

Trends in Education and Workforce Indicators for Boston Youth and Young Adults, 2006 to 2016

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INTRODUCTION

In the past ten years, Boston has improved educational outcomes for its high school students and recent graduates. This brief highlights trends over the past decade (2006 to 2016) on five education and workforce indicators. These indicators track the progress made on graduating students from high school and transitioning them into postsecondary education and the workforce. For each indicator, the trends over the past decade are described with the findings disaggregated for gender and race-ethnic groups. The tracking of performance on these measures provides important data to the city's collective impact initiatives focus on dropout prevention and recovery, college completion, and opportunity youth. These initiatives have made improvements on these indicators a priority. The key findings on the overall trends over the past decade include:

- **Declining high school dropout rates:** From the 2005-06 school year to 2015-16, the Boston Public Schools (BPS) high school dropout rate has been halved, declining from 9.4% to 4.5%. Over the last four school years, there have been 823 dropouts on average, down from 1,936 in 2005-06.
- **Increasing high school graduation rates:** The four-year high school graduation rate increased from 59.1% in 2006 to 72.4% in 2016, a 13 percentage point gain. The five-year graduation rate for the 2015 cohort reached 76.0%. Both the four-year and five-year rates for the most recent cohorts available represented historic highs for the district.
- **Rising college enrollment rates:** The percentage of high school graduates attending an institution of higher education within 16 months of high school increased by over 10 percentage points from 61.2% for the BPS Class of 2006 to 71.6% for the BPS Class of 2014, the most recent class year available.
- **Six-year college completion rates of BPS graduates climbing:** The six-year college completion rate of BPS Class of 2009 graduates, who first enrolled in college in the immediate year after graduation, increased to 51.3%, up nearly 10 percentage points from the BPS Class of 2000.
- **Fewer opportunity youth:** The number or percent of 16 to 24 year olds residing in the city of Boston who neither are in school nor employed declined from its peaks reached during the 2008-09 recession and weak recovery.

Progress has been made on all five indicators. However, this brief reveals wide gender and race-ethnic gaps persist for each indicator. White and Asian students graduate high school in four years at rates 13 to 22 points above their Black and Hispanic/Latino peers. On the measure of college enrollment, the gaps between Asian and White students and Black and Hispanic/Latino students range from 9 to 14 percentage points. For those that enroll in college during the first year after high school, college completion rates range from a low of 40% to 42% for Black and Hispanic/Latino youth to a high of 75% for Asian BPS graduates. While these gaps persist, the race-ethnic gaps have narrowed, particularly for high school dropout and graduation rates. The challenges over the next decade are to continue to make progress on each indicator while closing gender and race-ethnic gaps.

EDUCATION ATTAINMENT AND WORKFORCE INDICATORS DEFINITIONS

The first four indicators in this brief are for students from the Boston Public Schools district (BPS). These educational attainment indicators influence the fifth indicator, a citywide measure of disconnection from school and employment, derived from the U.S. Census Bureau's American Community Surveys. The measures are disaggregated by gender and race-ethnic group. Increases in high school graduation, college enrollment, and college completion rates should lead to lower disconnection rates of Boston's young adults over time. The four race-ethnic groups are defined how they are tracked by BPS; this brief focuses on the four major race-ethnic groups in Boston. Below is a definition for each indicator.

BPS high school dropout number and rate: The number and percent of students who left high school without transferring to another school system or graduating.

Four-year and five-year cohort high school graduation rates for BPS: The percentage of first time 9th graders who graduated high school in four years or five years.

College enrollment rate of BPS graduates: The percentage of high school graduates attending an institution of higher education within 16 months of graduating high school.

Six-year college completion rates of BPS graduates who enrolled in college: The percentage of BPS graduates who enrolled in a college or university the first fall or spring after graduating high school and complete a postsecondary degree or certificate within six years.

Number and percent of opportunity youth in Boston: The number or percent of 16 to 24 year olds residing in the city of Boston who are neither in school nor employed at the time of being surveyed. This is the most common measure of disconnection.

BOSTON PUBLIC SCHOOLS OVERVIEW

Four of the five indicators in this brief are outcomes for BPS students and graduates. The district has a diverse student population. In 2016-17, 55,843 students enrolled in BPS, which is 74% of school-aged children who live in Boston. Of them, 17,162 enrolled in grades 9-12. Black and Hispanic/Latino students account for 78% of the student population. Nearly one in every two students speaks a language other than English at home. One in five students have a disability.

BPS student demographics

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|---|---|
| <ul style="list-style-type: none">▪ 42% Hispanic/Latino▪ 35% Black▪ 14% White▪ 9% Asian▪ <1% Other/multiracial | <ul style="list-style-type: none">▪ 45% First language not English▪ 30% English learners▪ 20% Students with disabilities (students with an IEP)▪ 6% English learners with disabilities |
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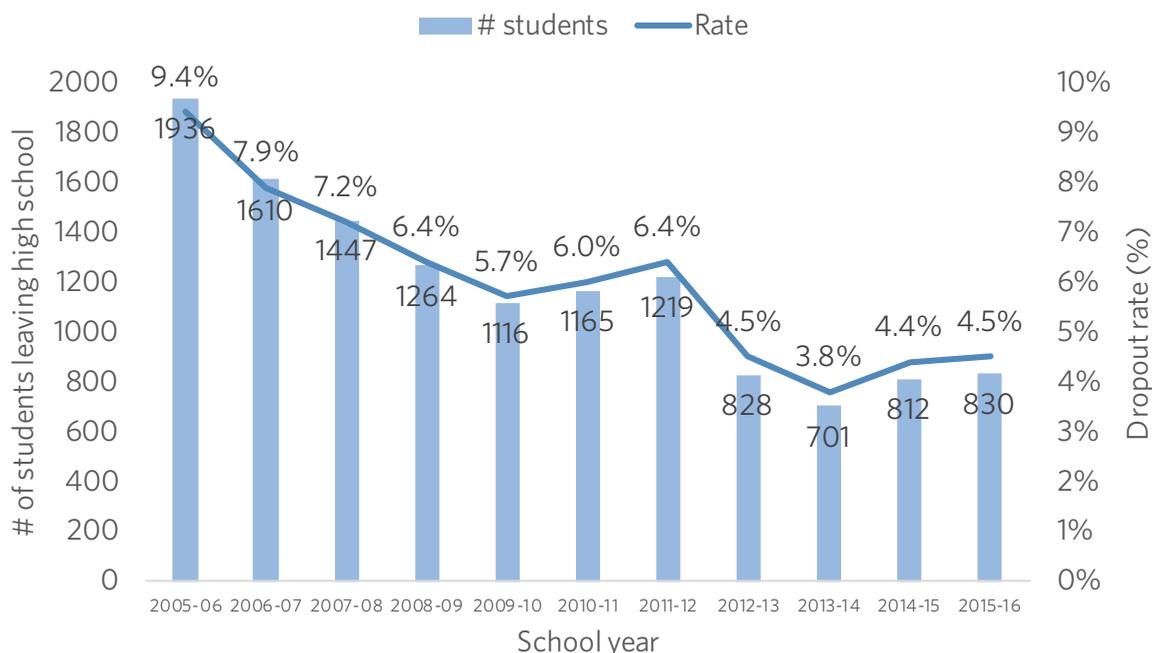
Source: Boston Public Schools

DECLINING HIGH SCHOOL DROPOUT RATES

Over the past decade, state and local policymakers, educators, business leaders, and non-profit organizations in Massachusetts have brought increased attention and resources to decreasing the high school dropout rate and raising 4-year and 5-year graduation rates. The BPS reports the annual high school dropout rate and the number of students who leave high school each school year. These reports allow for tracking trends over time and provide disaggregated results for student subgroups.

In the 2005-06 school year, the BPS high school dropout rate reached 9.4%, its highest rate since the early 1990s. Since 2005-06, the dropout rate declined sharply, falling to an all-time low of 3.8% in 2013-14, before a slight uptick to 4.5% for the past two school years (2014-15, and 2015-16). Over the past decade, the dropout rate fell by more than half from 9.4% to 4.5% in 2015-16 (Chart 1).

Chart 1: BPS annual high school dropout rate and number of students dropping out, 2006 to 2016



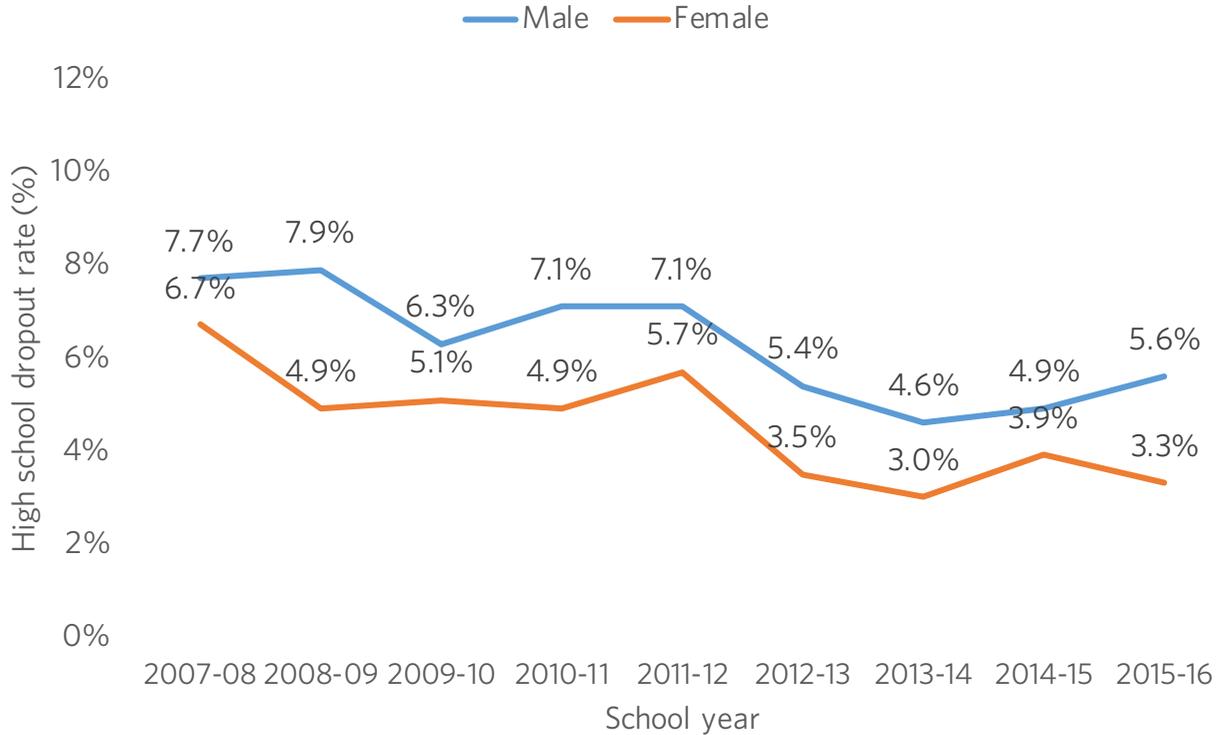
Source: Boston Public Schools

The decrease in dropout rates translates into a 57% decrease in the number of young people who left high school without a diploma from 1,936 in 2005-06 to 830 in 2015-16 (Chart 1). Over the past four years, 823 young people, on average, are dropping out of high school.

Since 2005-06, the dropout rate has decreased for all student groups (Charts 2 and 3). Hispanic/Latino students had an 11% dropout rate in 2005-06, which has decreased by 54% to 5% in 2015-16; Black students had a 10% dropout rate, which has decreased by 51% to 4.9%; and White students had a 7.8% dropout rate that decreased by 51% to 3.8%. In 2015-16, there was a 3.8 percentage point gap between the highest dropout rate of 5% for Hispanic/Latinos and the lowest of 1.2% for Asians.

Although all groups are faring better today, there are substantial differences in dropout rates across student subgroups. In 2015-16, males had higher dropout rates than females (5.6% to 3.3%) and there was a 3.8 percentage point difference between the highest dropout rate of 5.0% for Hispanic/Latinos and the lowest dropout rate of 1.2% for Asian students. This is down from an eight percentage point gap between the highest dropout rate of 11% for Hispanic/Latino students and the lowest dropout rate of 3% for Asian students in 2005-06 (Chart 3).

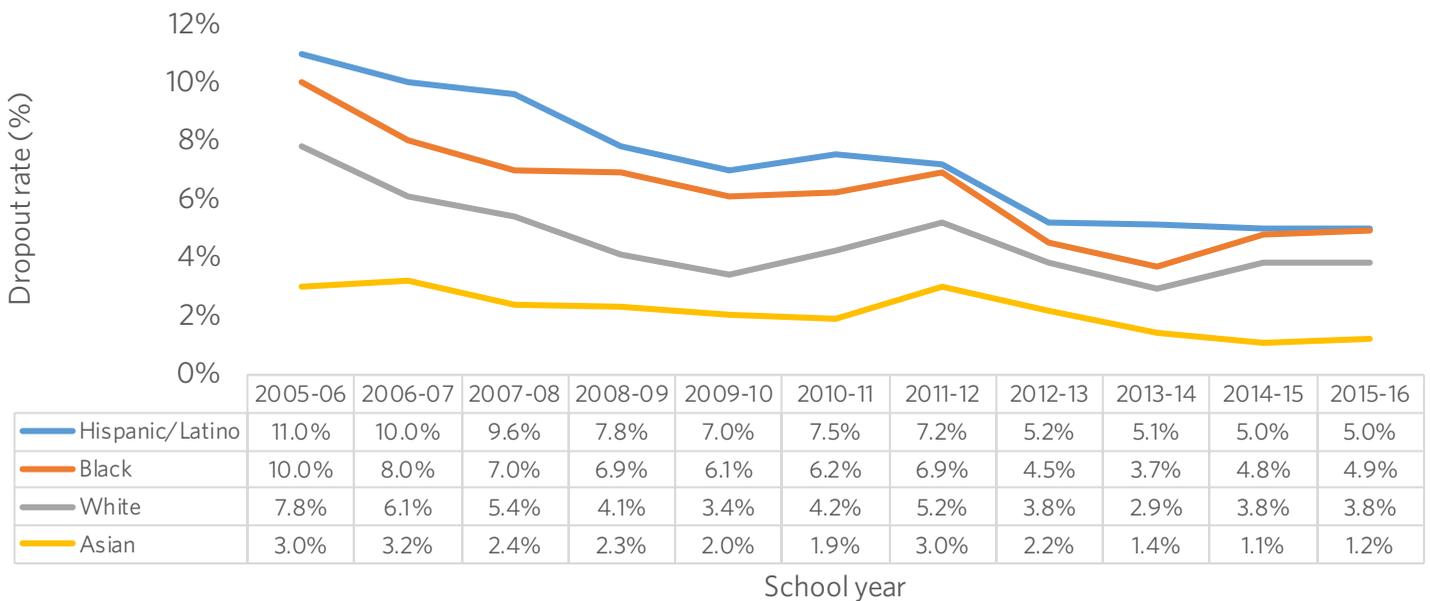
Chart 2: BPS annual high school dropout rate by gender, 2007-08 to 2015-16



Note: data are unavailable for 2005-06

Source: Boston Public Schools

Chart 3: BPS annual dropout rate by race-ethnic group, 2005-06 to 2015-16

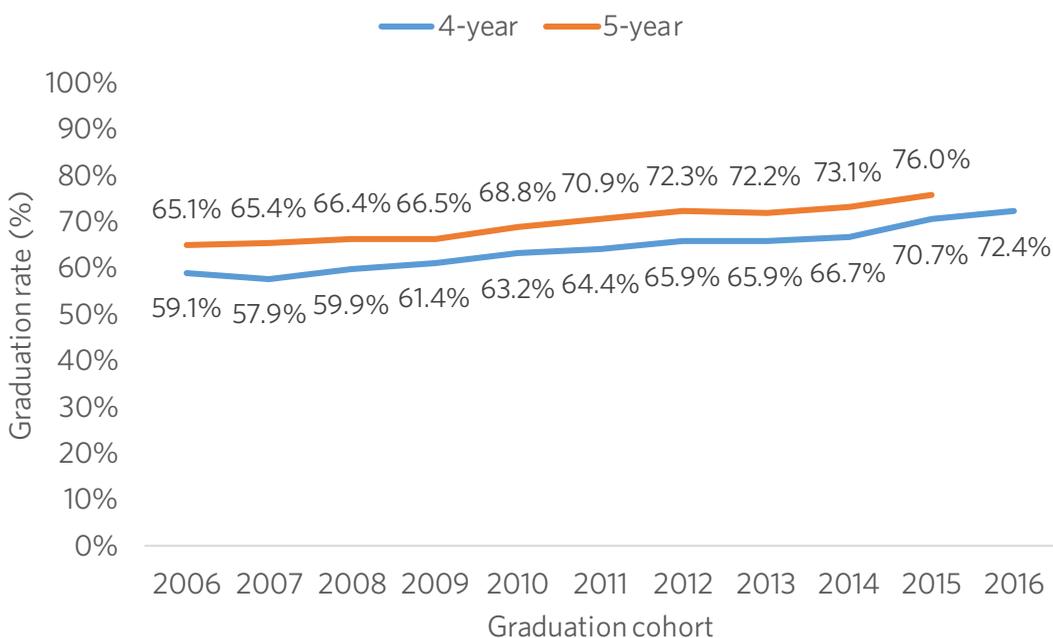


Source: Boston Public Schools

INCREASING HIGH SCHOOL GRADUATION RATES

In 2006, the Massachusetts Department of Elementary and Secondary Education (DESE) created a new graduation cohort tracking system that tracked first-time ninth graders and transfers in and transfers out of school districts for up to five years. The first cohort tracked was the 2006 cohort, representing first time ninth graders in 2002-03. Since the release of the 2006 cohort data, BPS has experienced a steady increase in both four-year and five-year graduation rates (Chart 4). The BPS four-year high school graduation rate has increased over 13 percentage points in ten years, from 59.1% to 72.4%. The five-year graduation rate increased from 65.1% for the 2006 cohort to 76.0% for the 2015 cohort. The four-year and five-year graduation rates for the cohort 2016 are the highest on record in this 11-year data series.

Chart 4: BPS four- and five-year graduation rates, 2006 to 2016

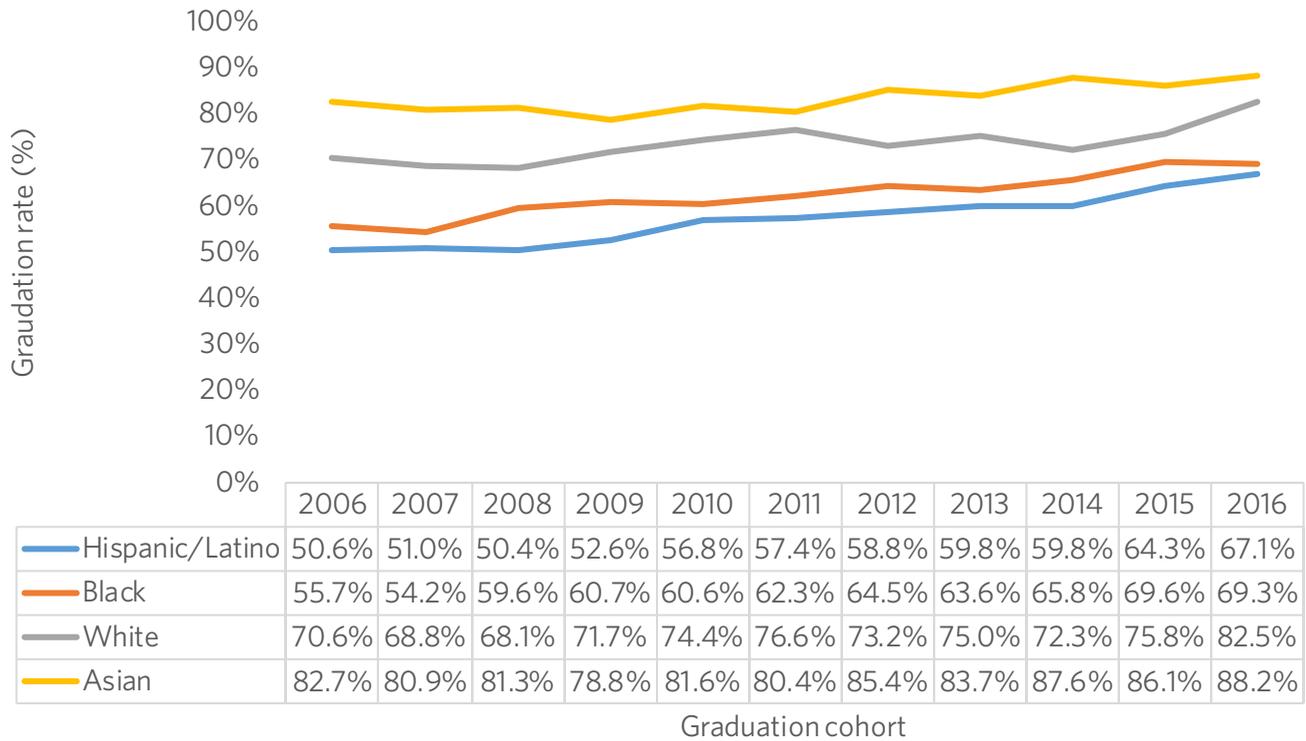


Source: Massachusetts Department of Elementary and Secondary Education

The graduation rates of all race-ethnic groups have increased over the last ten years. The graduation rates for Hispanic/Latino students have increased 15 percentage points from 50.6% for the 2006 cohort to 67.1% for the 2016 cohort. The graduation rates for Black students have increased by more than 13 percentage points from 55.7% for 2006 cohort to 69.3% for the 2016 cohort. The graduation rate for White students increased nearly 12 percentage points to 82.2% for the 2016 cohort.

Despite the progress, the race-ethnic gap in four-year graduation remains substantial with a 21.1 percentage point difference between the graduation rates of Hispanic/Latino and Asian students. However, the gap has narrowed over this ten-year period (Chart 5). The lowest graduation rate and the highest graduation rate for cohort 2006 was wider at 32.1 percentage points between Hispanic/Latino and Asian students.

Chart 5: BPS four-year graduation rates by race-ethnic group, 2006 to 2016



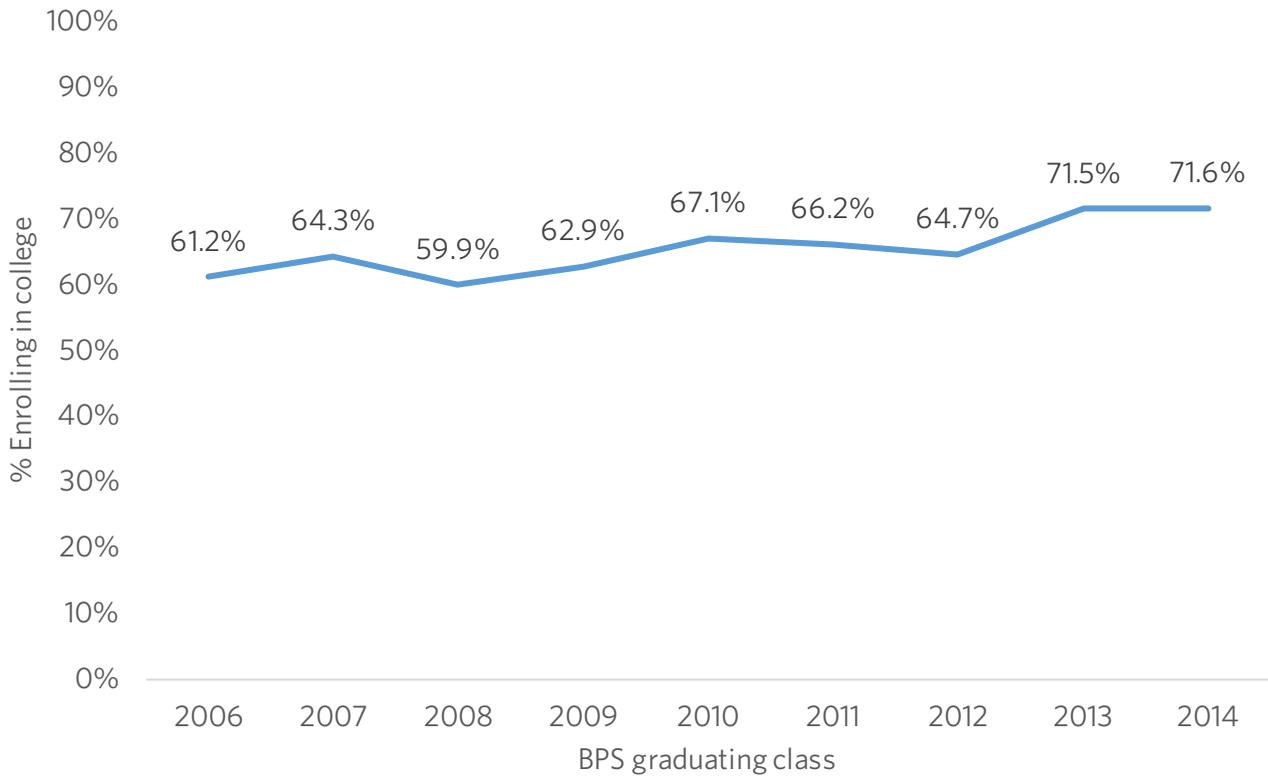
Source: Massachusetts Department of Elementary and Secondary Education

RISING COLLEGE ENROLLMENT RATES

The increasing share of high school students obtaining a diploma demonstrates crucial progress on preparing Boston youth for postsecondary education opportunities and the labor market. Yet, in Boston’s economy, a postsecondary credential is increasingly becoming the requirement for most jobs that pay middle-class earnings and offer health and retirement benefits. The college enrollment rate of high school graduates tracks progress on the pursuit of postsecondary credentials. Public data are available from DESE on the college enrollment rate for the BPS district, individual schools, and student subgroups. The college enrollment rate records are based on National Student Clearinghouse (NSC) enrollment records and include public and private colleges and universities.

College enrollment rates for BPS students have increased since 2006, particularly for the most recent class years reported, which are the Classes of 2013 and 2014. The college enrollment rates for the Class of 2013 and 2014 reached 72%, up from a range of 60 to 64% for the Classes of 2006-2009. Seven out of every 10 BPS graduates in recent years are enrolling in college within 16 months of high school graduation.

Chart 6: 16-month college enrollment rates of BPS graduates, BPS Classes of 2006 to 2014



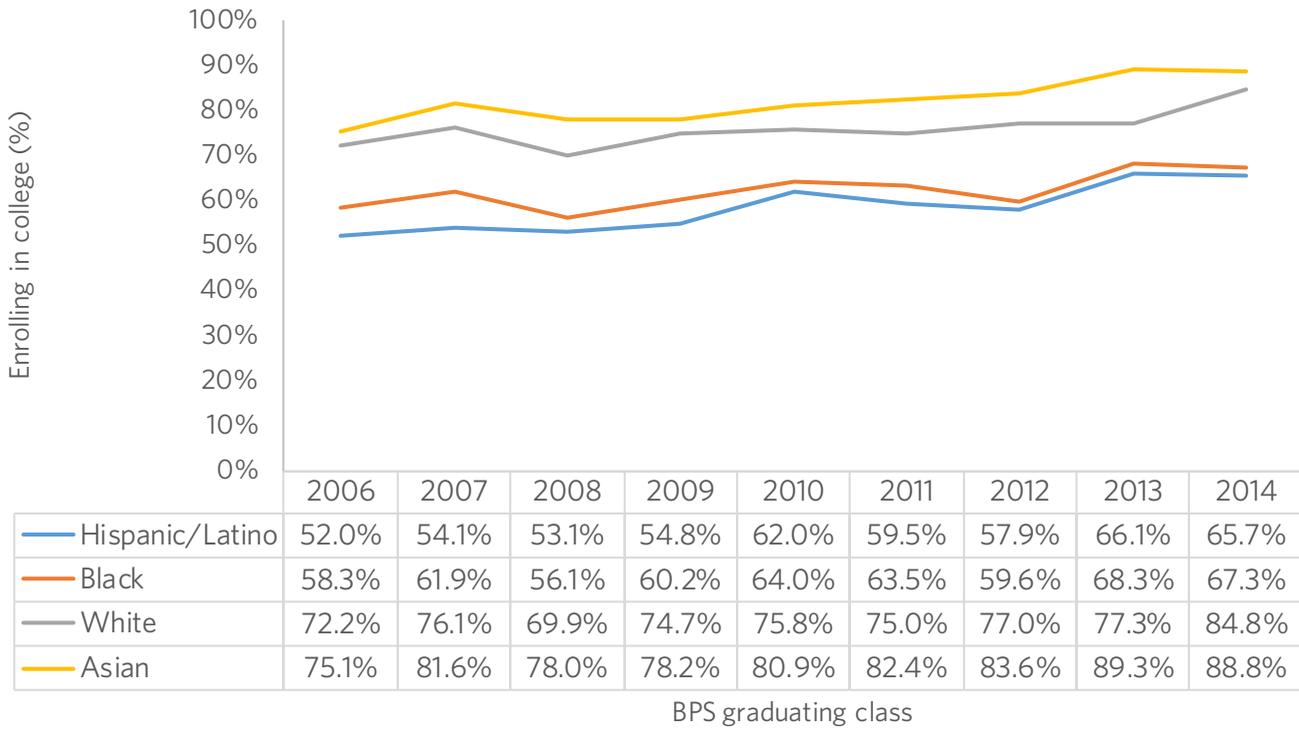
Notes:

- i) Using local data to match with the National Student Clearinghouse results in higher enrollment rates due to more extensive matching and data cleaning.
- ii) Variation in the rate from year to year should be interpreted with caution; there may be year-to-year differences in colleges reporting their enrollment or the number of students whose data has been blocked from being shared by privacy restrictions.

Source: Massachusetts Department of Elementary and Secondary Education

Each of the four largest race-ethnic groups have experienced an increase in their college enrollment rate over this seven-year period. College enrollment rates for the four race-ethnic groups increased by a range of 9 to 14 percentage points. As is the case with the prior two measures, there are still substantial gaps in college enrollment rates across race-ethnic groups. The college enrollment rate of White and Asian Class of 2014 graduates were 85% and 89% compared to 66% and 67% of Hispanic/Latino and Black graduates. From top to bottom, the race-ethnic gap in college enrollment rates was 22 percentage points, about the same size as the gap that prevailed for the BPS Class of 2006.

Chart 7: Trends in the 16-month college enrollment rates of BPS Classes of 2006 to 2014, by race-ethnic group



Source: Massachusetts Department of Elementary and Secondary Education

SIX-YEAR COLLEGE COMPLETION RATES CONTINUE TO CLIMB

While college enrollment is an important measure of access to postsecondary education, the economic payoff to college is greatest for those who attain a postsecondary credential. For the past decade, college completion outcomes for BPS graduating classes have been tracked to inform the Success Boston initiative. Success Boston, city-wide cross-sector initiative, was launched in 2008, with a goal to substantially increase the college completion rates of BPS graduates.¹ The initiative has committed to tracking the college completion rates of BPS classes to assess progress on its goals.²

Following the release of the 2008 initial report, *Getting to the Finish Line*, Success Boston research has followed graduating cohorts for six years (rather than seven) to align with national postsecondary completion research. College completion outcomes are tracked for all BPS graduates, and a subset of graduates that enroll in college during the first year after high school. These “first-year enrollees” would have six years from the start of college to complete a degree.

¹For more information on Success Boston, see: <http://www.tbf.org/tbf/55/success-boston>.

²See: i) Andrew Sum, Neeta Fogg, Ishwar Khatiwada, Joseph McLaughlin, and Sheila Palma. *Getting to the Finish Line*. Boston, 2008. ii) Andrew Sum, Ishwar Khatiwada, Walter McHugh, and Sheila Palma. *Getting Closer to the Finish Line*. Boston: The Boston Foundation, 2013. iii) Joseph McLaughlin, Neil Sullivan, and Anika Van Eaton. *The Six-Year College Enrollment and Completion Experiences of the Boston Public Schools Class of 2009, Reaching for the Cap and Gown*. Boston: The Boston Foundation, 2016.

Chart 8 shows the trends in six-year college completion rates for first-year enrollees from BPS graduating classes. The BPS Class of 2000 was the first high school class tracked in the NSC database and serves as the baseline for Success Boston’s college completion goals.

The six-year completion rate of first-year college enrollees from the BPS Class of 2000 was 40.6%.³ The college completion rate increased 6 percentage points to 46.8% for the Class of 2003 and 47% for the BPS Class of 2005. The college completion rate continued to edge up to a range of 48-50% for the BPS Classes of 2006-2008.

The BPS Class of 2009, the class with the 52% completion rate goal, reached the six-year mark during the spring/ summer 2015. The six-year college completion rate of the Class of 2009’s first-year college enrollees was 51.3%, a new high for the district and within one percentage point of the 52% goal set in 2009 (Chart 8).⁴ Rising college completion rates have benefitted all student groups. However, the gender and race-ethnic gaps are widest on this measure in the brief.

Chart 8: Trends in the six-year college completion rate of first-year enrollees, select years, BPS Class of 2000 to 2009



Sources: (i) “Getting Closer (2013)” (ii) PIC analysis of NSC data for the Classes of 2007-2010.

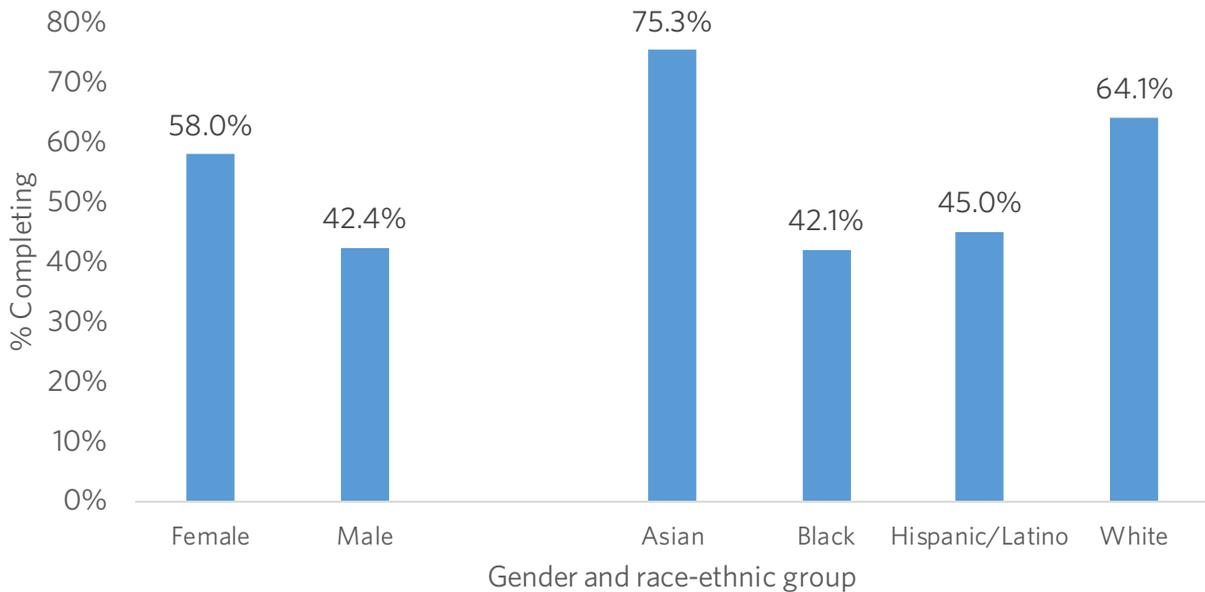
As was the case for previous BPS classes, six-year college completion rates for first-year enrollees from the BPS Class of 2009 varied substantially across gender and race-ethnic subgroups. Females had a six-year college completion rate of nearly 58%, exceeding the rate for males (42.4%) by close to 16 percentage points. The college completion rates of both males and females increased between 2000 and 2009, but the gains were much larger for females.

Six-year college completion rates for the four largest race-ethnic groups represented in the BPS Class of 2009 ranged from a low of 42.1% to a high of 75.3%, a 33 percentage point range. The college completion rate for Asian students was 75%, the highest among the four major race/ethnic groups. Whites followed with a 64% completion rate. College completion rates were lower for Black (42.1%) and Hispanic/Latino (45.0%) first-year enrollees from the Class of 2009 (Chart 9).

³Sum, et al., *Getting Closer to the Finish Line*, January 2013.

⁴McLaughlin, et al., *Reaching for the Cap and Gown*. June 2016.

Chart 9: Six-year college completion rates of first-year enrollees, BPS Class of 2009



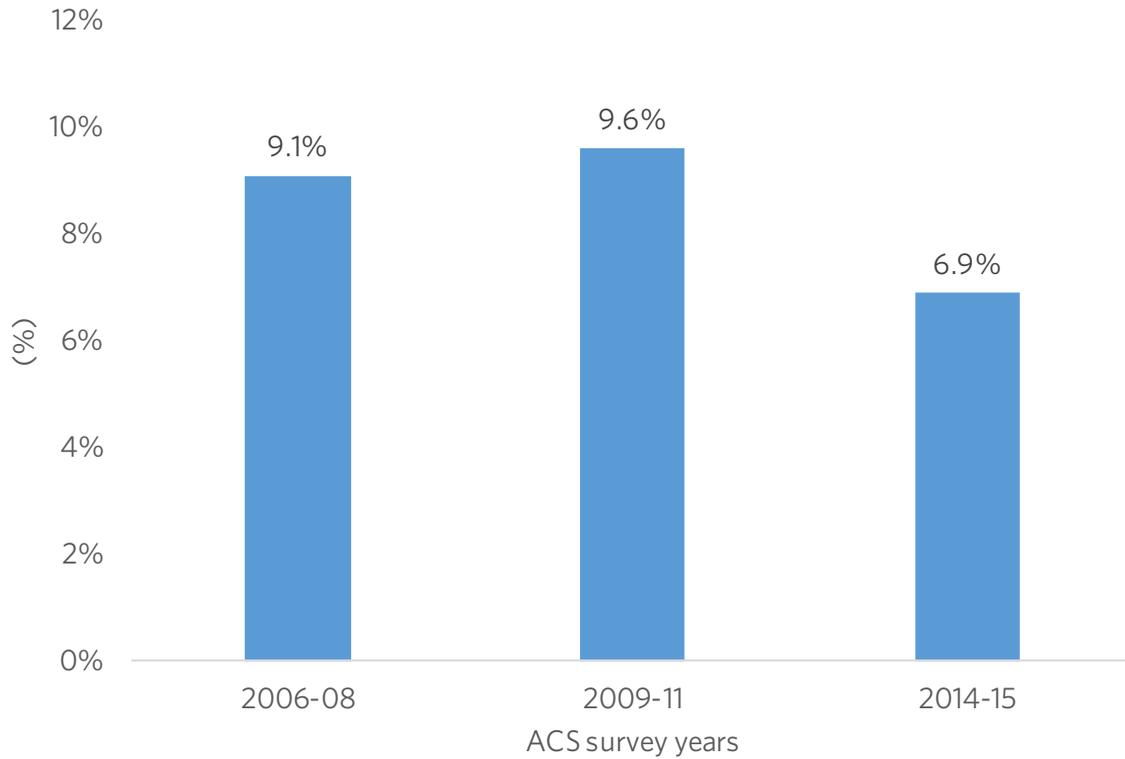
Source: *Reaching for the Cap and Gown*, June 2016

DECLINES IN THE NUMBER AND PERCENT OF OPPORTUNITY YOUTH

The fifth indicator is a citywide education and employment measure. A primary education and economic indicator for assessing how well 16 to 24 year olds are faring in the transition from high school to postsecondary education, training, and employment is the disconnection rate: defined as the percent of 16 to 24 year olds in Boston who are neither enrolled in school nor employed at the time of the American Community Survey (ACS). These young people are referred to as “opportunity youth”. The city of Boston has a large population of 16 to 24 year olds because it is home to many colleges and universities. The young adults who move into the city to attend college are part of the city’s 16 to 24 year old resident population in the ACS. This influx of “connected” college students is one of the reasons why Boston has a low overall disconnection rate when compared to other cities and urban areas. It is still informative to track changes in this indicator even though the data should be interpreted in the context of the city’s large college student population.

Disconnection rates have declined in Boston over the past several years after peaking during the Great Recession of 2008-2009 and weak recovery in the immediate years following the recession. In Boston, there were nearly 12,000 opportunity youth, representing 9.6% of the city’s 16 to 24 year old population in 2009-2011. The share disconnected declined to 7.5% for the 2011-2013 three-year period, and to 6.9% for the 2014-2015 two-year period (Chart 10). The 2014-2015 data are the most recently available from the ACS. Based on these two-year estimates, the number of opportunity youth fell to 7,800 in 2014-2015, a decline of over 4,000 from the 2009-2011 survey years.

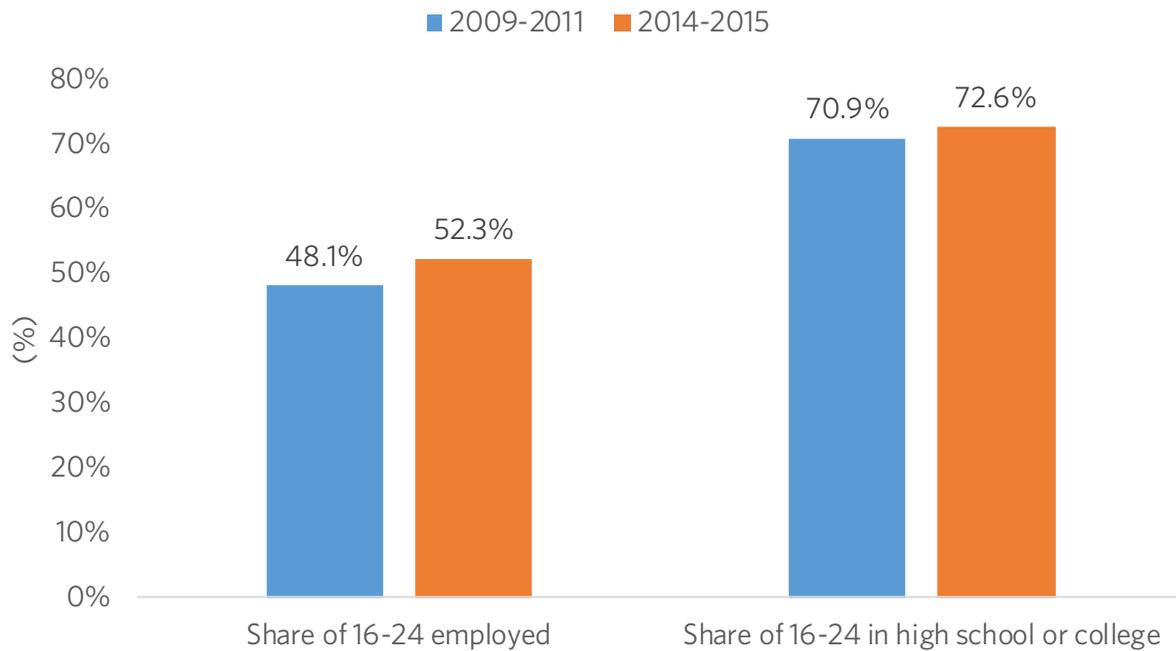
Chart 10: Trends in percent of opportunity youth in Boston, 2006 to 2015



Source: American Community Survey, 2006-2008, 2009-2011, and 2014-2015, public use microdata files, tabulations by the PIC6

According to ACS findings, the reduction in the disconnection rate is due to increasing employment and school enrollment rates over this time period analyzed (Chart 11). During the 2009-2011 survey years, 48% of the 16 to 24 year old population were employed. The share employed increased to 52% during the 2014-2015 period. The percent of 16 to 24 year olds enrolled in school, both secondary and postsecondary education, increased from 71% to 73%. These increases in employment and school enrollment have reduced the share of students who are in neither school nor working.

Chart 11: Percentage share of 16 to 24 year olds in Boston who were employed and enrolled in school, 2009-11 and 2014-15 (annual averages)



Sources: American Community Survey, 2009-2011, and 2014-2015, public use microdata files, tabulations by the PIC

CONCLUSION

Over the past decade, there have been substantial improvements in educational indicators for 16 to 24 year old youth and young adults in the City of Boston. On the first four education measures, gains were made by all race-ethnic groups. Both males and females and each race-ethnic group are faring better in 2016 than they were in 2006. Higher shares of BPS students are graduating high school and enrolling in college.

A key goal of the education and workforce development community in Boston is to reduce the number of teens and young adults that are disconnected from school and work. One factor in reducing disconnection rates, particularly among 20 to 24 year olds, is increasing the educational attainment of youth and young adults in the city of Boston. Research has found that educational attainment is a “mediator” for disconnection, i.e., as educational attainment rises, rates of disconnection decline. If the next cohort of youth aging into the 16 to 24 year old population has higher levels of educational attainment and college enrollment than an earlier cohort, then their disconnection rates should be lower. Thus, reducing the number of students that drop out of high school, increasing high school graduation rates, and rising college enrollment rates should lead to lower disconnection rates over time.

Despite the progress on each measure, there are substantial gender and race-ethnic gaps. While these gaps persist, the race-ethnic gaps have narrowed over time, especially on the measures of high school dropout and graduation. Policymakers, philanthropic organizations, community-based organizations, educational institutions, and business leaders will need to continue to work together to make further progress on each indicator and close gender and race-ethnic gaps in outcomes.

DATA SOURCES AND DEFINITIONS

Measure	Definition	Source
Number of dropouts and dropout rate	The number and percent of students who left high school without transferring to another school system or graduating, and the dropout rate is this number expressed as a percent of cumulative high school enrollment, minus transfers out and expelled students.	Boston Public Schools (BPS)
Cohort graduation rates	The percentage of the first time 9th graders who graduated high school in four years or five years, minus transfers out/deaths and plus transfers in.	Massachusetts Department of Elementary and Secondary Education (DESE)
16-month college enrollment rate	The number and percentage of high school graduates attending an institution of higher education within 16 months of graduating high school.	Massachusetts Department of Elementary and Secondary Education (DESE)
Six-year college completion rate	The number and percentage of students who enroll in a college or university the first fall or spring after graduating high school and complete a degree or certificate within six years.	National Student Clearinghouse, analysis by PIC
Number of disconnected and disconnected rate	The most common measure of youth disconnection is the number or percent of 16-24 year olds who are neither in school nor employed at the time of being surveyed.	American Community Survey, analysis by PIC



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