NONPROFIT INVESTOR

INDEPENDENT RESEARCH FOR PHILANTHROPY

National Math and Science Initiative ("NMSI")

Nonprofit Investor Rating:

BUY

Mission Statement

The NMSI aims to address the declining number of students who are prepared for and take courses in mathematics and science. NMSI's strategy is to find and promote programs that have demonstrated a significant impact on math and science education in the United States.

Financial Overview

$ in MM, Fiscal Year Ended July 31

	2009	2010	2011
Revenue and Support	**$12.4**	**$23.2**	**$32.7**
Operating Expenses	**$14.0**	**$23.5**	**$33.2**
% of Total:			
Grants	63.1%	74.0%	77.6%
Other program svcs	23.4%	16.8%	15.8%
Mgmt and general	13.5%	9.2%	6.6%

Year Founded: 2007

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SUMMARY

The National Math and Science Initiative ("NMSI") is dedicated to educational excellence and focused on dramatically improving K-12 math and science education to increase American competitiveness. NMSI brings proven operating and scale-up capabilities to help grantees replicate effective educational programs, including training, support, and incentive programs for AP and pre-AP courses.

STRENGTHS

▲ **Proven strategy and execution capabilities.** NMSI has been successful in expanding its organization, with significant growth in the number of schools and universities that it partners with. More importantly, NMSI has seen meaningful results from its programs – there have been an increased number of students passing AP exams, particularly amongst traditionally underrepresented groups, and there are currently more than 5,500 teachers enrolled in the UTeach program.

▲ **Effective fundraising efforts.** Over the last three years, NMSI has grown its revenue by ~$10MM each year. Despite only being in operation for a few years, NMSI is now raising in excess of $30MM annually. With its strong track record in impacting students, NMSI will likely continue to expand and grow its supporter base.

▲ **Operating leverage.** As NMSI has grown as an organization, it has been able to keep expenses at constant levels while applying marginal dollars raised towards grants

CAUTIONS

● **Transparency could be improved.** With limited financial information publicly available, it is unclear how exactly funds are distributed to NMSI's partner schools and universities. It would be helpful for the organization to publish more detail around how its beneficiaries are impacted by its efforts, not just in terms of end results but the steps along the way, as well as more comprehensive and comparable performance metrics.

RECOMMENDATION: BUY

The National Math and Science Initiative has been able to successfully scale and grow its operations over the last few years. It has made a positive contribution to the education system in the U.S. and increasing its operational and financial transparency will create broader accountability for the organization.

OVERVIEW OF NMSI's ACTIVITIES

The National Math and Science Initiative, Inc. was formed following a report issued in 2005 by the National Academies entitled "Rising Above the Gathering Storm." NSMI was created to implement the recommendations of the report, which calls for dramatically improving K-12 math and science education in the U.S. American students are falling behind in the essential subjects of math and science, putting the country's position in the global economy at risk. Some statistics that highlight the growing problem include:

- 60% of the new jobs that will be available in the 21st century will require skills possessed by only 20% of the current workforce.
- U.S. students recently finished 25th in math and 17th in science in the ranking of 31 countries by the Organization for Economic Cooperation and Development.
- 25 years ago, the U.S. led the world in high school and college graduation rates. Today, the U.S. has dropped to 20th and 16th.
- A recent study by ManpowerGroup found that a record 52% of U.S. employers have difficulty filling critical positions within their companies — up from 14% in 2010. Many of these jobs require a strong background in Science, Technology, Engineering, and Math ("STEM"), but American colleges are producing fewer math and science graduates.
- The U.S. may be short as many as three million high-skills workers by 2018. Two-thirds of those jobs will require at least some post-secondary education. American universities, however, only award about a third of the bachelor's degrees in science and engineering as Asian universities. Worldwide, the United States ranks 17th in the number of science degrees it awards.
- The competitive edge of the U.S. economy has eroded sharply over the last decade, according to a new study by a non-partisan research group. The report found that the U.S. ranked 6th among 40 countries and regions, based on 16 indicators of innovation and competitiveness. The indicators included venture capital investment, scientific research, spending on research, and educational achievement.
- The prestigious World Economic Forum ranks the U.S. 48th in quality of math and science education.

NMSI believes that in order to flourish in the 21st century, the U.S. must continue to generate intellectual capital that can drive the research and development activities that fuel the economic engine of future prosperity. Its goal is to prepare more American students to be college-ready and equip them with the skills necessary for the jobs of the future.

Program overview

NMSI has identified three programs to scale and replicate nationally – UTeach, the Advanced Placement Training and Incentive Program ("APTIP"), and Laying the Foundation ("LTF").

UTeach

The UTeach program was developed at the University of Texas at Austin in 1997 and enables students majoring in math, science, computer science, or engineering to receive full teaching certification without adding time or cost to their degrees. The UTeach program is twofold – 1) it recruits math and science majors in universities to become teachers and 2) transforms the way universities train and prepare teachers. Over thirty universities across the nation are currently in the process of implementing the program.

The current problem that UTeach is trying to address is that the U.S. is failing to produce and retain sufficient numbers of qualified math and science teachers to keep America internationally competitive. It is estimated that the U.S. will need 280,000 more math and science teachers by 2015. In the crucial middle-school preparatory years, more than two-

thirds of 5th – 8th graders are being taught math by teachers without a mathematics degree or certificate and 93% of those same students are being taught physical sciences by teachers with no physical science degree or certificate.

The UTeach solution is to produce higher quality teachers that are more confident and competent in their subject matter and has created a program that has the following core elements:

- 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 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

AP Training and Incentive Program

The AP Training and Incentive Program improves college readiness by increasing the number of high school students taking and succeeding in Advanced Placement ("AP") math, science, and English courses ("MSE"). Experience has shown that increasing the number of students taking these college-level courses greatly increases the number of students who will leave high school ready to succeed in college. In addition, students enrolled in AP programs are more internationally competitive in math and science than students who have not taken more rigorous coursework. Through this program, NMSI has trained more than 8,000 Pre-AP and AP teachers across the country in the last three years.

In addition to the core APTIP program, NMSI launched the Initiative for Military Families ("IMF") in 2010 which provides consistent, quality math and science education to public high schools with high concentrations of students from military families. This initiative addresses the two million young people in America who have a parent serving in the military today, many of which are constantly being transferred and relocated. In an effort to preserve the quality of education that these young people receive, IMF aims to provide excellence and continuity through the standardized AP program whenever and wherever families move.

Laying the Foundation

Laying the Foundation is a teacher training organization that merged with NMSI in 2011. The program is dedicated to providing quality teacher training, rigorous classroom materials, and web-based resources to improve the quality of English, mathematics, and science instruction from middle school through high school. LTF believes that training, mentoring, and empowering the Pre-AP and AP teacher corps will lead to higher standards of academic excellence for all students

LTF provides a comprehensive teacher training program designed to raise the level of instructional rigor. The goal of enhancing teacher preparation is to change the teaching paradigm and instructional practices to open the door for more students to engage successfully in AP or other college-level courses.

The LTF training program for math, science, and English teachers of grades six through twelve consists of six core components:

- Interactive teacher-to-teacher training focused on both content and pedagogy
- Materials and resources aligned to the Common Core State Standards

- Online mentoring through the Professional Learning Community
- Administrator support, including orientation workshops
- Embedded and project-based student assessments, as well as online formative assessments and AP-style pretests and posttests
- Capacity building within districts through the Train the Trainer model, AP Vertical Team materials, and curriculum integration

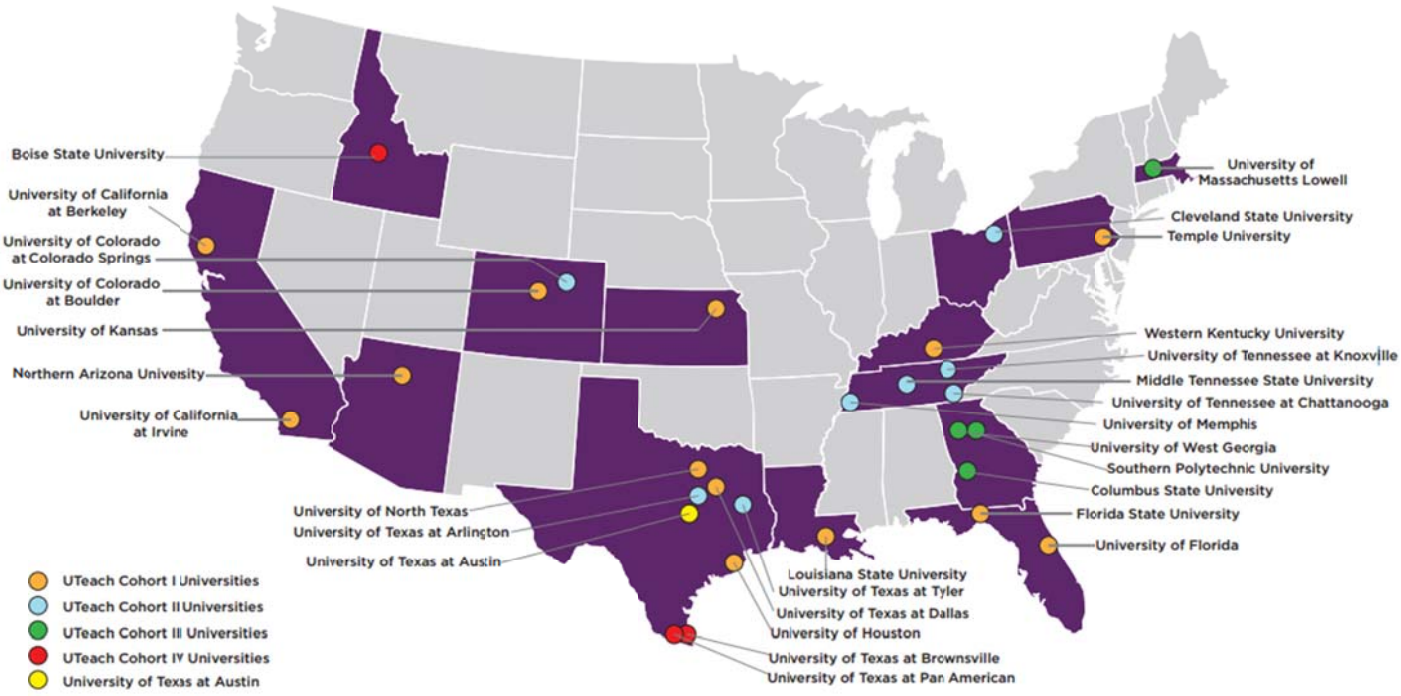
PROGRAM RESULTS AND EFFECTIVENESS

The NMSI has had tremendous success in all of its programs to date. The organization's scale and footprint has grown with its track record of results.

UTeach

NMSI's UTeach program has nearly quintupled its enrollment since the program expansion began in 2008. The program has grown from 1,100 math and science majors in its first cohort to more than 5,500 students in 2012. Momentum is rapidly building for the UTeach program across the nation.

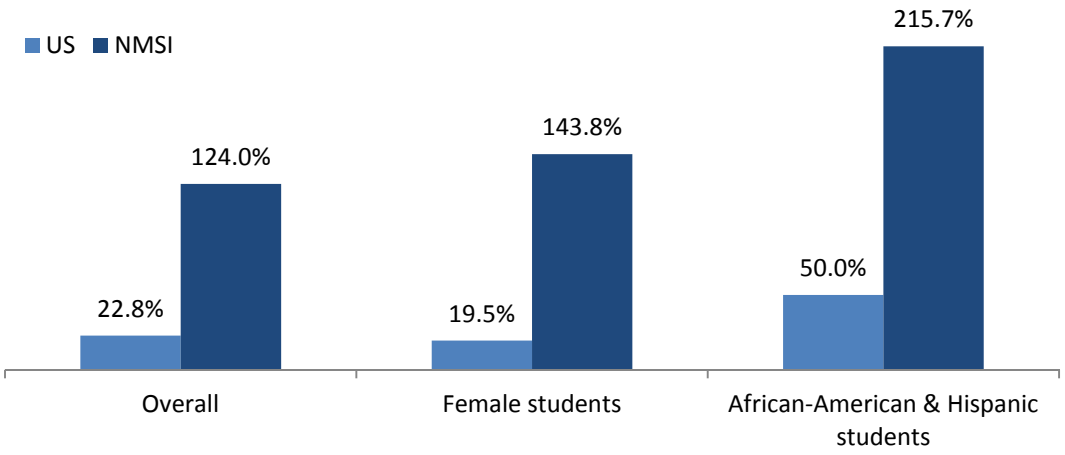
UTeach has produced a steady increase in the number of highly trained teachers with background in STEM subjects. Approximately 90% of UTeach graduates go directly into teaching, despite having the academic credentials for many other opportunities. Furthermore, the retention rate among UTeach graduates is at 82% after five years of teaching, compared to fewer than 65% nationally.



AP Training and Incentive Program

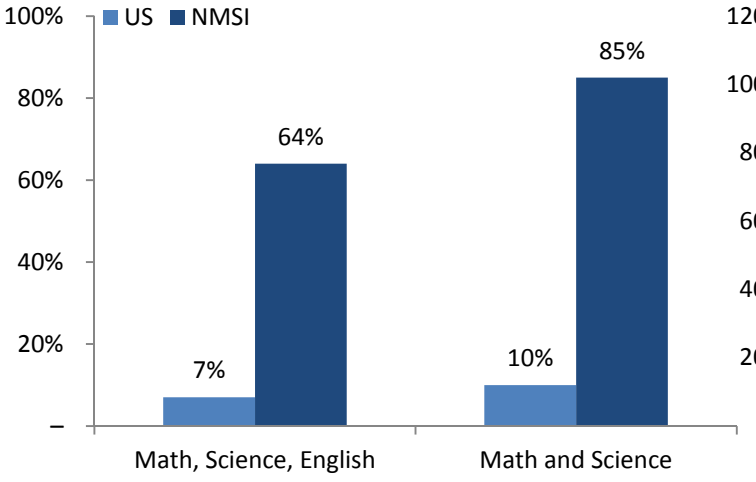
Schools participating in APTIP have produced record-setting results for the last three years. Results from the College Board for 2008-2011 show that participating schools recorded an average increase of 124% in qualifying math, science, and English exams, which is almost five and a half times the national average. Results from underrepresented groups such as female students and African-American and Hispanic students were even more impressive, with an increase of 144% and 216%, respectively.

2008 - 2011 percentage increases in qualifying MSE AP scores

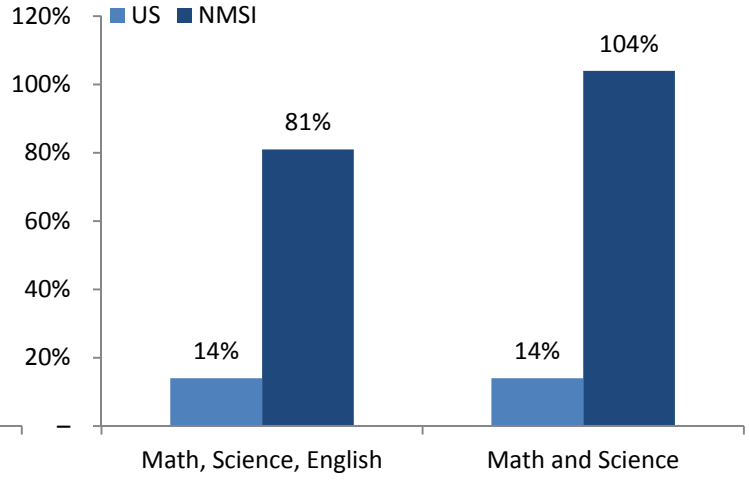


The IMF showed similar performance trends, with there being substantially greater percentage increases in pass rates in NMSI schools than non-NMSI schools.

Percentage increase in scores of 3 or greater in AP exams for the U.S. and 29 NMSI IMF schools



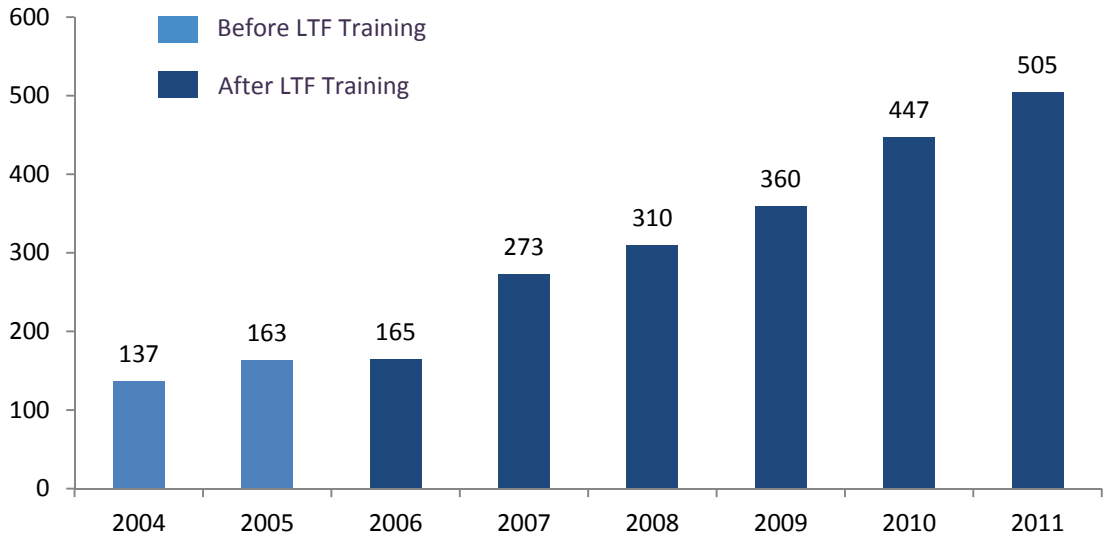
Percentage increase in scores of 3 or greater in AP exams for African-American and Hispanic students in the U.S. and 29 NMSI IMF schools



Overall, NMSI's various AP programs consistently showed across the board that they had a significant positive impact on exam pass rates. NMSI's program high schools represent approximately 1.5% of the total 23,000+ high schools in the U.S., yet they accounted for 7.4% of the overall U.S. percent increase in AP math, science, and English passing scores.

Laying the Foundation

The merger of NMSI and Laying the Foundation in 2011 created a seamless system for preparing middle school and high school students to succeed in Pre-AP and AP courses in the critical fields of math, science, and English. The chart below captures the total number of qualifying MSE AP scores in the Pasadena Independent School District and is illustrative of the type of results LTF has had in the past and expects to have in the future. Going forward, APTIP and LTF will effectively operate as one under NMSI's AP Program umbrella.



TRANSPARENCY

NMSI provides annual reports and brochures for each of its individual programs on its website. While the reports and brochures provide various sound bites of industry statistics and NMSI program results, they fail to serve as a cohesive source of readily accessible data. There lacks a set of comparable, historical information that the public can view. Data points are scattered and sparse across various forms, and could be more comprehensive, especially given the organization's accomplishments.

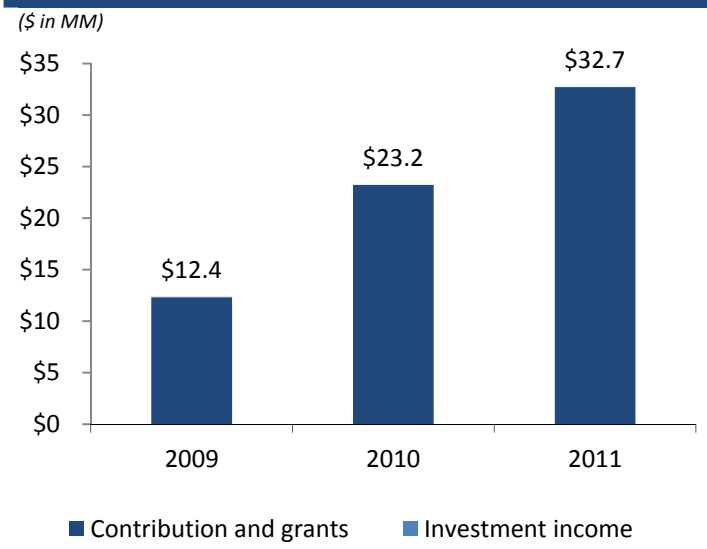
Financial information is limited, with the only source being the Form 990s available through GuideStar. These tax forms offer little insight on how funds are coming in and out of the organization.

FINANCIAL OVERVIEW

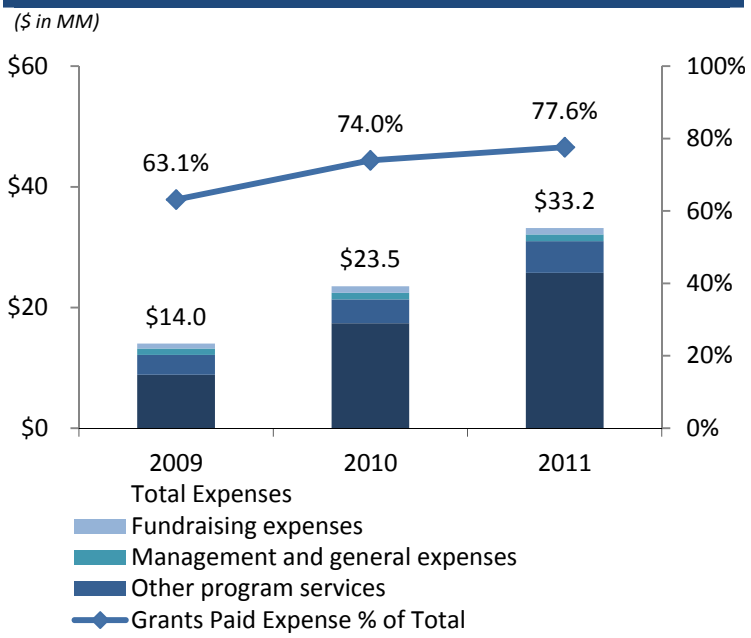
NMSI has expanded rapidly since its inception, both as an organization and financially. From a revenue standpoint, between 2007 and 2010, NMSI saw a $21MM increase in its annual top line, representing a 42% compounded annual growth rate. The majority of its revenue per year is comprised of contribution and grants – only a very small amount (typically less than 1% per year) comes from investment income, as a result of its conservative investment strategy.

On the expense side, grants paid increased along with revenue. NMSI contributed $5MM towards its various programs in 2007 and by 2010, contributed $26MM – a $21MM increase, representing a 70% compounded annual growth rate. In 2007, grants were 51% of total expenses and in 2010, they were 78%. NMSI has kept its operating expenses at a consistent level while significantly increasing the amount spent on its programs. This dynamic reflects positively on NMSI's financial management as its operational expenditures are largely fixed within a certain bandwidth and any incremental revenue beyond that goes straight towards nonprofit work.

Revenue Breakdown

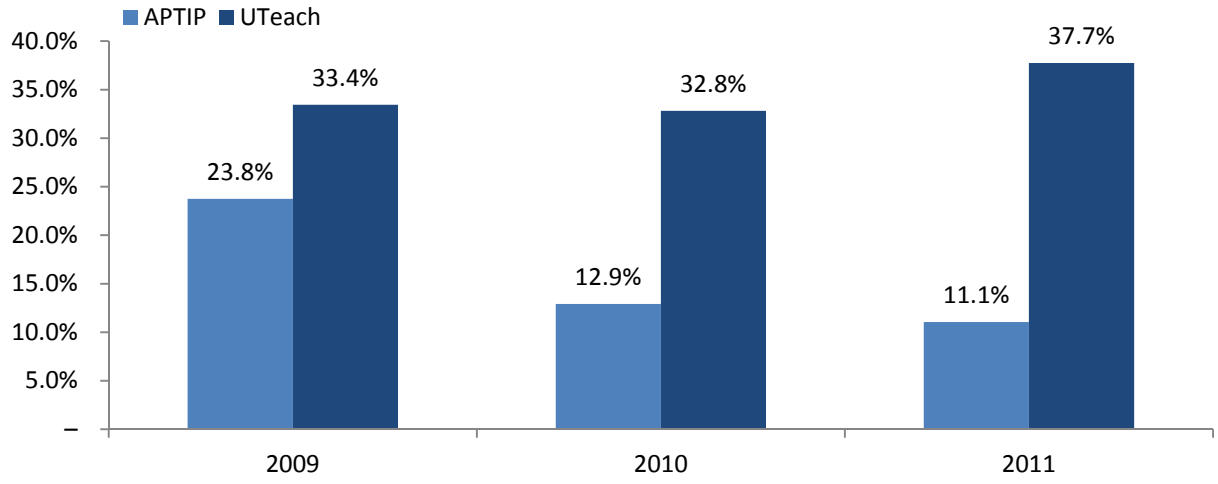


Expense Breakdown



On a cost per program basis, the below chart illustrates the percentage that is attributed towards costs, excluding grants attributable to the respective program. NMSI has been effective in lowering the expenses for its APTIP program over time, demonstrating its ability to scale the segment and distribute funds towards schools. In contrast is the UTeach program, which appears to have growing costs with less economies of scale. With only a few years of data available and an ambitious growth plan, it would be premature to make any definitive conclusions. As the organization progresses through its life cycle, the costs of the UTeach program will be an area to monitor.

Costs as a percentage of total program expenses



Detailed Financial Statements (Tax Accounting Basis)

Fiscal Year Ended July 31	2009	2010	2011
Revenue and Expenses (Tax Accounting Basis)			
Operating Revenue:			
Contribution and grants	$12,305,061	$23,215,273	$32,705,367
Investment income	54,624	574	1,453
Total Support and Revenues	**$12,359,685**	**$23,215,847**	**$32,706,820**
% Growth	*8.0%*	*87.8%*	*40.9%*
Expenses:			
Program Services:			
Grants and similar amounts paid	$8,852,828	$17,393,524	$25,735,792
Other	3,280,279	3,955,619	5,256,958
Supporting Services:			
Management and general expenses	1,061,684	1,085,627	1,125,501
Fundraising expenses	825,367	1,078,784	1,049,532
Total Expenses:	**$14,020,158**	**$23,513,554**	**$33,167,783**
% of Revenue	*113.4%*	*101.3%*	*101.4%*
Increase in Net Assets from Operations	**($1,660,473)**	**($297,707)**	**($460,963)**
KEY BALANCE SHEET INFORMATION			
Cash and Cash Equivalents	$4,113,214	$5,768,700	$7,706,109
Land, building and equipment	1,057,419	771,931	560,442
Other assets	191,898	559,435	2,982,342
Total Assets	**$5,362,531**	**$7,100,066**	**$11,248,893**
Total Liabilities	**$1,305,098**	**$3,340,340**	**$7,950,130**

Grants Paid as a % of Total Expenses	***63.1%***	***74.0%***	***77.6%***
Other programs services as a % of Total Expenses	***23.4%***	***16.8%***	***15.8%***
Management and general expenses as a % of Total Expenses	***7.6%***	***4.6%***	***3.4%***
Fundraising expenses as a % of Total Expenses	***5.9%***	***4.6%***	***3.2%***

Source: IRS Form 990

KEY PERSONNEL BIOS

Tom Luce – Founding Chief Executive Officer

An attorney, Tom Luce received his undergraduate and graduate degrees from Southern Methodist University and has been honored with the SMU Law School and University Distinguished Alumni Awards. He was a founding partner and managing partner of the law firm of Hughes & Luce, LLP until his retirement from the firm in 1997.

In addition to his active law practice, at various times Mr. Luce has served on the boards or as guest lecturer at a number of schools of higher education, including the Kennedy School of Government at Harvard, the LBJ School of Public Affairs at The University of Texas at Austin, and Southern Methodist University.

Mr. Luce served as United States Assistant Secretary of Education for Planning, Evaluation and Policy Development from July 1, 2005 until his resignation as of September 1, 2006. He currently is Chief Executive Officer of the National Math and Science Initiative, Inc.

Following his resignation from the Department of Education, Mr. Luce rejoined the board of Dell Inc. He is the longest serving outside member, having previously served on the Dell board from 1991 until 2005. He also has served on the boards of the Texas Education Reform Caucus and multiple community and charitable organizations. He served as a member of the National Commission on Teaching and America's Future and on the Executive Committee of the Dallas Citizens Council, an organization composed of CEOs of Dallas' largest businesses. In addition, the United States Senate appointed Mr. Luce a member of the Library of Congress Trust Fund Board where he served until 2005.

Mr. Luce also has been appointed five times to major posts by Texas governors, including Chief Justice pro tempore of the Texas Supreme Court. He is perhaps best known for his role as the Chief of Staff of the Texas Select Committee of Public Education, which produced one of the first major reform efforts among public schools in 1984.

Mr. Luce was a co-founder of the National Center for Educational Accountability and served as Chairman of the Board from its inception until 2005. He also founded Communities Just for the Kids and served as its Chairman until 2005. In 1995 Mr. Luce wrote Now or Never - How We Can Save Our Public Schools, a book that defined his educational philosophy and outlined a preliminary plan for educational reform that called for broader support for public education. His second book, Do What Works, was published in December 2004 and received numerous positive reviews.

Sue Payne – Chief Operating Officer

Sue Payne joined the National Math and Science Initiative as COO in 2011.

A native of Hickory Flat, Georgia, Ms. Payne graduated from Georgia Institute of Technology with a Bachelor of Science degree in Physics.

Ms. Payne joined Mobil in 1976 as a geoscientist in Dallas, Texas. During her 35 years with Mobil, and now ExxonMobil, her management and operations experiences have afforded her a variety of assignments. She has been Planning Manager for ExxonMobil Exploration Company; U.S. Area Exploration Manager; Geoscience Operations Manager for ExxonMobil Production Company; Vice President for Mobil's Onshore U.S. Producing Business; Commercial and Negotiations Manager for Mobil New Business Development in Latin America; and an advisor at Mobil's corporate headquarters. Ms. Payne has held positions in Lagos, Nigeria; New Orleans, Louisiana; Fairfax, Virginia; Dallas and Houston, Texas.

Before assuming her current position at NMSI, her role as Geoscience Resource Manager encompassed managing the training, career development, and project deployment for more than 1,500 geoscientists in ExxonMobil's worldwide operations; and providing specialist geoscience technical support for ExxonMobil Upstream projects.

A member of numerous charitable and civic organizations, Ms. Payne has recently completed her second term as Co-Chairman of the United Way of Greater Houston Women's Initiative and is an active member of the Georgia Tech Alumni

Association. She also was recently named one of "Houston's 50 Most Influential Women" by Houston Women's Magazine.

Patty Pickard – Chief Financial Officer

Patty Pickard is the Chief Financial Officer of NMSI and a Certified Public Accountant. During her career she has held senior level financial and management positions in the finance, real estate development, oil and gas, and insurance industries. She served as CFO and COO of several multi-million dollar companies, as Senior Vice President of a multi-billion dollar public ally traded company and as a senior advisor and consultant in mergers of private and public companies.

In 2005 she decided to leave the private sector and enter the non-profit world. Since that time she has served as the CFO for the YMCA of Metropolitan Dallas where she was responsible for all financial and IT operations for the $65 million enterprise.

She has worked with many non-profit organizations as a volunteer or board member, and is a co-founder of the Pickard Scholarship Fund. The Fund awards college scholarships to African-American males fulfilling certain educational criteria, and was established to honor her late husband, Dr. Dan J. Pickard, who devoted substantial time and resources during his life in South Dallas.

She is native of Massachusetts and a graduate of Indiana University.

OTHER THIRD PARTY RATINGS

Charity Navigator rates NMSI 4 out of 4 stars overall, 4 out of 4 stars for its financials, and 3 out of 4 stars for its accountability and transparency.

The National Math and Science Initiative is not currently covered by Great Nonprofits, Philanthropedia, and GiveWell.

GET INVOLVED

Individuals can support the organization through a number of ways:

- Providing a donation *(http://nationalmathandscience.org/donate)*
- Supporting local NMSI programs *(http://nationalmathandscience.org/solutions/how-you-can-help/program-locations)*
- Contacting government officials *(http://nationalmathandscience.org/our-approach/how-you-can-help/contact-your-government-officials)*

DISCLOSURES

Stephen Tang certifies that he does not have any affiliation with the National Math and Science Initiative and has never made a donation to the organization. Additionally, Stephen Tang has not supported directly competing organizations in a greater capacity than a nominal donation. NPI analysts and NPI as an organization do not receive any form of compensation from reviewed charities.

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