



Data Dashboard

Each year, the Rennie Center collects a set of key indicators in our Data Dashboard to provide context on the status of education in the Commonwealth. This data is collected from the MA Department of Early Education and Care; MA Department of Elementary and Secondary Education; MA Department of Higher Education; U.S. Census Bureau; U.S. Department of Education; and other research and policy organizations. As the education sector continues to learn about the impact of the COVID-19 pandemic on students, families, and communities, it is crucial to collect and report relevant data. This year's Data Dashboard tracks a set of 16 state- and local-level indicators grouped into the following major themes:

- **Access:** What do the opportunities to access a high-quality, equitable education look like in Massachusetts?
- **Inputs:** What resources are available to support the shared and individual needs of students at all grade levels?
- **Engagement:** How do students, families, and communities engage with the education system?
- **Outcomes:** What are the social, emotional, and academic outcomes of participating in early childhood through postsecondary education in the Commonwealth?

This resource focuses on what these indicators are measuring, why they matter, and what they can tell us about the education system in Massachusetts. Many of these indicators have been tracked by the Rennie Center for years, and we are utilizing this year's Dashboard to emphasize our commitment to reporting disaggregated, purposeful data after a year where reliable data was difficult to gather due to the pandemic. We are also excited to use the 2022 data supplement as a jumping-off point to refresh our Data Dashboard in the coming year, as we look forward to rolling out new data tools and stories that help all users examine and interpret data on Massachusetts' education system. The indicators we feature will be analyzed year-over-year to stay up-to-date on trends and highlight policy solutions for improving educational access, key inputs, engagement in schools, and equitable outcomes for all of the Commonwealth's students.

ABOUT THIS PROJECT

The Condition of Education in the Commonwealth project is one way the Rennie Center for Education Research & Policy fulfills its mission of producing non-partisan, high-quality, independent research that promotes improvement in public education for all Massachusetts children.

ADDITIONAL COMPONENT

The COE Action Guide builds on the Data Dashboard by examining evidence-based practices, identifying local exemplars, and offering research-informed recommendations for statewide actions that have the potential to address performance gaps and contribute to broad improvement in student outcomes. The report looks at the progress made and the challenges that remain, suggesting strategies for applying lessons learned in order to foster the success of all the Commonwealth's learners.

To explore even more data on the Massachusetts education system, check out our 2022 Action Guide, *Investing in Educators: How Massachusetts Can Support Teachers Through the Pandemic and Beyond*.

ACCESS

In order for the students of the Commonwealth to pursue an equitable, high-quality education, we must address the gaps in different entry points. The following indicators examine how our students are accessing the education system from Pre-K through college.

High-Quality Early Education

WHAT DOES THE DATA SAY?

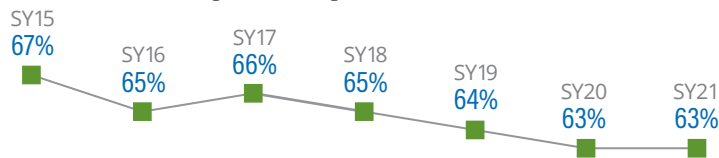
Since 2015, the percentage of children aged 0 to 5 eligible for financial assistance and enrolled in a high-quality early education program has slightly decreased to 63%. Although a majority of children enrolled in these programs in 2020 were identified as an unknown race (54.5%), White (26.8%) and Black (16.4%) children were the next-highest enrolled racial groups.

WHY DOES THE DATA MATTER?

High-quality early education programs yield important benefits for children, including a higher level of academic preparedness, likelihood of high school graduation, and workforce earnings.¹ These programs also provide a safe and welcoming environment that can help support brain development, health, and wellbeing, while mitigating trauma. With a large population of children in the “unknown race” category, it is hard to draw conclusions about who is accessing this care. Strengthening data systems to reflect who is accessing early childhood programs is essential to ensuring that our most marginalized children receive equitable, high-quality care to achieve their future potential.

SUBSIDIZED HIGH-QUALITY EARLY EDUCATION ENROLLMENT

Children Aged 0 to 5 Eligible for Financial Aid, SY15–21



Massachusetts Department of Early Education and Care: data provided by staff

Public School Enrollment

WHAT DOES THE DATA SAY?

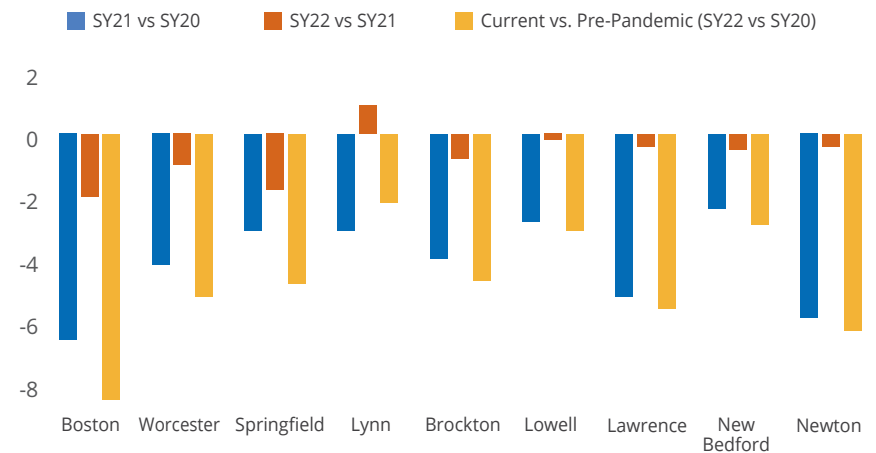
According to a Boston Indicators analysis, the ten largest districts across the state have seen substantial dips in enrollment between SY19–20 and SY21–22. In particular, Boston Public Schools, Newton Public Schools, and Lawrence Public Schools faced a greater than five percent decline in their enrollment since prior to the pandemic.

WHY DOES THE DATA MATTER?

Across the state, families are still grappling with key decisions regarding their children’s enrollment. Economic insecurity, unstable living conditions, and pandemic-related uncertainty may continue to affect families’ choices to delay kindergarten enrollment, move to private schools, or make a larger move to a different city or state. Enrollment declines can carry financial implications, as per-pupil state funding is likely to decrease.

MASSACHUSETTS PUBLIC SCHOOL ENROLLMENT

Percent Change in Total Enrollment in MA Largest School Districts, FY20–22



Ciurczak, P. and Hieronimus, M. “Statewide enrollment declines have leveled out two years into the pandemic, but in Boston declines continue.” Boston Indicators

Enrollment in Massachusetts Public Colleges & Universities

WHAT DOES THE DATA SAY?

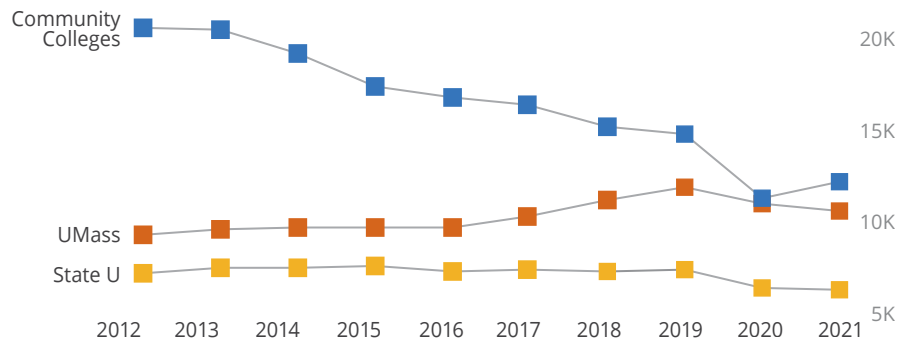
According to the MA Department of Higher Education, enrollment among first-time community college students reversed a decreasing trend by growing 8% over the past year, while UMass and state university enrollment decreased by 3.5% and 2.9%, respectively. Overall across all three institution types, first-time enrollment fell by 16.2% in 2020 and increased by 1.2% in 2021, due to the more significant increase in first-time community college enrollees. Unfortunately, among non-first-years, enrollment fell across each of the three institution types.

WHY DOES THE DATA MATTER?

COVID-19 has undoubtedly caused a decrease in public college and university enrollment since its onset. Decreasing enrollment may have been the result of income loss, childcare needs, illness, and lack of technology needed for remote studies. A promising trend is the recent uptick in community college enrollment, since these institutions tend to serve low-income, first-generation, older, or working students, as well as student-parents. Associate degrees can open doors to four-year degrees, higher earned wages, and greater economic security.²

MASSACHUSETTS PUBLIC COLLEGES & UNIVERSITIES ENROLLMENT

By Institution Type, First-Time Degree-Seeking Candidates, 2012–2021



Massachusetts Department of Higher Education:
2021 Early Enrollment Report for MA Public Colleges & Universities

INPUTS

People, time, and money are vital resources that keep the Massachusetts education system running. The indicators in this section delve into the status of these inputs over the past year. The 2022 Condition of Education Action Guide covers even more data points around some of the system’s most important inputs: educators.

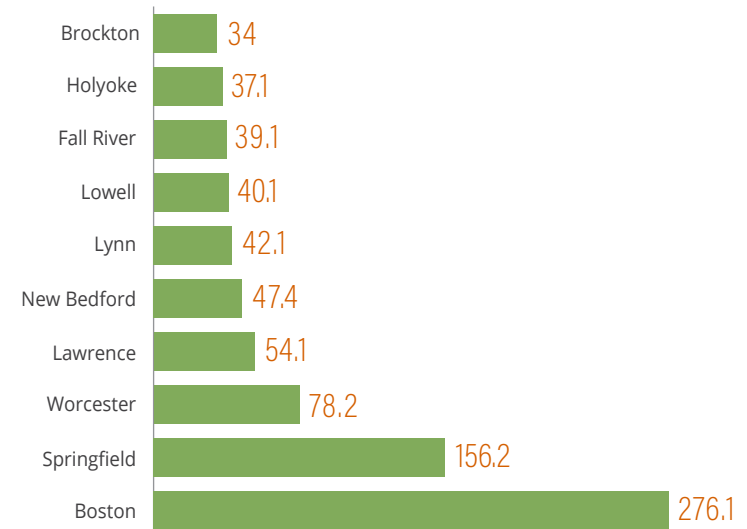
ESSER Funding

WHAT DOES THE DATA SAY?

The U.S. Department of Education approved the state’s American Rescue Plan Elementary and Secondary School Emergency Relief (ARP ESSER) plan and distributed its remaining ARP ESSER funds in July 2021, while districts submitted their Use of Funds Plans in October. Boston is poised to receive almost \$280 million dollars of ESSER funds, with many Gateway City districts receiving significant funding as well.

AMERICAN RESCUE PLAN ALLOCATIONS

Estimated Allocation in Millions to Top 10 MA Districts Receiving ARP ESSER Relief, April 2021



Massachusetts Budget & Policy Center; MA Department of Revenue, Division of Local Services

WHY DOES THE DATA MATTER?

Funding is a key concern of school districts across the state, especially as they work toward pandemic recovery. Additional funds can increase equitable learning experiences by providing more resources for staffing and labor needs, infrastructure updates, teaching and learning initiatives, health and wellbeing services, accelerated learning strategies, and more. An influx of dollars intended to lessen the pandemic's impact and strengthen a district's overall resources has the potential to improve student outcomes in diversified ways. See the box below for more on the EdImpact Research Consortium, a new initiative designed to examine the use and impact of ESSER funds.

Ed Prep Enrollment

WHAT DOES THE DATA SAY?

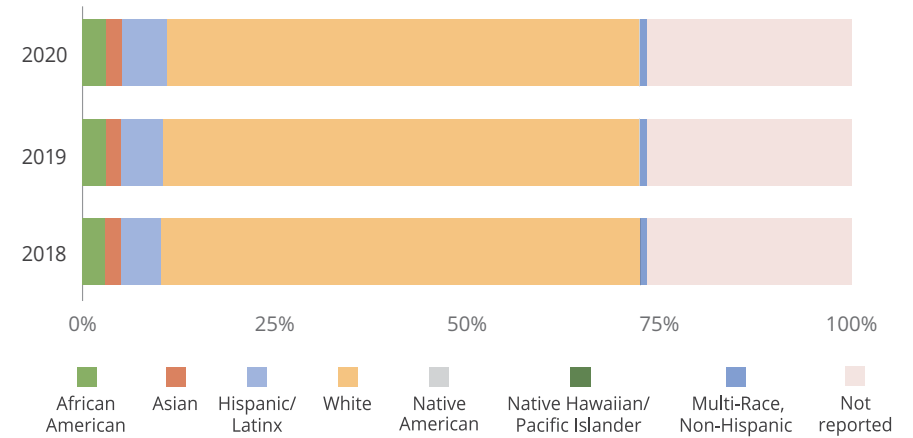
Educator preparation program enrollment continues to show overwhelming White enrollment trends. Hispanic/Latinx enrollment is the highest it has been since 2012, at 5.8% of all teacher candidates. However, the large proportion of unreported race data makes it difficult to draw any conclusions about trends over the past few years. According to the most recent data (from 2017), educator preparation faculty have also remained mostly White, at 86.8% of faculty.

WHY DOES THE DATA MATTER?

Making pathways into educator positions more accessible to (and utilized by) people of color will have a positive influence on students of color, who benefit from learning from someone who looks like them. Hiring faculty for these programs who represent diverse cultural backgrounds and model relevant practices to students would also help promote a more culturally responsive education system.

EDUCATOR PREPARATION ENROLLMENT

By Race/Ethnicity, 2018–2020



Massachusetts Department of Elementary and Secondary Education: *Educator Preparation Candidate Enrollment by Race/Gender Report*



Partnerships like the EdImpact Research Consortium, a new initiative of the Rennie Center, CERES Institute for Children & Youth at Boston University Wheelock College, and Education Resource Strategies (ERS), are working to support evidence-based spending, analyze the impact of COVID recovery funds, and provide a platform for the field to learn from one another and reflect on progress made.

ENGAGEMENT

Students can disengage from school due to a multitude of factors, including poverty, disproportionate disciplinary action, traumatic events, housing insecurity, family responsibilities, and more. Identifying who is engaged in their education and who is disengaging, while examining existing gaps in support, can ensure that all students across the state have an inclusive and accommodating academic experience.

Out-of-School Suspension

WHAT DOES THE DATA SAY?

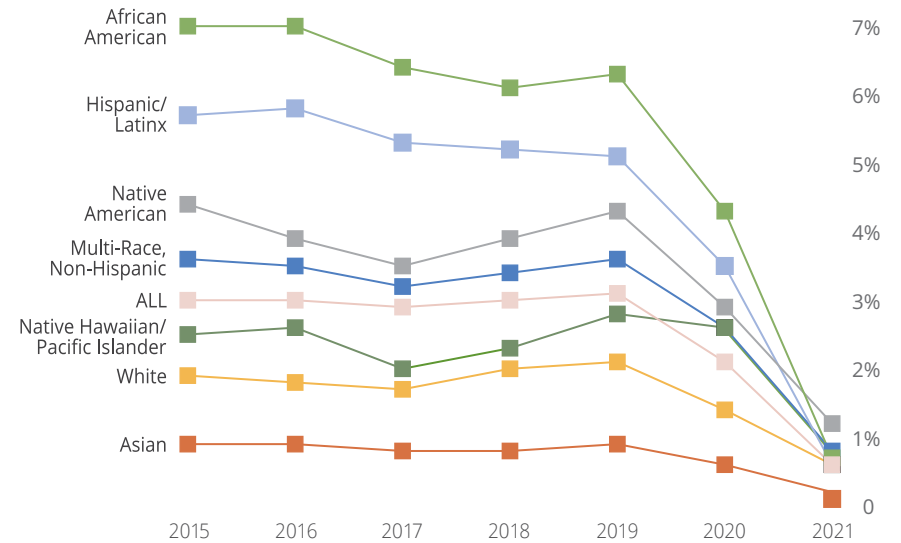
The overall out-of-school (OOS) suspension rate, as well as disaggregated rates by race, show a decrease in OOS suspension starting in 2019. This trend is to be expected, as students moved from in-person to remote or hybrid classes with reduced opportunities for disciplinary actions. Prior to the pandemic, White, Asian, and Native Hawaiian/Pacific Islander students experienced OOS suspension at a lower rate compared to all students, while African American (6.2%), Hispanic/Latinx (5%), and Native American (4.2%) students faced the highest rates of OOS suspension. In 2021, Native American faced the highest rate of OOS suspension at 1.1%.

WHY DOES THE DATA MATTER?

While we've seen declining trends over the past two years, this may not signal a more equitable disciplinary experience, as students spent less time learning in person. In the current school year, the effects of the pandemic may cause challenges related to behavior regulation and socialization that impact disciplinary rates. Research has consistently shown that exclusionary discipline policies, including out-of-school suspension, produce negative impacts for students, particularly Black and Latinx students and students with disabilities. Students lose instructional time when they are involved in disciplinary procedures and can become less engaged and trusting of adults. Additionally, students' future success is impeded with even one suspension, as students suspended in middle or high school are significantly less likely to graduate on time and more likely to drop out.³

OUT-OF-SCHOOL SUSPENSION RATE

By Race/Ethnicity, 2015-2021



Massachusetts Department of Elementary and Secondary Education: *Student Discipline Data Report*

Churn Rate

WHAT DOES THE DATA SAY?

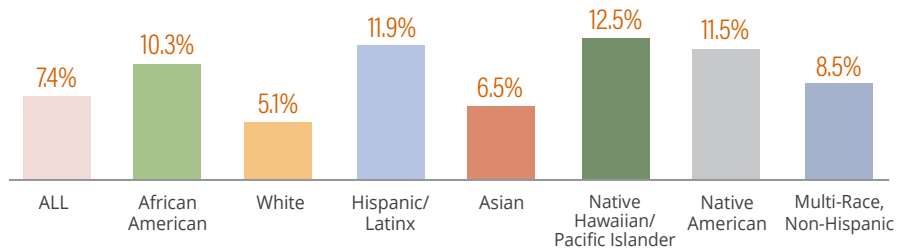
Native Hawaiian/Pacific Islander, Hispanic/Latinx, Native American, and African American students all had a churn rate (the percent of students transferring in or out of a school within a school year) of over 10% in 2021. Since 2015, the churn rate has been trending downwards for most groups; however, in 2021 there was an uptick for White (+0.9%), Native Hawaiian/Pacific Islander (+0.9%), and Multi-Race, Non-Hispanic (+0.7%) students compared to 2020.

WHY DOES THE DATA MATTER?

Among the most common causes of student mobility (churn) are moves due to financial insecurity or the attainment or loss of parent/guardian jobs. Students in foster care and homeless students also face greater chances of changing schools several times across their schooling experience. Churn can lead to a lower level of engagement with school, poorer grades, and higher risk of drop-out. For educators, churn can mean fewer opportunities for forming relationships with students and building upon previous instruction.

Therefore, identifying mobile students in Massachusetts should be a proactive task. Schools can partner with local social and community services to ensure that students transferring in or moving out of districts are receiving the supports they need. Connecting families with free or low-cost academic acceleration supports, like tiered interventions, tutoring, or after-school academies, can ensure that a move doesn't negatively impact a student's future outcomes.

CHURN RATE
By Race/Ethnicity, 2021



Massachusetts Department of Elementary and Secondary Education: *Mobility Rates Report*

Opportunity Youth

WHAT DOES THE DATA SAY?

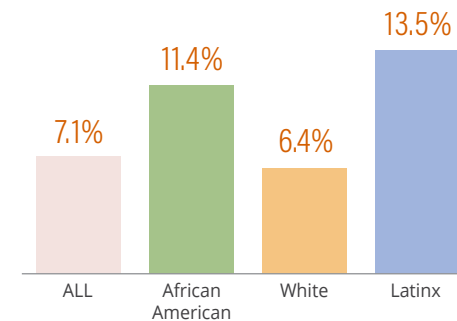
There is no new data available from the 2020 American Community Survey with which to calculate the percentage of opportunity youth (OY). Last year's analysis found that the percentage of OY in Massachusetts, defined as 16- to 24-year-olds neither in school nor employed, decreased from 9.4% in 2012 to 7.1% in 2017 (the last year for which we have disaggregated data). Rates of disconnection were found to be disproportionately high among African American and Hispanic/Latinx youth.

WHY DOES THE DATA MATTER?

Our 2021 analysis rings true this year: zooming in on who makes up the opportunity youth population can allow for communities, school systems, and institutions of higher education to drive targeted efforts for engagement, especially as the pandemic continues to disproportionately impact communities of color, low-income families, and those in hourly-wage jobs.

OPPORTUNITY YOUTH

By Race/Ethnicity, 2017



U.S. Census Bureau: American Community Survey; Tabulations prepared by staff at the Boston Private Industry Council

OUTCOMES

Evaluating the outcomes of our current education system with a specific eye towards disaggregation can demonstrate the effectiveness of our educational improvement efforts. Understanding the meaning of the following indicators can guide efforts to dismantle opportunity and achievement gaps for our most marginalized students, as well as illuminate our overall performance as a state.

MCAS (3rd Grade ELA, 8th Grade Math)

WHAT DOES THE DATA SAY?

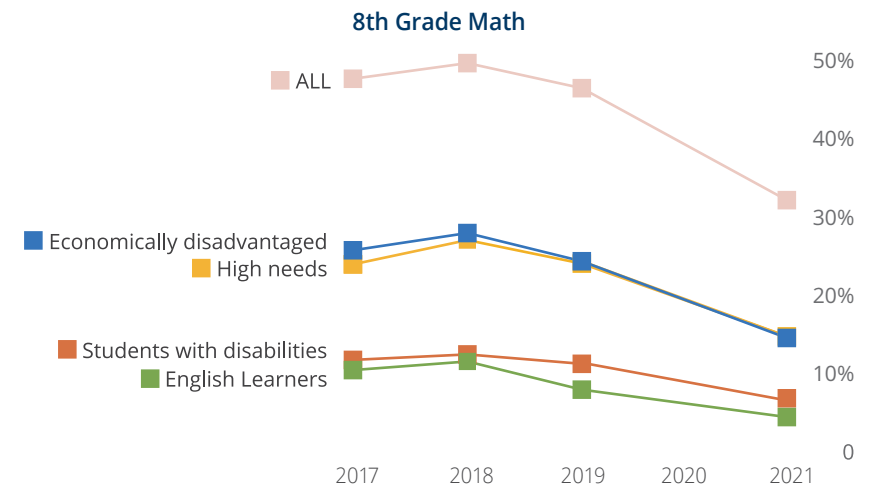
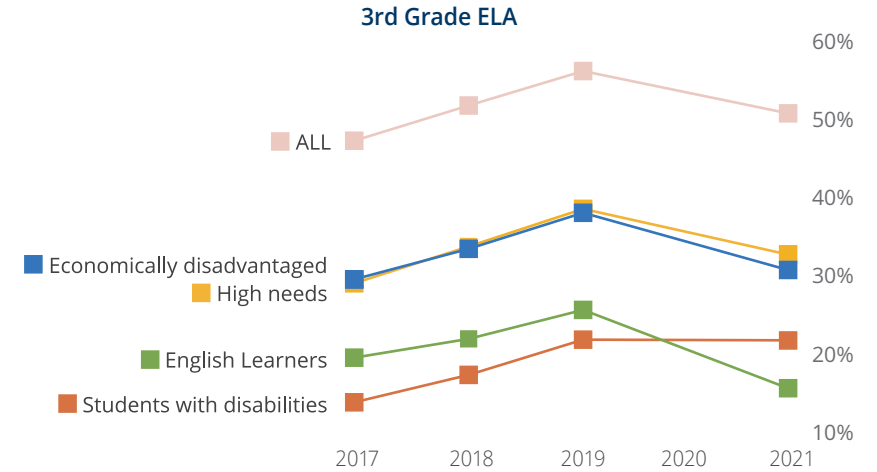
Though no 2020 MCAS tests were administered, 2021 scores show a decrease in students meeting or exceeding expectations by at least 5% for all special populations except students with disabilities. From 2017 to 2019, 3rd grade ELA MCAS scores meeting or exceeding expectations were trending upward for all students and special populations. However, the impact of pandemic-related unfinished learning has contributed to the more recent decrease in scores. Meanwhile, 8th grade math MCAS scores continued a downward trend from 2018.

WHY DOES THE DATA MATTER?

Unfinished learning due to COVID-19 is clear in the results of MCAS testing for 3rd and 8th graders. This dip in achievement points to weakening standards acquisition and, in many cases, widening gaps between student sub-groups. English Learners have the largest gap in both 3rd grade ELA and 8th grade math performance compared to all subgroups. These outcomes are predictors of future lost learning opportunities and can lead to significant inequities at the postsecondary level and in the adult workforce.

MASSACHUSETTS COMPREHENSIVE ASSESSMENT SYSTEM (MCAS) SCORES

By Special Population, Meeting or Exceeding Expectations, 2017–2021



Massachusetts Department of Elementary and Secondary Education:
Next Generation MCAS Achievement Results

MassCore Completion

WHAT DOES THE DATA SAY?

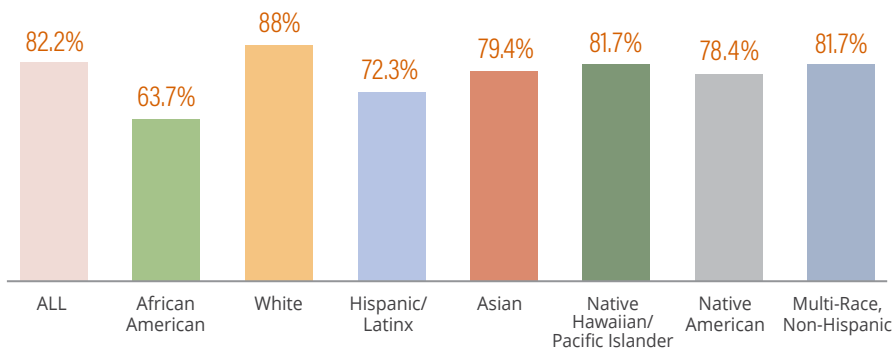
Although 82% of all public high school graduates completed the MassCore program of studies (which aims to ensure preparation for college and career), those numbers were much lower among English Learners (61%) and African American students (63.7%).

WHY DOES THE DATA MATTER?

MassCore is a comprehensive program of studies that can prepare students for post-high school life. Lower completion rates can leave students unprepared for the transition to college or career, impacting their long-term socioeconomic stability and growth. Identifying barriers to access and completion for the identified groups (for instance, by determining whether districts serving large proportions of students of color have adopted MassCore as a graduation requirement) is the first step to raising completion rates.

MASSCORE COMPLETION RATE

By Race/Ethnicity, 2020



Massachusetts Department of Elementary and Secondary Education: *MassCore Completion Report*

High School Graduation Rate

WHAT DOES THE DATA SAY?

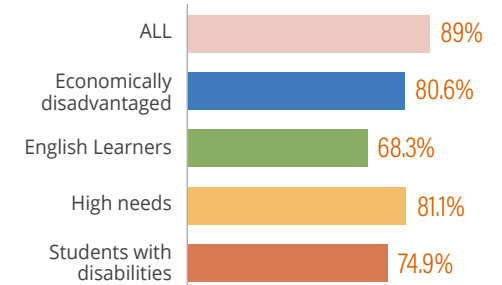
Compared to the four-year graduation rate of all students (89%) in 2020, English Learners face the greatest discrepancy in achieving this outcome, with a graduation rate of 68.3%. In fact, all special population groups are graduating at lower rates compared to their peers.

WHY DOES THE DATA MATTER?

High school graduation is an important stepping stone for future workforce and financial success. Barriers to completing high school within four years may be academic, physical, or systemic issues that stem from poverty, limited English proficiency, and a lack of cultural/linguistic supports, among other needs. Engaging students with culturally relevant, tailored, and relationship-focused instruction and care can create a more inclusive environment that can be conducive to students' success.

4-YEAR HIGH SCHOOL GRADUATION RATE

By Special Population, 2020



Massachusetts Department of Elementary and Secondary Education: *Cohort 2020 Graduation Rates Report*

Developmental Coursework Enrollment

WHAT DOES THE DATA SAY?

Over the past six years, students enrolled in at least one developmental course (a postsecondary course intended to develop skills that may not have been solidified in high school) has steadily decreased for all races. African American first-year students (22.8%) have had a higher enrollment rate in these courses than other student groups for the past 3 years, though the rate is still trending downwards.

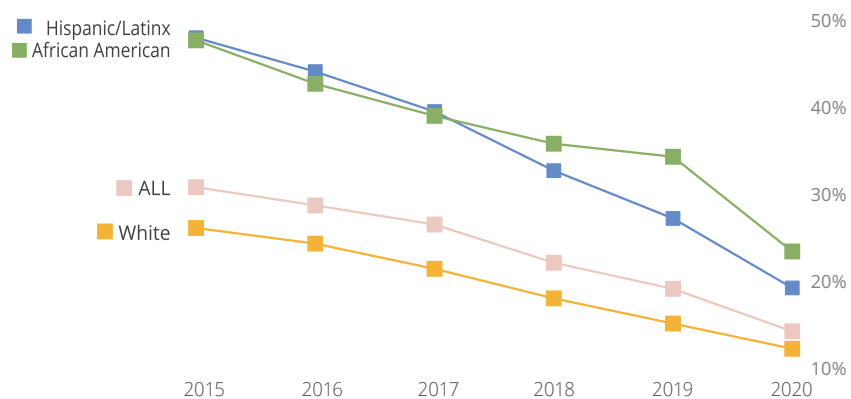
WHY DOES THE DATA MATTER?

Developmental coursework can add cost and time to students' academic workload upon entering a postsecondary institution. Oftentimes, students don't earn credits toward their degree in developmental courses, adding to their financial burden while

simultaneously lengthening their path to graduation. Students may be discouraged or less likely to complete their course load and their studies after completing developmental work. Developmental education enrollment rates in Massachusetts are higher for students of color. Additionally, both advanced coursework and MassCore completion rates are lower among Hispanic/Latinx and African American high school students compared to their White peers. Increasing enrollment in advanced coursework in high school may help students find greater success and avoid developmental courses at the postsecondary level.

DEVELOPMENTAL COURSEWORK ENROLLMENT

By Race/Ethnicity, 2015–2020



Massachusetts Department of Higher Education: data provided by staff; see appendix for additional information regarding this indicator

UMass & State University Graduation Rate/ Six-Year Community College Success Rate

WHAT DOES THE DATA SAY?

For the Fall 2014 cohort of first-time, full-time bachelor's degree-seeking students, the six-year graduation rate from a state university was 61.3%. Among this cohort, the gap in graduation rates between White and African American students was 10.8%, and the gap between White and Hispanic/Latinx students was 12.5%. The Fall 2014 cohort graduation rate from the University of Massachusetts system was higher at 70.4%. However, the gaps by race were also greater, with a 17.6% gap in the graduation rates of White and African American students, and a 19.2% gap in the graduation rates of White and Hispanic/Latinx students.

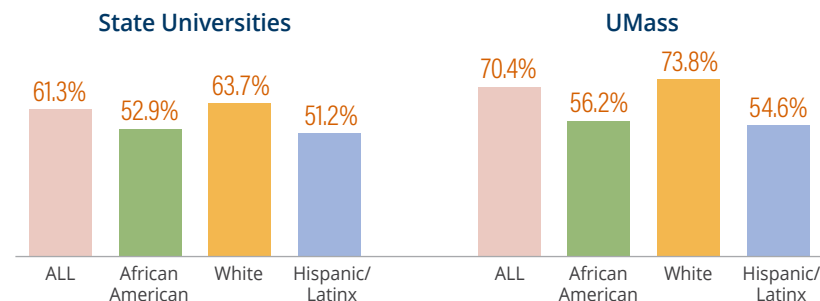
Among community college students who enrolled in Fall 2014, the percentage graduating, transferring, attaining 30 credits, or remaining enrolled after six years (known as the success rate) was 63.9% for all students. White and African American students are more likely to achieve one of these outcomes than their Hispanic/Latinx (60.3%) peers.

WHY DOES THE DATA MATTER?

Students of color in state universities, the UMass system, and community colleges graduate or achieve success at lower rates than their White peers. Recognizing the disproportionate toll that the pandemic has had on communities of color, and the impact that a college degree can have on earned wages, the state's public colleges and universities can look to address barriers that students face to pursuing and attaining a college degree.

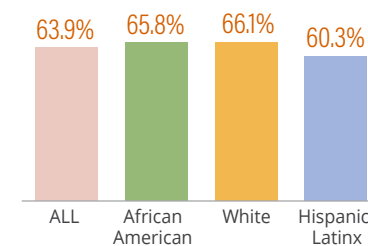
6-YEAR GRADUATION RATE

By Institution Type & Race/Ethnicity, Fall 2014 Cohort



6-YEAR COMMUNITY COLLEGE SUCCESS RATE

By Race/Ethnicity, Fall 2014 Cohort



U.S. Department of Education, Integrated Postsecondary Education Data System; Massachusetts Department of Higher Education: data provided by staff

ENDNOTES

1. National Education Association. (n.d.) *Early childhood education*. www.nea.org/student-success/smart-just-policies/funding-public-schools/early-childhood-education
2. Dawson, R.F., Kearney, M.S., and Sullivan, J.X. (2021) Why expanded student supports can improve community college outcomes and boost skill attainment. *Brookings Institution: Brown Center Chalkboard*. www.brookings.edu/blog/brown-center-chalkboard/2021/04/07/why-expanded-student-supports-can-improve-community-college-outcomes-and-boost-skill-attainment/
3. Boccanfuso, C., & Kuhfeld, M. (2011). *Multiple responses, promising results: Evidence-based, nonpunitive alternatives to zero tolerance* (Publication #2011-09). Child Trends. www.childtrends.org/wp-content/uploads/2011/03/Child_Trends-2011_03_01_RB_AltToZeroTolerance.pdf
4. Sparks, S.D. (2016, August 11). *Student mobility: How it affects learning*. Education Week. www.edweek.org/leadership/student-mobility-how-it-affects-learning/2016/08

APPENDIX

The definitions and notes below are compiled from the datasets featured in this deliverable.

- **High-Quality Early Education Enrollment:** Percent of children aged 0–5 eligible for financial assistance administered through the Massachusetts Department of Early Education and Care and enrolled in high-quality early education programs.
- **Massachusetts Public School Enrollment:** The number of PK–12th grade children enrolled in a public school in Massachusetts.
- **Enrollment in Massachusetts Public Colleges and Universities:** The number of first-time degree-seeking students enrolled in a Massachusetts community college, UMass system, or state university.
- **ESSER Funding:** The estimated allocation in millions of dollars of American Rescue Plan Elementary and Secondary School Emergency Relief to the top 10 highest-allocated districts in Massachusetts.
- **Educator Preparation Enrollment:** Educator preparation program enrollment by candidates' gender and race. Information is reported by the educator preparation program provider for the academic year listed (September 1st–August 31st).

- **Out-of-School Suspension Rate:** Percent of enrolled students in grade 1 through special education beyond grade 12 who received one or more out-of-school suspensions.
- **Churn Rate:** Percent of all students transferring into or out of a school within a school year.
- **Opportunity Youth:** Percent of 16–24 year olds in Massachusetts who are both out of school and out of work. These youth, often referred to as “disconnected” or “opportunity” youth, may or may not have completed a high school diploma or General Educational Development (GED) credential. They also may or may not have enrolled in and attended a postsecondary education institution at some point.
- **Massachusetts Comprehensive Assessment System:** Percent of all students in grade 3 scoring “meeting” or “exceeding” on the English Language Arts Next Generation MCAS; percent of all students in grade 8 scoring “meeting” or “exceeding expectations” on the Mathematics Next Generation MCAS.
- **MassCore Completion Rate:** Percentage of public high school graduates who complete the MassCore program of studies. The Massachusetts High School Program of Studies (MassCore) recommends a comprehensive program of studies for students to complete before graduating from high school in order to be prepared for college and career.
- **4-Year High School Graduation Rate:** Percent of students who graduate with a regular high school diploma within four years.
- **Developmental Coursework Enrollment:** Percent of all first-time, full-time, degree-seeking students who graduated from a Massachusetts public high school the previous year and who enrolled in at least one developmental (remedial) course when enrolling at a Massachusetts public institution of higher education (a community college, state university, or University of Massachusetts).
- **6-Year Graduation Rate:** Percent of all first-time, full-time, bachelor's degree-seeking students graduating from the University of Massachusetts or a state university within six years of initial enrollment.
- **6-Year Community College Success Rate:** Percent of students who graduate, transfer, attain 30 credits, and/or remain enrolled within six years after enrolling at a community college as either first-time or transfer students.

NOTES

Comparing indicators: While comparing indicators, please keep in mind that different data sources use different definitions of student subgroups and certain data cannot be directly compared to data in prior years. Also note that some data is not available for each year or each student group.

Developmental Coursework: Understanding the trends in developmental enrollment levels requires a careful look at specific initiatives that may explain the decline.

- **Alternative Assessments:** Institutions may use high school GPA, in-house exams, or high school transcript analysis to determine course placement.
- **Math Pathways:** A student's first college math requirement may be linked to their major (e.g., a liberal arts major may take statistics, while a STEM major may take calculus as their gateway math course).
- **Corequisite Structures:** These structures may combine college-level coursework with additional supports that allow a student to enroll directly into a college-level course.

The implementation and expansion of these policies complicate longitudinal analyses of college-level work readiness and successful completion of this work over time. Given this, it is difficult to interpret changes in developmental enrollment over time. The Massachusetts Department of Higher Education is taking strides to analyze these policies and will be able to provide more reliable analyses of readiness for, and the completion of, entry-level math and English in the future.

Economically Disadvantaged: As a result of the Student Opportunity Act, the MA Department of Elementary and Secondary Education has developed a new income status that takes into account the eligibility of students up to 185% of the Federal Poverty Level (FPL) for the purpose of determining Chapter 70 aid. This new metric, economically disadvantaged, is differentiated from the old "low income" measure, and it is used to report data from all schools and districts. The new measure is based on a student's participation in one or more of the following state-administered programs: the Supplemental Nutrition Assistance Program (SNAP); the Transitional Assistance for Families with Dependent Children (TAFDC); the Department of Children and Families' (DCF) foster care program; and MassHealth (Medicaid). These shifts are likely to contribute to a reported increase in students defined as economically disadvantaged statewide.