The Long-term Impact of NMSI’s College Readiness Program

WHITE PAPER

2022 UPDATE

NATIONAL MATH + SCIENCE INITIATIVE

Transforming Math + Science Education

nms.org
STEM education is widely recognized as mission-critical for preparing students for success in postsecondary education and in their future careers. In fact, the U.S. Department of Education is committed to making the country a global leader in STEM literacy, innovation and employment.

Despite a clear and shared vision for STEM education, recent ACT score data indicate a decline in students who are interested in pursuing a STEM-related major - especially students from underserved groups. It’s obvious that there’s more work to be done.

At the National Math and Science Initiative, we believe STEM education is the greatest lever to unlock student potential, and help every learner achieve success in both college and career.

NMSI views Advanced Placement® courses as a primary vehicle for including high school students of all backgrounds in high-quality STEM education and promoting college readiness. We put this belief into action through our College Readiness Program.

In this white paper, you’ll find evidence of the real-world, long-term impact and outcomes of the College Readiness Program. Continue reading to learn how NMSI is making a measurable difference for students, teachers and schools across the country.
The College Readiness Program is a multi-year program that provides teacher, student, and school supports to promote high school students’ success in rigorous, college-level courses, particularly in STEM subjects. The goals are to ensure equitable access and achievement based on community populations. It’s based on the premise that all students can master rigorous AP coursework with the right supports in place.

Through the College Readiness Program, schools receive:

- Teacher training and mentoring
- Additional instructional time for students outside the classroom
- Instructional resources
- Financial recognition for educators and scholarships for students engaged in the work
- Funding for purchasing equipment and supplies
OUTCOMES AND IMPACTS

NMSI grounds its effectiveness in the measurable outcomes we achieve for educators and students. The impact of each program is regularly studied and measured across our partnering school systems, using independent, evidenced-based practices.

To judge the long-term impact of the College Readiness Program, we compared College Board data for students enrolled in NMSI programs against national averages provided by the National Student Clearinghouse between 2015-2021. Here’s what we found.

View our methods of measurements on page 11

1. Schools participating in CRP expand opportunities and outcomes for students
   - NMSI consistently increases or maintains high AP course enrollment from non-white students, females, and students experiencing poverty
   - The percentage of NMSI students earning qualifying scores has increased more quickly than their peers across the country

2. Students enrolled in schools where teachers participate in NMSI’s College Readiness Program are more likely to attend, persist in, and earn degrees from postsecondary institutions than those not impacted by CRP
   - Greater percentages of NMSI students attend postsecondary institutions compare to national averages, especially four-year institutions
   - NMSI students are much more likely to persist in their postsecondary education compare to the national average
   - NMSI students are more likely to earn postsecondary degrees compare to national averages

3. NMSI students are dramatically more likely to earn STEM degrees than the national average

4. NMSI students, in all targeted demographic groups (Black, Latino, Female, FRL qualified), see strong long-term outcomes
Since 2015, AP enrollment from NMSI students who identify as non-white has increased, and there’s steady participation among female students and students who qualify for free or reduced-price lunch.

NMSI Student AP Enrollment

We believe STEM education provides critical skills students need to excel in academia and postsecondary life. In this section, we illustrate CRP’s impact by breaking down the data around schools participating in CRP and NMSI students in postsecondary education.
Math, Science, and English Test Takers Earning Qualifying Scores on AP Exams Over Time | All U.S. Students vs. NMSI Students

Over the past four years, the percentage of NMSI students earning qualifying scores follows the same pattern as all U.S. student AP test-takers. However, the rate of NMSI students earning qualifying scores has increased more quickly than their peers across the country.

School Level Performance Over Three Years

Eighty percent of Cohort 11 schools demonstrated positive gains of any size from baseline to year 3 in the percent of Qualifying Scores earned.
73% of NMSI students attended any postsecondary institution, exceeding the national average.

57% of NMSI students attended four-year institutions, 25% more than non-NMSI students.

Black, Hispanic and FRL Qualified NMSI Students attend four-year schools at higher rates than the national average.

NMSI students are far more likely to persist in postsecondary institutions than the national average of 74%.

Black, Hispanic and FRL Qualified NMSI Students persist in postsecondary institutions at higher rates than the national average.
NMSI students earn degrees at higher rates than the national average. Across all racial and ethnic groups, NMSI students earn postsecondary degrees at higher rates than the national six-year averages.

### Earning a Degree

<table>
<thead>
<tr>
<th>High school graduation year in Spring</th>
<th>NMSI students enrolled in college</th>
<th>% of NMSI students earning a degree</th>
<th>The national average % of students earning a degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>78.30%</td>
<td>60.80% within 6 years</td>
<td>54.80% within 6 years</td>
</tr>
<tr>
<td>2016</td>
<td>76.10%</td>
<td>52.90% within 4 years</td>
<td>41% within 4 years</td>
</tr>
<tr>
<td>2017</td>
<td>76.80%</td>
<td>43.10% within 4 years</td>
<td>41% within 4 years</td>
</tr>
</tbody>
</table>

### Across all racial and ethnic groups, NMSI students earn postsecondary degrees at higher rates than the national six-year averages

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Enrolled</th>
<th>Earned Degree</th>
<th>National Average (6 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian, Asian American</td>
<td>83.60%</td>
<td>72.50%</td>
<td>71.70%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>83.80%</td>
<td>51.60%</td>
<td>45.90%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>72.10%</td>
<td>57.20%</td>
<td>55.00%</td>
</tr>
<tr>
<td>White</td>
<td>83.10%</td>
<td>72.10%</td>
<td>67.20%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>78.60%</td>
<td>62.10%</td>
<td>54.80%</td>
</tr>
</tbody>
</table>
NMSI students earn STEM degrees at higher rates than the national average.

Black, Hispanic, and FRL Qualified NMSI Students earn STEM degrees at higher rates than the national average.

NMSI remains focused on supporting the students we serve. We continue to see strong long-term outcomes for Black, Latino, female, and FRL qualified-connected students who learn from teachers that participate in NMSI’s College Readiness Program.

NMSI is meeting its mission by consistently serving students furthest from opportunity, ensuring that they earn credits in advanced level high school courses; attend, persist in, and earn degrees from postsecondary institutions; and complete their degrees in a STEM field.

For more research findings and analysis, download our guide book.
ADVANCE STEM EDUCATION, EMPOWER CHANGE

Helping every student achieve success is no small feat – but NMSI is here to help. Through our College Readiness Program, we offer extensive supports for schools, teachers and students, including training, after-hours instruction and financial incentives.

By working together, we’ve shown that we can help level the playing field for students of all backgrounds by engaging them in high-quality STEM education, promoting college readiness, and ultimately, helping them thrive in college and beyond.

To learn more about NMSI and how we support rigorous STEM learning for all students, visit the College Readiness Program page on our website.

Bring NMSI to my schools
METHODS OF MEASUREMENT

National Student Clearinghouse Data
All NMSI CRP students enrolled in 12th grade between Spring 2015 and Spring 2021, inclusive of students graduating in 2021

Outcomes explored
- Postsecondary Enrollment Rates
  81,947 students
- Postsecondary Persistence Rates
  47,258 students
- Degree Completion Rates
  17,881 students
- Total Degrees Completed (looking at STEM)
  9,507 students

NMSI Roster and College Board Data
All students enrolled in NMSI-supported Advanced Placement courses taught by teachers, engaged with the College Readiness Program

Outcomes explored
- Student AP Course Enrollment
- Student AP Exam Participation
- Student AP Exam Performance
- School-level AP Exam Performance

All data disaggregated by race, gender, military-connected status, and free or reduced-price lunch (FRL) qualifying status