

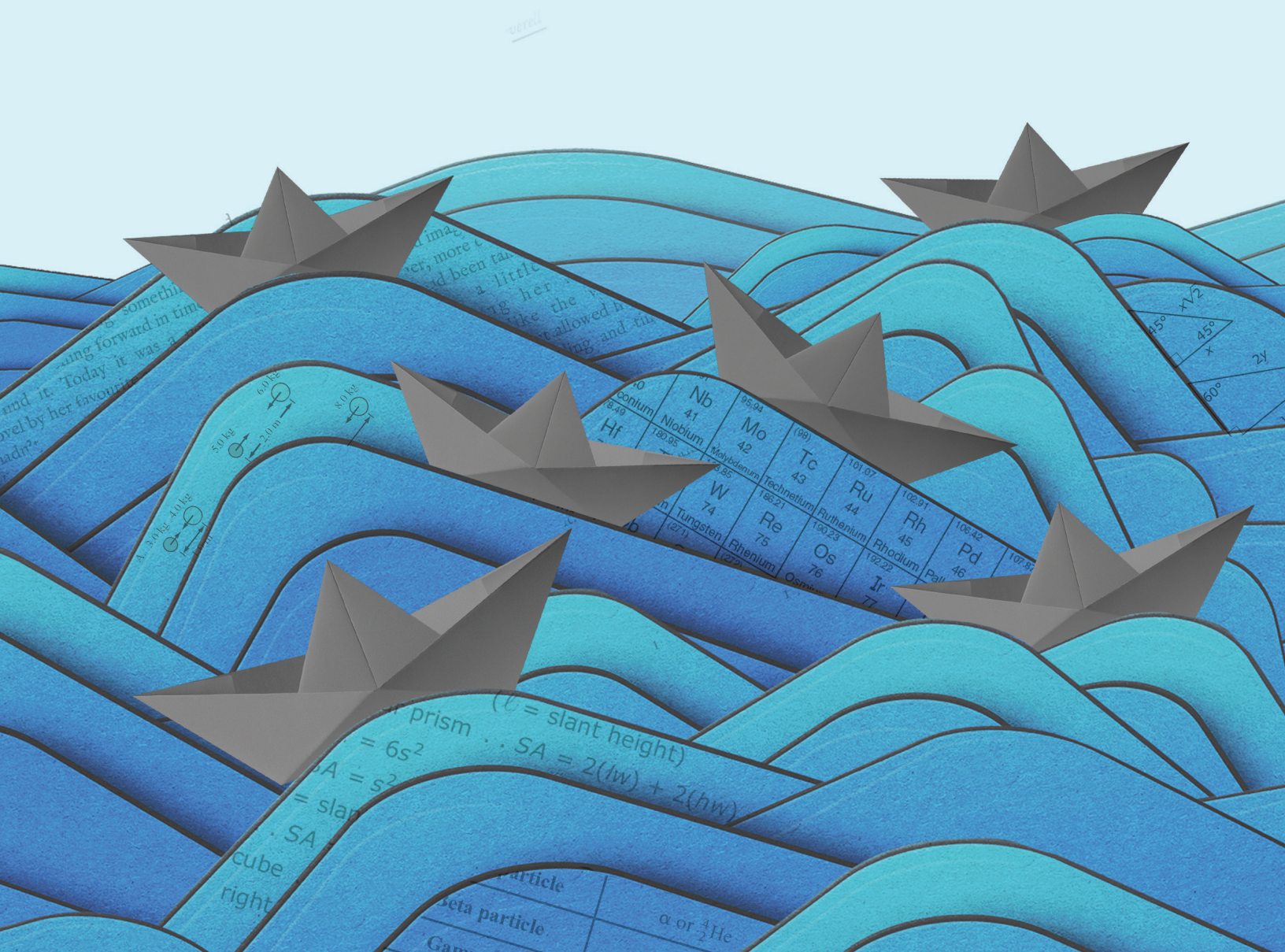
EXECUTIVE SUMMARY

LIFTING ALL BOATS?

Accomplishments and Challenges from 20 Years
of Education Reform in Massachusetts

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Since the passage of the Massachusetts Education Reform Act in 1993, the Commonwealth has been seen as a national leader in education reform. The legislation introduced statewide learning standards and the Massachusetts Comprehensive Assessment System (MCAS) tests, and provided large increases in funding for K-12 education. We explore the high school experiences, post-secondary educational attainments, and labor market earnings of Massachusetts public school students since the early 2000s, when MERA was fully implemented.

New state-level initiatives, including the passage of the Student Opportunity Act in 2019 and the introduction of the Next-Generation MCAS tests, aim to advance the state's goal of providing all students with the skills and knowledge to thrive in today's complex and changing society. The COVID-19 pandemic has increased awareness of the dramatic inequalities in students' opportunities and schools' resources and underscores the need to re-envision the role of public schools in promoting equity. Doing so requires a robust consideration of the progress of public education in the Commonwealth over the past several decades.

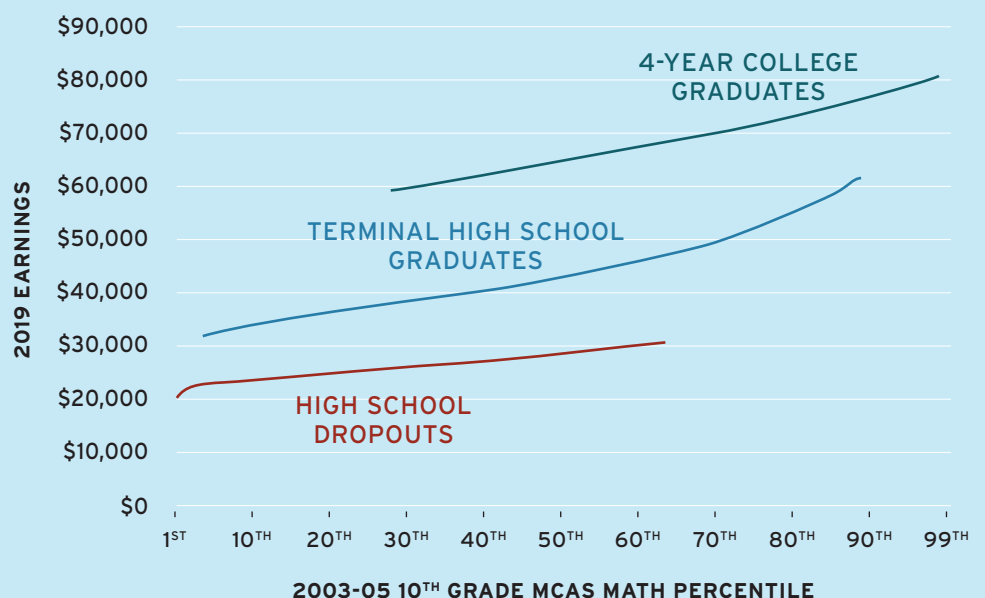
WE HIGHLIGHT FIVE KEY FINDINGS:

1. MCAS scores predict later outcomes.

Scores on the grade 10 MCAS examinations – the last MCAS tests public-school students take in high school and the only ones with high-stakes consequences for students – predict longer-term educational attainments and labor market success, above and beyond typical markers of student advantage. *Figure 1* displays average earnings in 2019 for students with the same level of ultimate educational attainment. Students with higher MCAS mathematics scores go on to have much higher average earnings than demographically similar students who attended the same high school but had lower MCAS scores.

FIGURE 1

Average earnings by MCAS score percentile and attainment, controlling for demographics and high school attended



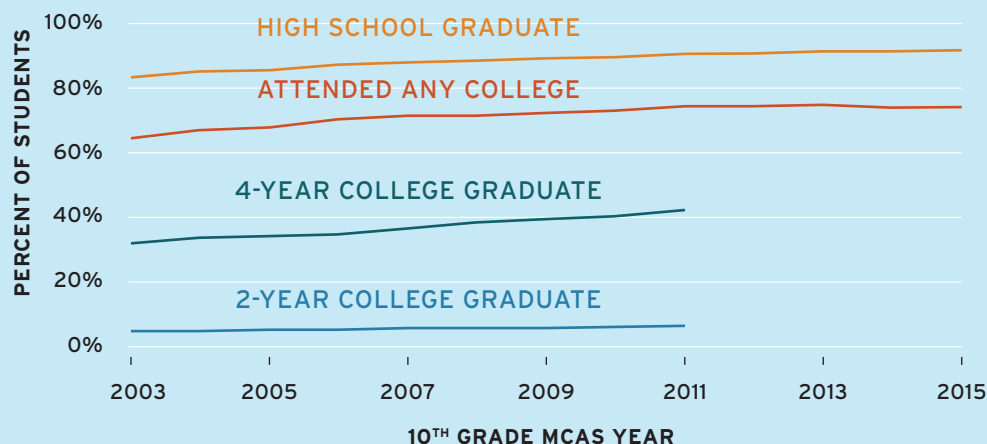
NOTE

We plot earnings for students between the 5th and 95th percentile of the MCAS score distribution for each attainment level.

2. Educational attainments have risen over time.

Since the early 2000s, average educational attainments have increased substantially overall (as shown in *Figure 2*) and for key student groups, including English learners (ELs), low-income students, and those of different races/ethnicities. For instance, seven years after taking the 2011 10th grade MCAS tests, 42% of students in the 2011 test-taking cohort had graduated from a four-year college compared to 32% of test-takers in 2003. These gains came despite demographic shifts that included large increases in the proportions of low-income students and English learners.

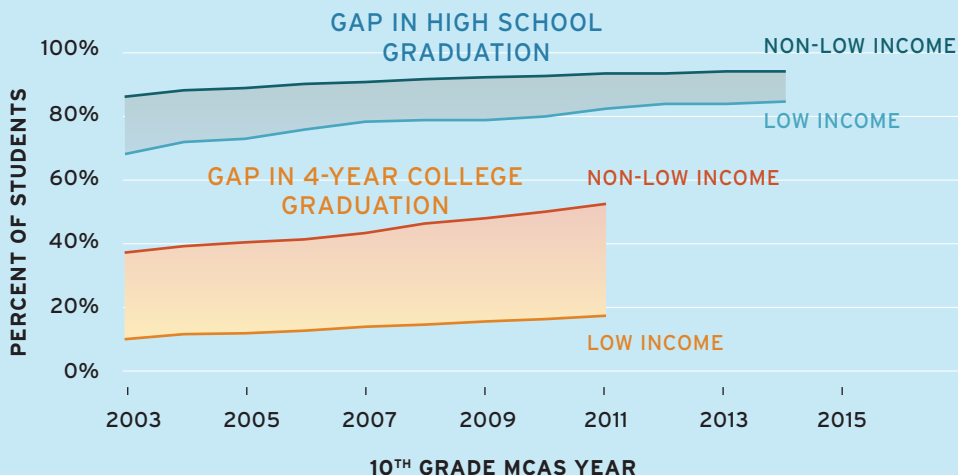
FIGURE 2
Trends in high school and college outcomes



3. Gaps by income and race/ethnicity in four-year college completion have widened.

While income-based gaps in the Commonwealth's high school graduation and college-going rates have narrowed over time, the gap in four-year college graduation rates has widened in recent years. The patterns in *Figure 3* reflect national trends but are cause for concern given the large earnings premium associated with a bachelor's degree.

FIGURE 3
Trends in educational attainment gaps by family income

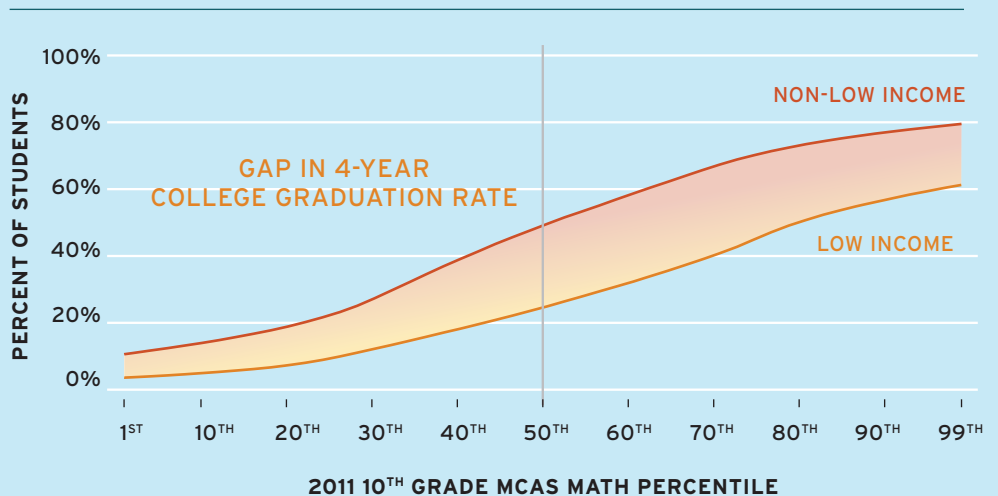


4. Gaps in attainments exist even for students with the same MCAS scores.

The educational attainments of low-income students (as well as English learners, Black students, and Hispanic students) are lower, on average, than those of higher-income students with the same MCAS scores. For example, at the state median score on the 2011 MCAS math examination (marked in *Figure 4*), about half of higher-income students graduated from a four-year college within 7 years, compared to approximately 25% of low-income students.

FIGURE 4

Gap in 4-year college graduation rate by family income and 10th grade MCAS math score percentile (2011 test-takers)



5. Earnings gaps are much smaller for students with the same MCAS scores and attainments.

There are large gaps between the later earnings of students across lines of difference. For example, the median student who grew up in a higher-income family and who took the 10th grade MCAS in 2003-05 earned \$50,000 in 2019, at approximately age 31. In contrast, the median low-income student in this cohort earned 31% less, or about \$38,000. Two-thirds of this gap is

accounted for by differences in students' 10th grade test scores and educational attainments. If we compare students who have the same 10th grade MCAS scores and same educational attainments, the gap in annual earnings between students from low-income families and those from higher-income families is only 10%.

IMPLICATIONS

Taken together, our findings suggest that the public education system in the Commonwealth has made substantial progress over the past two decades but has a long way to go in equalizing opportunities for students from key subgroups. We find inequalities at all points in the Commonwealth's educational pipeline. Closing gaps in high-school performance and postsecondary educational attainments could dramatically reduce current levels of income inequality.

Both the state's public K-12 and higher education systems need to work to ensure that students who want to pursue

post-secondary education have access to college, enter college ready to succeed, and receive the supports necessary during college to leave with a valuable credential. For K-12, improved MCAS scores should follow from better educational opportunities and increases in critical skills. This requires that all students experience high-quality instruction designed to achieve student mastery of core academic and social skills, as opposed to test-taking strategies. For higher education, we note that in-state public colleges have a critical role to play in equipping low-income students with the skills and educational credentials to succeed in the labor market.