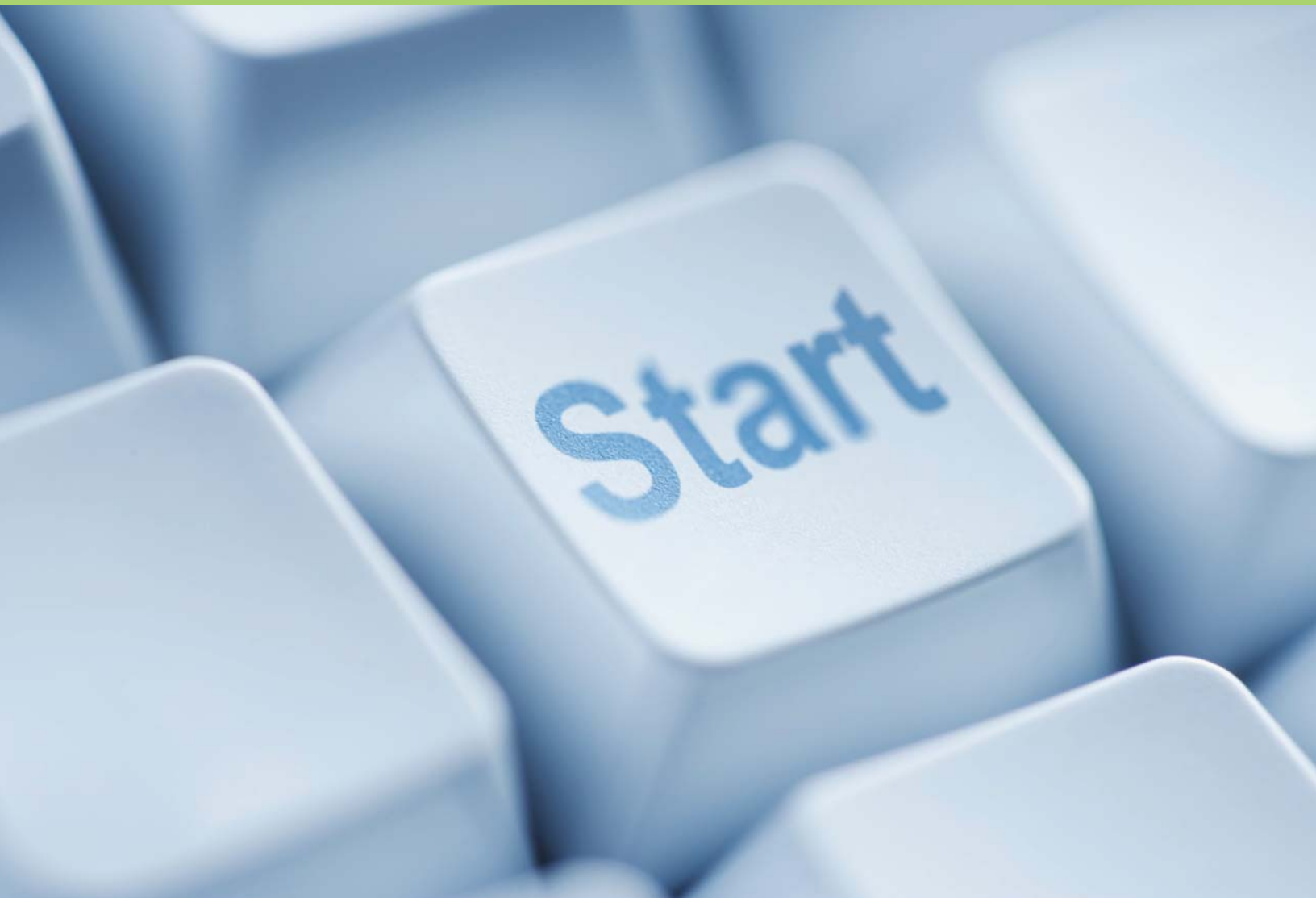
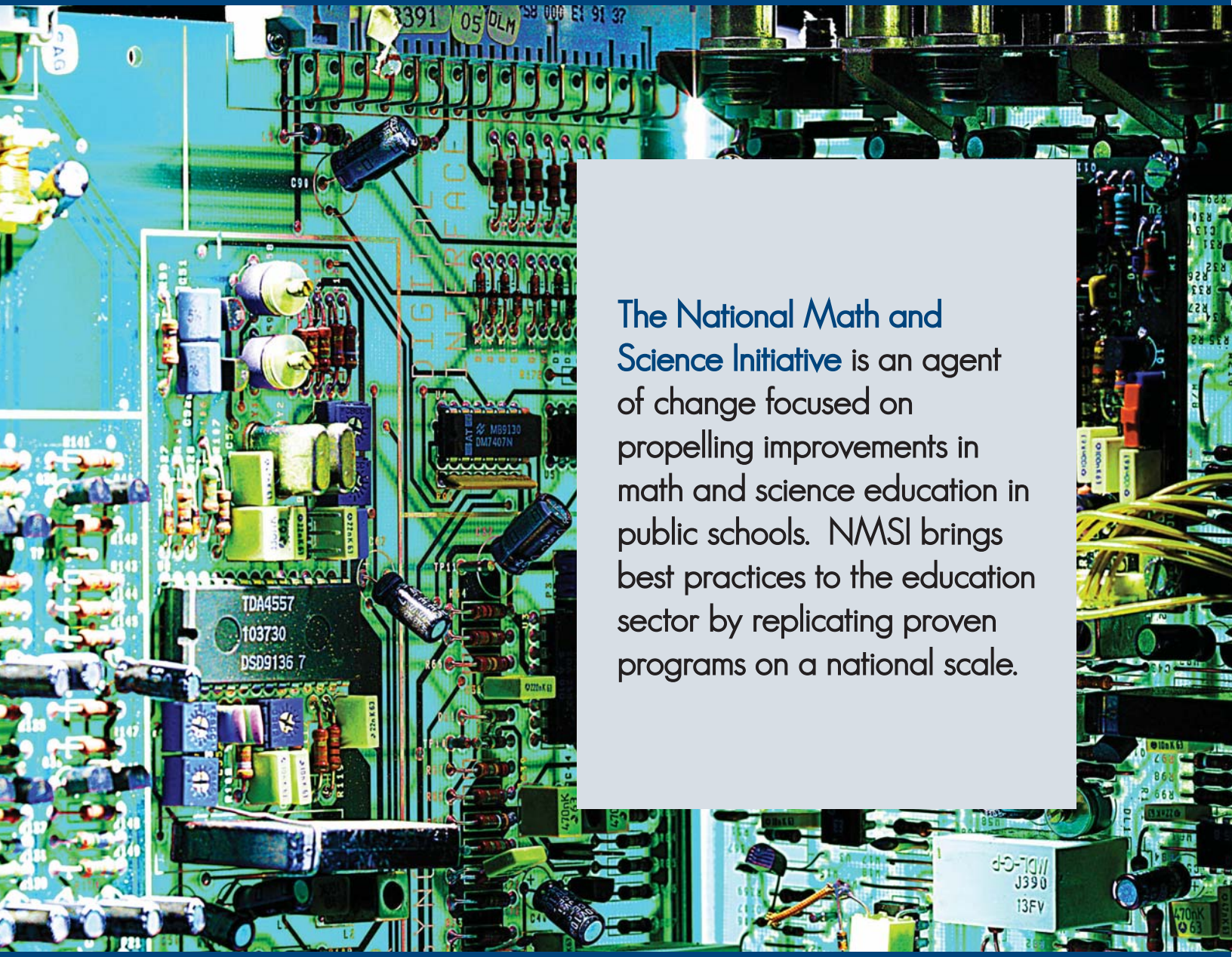


Annual Report
2009

REBOOTING EDUCATION IN AMERICA



WE MULTIPLY SUCCESS



The National Math and Science Initiative is an agent of change focused on propelling improvements in math and science education in public schools. NMSI brings best practices to the education sector by replicating proven programs on a national scale.

A MESSAGE FROM THE CEO

2009 has been a tremendous year for the National Math and Science Initiative. We are working as an agent of change in the U.S. public education system, dramatically improving math and science education for our young people.

Our AP Training and Incentive Program (APTIP) has already produced impressive results. In the first year, the program schools in our six states produced a 52 percent increase in the number of AP courses passed in math, science, and English (MSE). That is nine times the national average. Just as importantly, this is a program that works in large schools, small schools, urban schools and rural schools. And, it can help reduce the minority achievement gap significantly – our schools showed a 71 percent increase in MSE exams passed by African-American and Hispanic students in just one year.

One of the keys to success in APTIP is providing high-quality professional development for the existing teacher corps. In 2009, NMSI provided AP training to 478 teachers across the country.

Our second program, UTeach, works to build the quality of our future teacher corps. This program boils down to: you can't teach what you don't know. UTeach is bringing a new generation of math and science majors into the field of teaching. The heart of this program is ensuring our new teachers have deep math and science knowledge; the pedagogy in the program focuses specifically on how to teach math and science effectively.

In our first year of replicating UTeach, we have implemented the program in 13 universities nationwide – from coast to coast. Our “freshman” class drew 1,100 students, and that enrollment has nearly doubled our second year. But, we have more than 40 universities on our waiting list. We will need more help from around the country to take this program to the many universities who are eager to implement it.

Our message at the National Math and Science Initiative is that in today's economy, math and science are not just for brain surgeons or rocket scientists, but for any person looking for a job. More than 50 percent of the fastest growing jobs in the U.S. require math, science, or technology skills.

While we have made great strides in the last year, there is still much work to be done.



As 2009 was drawing to a close, the unemployment rate had risen to 10 percent in the U.S., the highest level in a quarter century.

The quality of America's workforce is THE essential factor in our ability to compete in the global economy. Companies in the U.S. are increasingly forced to go overseas to build their workforce. We must ramp up our education system to stay competitive and to ensure that our children have every opportunity for success in the future.

To put this in a real-world context, if you want to be an auto mechanic today, you must be computer literate to run the advanced diagnostics systems, and you must be able to read and understand technical manuals. Forty years ago, a living wage job required a strong back; today, you must have a strong mind. That's why NMSI is working to enroll many more students into Advanced Placement courses that will give them the skills to succeed. We emphasize the AP courses, because those courses have a higher standard and teach critical thinking skills. If you pass an AP course, research shows that you are much more likely to graduate from college.

Columnist
Thomas Friedman of
The New York Times got it
right when he said, "We're not
going back to the good old days
without fixing our schools as well
as our banks." The reality today
is that education in America
needs "rebooting" as well
as our financial
system.

One of the things I encounter when talking about education across the country is that people say, "Oh my goodness. The problem is so overwhelming. Where do we start?" There is a lot of wailing and gnashing of teeth.

But there is hope. We do have programs that work. We believe our NMSI programs are lighthouse programs – they are showing the way ahead.

That's why we are redoubling our efforts to expand these worthy programs and make more progress in 2010.

NMSI is supporting national educational reform on a variety of levels, but we feel we must act immediately to expand these two fundamental programs in order to shore up America's STEM education without further delay. If we concentrate on replicating those programs, we can make immediate progress while we are transforming other aspects of education. Our country can't afford to write off another generation.

Sincerely,

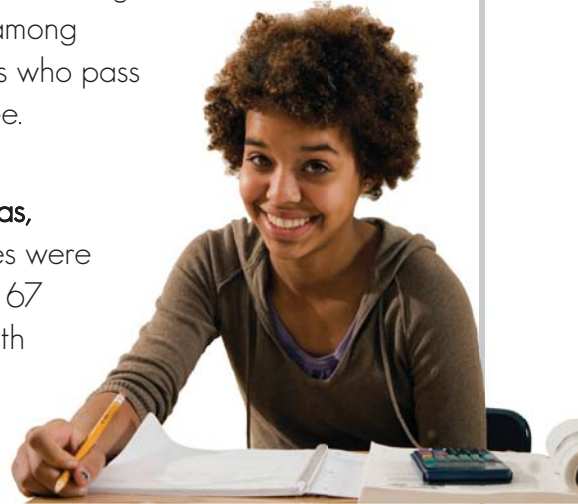


Tom Luce
Chief Executive Officer
National Math and Science Initiative

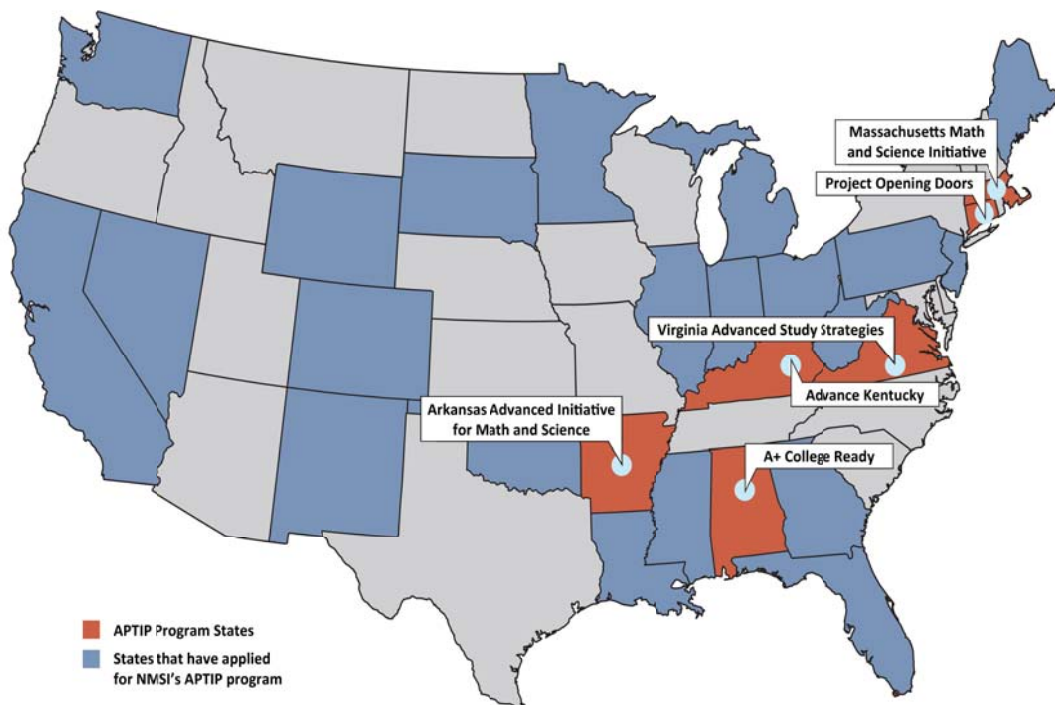
APTIP

NMSI's Advanced Placement Training and Incentive Program (APTIP) increases dramatically the performance of public high school students in rigorous college-level work and expands access to college-level courses among traditionally under-represented students. Research shows students who pass an AP course are three times more likely to earn a college degree.

NMSI has implemented APTIP in six states: Alabama, Arkansas, Connecticut, Kentucky, Massachusetts, and Virginia. State affiliates were able to achieve extraordinary first-year results by partnering with 67 public high schools in 49 local school districts. In collaboration with our state partners, NMSI trained 478 teachers in curriculum development, pedagogy, and content in the following AP subjects: biology, calculus, chemistry, computer science, English language, English literature, environmental science, physics, and statistics.



In fall 2009, NMSI's state partners expanded the program to 142 public high schools, which will impact over 1,000 AP teachers.

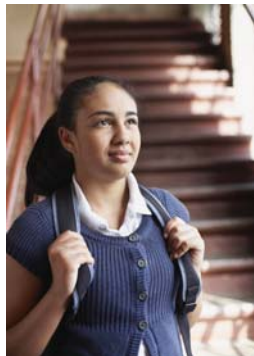


RESULTS

NMSI program results demonstrate that it is possible to rapidly improve student performance in math and science through expanding proven programs.

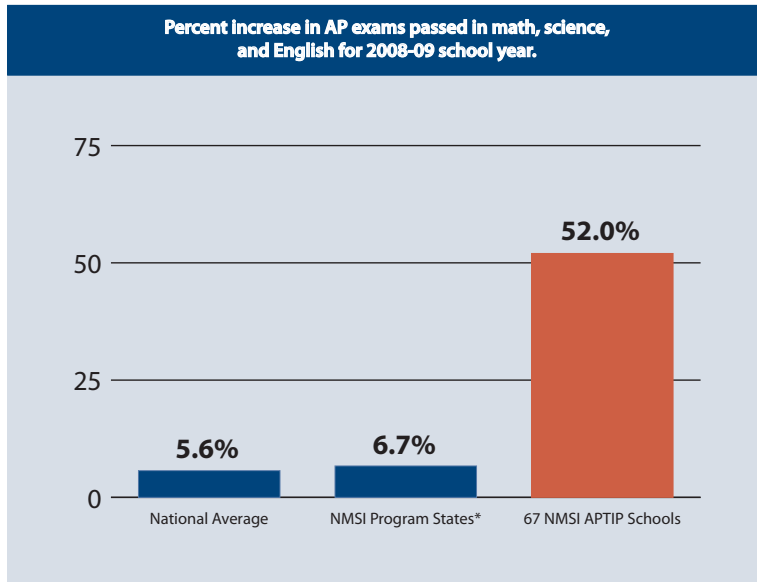
Results from 2008-2009 School Year:

- NMSI's state affiliates partnered with **67** public high schools in **49** local school districts to implement APTIP.
- NMSI trained **478** AP teachers in curriculum development, pedagogy, and content in the following subjects: biology, calculus, chemistry, computer science, English language, English literature, environmental science, physics, and statistics.
- There were more than **12,500** exams taken by AP students in math, science, and English, which is an **80.4** percent increase over the previous school year, compared to **6.7** percent increase nationally.
- There was a **52.0** percent increase in AP exams passed in math, science, and English, which is more than nine times higher than the national average of **5.6** percent.
- There was a **134.3** percent increase in AP math, science, and English exams taken by African-American and Hispanic students, compared to **13.4** percent nationally.
- There was a **71.5** percent increase in AP exams passed in math, science, and English by African-American and Hispanic students, compared to **12.8** percent nationally.
- There was a **47.6** percent increase in AP exams passed in math and science by female students, who are traditionally under-represented in math and science. The national increase was only **3.6** percent.

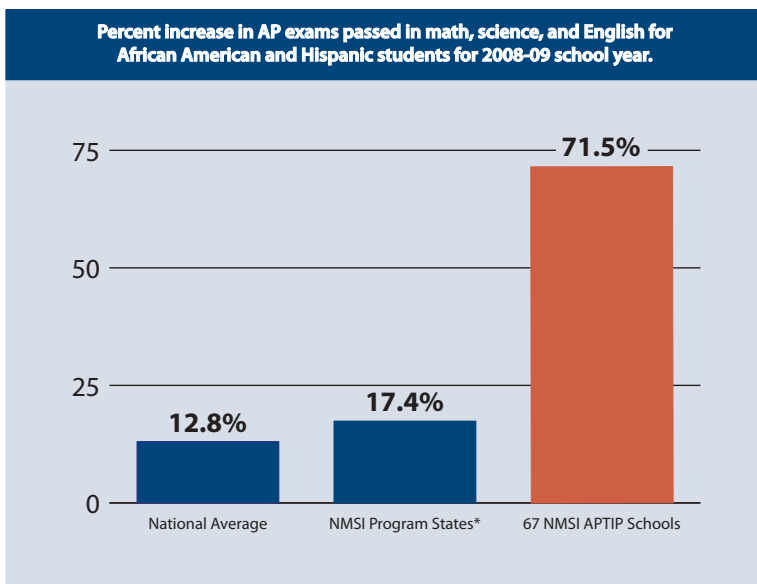


ACHIEVEMENT

Public high schools *can* improve – dramatically – in just one year using the NMSI model.



Participating schools showed a 52 percent increase in passing scores on AP math, science, and English exams.



African-American and Hispanic students showed a 71.5 percent increase in passing scores.

Source: College Board. National average is for public schools only.

*NMSI has brought the APTIP program to six states: AL, AR, CT, KY, MA, and VA. This is the average for those states, including NMSI schools.

UTEACH

UTeach has the formula for success.



UTeach is providing the teachers America needs. The U.S. is failing to produce and retain sufficient numbers of qualified math and science teachers to keep America internationally competitive. Talented math and science teachers with strong content knowledge are urgently needed in classrooms across the country to help our students reach their full potential.

UTeach is Multiplying Success.

In the first year of national expansion, in 2008, UTeach programs enrolled more than 1,100 new math and science majors. By 2009, the enrollment nearly doubled.

Momentum is building for the UTeach Program across the nation.

The UTeach Institute estimates that the new math and science teachers, from one graduating class of 700 in the first cohort of universities alone, will impact more than **two million** students over the course of their teaching careers, based on the average retention rate for UTeach graduates.¹

The 13 universities in the first cohort of UTeach replication sites plus the original UTeach program at The University of Texas at Austin will graduate 1,000 math and science teachers a year by 2017. This would be 10 percent of the goal set in the National Academies' landmark call to action, "Rising Above the Gathering Storm," to graduate 10,000 new math and science teachers a year. That means the UTeach program alone will be producing a significant portion of the national goal.

UTeach First Cohort Impact

1,000,000 students served by 2017

1,000 math and science teachers graduated a year by 2017

2,124 students enrolled in second year

1,100 students enrolled in first year

15-20 universities in second year

13 universities in first year

MOMENTUM

The UTeach approach is proven to be effective.

Experience has shown that:

45%

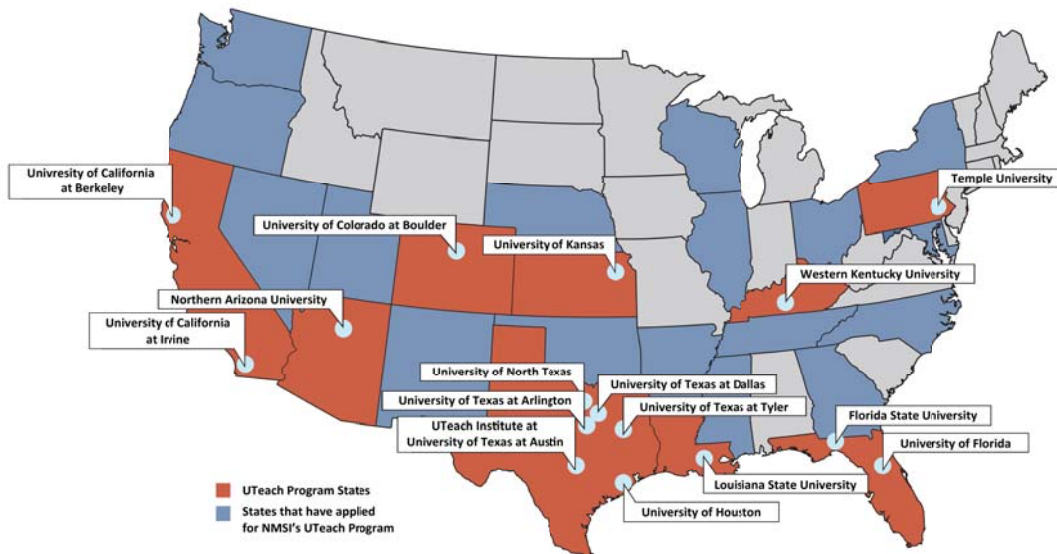
of UTeach graduates teach in high-needs schools.

92%

of students who enter the program go into public school teaching.

82%

of UTeach graduate hires are still teaching after five years, compared with fewer than 65% nationally.



The core elements of the UTeach program include:

- ❖ Active recruitment and financial incentives, such as offering the first two courses free or providing tuition stipends.
- ❖ A compact degree program that allows students to graduate in four years with a math or science degree and a teaching certification.
- ❖ A strong focus on acquiring deep content knowledge in math and science, in addition to research-based teaching strategies focusing on teaching and learning math and science.
- ❖ Early and intensive field teaching experience, beginning in the students' first semester.
- ❖ Personal attention and guidance from highly experienced master teachers, faculty and successful public school teachers.

FEEDBACK

"I love seeing students learn, to watch them 'get it.' They feel a sense of accomplishment, and so do you,"
- Angela Snow, UTeach Student, Temple University



"The UTeach program challenges you to understand what you know – and you find out you don't know as much as you think. It challenges you to become a life-long learner."

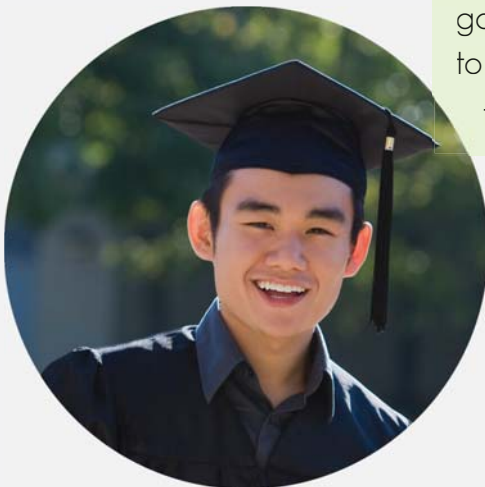
-Mark Duke, UTeach Student, University of Texas at Austin

"This opened a new reality for me – I have study habits now that will prepare me for college most of all."

-Shalymar Cruz, AP Student, East Hartford High School

"When we took AP, we did it because it was something good for ourselves. It turned out we were inspirational to our friends."

-Jimmy Nguyen, AP Student, East Hartford High School



"AP raised the bar, and we reached for it."

-Tina Nguyen, AP Student, East Hartford High School

THE *FUTURE*

A Look Ahead

- NMSI is working in partnership with states across the country to develop strong statewide STEM education initiatives that will compete for the U.S. Department of Education's \$4.35 billion "Race to the Top" fund.
- In partnership with the Carnegie Corporation, NMSI is taking a statewide approach to expanding UTeach by using state funding. We are expecting to expand to at least five statewide UTeach programs in the next two years.
- In partnership with the Michael & Susan Dell Foundation and the Carnegie Corporation, NMSI is developing a UTeach alumni network and learning community to foster innovation in math and science instruction.
- NMSI is partnering with the New Teacher Project to expand urban school district teacher recruitment initiatives to new UTeach graduates.
- Within five years, NMSI projects its initial six state APTIP partners will expand to 350 public high schools, 2,500 teachers will receive training, and more than 150,000 students will be impacted. As funding is available, NMSI plans to expand APTIP to additional states, helping more American students succeed in the critical fields of science, technology, engineering and math.
- NMSI plans to expand the UTeach program to at least 25 universities in the next five years. This expansion has the potential to impact many more millions of students and trigger additional teaching reforms throughout the country.

"Universities and nonprofit organizations can launch programs like UTeach...that allows aspiring teachers to get a math or science degree and teaching certificate at the same time."

- President Barack Obama,
July 24, 2009

For more information, visit:

www.nationalmathandscience.org 214-665-2500

www.uteach-institute.org 512-232-2770



2009

THE YEAR THAT WAS

JAN

NMSI starts off the year with its Advanced Placement Training & Incentive Program (APTIP) in 67 schools in six states, and the UTeach program in 13 universities in nine states.

CEO Tom Luce is named co-chair of the Roundtable on Education Systems and Accountability.

FEB

NMSI releases its Parents Guide, promoting ideas on how parents can support and encourage their children in building math and science skills from elementary school through high school.

In its annual report on the Advanced Placement program, the College Board reports that the AP program is growing steadily and significantly, confirming our belief at NMSI that providing training and incentives to boost the number of students taking AP math, science and English classes will significantly raise the bar in American education.

MAR

NMSI hosts a convocation in Washington, D.C. at the National Academy of Sciences to honor the presidents of the state organizations that have implemented APTIP in their school districts.

NMSI announces Travis Grenier, of Franklin County, Va., as the winner of its inaugural FILMS (Fun Is Learning Math and Science) competition.

Harvard's Ash Institute for Democratic Governance and Innovation names UTeach Natural Sciences one of the Top 50 Innovations in American Government.

APR

NMSI and its programs are featured as the cover story in PRISM magazine.

NMSI names Nobel Prize winner Carl E. Wieman, Ph.D., director of the Carl Wieman Science Education Initiative at the University of British Columbia, and Shirley Malcom, Ph.D., head of education and human resources for the American Association for the Advancement of Science, as the newest members of its Board of Directors.

MAY

A record 300 attendees - including representatives of universities interested in the UTeach program - gather at the UTeach Conference in Austin, Texas, where 13 participating universities presented progress reports and collaborated to share best practices.

Two college students make history as the inaugural graduates of the UTeach program that is being replicated across the country by NMSI. Ricardo Garcia became the first student in the teachHOUSTON program to receive his diploma at the University of Houston, and Andie Grasmick Nye was the first to graduate from the UKanTeach program at the University of Kansas.

Chief Program Officer, John Winn speaks at the 2009 ExxonMobil Diversity Networks Conference, themed "Reaching Beyond Diversity to Inclusion."

JUN

NMSI hosts the inaugural "FORTUNE Young Leaders" program in New York.

CEO Tom Luce conducts a high-level STEM briefing hosted by Grantmakers for Education in Washington, D.C.

NMSI and the National Council on Teacher Quality release a joint publication that cuts to the heart of STEM issues: "Tackling the STEM crisis: Five steps your state can take to improve the quality and quantity of its K-12 math and science teachers."

President Barack Obama delivers a major speech on education, citing the UTeach program as an ideal example of innovative and effective teacher preparation.

CEO Tom Luce conducts an education workshop on the topic of STEM education at the Aspen Institute.

Chief Program Officer, John Winn speaks at the The Atlantic's Education Innovation Convention in Richmond, VA., and participates in a special White House meeting chaired by the President's Council of Advisors on Science and Technology.

JUL

NMSI announces year-one results from its Advanced Placement Training & Incentive Program (APTIP), which led to a 52 percent increase in the numbers of AP exams passed in participating schools - more than nine times the national average.

AUG

UTeach expands to the University of Texas at Arlington, its 14th campus, with the support of NMSI, Texas Instruments Foundation, the Michael & Susan Dell Foundation and the Texas Education Agency.

CEO Tom Luce testifies about the importance of STEM education to the U.S. House Committee on Science and Technology.

SEP

Texas Governor Rick Perry announces a \$160-million plan to expand STEM education in Texas, including the successful AP Strategies and UTeach programs.

Chief Program Officer, John Winn participates in a White House roundtable discussion on STEM Education, hosted by the White House Office of Public Engagement, the Office of Science and Technology Policy, the Domestic Policy Council, and the Department of Education

OCT

NMSI announces that enrollment figures for the UTeach program nearly doubled for the 2009-2010 school year. It is estimated that the first cohort of students will impact more than two million students over the course of their careers.

CEO Tom Luce participates in a national webinar, hosted by the Hechinger Institute, along with Steve Robinson from the U.S. Department of Education and Michelle Cahill from the Carnegie Corporation, on "America's Math and Science Crisis: How to Fix It."

NOV

NMSI announces that grants totaling \$1.4 million have been awarded to establish a new UTeach program at the University of Texas at Tyler, making it the 15th campus nationwide to implement the program. Funding for the new program is being provided by the Michael & Susan Dell Foundation and the Texas Education Agency.

DEC

NMSI would like to thank our generous supporters for making these results possible and for your commitment to improving math and science education in America.

Founding Partners

Bill & Melinda Gates Foundation
Exxon Mobil Corporation
Michael & Susan Dell Foundation

Supporting Partners

Carnegie Corporation of New York
DreamWorks
Greater Texas Foundation
IBM
O'Donnell Foundation
Perot Systems
Texas Education Agency
Texas High School Project
Texas Instruments Foundation

State Partners

A+ College Ready

A+ Education Foundation
Alabama Mathematics, Science,
and Technology Education Coalition
Alabama Power Foundation
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Arkansas Advanced Initiative for Math and Science

Arkansas Advanced Placement
Development Center
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Appalachian Regional Commission
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Education
Kentucky Department of Education
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Partnership for Successful Schools
US Department of Education AP
Incentive Program

Project Opening Doors

Connecticut Academy for Education
in Mathematics, Science and
Technology
Connecticut Business and Industry
Association
Connecticut Department of Higher
Education
Connecticut Science Center
Connecticut State Department of
Education
Northeast Utilities
US Department of Education

Virginia Advanced Study Strategies

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Dominion
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Research
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Center

Massachusetts Math and Science Initiative

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Abbott Bioresearch Center
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Nellie Mae Education Foundation
Noyce Foundation
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DID YOU KNOW?

- Our AP math, science, and English enrollment has increased by 11,602 in our 142 schools.
- NMSI now has 1,050 AP teachers teaching 1,108 AP courses in the APTIP.
- The total number of AP and Pre-AP teachers trained through NMSI funding/support is 3,585.
- If the schools in NMSI's APTIP program were a state, it would have the 33rd largest student enrollment and the 28th largest African-American and Hispanic student enrollment.
- The UTeach program has grown to 15 universities by fall 2009 with more sites in the pipeline for January 2010.
- Enrollment in the UTeach program overall has grown to over 2,700 students, nearly double the year before.

NMSI BOARD OF DIRECTORS

Tom Luce

CEO, National Math and Science Initiative;
former Assistant Secretary, U.S. Department of Education

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former President, National Academies

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Carl Wieman

Director of Carl Wieman Science Education Initiative,
University of Colorado at Boulder, University of British Columbia;
Physics Nobel Laureate

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former Assistant Secretary of Education and Co-Founder
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John Winn

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Gregg Fleisher

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Dr. Mary Ann Rankin

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Dean of the College of Natural Sciences at The University
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Tracy LaQuey Parker

Director of the UTeach Institute;
former Manager of Education Market Development at Cisco
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WE MULTIPLY SUCCESS

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