contest, came from such immigrant families. Seven of the top ten award winners at the 2004 Intel STS were immigrants or the children of immigrants.

"Since many immigrants come here as students, it works as a strong catalyst for their kids to become focused on academics," said Ryna Karnik, who finished third in the competition and whose father came from India on a student visa and later obtained an H-1B visa. Her experience is very typical of that of other immigrant children. Many students from immigrant families are aware they have been given a unique opportunity in the country that their parents have chosen as their new home.

Russian-born student Boris Alexeyev, who finished second at the Intel STS, also has a father who arrived in the United States on an H-1B visa. In fact, the children of H-1B visa holders among the Intel STS finalists outnumbered American-born children.

Immigrants also dominate in math and physics. Four of the six members of the 2001 U.S. team that tied with Russia for second place at the International Mathematical Olympiad were the children of immigrants. Until recently the coach of the team was Romanian immigrant Titu Andreescu.

Similarly, two of the five students chosen to represent the U.S. at the International Physics Olympiad in South Korea are immigrants. Yelena Udovina, the only female in the group, was born in Russia. Alexander Bogorad, her father, came to the United States on an H-1B visa.

Observers have two explanations for the dominance of immigrant children in science and technology. According to Steve Olson, whose book *Count Down* details the second place finish of the U.S. math team in 2001, "All new immigrants to the United States must work hard to succeed, and they expect their children to work hard, too."

Based on his daughter's experience, Bogorad estimates that what U.S. students are taught in twelfth grade math classes is what Russian students study in eighth and ninth grades. "Math and physics are not the strong side of American schools," he said.

Overall Americans are concerned that their country is losing its dominance in science and innovation. As *The New York Times* recently reported, "Foreign advances in basic science often rival or even exceed America's." The National Science Board stated in January 2004 that the percentage of visa application rejections in important human capital categories had increased significantly in the past years. Additionally, one measure of what some believe is a troublesome development is the decline in the number of applications for U.S. graduate schools from Chinese and Indian students.

According to the National Science Foundation, the government agency responsible for promoting science and engineering, more than 50% of engineers working in the United States are foreign-born, as are almost half of mathematicians and computer scientists and a quarter of all physicists. The drop in applications is therefore a potentially significant negative trend for the U.S.

The problem is compounded by what some experts have dubbed a reverse brain drain. According to *The New York Times*, the number of doctoral students from China, India and Taiwan with plans to stay in the U.S. has declined by hundreds. While some of these trends may be beyond the control of American policy makers, Anderson argues there is much that can be done if the United States wants to keep its competitive edge in science and technology. Suggestions include a relatively open immigration policy with skilled and educated foreigners in mind. For example, the annual cap of 65,000 H-1B visas has already been exhausted this year. In previous years Congress increased the limit, but so far this year there has been no legislative action.

LA OPINION: La inmigración fomenta y mejora las ciencias del país

Los mejores estudiantes de secundaria son inmigrantes o hijos de inmigrantes recientes, revela un estudio

María Luisa Arredondo
La Opinión

21 de julio de 2004

El 60% de los mejores alumnos en ciencias y el 65% de los más destacados en matemáticas son hijos de inmigrantes, asegura un estudio de la organización National Foundation for American Policy (NFAP).

La investigación indica también que los estudiantes nacidos en el extranjero representan hasta el 50% de los que obtienen más altas calificaciones en la Olimpiada de Matemáticas de Estados Unidos; 38% de los mejores del Equipo de Física de EU y 25% de los finalistas en la Búsqueda Intel de Talentos en Ciencia. Estas competencias son las más prestigiosas entre los estudiantes de secundaria del país.

La NFAP llegó a estas conclusiones luego de efectuar más de 50 entrevistas y examinar los antecedentes de los mejores estudiantes de secundaria de la nación. El estudio, llamado El efecto multiplicador, aparecerá en la próxima edición de la revista especializada *International Educator*.

Stuart Anderson, director ejecutivo de NFAP y uno de los autores de la investigación, afirmó que “estos descubrimientos prueban que mantener una política abierta hacia los profesionales capaces, los estudiantes internacionales y la inmigración legal es vital para que Estados Unidos pueda competir en el mundo en materia tecnológica y científica”.

“Si los opositores a la inmigración hubieran tenido éxito en los últimos 20 años, dos tercios de los más destacados científicos y matemáticos de hoy no estarían en este país, porque la política de Estados Unidos les habría negado el ingreso a sus padres”, dijo Anderson.

El experto agregó que “los esfuerzos para preservar la fuerza de Estados Unidos en ciencia y tecnología deben empezar por reconocer el papel clave que los inmigrantes y sus hijos desempeñan en estos campos. Como demuestra la investigación, las contribuciones hechas por los hijos de inmigrantes están más allá de lo que normalmente consideran los legisladores”.

Cerrar fronteras

Anderson señaló, asimismo, que aunque algunos han lamentado la “exportación” de empleos y de capital intelectual de Estados Unidos, muchos de esos individuos también se oponen a que la nación abra sus puertas a los profesionales capacitados y a los estudiantes destacados, que son la clave para mantener el liderato del país en ciencia y tecnología.

Por otra parte, Anderson precisó que no se debe inferir del estudio que Estados Unidos gana solamente con la entrada de profesionales altamente capacitados. “La inmigración es el factor crucial para determinar si la fuerza laboral crece en este país o se queda estancada como en Europa Occidental”, subrayó.

De acuerdo con el estudio, los alumnos destacados provienen de países tan diversos como China, Corea, Ucrania, Rusia, India, Pakistán, Turquía, Taiwán y Vietnam.

Otras conclusiones

Otros descubrimientos interesantes de la investigación incluyen los siguientes:

*Siete de los 10 ganadores del concurso Búsqueda Intel de Talentos en Ciencia eran inmigrantes o hijos de éstos. En 2003, tres de los cuatro que obtuvieron las mejores calificaciones en este concurso eran de origen extranjero.

*Entre los finalistas de la competencia Búsqueda Intel de Talentos en Ciencia de 2004, más estudiantes (18) tenían padres que ingresaron al país con visas H-1B para profesionales que padres nacidos en Estados Unidos.

*Entre los mejores alumnos de la Olimpiada de Matemáticas, un número mayor (10) tenían también padres que entraron con la visa H-1B que padres nativos de este país.

*El número de personas con visas nuevas H-1B representa menos del 0.4% de la población total estadounidense, lo que ilustra la ganancia sustancial en capital humano que esta nación recibe con la entrada de estos individuos y sus descendientes.

*Casi un cuarto (9 de 40) de los padres de los finalistas de la Búsqueda Intel de Talentos en Ciencia llegaron a este país como estudiantes internacionales.

*Los alumnos de secundaria nacidos en el extranjero constituyen hasta el 50% de los mejores competidores de la Olimpiada de Matemáticas, el 38% del Equipo de Física de Estados Unidos y el 25% de la Búsqueda Intel de Talentos en Ciencia.

*Hoy en día, más del 50% de los ingenieros con doctorados que trabajan en Estados Unidos y el 45% de los científicos en matemáticas y computación que poseen doctorados son nacidos en el extranjero.

La NFAP es una organización no lucrativa y no partidista que se fundó en 2003 para estudiar asuntos relacionados con el comercio, la inmigración y la política pública.

The White House Bulletin
7/19/04

NFAP Study Finds Over 60% Of Top US Science, Math Students Are Children Of Immigrants. A new study released this morning by the National Foundation for American Policy (NFAP) finds that 60 percent of the nation's top science students and 65 percent of the top math students are the children of immigrants. The study also shows that foreign-born high school students make up 50 percent of the 2004 US Math Olympiad's top scorers, 38 percent of the US Physics Team, and 25 percent of the Intel Science Talent Search finalist -- the United States' most prestigious awards for young scientists and mathematicians.

Stuart Anderson, Executive Director of NFAP said in releasing the report, "These findings provide evidence that maintaining an open policy toward skilled professionals, international students, and legal immigration is vital to America's technological and scientific standing in the world. If opponents of immigration had succeeded over the past 20 years, two-thirds of the most outstanding future American scientists and mathematicians would not be here today because US policy would have barred their parents from entering the United States. While some have decried the 'exporting' of US jobs and intellectual capital, many of those individuals also oppose the nation's openness to skilled professionals and students entering the country on temporary visas, ironically, a key source of maintaining and expanding the United States' intellectual base in science, mathematics, and technology. Previously it was thought that these restrictions on immigration impacted only the skills of such professionals. Now we understand that America suffers an even greater blow by losing those professionals' children."