



The Long-Term Impact of NMSI's College Readiness Program

WHITE PAPER

2023 UPDATE



NATIONAL
MATH + SCIENCE
INITIATIVE

Transforming Math + Science Education

nms.org

A SHARED VISION FOR COLLEGE READINESS

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, there is [a wide achievement gap](#), particularly for schools with high-minority or high-poverty populations due to a lack of teacher training and high-quality resources for schools.

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.





PROGRAM OVERVIEW

The College Readiness Program is a multi-year program that provides educators practical support 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 proper supports in place.

Through the College Readiness Program, schools receive:



Teacher training and mentoring



A full spectrum of AP resources for teachers and students



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 2015-2022. Here's what we found.

[View our methods of measurements on page 11](#)

1

Schools participating in CRP increase STEM opportunities and outcomes for students

- NMSI students furthest from opportunity are enrolling in and succeeding in their advanced level STEM courses.

2

NMSI expands postsecondary participation

- 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.

3

NMSI supports STEM workforce development

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

4

NMSI supports students furthest from opportunity

- NMSI students, in all targeted demographic groups (Black, Latino/a, Indigenous, low income), see strong long-term outcomes.

5

NMSI's results are consistent over time

- NMSI's longitudinal outcomes are strong over multiple student cohorts.

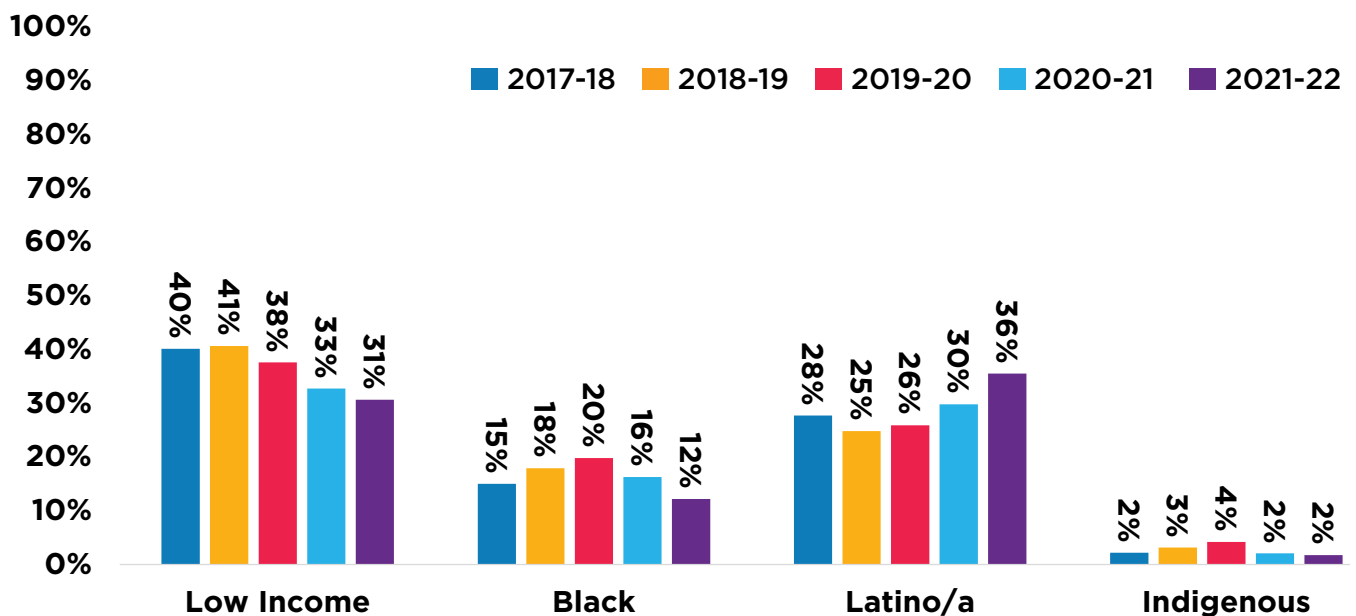
STUDENT OUTCOMES

We believe STEM education provides critical skills students need to excel in academia and postsecondary life. In this section, we illustrate CRP's impact on students growth in advanced level STEM courses during their high school years.



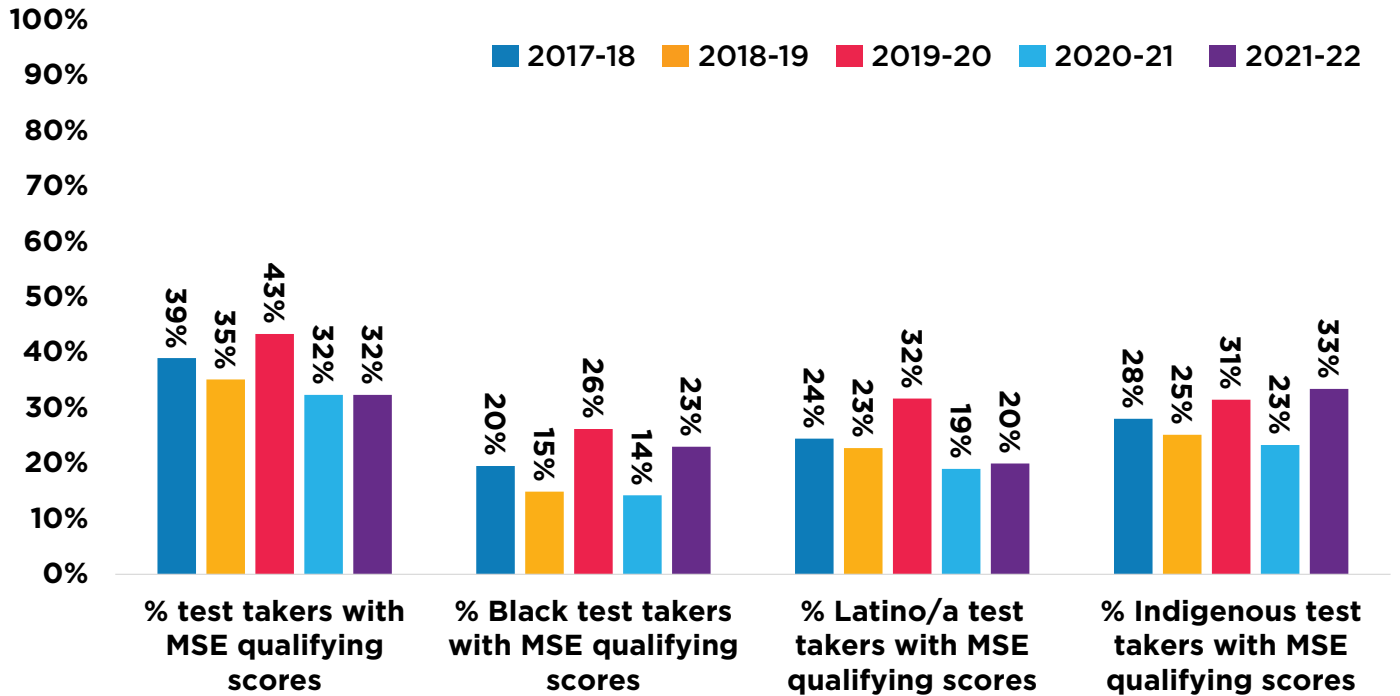
NMSI schools serve students furthest from opportunity, ensuring they earn credits in advanced level courses

Percent of NMSI Students Served in Targeted Demographic Groups



NMSI students furthest from opportunity are succeeding in their advanced-level STEM courses

National AP Scores for Outcomes for Selected Groups, Percent Qualifying Scores Over Time



NMSI students demonstrated substantial growth on the Critical Reasoning for College Readiness assessment

The Critical Reasoning for College Readiness assessment is a pre- and post-course assessment of students' ability to problem-solve using math skills that indicate college readiness. In the 2023-24 school year, students who took CR4CR showed significant increases in their skills from Fall to Spring in:



**Middle School
Problem Solving**



**Middle School
Data Driven
Decision Making**



**High School
Problem Solving**



**High School
Data Driven
Decision Making**

POSTSECONDARY FINDINGS

NMSI's College Readiness Program expands opportunities for students to excel in their postsecondary life. This section delves deeper into the outcomes of the students once they have completed high school, specifically focusing on their postsecondary enrollment rates, persistence rates and degree completion.



ENROLLMENT

NMSI students enroll in postsecondary institutions at higher rates than the national average

Enrolled in any postsecondary institution



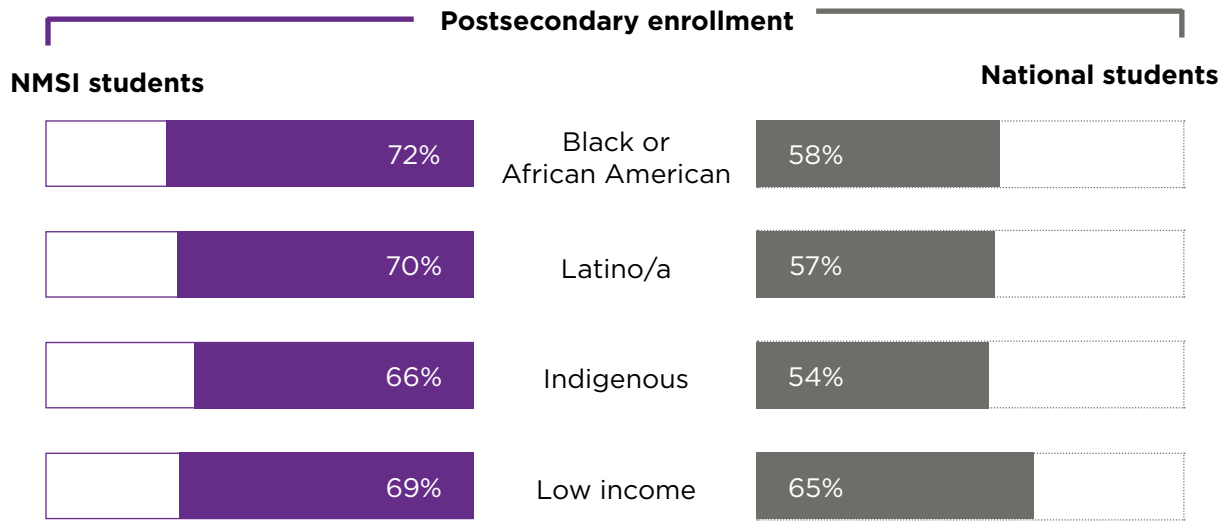
73% of NMSI students attended any postsecondary institution, 17% more than the national average

Enrolled in four-year institution



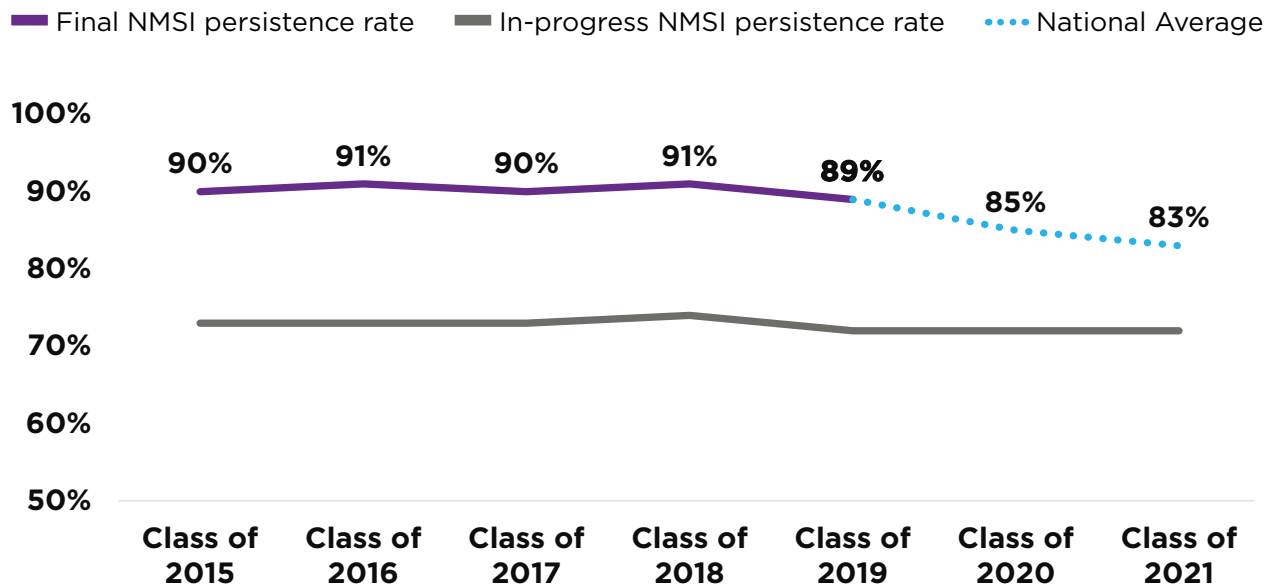
59% of NMSI students attended four-year institutions, 37% more than non-NMSI students

▲ A greater percentage of Black, Latino/a, Indigenous and low income NMSI students attend postsecondary institutions than non-NMSI students



PERSISTENCE

▲ NMSI students are far more likely to persist in postsecondary institutions than the national average of 73%



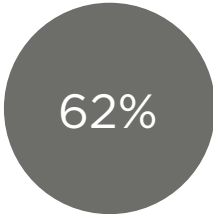
Please note, Y axis begins at 50%

DEGREE COMPLETION

▲ NMSI students complete college at higher rates than the national average

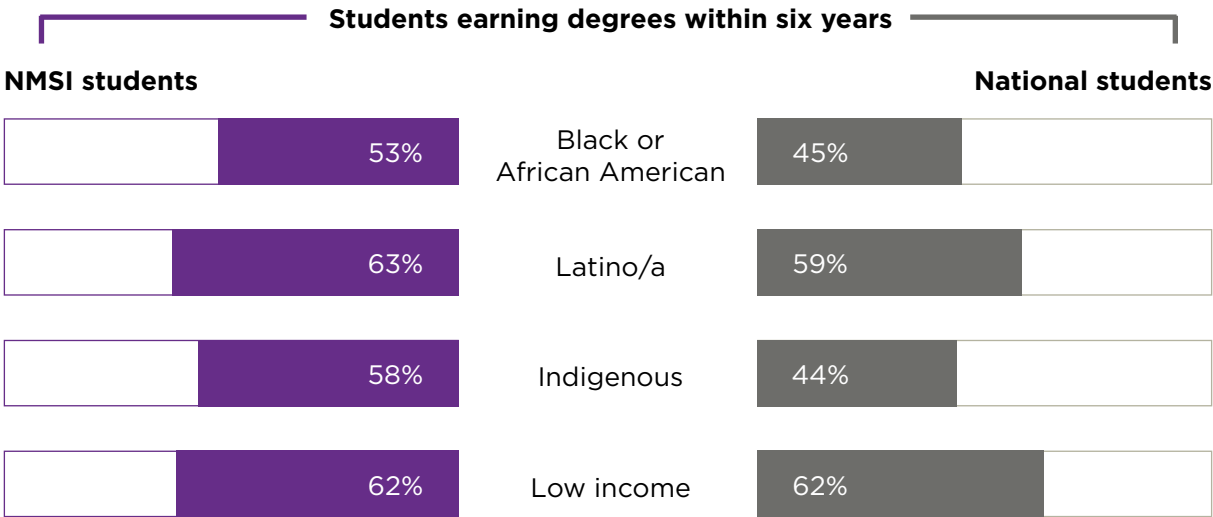


66% of NMSI students enrolled in postsecondary institutions graduate within six years



62% of students nationally enrolled in postsecondary institutions graduate within six years

▲ A greater percentage of Black, Latino/a and Indigenous NMSI students earn degrees from postsecondary institutions than non-NMSI students



STEM DEGREE COMPLETION

▲ NMSI college graduates earn STEM degrees at twice the national average

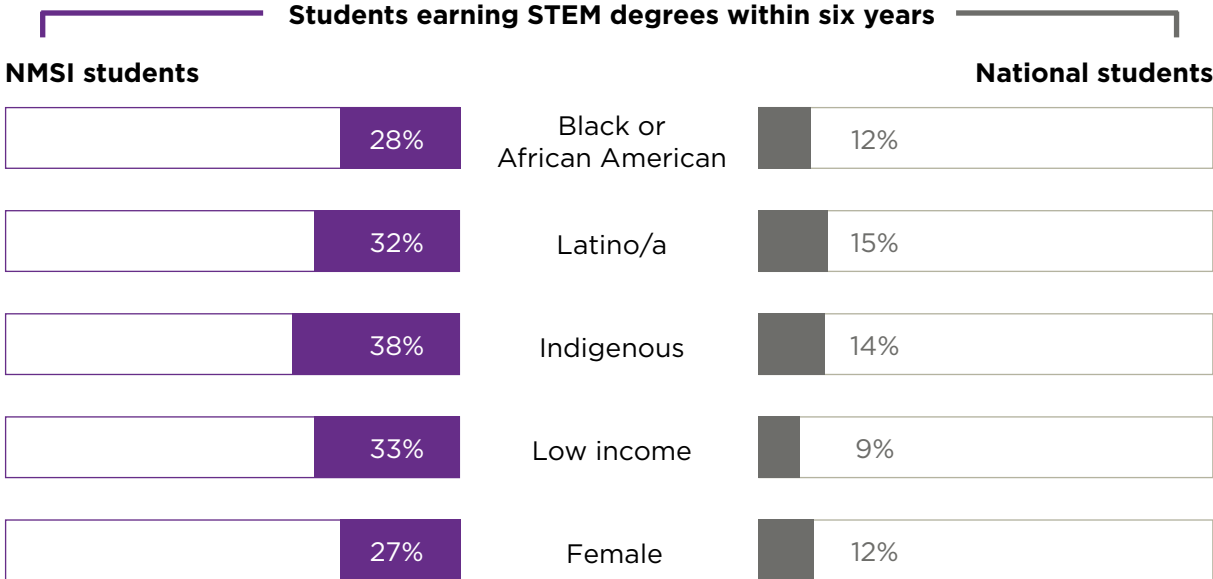


of NMSI students graduating college earned STEM degrees



of students nationally graduating college earned STEM degrees

▲ A greater percentage of Black, Latino/a, Indigenous, low income and female NMSI students earn STEM degrees than non-NMSI students



NMSI remains focused on ensuring positive results for the students we serve. We are meeting our mission by consistently serving students furthest from opportunity, ensuring they earn credits in advanced-level high school courses and attend, persist in and earn degrees from postsecondary institutions.

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 educators in service of their students, including training, instructional resources 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

NMSI collected data from the National Student Clearinghouse for all CRP students enrolled in 12th grade between Spring 2015 and Spring 2022, inclusive of students graduating in 2022

- Overall sample size: **95,986**
- Enrollment sample size: **95,933**
- Persistence sample size: **59,258**
- Completion sample size: **11,493**
- STEM degree sample size: **14,332**
- Overall demographics:

- 16% Black**
- 28% Latino/a**
- 4% Indigenous**
- 54% Low Income**
- 55% Female**

NMSI Roster and College Board Data

NMSI collected class enrollment (via school rosters) and College Board data for all students enrolled in courses taught by teachers engaged with the College Readiness Program

- Student sample size: **42,654**
- School sample size: **227**
- Math, science and English exams: **43,529**
- Enrollment demographics:

- 12% Black**
- 36% Latino/a**
- 2% Indigenous**
- 31% Low Income**
- 54% Female**

- AP Participation Demographics:

- 8% Black**
- 46% Latino/a**
- 1% Indigenous**
- 53% Low Income**
- 27% Female**