

Getting Closer to the Finish Line

The College Enrollment and Completion Experiences of
Graduates of the Boston Public Schools

Prepared by:

Center for Labor Market Studies
Northeastern University

With the Assistance of:

The Boston Private Industry Council &
The Boston Public Schools

Prepared for:

The Boston Foundation

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Graduates of the Boston Public Schools

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Preface

It is rare that the Boston Foundation has the privilege of publishing a report that conveys as much good news as this one. Prepared by the Center for Labor Market Studies at Northeastern University, it focuses on the college completion rates of Boston Public Schools graduates and the potential impact of a college completion initiative called Success Boston, which the Boston Foundation is proud to support with \$1 million in funding annually.

The bottom line is that over the last decade, BPS graduates are enrolling in, persisting in and completing college at higher rates—and that we are on track to meet the ambitious goals of Success Boston. This is an achievement that makes our city a national leader in addressing what has become a crisis in higher education in the United States, where close to half of college students leave with no degree.

Let me put these results in some context. In 2008, the Boston Foundation funded another report prepared by the Center for Labor Market Studies. Called *Getting to the Finish Line*, it focused on the college enrollment and completion rates of BPS graduates. The findings were that, despite increasingly high college enrollment rates, completion rates were abysmal: only 35% of BPS graduates who enrolled in college in the first seven years after graduation had completed a degree by the end of that period.

For those of us who are deeply committed to a vibrant future for Boston, this was the worst possible news—especially in the context of our competitive global economy, where the vast majority of jobs require a college degree. And the personal ramifications are profound: A typical Bachelor's degree holder will earn \$1 million more than a high school graduate over the course of a lifetime.

Mayor Menino responded to the 2008 report by collaborating with the Boston Foundation, the Boston Public Schools, the Boston Private Industry Council and University of Massachusetts Boston to launch Success Boston, which has the goal of increasing the six-year completion rates for the Class of 2009 to 52% and the same rates for the Class of 2011 to 70%. The initiative focuses on a group of low-income students of color who are at greatest risk of not completing college, and works closely with high schools and colleges to offer students a sweeping series of supports, including personal coaching for each student.

As this report reflects, the Class of 2005 achieved a six-year college completion rate of 47.4%, less than five percentage points shy of Success Boston's first goal for the Class of 2009. There are many factors influencing these results, including Superintendent Johnson's Acceleration Agenda, rigorous MCAS testing and other education reforms. It is also clear that Success Boston is working. Those participants who are most at risk of not completing college, Blacks and Hispanics, are showing stunning college persistence gains of 17 to 22 percentage points compared to their peers who are not participating.

Ultimately, this report not only reflects the power of a city willing to come together to meet a serious challenge—it shows that, given the necessary supports, the potential for the majority of Boston students to succeed in college and go on to contribute to our region's economy is truly within our reach.



Paul S. Grogan
President and CEO
The Boston Foundation

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EXECUTIVE SUMMARY

Getting Closer to the Finish Line

The College Enrollment and Completion Experiences of Graduates of the Boston Public Schools

In recent decades, formal educational attainment, including proficiency in reading and in math, have become inextricably linked to the economic and social success of adults in the United States and around the world. Obtaining a high school diploma no longer guarantees success in the labor market or the ability to make it into the middle class. Many high school graduates, especially men, have lost real earnings over time, and the gaps in annual earnings and incomes between high school graduates and adults with college degrees have widened considerably in the last 30 years.¹

As a result, President Obama has made college completion a priority, with the goal of regaining this country's position as a world leader in producing college graduates and, as a result, promoting stronger economic growth and international competitiveness. Through his *American Graduation Initiative*, the President seeks to add five million more college graduates to the workforce in this decade.

In Massachusetts, the need for educated workers has never been greater. The vast majority of jobs in Boston's knowledge economy call for at least some type of postsecondary achievement, a requirement that will only increase in the years to come. This means that college success for the city's most important pool of future workers, graduates of the Boston Public Schools, is crucial. College degrees not only improve the potential economic and social well-being of these vital members of Boston's population—allowing them to earn almost twice the income of high school graduates over their lifetimes—they also are key to the city's future prosperity and capacity to compete in the global economy.

While the college-going rates of graduates of the Boston Public Schools (BPS) have increased significantly in recent years, far too few go on to complete degrees or certificates. A 2008 Northeastern University report, *Getting to the Finish Line: College Enrollment and Graduation*, provided a valuable baseline for future research

and revealed a deeply disturbing finding. Despite a multitude of higher education institutions in the region and steady gains in college enrollment, only 35% of BPS students who enrolled in college were earning a postsecondary degree within seven years of graduating from high school.

That report served as a clarion call to the city and mobilized its leaders. And so, in the midst of the nation's most significant economic downturn since the Great Depression, Boston embarked on an unprecedented effort to examine the postsecondary experiences of public school students and radically transform their outcomes. Mayor Thomas M. Menino announced Success Boston, a cross-sector, citywide initiative aimed at dramatically increasing the number of BPS graduates completing college. Other partners, supporters and leaders of the effort include the Boston Public Schools, the Boston Foundation, the Boston Private Industry Council, University of Massachusetts Boston and 37 other higher education institutions.

With its focus on first-generation, low-income students of color, Success Boston is dedicated to ensuring that the vast majority of BPS students are "Getting Ready, Getting In and Getting Through" college by working closely with high schools and colleges to offer students support. The stated goals of Success Boston are ambitious: to increase the six-year postsecondary completion rate for the BPS Class of 2009 from 35% to 52%, and to double that same completion rate for the Class of 2011 to 70%.

It is important to note that the initial 35% completion rate (subsequently updated to 39%) was based on a seven-year measure, even though the most commonly used length of time for measuring completion for four-year college students is six years (or, 150% of the time it takes to earn a Bachelor's degree). The baseline report used a seven-year measure in an attempt to capture as many college graduates as possible. Success Boston will

use a six-year measure for tracking Associate's and Bachelor's degrees, and will hold itself accountable for meeting its goals within six years of students' graduating from high school. Even so, this report and subsequent ones will include other measures of college success, including 7-11 year measures and measures that adjust graduation rates. One can measure college graduation rates in different ways, each of which is important and provides additional information. Also, by having multiple measures for different years, we can see if progress is being achieved on each measure over time.

Among the recommendations presented in the 2008 report was the importance of continuing to track the college experiences of BPS graduates in order to measure progress in college enrollment and graduation rates over time—leading directly to this report, which presents information drawn from two studies that were prepared by the Center for Labor Market Studies at Northeastern University.

Chapter One tracks college enrollment and graduation outcomes for all BPS graduates from the Classes of 2000, 2003 and 2005. It is based on educational outcomes data through April-May of 2012 and includes almost 12 years of post-high-school data for the Class of 2000. Chapter Two focuses on the experiences of BPS graduates from the Classes of 2007, 2008 and 2009. It also examines emerging persistence results for the first Success Boston students from the Class of 2009.

Key Findings

A number of findings in this report are extremely encouraging across key indicators of college success for BPS graduates:

■ Enrollment in college is up

College enrollment rates of all BPS graduates in the first year following high school graduation have been rising over the last decade. First-year enrollment rates rose from 61% in 2005 to nearly 70% in 2010. The cumulative enrollment rate (reflecting students who enrolled at various points in time after graduating from high school) shows significant increases: The BPS Classes of 2007, 2008 and 2009 reach a cumulative enrollment rate of at least 75%, impressively outpacing their previous classes. The cumulative rate measures enrollment starting with the fall after high school graduation. Just five years after gradua-

tion, the Class of 2007 had a cumulative enrollment rate of 76.7%, compared to the Class of 2000, which had only reached 73% enrollment 12 years after high school graduation. In addition, the cumulative enrollment rate for the Class of 2009 grew from 60.2% in the fall following graduation to 75.9% in the three years since high school graduation, showing that significant gains can be made beyond the first year. Strong gains (10 percentage points) in first-year college enrollment rates over the past decade were also reflected in annual follow-up surveys conducted by the Boston Private Industry Council.

■ The need for remedial courses in college is down

Despite continued high placement in remedial courses, which are designed to prepare high school graduates for college-level work, particularly among community college attendees, the data reveal a notable reduction in remedial placement rates overall between the Classes of 2009 and 2011. The Class of 2011 saw a 6 percentage point decrease in remedial course taking rates for community college enrollees (from 66% to 60%). For students enrolled at the University of Massachusetts, the rates declined from 20% to 14%. At state universities, the decline was less.

■ Persistence in college remained relatively consistent

College persistence is one way to evaluate college preparation and anticipate college completion. Despite meaningful gains in enrollment, two-year college persistence rates did not improve between the Classes of 2007 and 2009, going from 71% for the Class of 2007 to 68.9% for the class of 2009. It is important to note that persistence rates had increased over the last decade. In a 2010 study produced by the Center for Labor Market Studies, overall, one-year persistence rates for the Class of 2007 were 3.7 percentage points higher than they were for the class of 2001. More significantly, the one-year persistence rates at two-year institutions (or community colleges) increased at even higher rates. The one-year persistence rate for the Class of 2007 at community colleges was 5.9 percentage points higher than the Class of 2001.

■ College completion is up

For students enrolling in college in the first year after high school graduation, college completion rates are extremely promising. The Class of 2005 achieved a six-year college completion rate of 47.4%,

less than 5 percentage points shy of Mayor Menino's first college completion goal for the Success Boston College Completion Initiative. This is compared to a 40.2% completion rate for the class of 2000. The Class of 2003 was the first required to pass the MCAS to graduate from high school, and the added academic rigor may have affected their success. Ultimately, this report finds that Boston is well on track to increasing the six-year college graduation rate to 52% for the Class of 2009. An analysis of college graduates as a percentage of all high school graduates revealed an increase from 25% for the Class of 2000 to nearly 32% for the Class of 2005 and the Class of 2006 in the first six years following graduation.

■ **Gender and racial-ethnic gaps permeate all measures**

Whether looking at enrollment, remediation, persistence or college completion, there are wide gaps between female and male students, with females faring far better than males. For instance, for the Classes of 2007 through 2009, first-year enrollment rates for women exceeded those of men by 10 percentage points. In addition, White and Asian students do better when compared with Black and Hispanic students: While enrollment rates for all racial-ethnic groups have improved, just 59% of Hispanic students from the Class of 2009 enrolled in college in the first year after high school graduation, compared to 83.2% of Asians. In addition, graduates who attended one of Boston's three exam schools did far better on all measures than those who did not.

■ **Success Boston is working**

With its focus on low-income students of color, those who are most at risk of not completing college, Success Boston shows real promise. Success Boston Class of 2009 participants receiving personalized coaching services have regression-adjusted one-year persistence rates that are nearly 17 percentage points higher than their peers who did not participate. Further, among Blacks and Hispanics, the persistence rates showed stunning gains of 17 to 22 percentage points over their peers. Two-year retention rates were equally positive, with gains of 16 percentage points—and even higher gains for Black participants at just under 19 percentage points, when compared with Black peers not engaged by Success Boston.

Overall, these key findings show that Boston is getting closer to the finish line, with significant strides in enrollment and completion rates, especially since the introduction of MCAS tests and other education reforms. The analyses captured in this report point to several key levers that call for enhanced efforts, including the strengthening of academic rigor for non-exam school students, earlier and more comprehensive college advising, robust student supports during the transition from high school to college as well as increased financial aid and the continued collection and analysis of data. Additionally, the persistent gaps in outcomes related to gender, race-ethnicity, exam and non-exam school settings and students attending two- and four-year institutions warrant much deeper exploration and innovative solutions.

The early results for Success Boston are extremely promising. The impact of the interventions the initiative uses, combined with conclusions that can be drawn from the emerging completion results for the Class of 2005, suggest that Boston is well on its way to attaining the goal of 52% college completion for BPS students from the Class of 2009. While these results are encouraging, reaching the 70% college completion rate for the BPS Class of 2011 and beyond is both bold and ambitious.

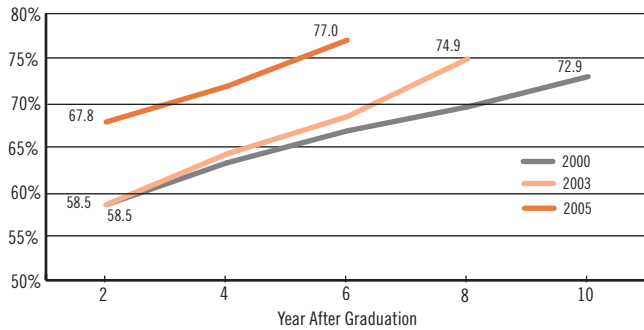
College Enrollment, Readiness and Completion

The rest of this Executive Summary is organized around the three important measures of the college experience for Boston Public Schools students: college enrollment, readiness and completion.

College Enrollment

In examining the college enrollment trends of Boston Public Schools graduates, Chapter One of this report explores three distinct enrollment measures: enrollment in the fall immediately following high school graduation; enrollment within one calendar year after graduation; and cumulative enrollment since high school graduation. It is important to recognize that college enrollment patterns are dynamic and significant gains are made in the years following high school completion. The cumulative enrollment rate (reflecting students who enrolled at various points after graduating from

CHART 1
**Cumulative College Enrollment Rates of BPS Graduates,
 Classes of 2000, 2003 and 2005 (in %)***



* Base is all high school graduates

TABLE 1
**The Number and Percent of BPS Class of 2000, 2003 and
 2005 Graduates Who Enrolled in College at Some Point
 Between the Fall after High School Graduation and
 Fall of 2011/Spring 2012, All and by Type of High School**

Characteristics	(A) Number of Graduates	(B) Number Enrolled in College	(C) Percent Enrolled in College
Class of 2000			
All	2,967	2,164	72.9
Exam High Schools	722	669	92.7
Non-Exam High Schools	2,245	1,495	66.6
Class of 2003			
All	3,025	2,267	74.9
Exam High Schools	777	726	93.4
Non-Exam High Schools	2,248	1,541	68.5
Class of 2005			
All	3,045	2,345	77.0
Exam High Schools	804	755	93.9
Non-Exam High Schools	2,241	1,590	71.0

high school) for the Classes of 2000, 2003 and 2005 show significant increases from 2000 to 2005. Part of the rise in the cumulative enrollment rate between 2000 and 2005 is attributable to increased National Student Clearinghouse coverage of enrollees. (See **Chart 1**.)²

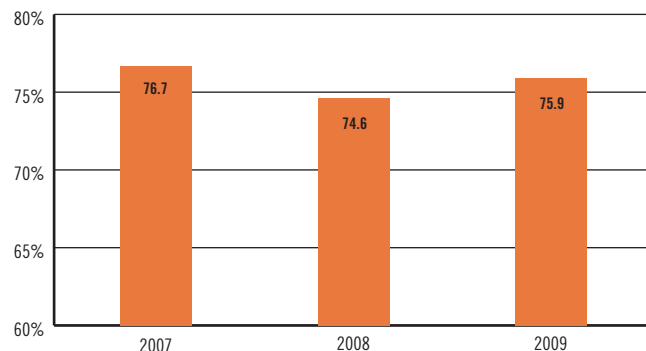
Variations in Enrollment Rates

For the Classes of 2000, 2003 and 2005, the cumulative college enrollment rates of exam-school students remained steady, ranging from 92.7% to 93.9%, while non-exam school graduates improved between the Class of 2000 and the Class of 2005, from 66.6% to 71%. (See **Table 1**.)

For graduates from the Classes of 2007, 2008 and 2009, this study takes a more detailed look into college enrollment using three distinct measures: fall enrollment, first-year enrollment and cumulative enrollment.

Despite fewer years since high school graduation, Chapter Two shows that the Classes of 2007 to 2009 all reach a cumulative enrollment rate of at least 75%, outpacing their previous classes. Just five years after high school graduation, the Class of 2007 had a cumulative enrollment rate of 76.7%. (See **Chart 2**.) (Comparatively, Chapter One shows that the Class of 2000 had only reached 73% enrollment 12 years after high school, and the Class of 2003 approached 75% enrollment after nine years.) It is notable that the cumulative enrollment rate for the Class of 2009 grew from 60.2% to 75.9% in the three years since high school

CHART 2
**The Cumulative College Enrollment Rates from High School
 Graduation Through May 2012 of BPS Graduates from the
 Classes of 2007, 2008 and 2009 (in %)**



graduation, demonstrating that sizable enrollment gains are made well beyond the first year.

Enrollment rates of BPS graduates in the fall immediately following graduation also show upward improvement over the last four graduating classes. This rate increased from slightly under 55% for the Class of 2005 to above 60% for the Class of 2009. (See **Chart 3**.)

Enrollment Gaps

The Classes of 2007 through 2009 showed great variation in enrollment rates by gender, race-ethnicity and high school type. Between the Class of 2007 and the Class of 2009, first-year enrollment rates for women exceeded those of men by 10 percentage points (for the Class of 2007) to seven (for the Class of 2009) with some modest decline in the gap. (See **Table 2**.)

While all racial-ethnic groups experienced one-year enrollment growth between the Class of 2007 and 2009, significant gaps remained between Class of 2009 Hispanic students, at 59.7%, and their Asian counterparts at the top, at 83.2%. When we look at race-ethnicity and gender combined, we see these gaps exacerbated, with cumulative enrollment rates for Hispanic men from the Class of 2009 at 64% compared to 90.1% for Asian men.

College Readiness

As noted above, this research shows that Boston is sending greater numbers of students on to post-secondary schooling. Enrollments have risen over the last decade, as measured by students who enroll in college directly out of high school and by cumulative enrollment rates. Gains in first-year college enrollment rates of 10 percentage points were also found between the Classes of 2000/2001 and the Classes of 2009/2010, according to the Boston Private Industry Council’s annual follow up surveys of high school graduates.

As enrollments rise, however, it’s important to consider whether students are ready to do college-level work when they arrive. In the absence of a standard definition of college readiness, this report relies on proxies to measure how prepared or how “ready” students are for college. The report considers the level

CHART 3
Trends in Fall College Enrollment Rates of BPS Graduates from the Classes of 2005, 2007, 2008 and 2009 (in %)

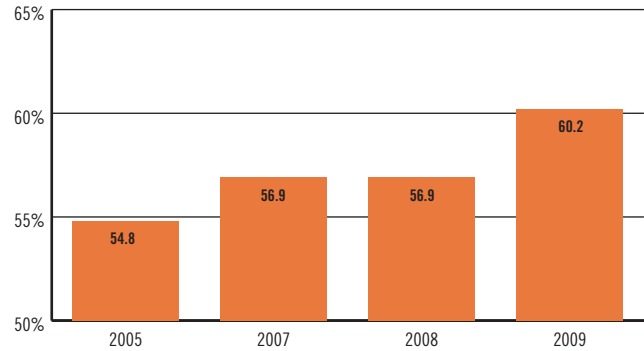


TABLE 2
College Enrollment Rates in the First Year Following Graduation from High School for BPS Graduates from the Classes of 2007, 2008 and 2009 by Gender and Racial-Ethnic Group (in %)

Demographic Group	(A) Class of 2007	(B) Class of 2008	(C) Class of 2009
All	63.4	63.5	67.0
Men	57.4	58.5	63.3
Women	67.9	67.8	70.9
Women – Men	+10.5	+9.3	+7.6
Asian	78.2	82.3	83.2
Black	60.5	59.8	64.2
Hispanic	55.6	56.7	59.7
White	73.7	73.6	77.3

of preparation in multiple ways: by enrollment rates in remedial education once students arrive in college and by persistence rates in college and by college graduation success. A student’s ability to stay enrolled, persisting from one year to the next, also can be used as a measure of readiness.

TABLE 3
**Remedial Placement Rates for BPS Graduates in Fall 2009, 2010 & 2011,
 by Class Year, Placement Overall and by Type of Remedial Course**

Fall	High School	Segment	Enrolled as First-Time Student in Fall Term	% Enrolling in at least 1 remedial course	% Enrolling in at least 1 remedial reading course	% Enrolling in at least 1 remedial writing course	% Enrolling in at least 1 remedial math course
2009	Total All High Schools	Total	875	44%	15%	25%	32%
		Community Colleges	439	66%	29%	41%	49%
		State Universities	139	24%	1%	2%	21%
		University of Massachusetts	297	20%	0%	11%	13%
2010	Total All High Schools	Total	946	43%	14%	25%	33%
		Community Colleges	471	64%	27%	42%	49%
		State Universities	127	33%	0%	6%	30%
		University of Massachusetts	348	18%	0%	10%	13%
2011	Total All High Schools	Total	984	35%	13%	20%	26%
		Community Colleges	435	60%	30%	38%	43%
		State Universities	152	21%	1%	3%	18%
		University of Massachusetts	397	14%	0%	6%	10%

Source: Department of Higher Education 2012

The Need for Remedial Courses

One way to evaluate the degree to which BPS schools are preparing students for college-level work is to examine student participation in remedial courses at the beginning of their post-secondary experience. Chapter Two reflects supplemental research that was conducted by the Department of Higher Education on remedial course placement for the most recent graduating Classes of 2009, 2010 and 2011 attending public higher education institutions in the Commonwealth. (See **Table 3**.)

Despite high placement in remedial courses, particularly among community college attendees, the data reveal a notable reduction in remedial placement rates overall between the Classes of 2009 and 2011. The Class of 2011 saw a six percentage point decrease in the remedial

course taking rates for community college enrollees (from 66% to 60%) and for students enrolled at the University of Massachusetts (from 20% to 14%). At state universities the decline was less. The reduced placement rate in remedial writing and math may reflect a number of interventions implemented by the BPS district under Superintendent Carol Johnson's Acceleration Agenda and Success Boston. Given that the Superintendent arrived in Boston in 2007, when members of the Class of 2009 were juniors, the impact of her agenda, including the greater rigor in the curriculum, should be increasingly evident with later classes. In addition, beginning with the Class of 2010 state MCAS requirements for graduation have shifted from "Needs Improvement or Higher" to "Proficiency."

Who Arrives Ready? Findings by High School and MCAS Proficiency

This report reinforces what previous research and common sense tell us: there are many factors that contribute to enrollment, persistence and success in obtaining a post-secondary credential. Academic preparedness and access to scholarships and other forms of financial assistance are two of the most commonly cited contributors to college completion. This report examines the readiness levels of students and uses remedial course taking as one proxy for readiness.

Another way to look at readiness as a predictor of college success is by considering college completion results by the type of high school attended. When reviewing data on the performance of exam school graduates, it's important to keep in mind that while exam schools offer a rigorous academic curriculum, other factors contribute to the success of exam school graduates, including stronger MCAS reading and math scores, greater access to financial aid and scholarships, more access to on-campus employment and an increased likelihood of a more manageable work schedule (defined as working less frequently off campus for 20 or more hours a week).

While the type of high school attended may not be the perfect proxy for readiness, this report does find that those students who graduated from an exam high school were 15 percentage points more likely to graduate from college than their peers from other high schools.

As shown in **Chart 4**, there are significant gaps in college enrollment and completion between students who attended exam schools and those who attended non-exam schools. The BPS has three exam schools: Boston Latin Academy, Boston Latin School and the John D. O'Bryant School of Mathematics and Science.

When comparing the college completion rates of exam and non-exam high school graduates, Chapter One of this report finds that there are gaps ranging from 38 percentage points for the Class of 2000 to 44 points for the Class of 2005. These data suggest that a combination of strong pre-existing academic achievement and access to academic rigor, typically higher in exam schools, continue to be a significant factor in degree completion. The level of college preparation provided by different types of BPS high schools has a lasting effect on the college graduation rates of students.

CHART 4
Comparisons of the College Graduation Rates of Exam and Non-Exam High School Graduates Who Were No Longer Actively Enrolled in 2011, BPS Graduating Classes of 2000, 2003 and 2005

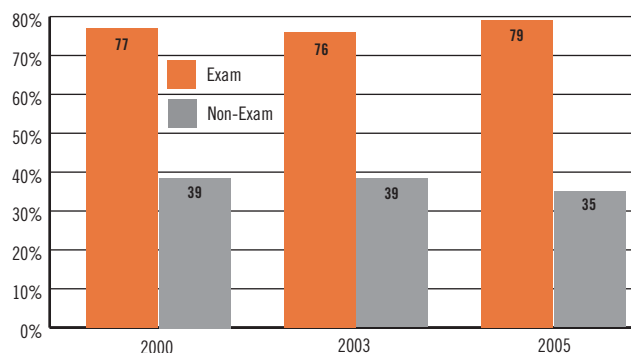


TABLE 4
College Enrollment Rates in the First Year Following Graduation from High School for BPS Graduates from the Classes of 2007, 2008 and 2009 by Type of High School Attended (in %)

Type of High School	(A) Class of 2007	(B) Class of 2008	(C) Class of 2009
Exam	85.6	90.9	89.7
Non-Exam	56.3	55.9	59.9
Exam – Non-Exam	+29.3	+35.0	+29.8

Additionally, as Chapter Two shows, enrollment rates in the first year following high school graduation, another measure of college readiness, vary widely by the type of high school attended. Boston Public Schools graduates from exam schools enrolled in college right after high school at rates ranging from 29.3 percentage points higher than non-exam school graduates in 2007 to 35 and 29.8 percentage points higher in 2008 and 2009 respectively. (See **Table 4**.) Exam school graduates are considerably more likely to enroll in a four-year college after graduation, relative to those from other high schools.

In addition, **Table 5** shows that students graduating from exam schools are far more likely, at 90%, than students graduating from other BPS high schools, at just 53%, to attend a four-year college. Since graduation rates

TABLE 5
**Percent Distribution of Cumulative College Enrollees from the Class of 2005
 By Type of Educational Institution First Attended, by Gender, by Type of High School Attended**

Type of College First Attended	(A) Men	(B) Women	(C) Exam School Graduates	(D) Non-Exam School Graduates
Four-Year, Total	63	66	90	53
Four -Year Private	39	41	60	31
Four-Year Public	24	25	30	22
Two-Year, Total	37	34	10	47
Two-Year Private	4	3	1	5
Two -Year Public	33	31	9	42

are far higher from four-year schools than two-year schools (see the section on College Completion later in this Executive Summary), exam school students enter college with a better chance of graduating and gaining well-paying employment.

More broadly, the report finds that the college attendance, persistence and graduation behavior of BPS graduates is strongly associated with their MCAS reading and math scores. Those graduates who had Proficient and Advanced scores on these tests were substantially more likely to attend four-year colleges and persist in college. In fact, those members of the Class of 2005 who scored Advanced on the reading and math tests were 10 to 15 percentage points, respectively, more likely to graduate from college by the end of 2011.

College persistence rates for the BPS Class of 2009 show the dramatic impact of achieving higher scores on MCAS reading tests. Three-quarters, 75%, of students who scored Advanced persisted in college through the fall two years later, while only 53% of those students who scored Proficient persisted in college for two years, a difference of close to 22%. Only 27% of those who scored Needs Improvement were able to persist in college.

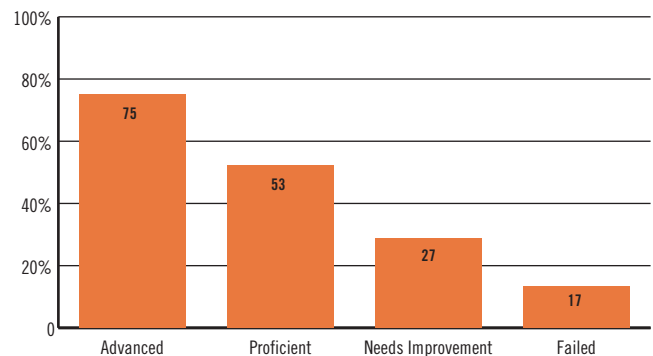
College Persistence

College persistence is another way to evaluate college readiness and anticipate college completion for graduates of BPS high schools. For all BPS graduates who enrolled in college in the fall immediately following graduation, this report tracks their college

persistence behavior for two to four years depending on their graduating class. A student is considered to be “persisting” in college if he or she was still enrolled in college the following fall or had obtained a college degree or certificate by that fall. Chapter Two of this report addresses the overall persistence rates for students, and disaggregates them according to the type of high school attended, the type of college initially attended, gender and race.

For the Class of 2007, 81.3% of students persisted after one year. This represents an increase in persistence when compared to earlier classes. A 2010 study from the Center for Labor Market Studies, *The College Success of Boston Public Schools Graduates from the Classes of 2000-2008*, reported that for the Class of 2001, 78.1% of students persisted after the first year.

CHART 5
**Percent of BPS High School Graduates Class of 2009 Who
 Both Enrolled in College in the Fall of 2009 and Persisted in
 College through Fall Two Years Later by MCAS Reading Score**



Since then, the college persistence rates in the first and second years following initial enrollment have not changed much for the most recent graduating classes covered in this report (2007 to 2009). Approximately 80% persist for one-year, and the two-year persistence rate has averaged about 69%.

When the data is disaggregated, it shows that exam school students continue to outpace non-exam school

students in college persistence, and the gap increases over time, with a 94.1% retention in year one and 89.3% in year two, versus 74.3% (-20) and 61.1% (-28) respectively for non-exam school students from the Class of 2007. (See **Table 6**.)

Variations in college persistence across school types also prevailed across gender groups and racial-ethnic groups. (See **Table 7**.)

TABLE 6
One-year to Four-year College Persistence Rates of BPS Class of 2007 Graduates Who Were Enrolled in College In the Fall Following Graduation, by High School Type (in %)

School Type	1-Year Persistence	2-Year Persistence	3-Year Persistence	4-Year Persistence	N
Exam Schools	94.1	89.3	83.1	73.2	663
Pilot Schools	73.7	61.2	52.6	43.4	399
All Other Schools	74.7	61.0	48.5	39.3	829
All Schools	81.3	71.0	61.5	52.0	1891

TABLE 7
One-Year and Two-Year College Persistence Rates of Class of 2007 BPS Graduates Enrolled in Fall 2007 (Based on NSC Data as of April 2012) (in %)

High School Type	Race	1-Year Persistence			2-Year Persistence		
		Female	Male	Total	Female	Male	Total
Exam Schools	Black	94.0	90.5	93.0	87.1	83.3	86.1
	White	96.1	92.3	94.6	92.2	87.5	90.3
	Asian	96.5	92.4	94.4	95.3	89.1	92.1
	Hispanic	90.2	100.0	94.4	90.2	80.0	85.9
	Total	94.9	92.9	94.1	91.1	86.6	89.3
Non-Exam Schools	Black	76.5	71.9	74.8	64.8	56.1	61.6
	White	78.8	66.7	73.3	59.1	55.6	57.5
	Asian	89.1	84.6	87.1	79.7	71.2	75.9
	Hispanic	71.1	67.4	69.8	59.1	52.3	56.6
	Total	76.1	71.5	74.4	63.8	56.7	61.1
Total	Black	80.4	74.8	78.5	69.8	60.4	66.5
	White	90.9	83.5	87.8	82.2	76.6	79.8
	Asian	93.3	89.6	91.5	88.6	82.6	85.7
	Hispanic	74.0	73.5	73.8	63.7	57.4	61.4
	Total	82.5	79.3	81.3	73.1	67.6	71.0

The persistence rates of college attendees in years one and two were also significantly influenced by their scholarship and grant assistance. Students with some grant assistance were considerably more likely to persist in college during the first two years. These gains applied to each gender and racial-ethnic group.³

Finally, there are large gaps in college persistence rates between those graduates attending two-year and four-year colleges. The size of these gaps tends to widen over time. For graduates of the Class of 2007, the two-year persistence rate for four-year college attendees was nearly 80%, versus only 42% for those attending two-year colleges. Similar findings hold for the other graduating classes.

College Completion

For students enrolling in college in the first year after high school graduation, the college completion rates are extremely promising. Examining the trends for the classes of 2000, 2003 and 2005, Chapter One shows that there are pronounced gains for the Class of 2003, with a six-year completion rate of between 46 and 47%, a near seven percentage increase from the Class of 2000.

The Class of 2003 was the first required to pass the MCAS to graduate from high school, and the added academic rigor appears to have had significant implications for their completion rates. These results suggest that the “MCAS effect” and increased exposure to academic rigor may have lasting effects on college completion. Gains in subsequent graduating classes are more modest, suggesting that the “MCAS effect” has been retained but not improved upon.

The Class of 2005 achieved a six-year completion rate of 47.4%, less than five percentage points shy of Mayor Menino’s first college completion goal. Boston is well on track to increase the six-year graduation rate from 40% (an updated percentage from the 2008 report) to 52% for the Class of 2009. (See **Chart 6**.)

The percentage of all college students who received a college degree within seven years of high school graduation has been rising over time. This ratio increased from 39% in 2000 to 47% for the Class of 2005.

An analysis of college graduates as a percent of all high school graduates revealed an increase from 25% for the Class of 2000 to 32% for the Class of 2005 in the first six years following graduation. (See **Table 8**.)

CHART 6
Time Trends in College Graduation Rates of BPS Graduates Who Enrolled in College in First Year Following Graduation from High School, Classes of 2000, 2003 and 2005 (in %)

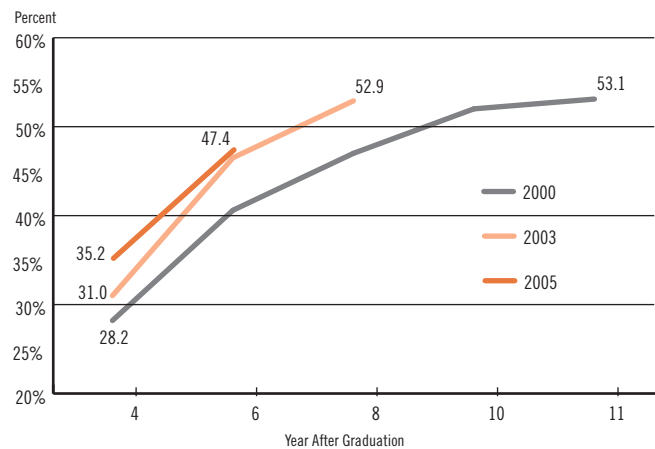


TABLE 8
Six-Year College Graduation Rate for All BPS Graduates from Classes of 2000, 2003, 2005 and 2006

Class	High School Graduates	College Graduates	College Graduates as % of Total
2000	2,967	735	24.7
2003	3,025	883	29.2
2005	3,045	966	31.7
2006	3,214	1,045	32.5
Change, 2000-2006			+7.8

Wide Gaps in Completion Rates

Despite these gains in college completion, significant gaps persist when race-ethnicity, gender and college type are factored in. For the three graduating classes of 2000, 2003 and 2005, this report’s researchers examined the graduation rates of inactive college enrollees who completed either a college degree (Associate’s or Bachelor’s), a certificate program, or are not currently pursuing a degree. The graduation rates of college-enrolled BPS graduates varied across gender and racial-ethnic group and by the type of high school attended (exam school versus non-exam school).

The Gender Gap

As shown in Chapter One, in 2000, 2003 and 2005, women were more likely than men to graduate from college. For enrollees from the Class of 2000, nearly 57% of female students had obtained a college degree by the end of the reporting period versus only 45% of male students, a difference of nearly 12 full percentage points. (See **Chart 7**.) Very similar gender differences prevailed for college-enrolled graduates from the Classes of 2003 and 2005. Reflecting national and statewide trends, the rising gender disparity in college completion for BPS graduates has women outpacing men by an increasingly wider margin.

A Wide Racial-Ethnic Gap

College graduation rates for enrollees from each of these same three BPS graduating classes varied even more widely across the four major racial-ethnic groups. As shown in Chapter One, Asian and White (non-Hispanic) graduates achieved graduation rates that were well above those of their Black and Hispanic counterparts in each year. For the BPS Class of 2005, the college graduation rates ranged from lows of 38% among Hispanics and 41% among Blacks to highs of 71% among White (non-Hispanics) and 74% among Asians, nearly twice the rate of their Hispanic peers. (See **Chart 8**.)

When Gender & Race-Ethnicity Are Combined

When completion gaps are studied both by gender and by racial-ethnic group, the disparities are even starker (See **Table 9**.) As shown in Chapter Two, among Black female graduates from the Class of 2005, nearly two received a degree for every one Black male, as was the case for Hispanic females compared to their male peers. While White and Asian females are outpacing their male counterparts in college completion, the racial-ethnicity and gender gaps among them are not nearly as wide.

The MCAS Test Score Gap

College graduation rates of Class of 2005 college enrollees also varied widely by their performance on the MCAS Reading and Math tests. The College completion rates range from 23% for those with a failing score on the Math test to 28% for those with an Advanced score on the test. (See **Chart 9**.)

CHART 7
Comparisons of the Percent of Female and Male Inactive College Enrollees with a College Degree, BPS Graduating Classes of 2000, 2003, and 2005

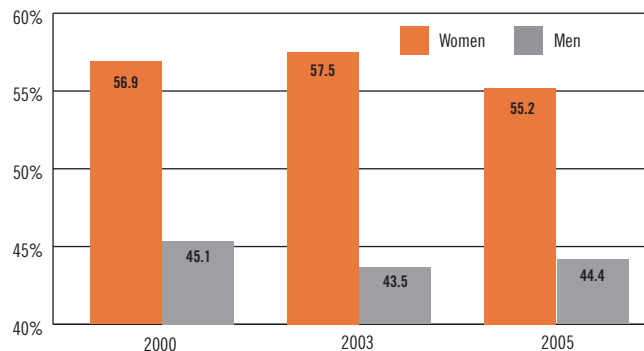


CHART 8
Percent of Inactive College Enrollees with a College Degree by Racial-ethnic Group, Class of 2005

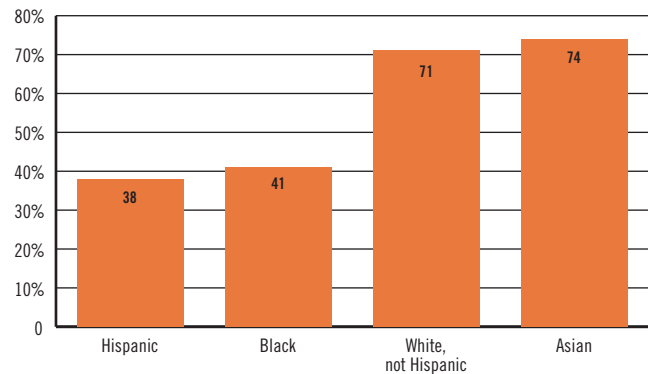


CHART 9
Percent of Inactive College Enrollees from the Class of 2005 with a College Degree by 2011 by their Score on the MCAS math test

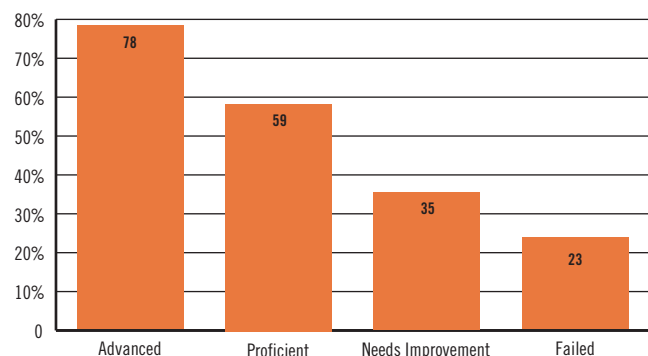


TABLE 9
Distribution of Class of 2005 College Graduates (Based on NSC Data as of April 2012)

Race	Number With a College Degree (A)			Total College Enrollees (B)			% With a College Degree (A/B)*100		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
Black	219	123	342	634	445	1,079	34.5	27.6	31.7
White	155	113	268	234	193	427	66.2	58.6	62.8
Asian	129	90	219	177	159	336	72.9	56.6	65.2
Hispanic	93	44	137	272	196	468	34.2	22.5	29.3
Total	596	370	966	1,341	1,004	2,345	44.4	36.9	41.2

TABLE 10
Comparisons of College Graduates by Institution First Attended Versus Institution from Which the Degree was Obtained, BPS Graduating Classes of 2000, 2003 and 2005

Graduating Class / Type of College	(A) College Graduates from First Institution Attended	(B) Percent of College Graduates	(C) College Graduates from Institution Awarding Degree	(D) Percent of All Degrees Awarded
2000				
Two-Year Private	25	2	22	2
Two-Year Public	136	14	112	11
Four-Year Private	553	55	572	57
Four-Year Public	290	29	298	30
Total	1,004	100	1,004	100
2003				
Two-Year Private	18	2	17	2
Two-Year Public	134	13	95	9
Four-Year Private	599	58	612	59
Four-Year Public	284	27	311	30
Total	1,035	100	1,035	100
2005				
Two-Year Private	13	1	11	1
Two-Year Public	86	9	76	8
Four-Year Private	573	59	579	60
Four-Year Public	294	30	300	31
Total	966	100	966	100

Completion Gaps by Type of College

College completion rates vary considerably between community colleges (two-year public institutions), four-year public institutions and four-year private institutions. Despite a growing focus on community colleges, the vast majority of degrees (89% for the Class of 2005) are being awarded by four-year institutions. (See **Table 10**). The college graduation rates of BPS graduates from the Class of 2005 who attended four-year colleges tended to match (private colleges) or exceed (public colleges) those of their national counterparts, but the graduation rate of those attending two-year public colleges fell below that of their national counterparts.

These outcomes, however, depend on a number of factors, not all of which are academic readiness. They also include college attendance patterns (part-time and full-time), work behavior in college, financial aid assistance and academic support from case managers and other professional support staff. These factors are consistently less favorable for students in two-year colleges. More research is necessary to understand why Boston lags behind the national graduation rate for two-year public colleges.

Completion Rates by Individual Higher Education Institutions

As Chapter One shows, when college completion is examined by individual institution, based on the first institution attended and a degree earned at any institution, there is wide variation with some notable standouts across each type. These differences in college completion rates represent a wide variety of factors, including differences in student demographics and academic characteristics. (See **Table 11** on next page.) Yet, when considered in the context of the completion rates for students from the Class of 2000, these completion rates largely represent improvements, with some institutions dramatically improving completion rates.

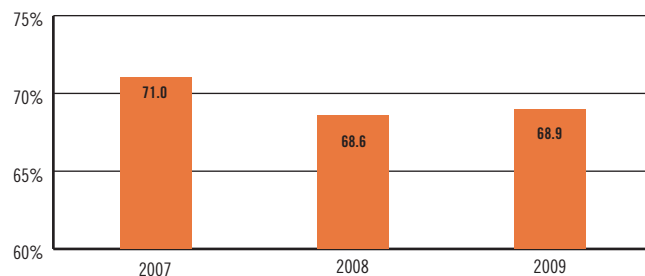
With the work of Success Boston, it is anticipated that there will be improvements in student outcomes among more recent BPS college enrollees, as they respond to the initiative's successful interventions on area campuses.

Looking Ahead: The Classes of 2007, 2008 and 2009

It is too soon for a comprehensive study of college completion rates for the BPS Classes of 2007, 2008 and 2009, and to draw conclusions about the completion trend data for these recent classes, which are the most recent classes analyzed in this report. However, as Chapter Two shows, college persistence rates for these classes may offer indicators of progress toward citywide completion goals.

This report shows that, despite the meaningful gains in enrollment discussed earlier in this Executive Summary, college persistence rates in the first and second years have not improved between the Classes of 2007 and 2009. When two-year persistence rates are examined, the persistence rates decline slightly from 71% to 68.6% and 68.9%. (See **Chart 10**.)

CHART 10
Comparisons of Two-year College Persistence Rates of BPS Graduates From the Classes of 2007, 2008 and 2009



While no known direct cause can be attributed to the plateauing of recent persistence rates, it is noteworthy that these results emerged during a time of more stringent enforcement of federal policies related to academic standing and financial aid that may have had implications for the ability of students to persist. Furthermore, while the nation had officially emerged from the recession during this time, the reality of a weak economy continued to shape and strain financial resources for students and their families, with likely implications for persistence. In other words, the city's college completion agenda emerged in the midst of a landscape that had a heightened degree of difficulty and the need for a bold intervention.

TABLE 11
**Comparison of Completion Rates from Any Institution by Individual College,
 Class of 2000 after Seven Years compared to the Class of 2005**

College	Class of 2000*		Class of 2005	
	All Enrollees Excluding Still Enrolled	% Completed	First-time Enrollees Excluding Still Enrolled	% Completed
Bunker Hill	130	16.9	314	15.9
Roxbury	83	7.2	80	17.5
Mass Bay	93	26.9	72	23.6
Quincy	55	21.8	39	23.0
Salem State	11	27.3	54	35.3
UMass Amherst	64	68.8	139	78.4
UMass Boston	123	25.2	87	56.3
UMass Dartmouth	30	50.0	33	51.5
Boston University	52	80.8	65	84.6
Boston College	35	91.4	39	87.2
Northeastern	79	83.5	36	88.8
Suffolk	27	70.4	30	80.0
Fisher	28	50.0	29	27.7

* Some FERPA blocking occurred for a number of enrollees.

It is also important to note that even with this slight decline in two-year persistence rates, earlier studies from the Center for Labor Market Studies have shown that during the early years of the last decade, persistence rates were improving. So, while persistence rates for recent classes may appear to have plateaued (and perhaps declined), this comes on the heels of significant gains between 2001 and 2008.

As the Class of 2007 is the first class for which four-year persistence results are available, data from future classes will be needed to determine whether these rates are reflective of a real trend.

Nevertheless, the persistence rates of these current classes to date seem to point to the continued need for the kinds of student supports offered by Success Boston to promote persistence, particularly for those students at the greatest risk of attrition, primarily Black, Hispanic and non-exam school students.

Persistence Gaps

Persistence rates also vary widely by gender and race-ethnicity. Estimates of the one- to four-year persistence rates of BPS graduates from the Class of 2007 are displayed in **Table 12**. By the end of year one, the persistence rate of fall 2007 enrollees was 81%. It then declined by about 10 percentage points per year over the next three years, falling to 52% by year four, implying that nearly half of all initial college enrollees had left college by the end of four years without obtaining a degree.

Persistence Gaps by Gender

Drilling down into the persistence rates by gender, women continue to outpace men. Declines in the retention of male students have contributed to a widening persistence gap with each year of enrollment. (See **Table 13**.)

TABLE 12

The One-Year, Two-Year, Three-Year and Four-year College Persistence Rates of BPS Class of 2007 High School Graduates Who Enrolled in College in the Fall of 2007, All and by Gender and Racial-Ethnic Group (in %)

Group	One Year	Two Year	Three Year	Four Year
All	81.3	71.0	61.5	52.0
Men	79.3	67.6	58.4	49.0
Women	82.5	73.1	63.4	53.9
Asian	91.5	85.7	78.2	72.7
Black	78.5	66.5	55.2	45.3
Hispanic	73.8	61.4	51.7	41.6
White	87.8	79.8	72.9	62.1

TABLE 13

The One-Year, Two-Year and Three-Year Persistence Rates of BPS Classes of 2007, 2008 and 2009 by Gender

	Class of 2007	Class of 2008	Class of 2009
Women			
One-year	82.5	83.8	82.4
Two-year	73.1	72.7	72.6
Three-year	63.4	66.7	N/A
Men			
One-year	79.3 (-3.2 gap)	80.9 (-2.9)	76.6 (-5.5)
Two-year	67.6 (-5.5)	63.0 (-9.7)	64.2 (-8.2)
Three-year	58.4 (-5)	53.4 (-13.3)	N/A

TABLE 14

The One-Year and Two-Year Persistence Rates of BPS Classes of 2007, 2008 and 2009 by Racial-Ethnicity

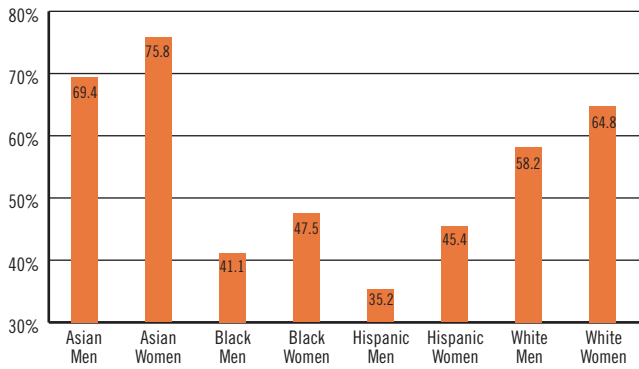
	Class of 2007	Class of 2008	Class of 2009
One-Year Retention			
Asians	91.5	94.3	92.3
Blacks	78.5	80.1	76.1
Hispanic	73.8	76.1	73.9
White, not Hispanic	87.8	86.6	86.4
Gap (Asian- Hispanic)	-17.8	-18.2	-18.4
Two-Year Retention			
Asians	85.7	81.4	86.7
Blacks	66.5	64.5	64.1
Hispanic	61.4	59.3	61.1
White, not Hispanic	79.8	79	76.1
Gap: (Asian-Hispanic)	-24.3	-22.1	-25.6

Persistence by Racial-ethnicity

Similarly, Asians and Whites out-persist their Hispanic and Black peers, and this persistence gap grows with each year of enrollment. Despite gains in one-year retention rates for most of the Class of 2008, there were declines among Asian, Black and Hispanic members of the Class of 2009 of two to four percentage points. That same academic year, Asian, Black and Hispanic students from the Class of 2008 saw losses in two-year retention rates relative to their Class of 2007 peers, of 4.3 to 2 percentage points. But as can be seen in **Table 14**, much of this is gained for the following class.

CHART 11

Four-year College Persistence Rates of Class of 2007 BPS Graduates, by Gender and Racial-ethnicity Combined (in %)



When Gender and Racial-Ethnicity Are Combined

When combining gender and race-ethnicity of these college students, persistence rates vary considerably. Among BPS graduates from the Class of 2007, the four-year persistence rate ranges from 35.2% for Hispanic males to 75.8% for Asian female students. (See **Chart 11**.)

Persistence Rates by Type of College

In each year, the persistence rate of four-year college attendees substantially exceeded that of their community college counterparts, and the size of those gaps widened over the first three years. For the Class of 2007, the persistence gap between two- and four-year college attendees was 26.6 percentage points for one-year retention (60.7% versus 87.3%) and 37.1% for two-year retention (42.3% versus 79.4%). The one-year persistence gap was more than 26 percentage points, increasing to 37 percentage points in year two and 44 percentage points in year three. Only 22 of every 100 initial two-year college attendees had either obtained a college degree or remained enrolled in college by year four. For four-year college attendees, just under 62% persisted. (See **Table 15**.)

The one- and two-year college persistence rates of BPS graduates from the Classes of 2007, 2008 and 2009 are reflected in **Table 16**. While both one-year and two-year persistence rates of four-year institutions outpace the rates of two-year institutions, comparisons of persistence rates for the three graduating classes show no upward trend.

TABLE 15

One, Two, Three and Four-year Persistence Rates of Class of 2007 BPS Graduates Who Attended College in the Fall Following Graduation by Type of College Attended (in %)

Type of College	(A) One Year	(B) Two Year	(C) Three Year	(D) Four Year
Two-year	60.7	42.3	28.1	22.1
Four-year	87.3	79.4	72.2	61.6
Four-year – Two-year	+26.6	+37.1	+44.1	+39.5

TABLE 16

One-year to Two-year College Persistence Rates for BPS Class of 2007, 2008, 2009 Graduates Who Enrolled in College in the Fall Following Graduation, by Type of College (in %)

School Type	One-Year Persistence			Two-Year Persistence		
	2007	2008	2009	2007	2008	2009
Two-year	60.9	67.5	62.8	42.3	44.4	44.0
Four-year	87.3	87.5	85.9	79.4	75.6	77.8
Four-year – Two-year	+ 26.4	+ 20.0	+ 23.1	+ 37.1	+ 31.2	+ 33.8

On the whole, this suggests very modest retention gains among two-year attendees and a small decline among four-year attendees. As mentioned earlier, Success Boston was launched just as the recession hit, so the Class of 2009 faced a harsh financial environment in which to begin their college careers.

Success Boston’s Coaching Model

Success Boston is dedicated to ensuring that the vast majority of BPS students are “Getting Ready, Getting In and Getting Through” college. The initiative supports academic programming and college advising activities at the high school level, so that students and their families are better positioned to make informed choices. It also works closely with Boston area colleges and universities to connect graduates of the BPS with the support they need, including dedicated student coaches situated within the institutions, to earn a degree and be prepared to enter the workforce.

In addition, the initiative provides direct “transition coaching” to a cohort of students from each high school graduating class who are headed to a subset of the most commonly attended post-secondary destinations. Transition coaching pairs nonprofit organizations with first-generation and low-income students of color—those who show the poorest results along the entire education pipeline.

This two-year support program was piloted with college students from the BPS Class of 2009. Providing Success Boston students with transition coaching, the pilot program addressed the academic and non-academic challenges associated with the first two years of college. The following section details emerging persistence results for participants in the Success Boston pilot group compared with their peers.

While this does not capture every element from which Success Boston students have benefited—including Superintendent Johnson’s Acceleration Agenda, efforts to increase the rigor of the academic curriculum and efforts on local higher education campuses to provide expanded support for students—this section does analyze the outcomes for students who received direct coaching from a Success Boston nonprofit partner. Future studies will attempt to capture the experiences of all students who benefit from Success Boston, and any consideration of citywide completion rates for high

school classes after 2009 will include the complete Success Boston story. For now, this review includes those students who were the first and most direct beneficiaries.

The Success Boston Class of 2009 cohort shows non-regression adjusted one-year persistence rates nearly 13 percentage points higher than their peers who did not participate. Furthermore, across gender and racial-ethnic groups, the persistence rates ranged from 13 to nearly 19 percentage points higher. Overall, Black participants showed the largest gains of 18.9 percentage points compared to their non-Success Boston peers. (See **Table 17**.)

Similar findings prevailed in the case of two-year retention statistics, with gains of 13 percentage points for all Success Boston students compared to their non-Success Boston peers, and continued dramatic gains for Black participants of 17.3 percentage points.

TABLE 17
Comparisons of One-Year and Two-Year College Persistence Rates of Class of 2009 Success Boston Participants Compared to Non-Participants (in %)

Group/Persistence	(A) Success Boston	(B) Not Success Boston	(C) Difference (A-B)
1-Year Persistence			
All	86.7	73.8	+12.9
Men	84.0	70.9	+13.0
Women	88.5	76.1	+12.3
Black	91.4	72.6	+18.9
Hispanic	83.2	69.6	+13.6
N	211	1,427	
2-Year Persistence			
All	73.9	61.0	+13.0
Men	67.9	56.3	+11.7
Women	77.7	64.8	+12.9
Black	77.1	59.9	+17.3
Hispanic	68.3	56.2	+12.1
N	211	1,427	

To estimate the impact of the Success Boston program, Chapter Two of this report compares students attending the seven colleges and universities that enrolled the largest share of program participants. The colleges included two community colleges and five four-year institutions and accounted for 87% of the Success Boston participants from the Class of 2009.

Based on this comparison, Success Boston participants had a one-year retention rate that was 20.4 percentage points higher than their non-Success Boston peers (86.4% versus 66%). Among both men and women and Black and Hispanic students, Success Boston participants out-persisted their peers with gains of 18.1 to 25.6

percentage points in Year One, and 20.1 to 27.8 percentage points in Year Two. (See **Table 18.**)

To further estimate the impact of participation in Success Boston, the researchers designed linear probability models which took into consideration gender, racial-ethnic group, MCAS math scores, the college attended and participation in the program.

The regression-adjusted independent impacts of Success Boston participation on the one- and two-year college persistence rates of BPS Class of 2009 graduates were both large and highly statistically significant. For the entire sample, the estimated impact of participation on one year persistence was found to be 16.7 percentage

TABLE 18
One-year to Two-year College Persistence Rates for BPS Class of 2007, 2008, 2009 Graduates Who Enrolled in College in the Fall Following Graduation, by Type of College (in %)

Group	Enrolled in Success Boston		Not in SuccessBoston		Difference		
	One-Year Persistence Rate	Two-Year Persistence Rate	One-Year Persistence Rate	Two-Year Persistence Rate	One-Year Persistence Rate	Two-Year Persistence Rate	N
All	86.4	73.4	66.0	49.9	+20.4	+23.5	711
Male	83.3	66.7	62.5	46.6	+20.9	+20.1	343
Female	88.1	77.1	70.0	53.6	+18.1	+23.5	368
Black	90.3	77.4	64.8	49.6	+25.6	+27.8	306
Hispanic	82.6	66.3	58.6	42.7	+24.0	+23.6	243

TABLE 19
Estimated Percentage Point Impacts of Participation in Success Boston Programs on the One-Year and Two-Year Persistence Rates of BPS Graduates from the Class of 2009, All and by Gender

Group	(A) One-Year Persistence Rate	(B) Sig. Level	(C) Two-Year Persistence Rate	(D) Sig. Level
All	16.7	.01	15.6	.01
Men	18.6	.01	16.3	.05
Women	14.8	.01	15.9	.01
Black	21.9	.01	18.9	.01
Hispanic	17.0	.01	13.7	.05

points. Equally large estimated impacts were found for men and women and for Black and Hispanic students, ranging from 14.8 to 21.9 percentage points for one-year and 13.7 to 18.9 percentage points for two-year retention. (See **Table 19**)

Conclusion

Both chapters of this report show promising signs for all of Boston's graduates and particularly for Success Boston participants who receive coaching services. However, plateaued persistence rates and continued wide differences in college enrollment, persistence and graduation rates across high school type, college type, MCAS test scores, race-ethnicity and gender threaten to slow progress for the city's goals. College completion is still a distant dream for many students, especially Black and Hispanic male students from non-exam schools. And Hispanic students have been increasing their share of all BPS high school students in recent years. The impact of MCAS, the importance of financial assistance, college advising and the ability to do college-level work are powerful influences on the ability of students to complete college. In addition, the potential of the Success Boston model and the variables identified in this report suggest that the need to focus aggressively on a set of key policy levers is very strong.

These include curricular alignment and increased academic rigor, the expansion of case management intervention and deeper attention to the role of work, college enrollment patterns and financial aid on student persistence. The Center for Labor Market Studies (CLMS) has produced papers on a number of these areas, which are available at <http://www.northeastern.edu/clms/>. In addition, the Center will continue to study the effect of Success Boston's coaching model as an intervention.

To achieve Success Boston's bold vision for the city's students, we will need deep and widespread engagement and support from civic, educational and business leaders across Boston championing these key issues and keeping the postsecondary success of all BPS students at the forefront of their priorities for the future.

Introduction

In recent decades in both Massachusetts and the U.S., the labor market experiences and the personal economic and social success of adults have become more strongly linked with their formal educational attainment, their occupational training experiences on and off the job, and their literacy/numeracy proficiencies. Those adults without high school diplomas, especially men, have experienced substantial declines over time in their employment opportunities and lifetime earnings.¹ Annual earnings data for the 2004-2005 period in Massachusetts revealed that the average native born, male high school graduate with no completed years of post-secondary schooling would obtain about \$600,000 more in earnings over his working lifetime (ages 18-64) than high school dropouts.

Obtaining a high school diploma by itself, however, has provided no guarantee that one will fare well in the labor market or make it into the middle class. Many high school graduates, again especially men, have lost real earnings in recent decades, and the gaps in annual earnings and incomes between the nation's adults with college degrees and high school graduates have widened considerably in recent decades up through at least 2000.² These findings combined with the projected national outlook for job growth by educational attainment have led some educational and labor market analysts to push for an expansion of the number of high school graduates going onto college and securing college degrees.³ President Obama recently called upon the U.S. to once again achieve world leadership in producing college graduates to raise average living standards and allow the nation to experience stronger economic growth and enhance its international competitiveness. In the past few years, however, a weak labor market devastated by the effects of the Great Recession of 2007-09 has created growing labor market problems, including rising mal-employment and underemployment for its young Associate and Bachelor degree holders.⁴

Given the importance of formal educational attainment for labor market, economic and social success, a growing number of states, including Massachusetts, have embarked on a series of efforts to more closely track trends in high school graduation rates, the college plans of recent high school graduates, and the college enrollment and graduation behavior of these high school graduates. Here, in Boston, a number of data collection efforts were undertaken in recent years to identify the early college enrollment behaviors of each year's high school graduates and to conduct longer term tracking of their college retention and graduation experiences. Each year, a follow-up survey of the graduating class from the Boston Public Schools is undertaken to identify their college and labor market experiences in the first year following graduation. In 2008, a major new study was completed on the college enrollment and graduation experiences of Boston Public Schools graduates from the Class of 2000 over a seven year period following their graduation from high school through the late spring of 2007.⁵ The study tracked the college enrollment and graduation behaviors for all high school graduates, for members of gender and racial-ethnic groups, gender by racial-ethnic groups, and by type of high school attended (exam versus non-exam high school). The types of colleges attended by these graduates (two-year versus four-year and public versus private) and their college graduation experiences within each of these types of colleges also were identified. Among the recommendations presented in that chapter was the desirability of continuing the follow-up of the college experiences of the BPS Class of 2000 and extending the analysis to following graduating classes to measure progress in improving college enrollment and graduation outcomes over time. This chapter represents a response to that recommendation. Chapter One is primarily focused on the college enrollment and graduation outcomes for BPS graduates from the classes of 2000, 2003 and 2005. Chapter Two focuses on student characteristics from the Classes of 2007, 2008 and 2009, and their enrollment and persistence behaviors.

The College Enrollment and Graduation Experiences of Boston Public Schools Graduates from the Classes of 2000, 2003 and 2005 Through the End of 2011: An Assessment of Progress and Remaining Challenges

This chapter is primarily focused on the college enrollment and graduation outcomes for BPS graduates from the Classes of 2000, 2003 and 2005. The available data bases allow us to track these educational outcomes through April-May 2012, thus yielding nearly 12 years of data for the Class of 2000, nine years of data for the Class of 2003, and seven years of data for BPS graduates from the Class of 2005. The chapter is organized along the following lines. We will begin by reviewing the various local, state, and national data bases that were used in conducting all of the empirical analyses appearing in this chapter. Data were obtained from the local Boston Public Schools, the annual follow-up surveys of the Boston Private Industry Council, the National Student Clearinghouse, the Massachusetts Department of Education, the U.S. Department of Education, and the monthly Current Population Surveys of the U.S. Census Bureau and U.S. Bureau of Labor Statistics.¹

Discussion of the data sources will be followed by a detailed overview of the college enrollment experiences of BPS graduates from the Classes of 2000, 2003 and 2005. Their enrollment behaviors will be tracked from the year of their graduation from high school through the late fall of 2011 or the spring of 2012. Findings on cumulative college enrollment rates will be presented for all BPS graduates combined, by gender and racial-ethnic group, for gender by race subgroups, and by type of high school attended (exam versus non-exam high school). The types of colleges attended by BPS graduates also will be examined with some breakouts of the enrollment data by time period following graduation.

The analysis of the college enrollment behavior of high school graduates will be followed by a description and

assessment of their college graduation outcomes through the spring of 2012.² The number of college graduates from each class will be identified, and college graduation rates will be calculated for various demographic subgroups of college enrollees and by type of high school attended. A series of “college graduation rates” for types of colleges attended (two-year versus four-year and public versus private) will be presented for each graduating class. For college enrollees from the Class of 2005, graduation rates will be presented for selected individual two- and four-year colleges that were able to meet minimum college enrollment figures.

The analysis of the college graduation rates of the college enrolled will be accompanied by a detailed review and assessment of the college graduation rates of all high school graduates from each of the three graduating classes regardless of their college enrollment status. These college graduation rates were estimated for all high school graduates combined, for gender, racial-ethnic, and gender by race demographic groups, and by type of high school attended. Gender disparities in overall college degree attainment and Bachelor degree attainment will be presented for the entire group of graduates from each of the three graduating classes and by racial-ethnic group. Trends in these gender disparity ratios in college degree attainment over time also will be provided together with their educational policy implications.

One of the final sections of this report will be devoted to an analysis of the time paths of college graduation rates for those BPS graduates from each class who enrolled in college in the first year after graduation. Under Mayor Menino’s guidance, the Boston College Success Initiative has established six-year graduation rate objectives

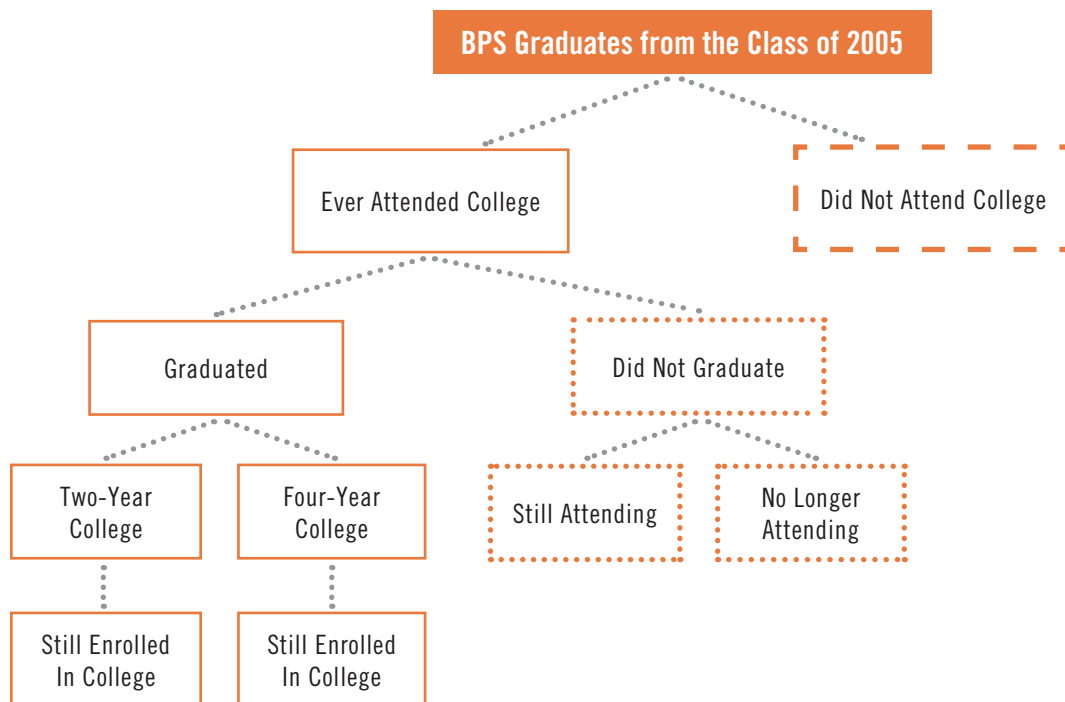
for BPS graduates from the Classes of 2009 and 2012. The analysis will highlight how far recent BPS graduates have come in achieving these college graduation objectives and how far they need to go to achieve them in the near future. The last section of the chapter will present findings on the number of BPS graduates (without a college degree in late 2011) who were still enrolled in college in the fall of 2011/early spring of 2012. The number of such active college attendees and their gender and racial-ethnic characteristics will be identified and compared to one another. Comparisons of the share of BPS graduates (with no college degree) enrolled in college in 2011 will be compared to national findings for similar-aged youth in the fall of 2011.³ A few concluding remarks on the desirability of continuing efforts to track these active college enrollees and their college graduation outcomes will be provided.

Tracking the College Enrollment and Graduation Experiences of BPS Graduates Over Time

This chapter is primarily designed to track and assess the college enrollment and graduation behaviors of BPS graduates over a 7 to nearly 12 year period following their leaving high school. A flow diagram below illustrates how this tracking can be done with the National Student Clearinghouse data as supplemented by four the local colleges that provided data to us directly.

For each graduating class (e.g., 2005), we start with the number of high school graduates. This pool of graduates is initially divided into the following two subgroups: those who ever attended college since leaving high school and those who did not attend college. For those who attended college, we will identify those who graduated from college as of the end of the reporting period (early 2012) and those who did not graduate. Graduates are those who were identified by the NSC as obtain-

CHART 1
Tracking the College Enrollment and Graduation Outcomes of Class of 2005 BPS Graduates through the First Six to Seven Years Following High School Graduation



ing either a college degree or a certificate.⁴ For those who graduate, we can identify whether they graduated from a two-year or four-year college. We will measure degrees received by type of college from which they were received. This college may not be the same one that they initially attended. We also will examine degrees received from post-secondary educational institutions in two different ways: by the college that one initially attended and by the college that granted the degree.

The data on high school graduates, cumulative college enrollees, and college graduates will be used to calculate two sets of college graduation rates. First, we will estimate a college graduation rate for all college enrollees in a given group excluding those still actively enrolled in college. Second, we will estimate a college graduation rate based on the share of high school graduates in a given group (gender, racial-ethnic) who had obtained a college degree by the end of the reporting period.

For those youth who attended college but did not graduate as of the end of 2011 or spring 2012, we will identify how many were still attending college at the end of this time period. The demographic characteristics of these active college students without a college degree will be identified and the shares of high school students in such an active enrollment status will be identified.

Data Sources for the Analysis of the College Enrollment and Graduation Behavior of BPS Graduates from the Classes of 2000, 2003 and 2005

The comprehensive set of findings on the college enrollment and graduation experiences of BPS graduates appearing in this chapter is based on a number of different data sources. The data on the demographic characteristics of BPS graduates (gender, racial-ethnic group), and the high schools from which they graduated were provided by the Boston Public Schools. A second source of data is the annual follow-up surveys of BPS high school graduates conducted by the Boston Private Industry Council. This survey is administered by PIC career specialists in the late winter and spring of the year following their graduation from high school. For example, the graduates from the Class of 2000 were interviewed in the late winter and spring of 2001. The follow-up questionnaire is used to collect information from graduates on their college, post-secondary train-

ing, and employment status, including military service, at the time of the follow-up survey and the characteristics of their college and job experiences. College enrolled students are asked to identify the college they are attending, the part-time/full-time nature of their enrollment, their college major, their financial aid status, and their employment status, including the name of their employer, occupational job titles, and their weekly hours of work.

The third and most important source of data is the information on the college enrollment status and graduation status of Boston Public Schools graduates from the National Student Clearinghouse (NSC). The Clearinghouse was established by the higher education community back in 1995 to serve as a central location for storing and retrieving information on the college enrollment status and graduation status of students in colleges and universities that are members of the Clearinghouse. One of the most important functions of the Clearinghouse is to provide services to local school districts and educational researchers who wish to obtain access to the data base that today covers between 93 and 94 percent of total enrollment in the nation's colleges and universities. As a result of agreements between the Boston Public Schools, the Boston Private Industry Council, and the National Student Clearinghouse, the Center for Labor Market Studies was able to obtain listings of the names of all Boston Public Schools graduates from the graduating Classes of 2000, 2003 and 2005. The NSC then provided the Center with information on the college enrollment status and the college graduation status of each BPS graduate for each semester from the date of high school graduation through the early spring of 2012.⁵ The Clearinghouse data provide information on the college attended by each individual student, including its name, whether it is a two-year or four-year college, and its private / public nature. A subset of colleges will provide information on the type of degree obtained by the graduate (Associate, Bachelor) or the type of certificate.

As noted above, not all colleges and universities in Massachusetts were members of the Clearinghouse. Analysis by the Center for Labor Market Studies of the NSC membership lists and the PIC follow-up data for the Class of 2000 revealed that several local colleges and universities serving a substantial number of BPS graduates from the Class of 2000 were not members of the Clearinghouse in the earlier years of the decade

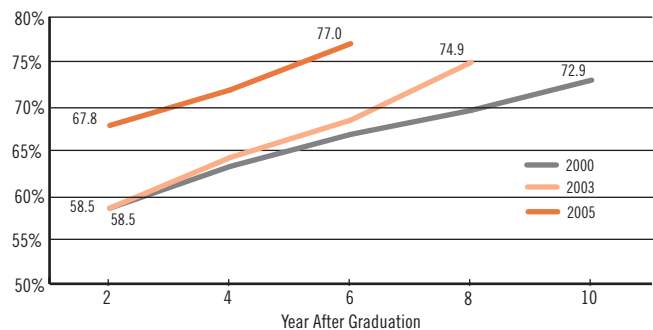
though they did join later on in the decade. They were the Benjamin Franklin Institute, Bunker Hill Community College, Mount Ida College, and Northeastern University. These four institutions did agree to provide information on the college enrollment and graduation status of all BPS graduates who attended their colleges at any time between 2000 and 2007. Research staff in the Center for Labor Market Studies merged the individual records for BPS college students in these four colleges with the data base from the National Student Clearinghouse. As a result of this merging process, we estimate that college enrollment and graduation records should have been available for about 94-95% of all college enrollees from the BPS Class of 2000.⁶

The final sets of data appearing in this chapter are based upon a series of national data sources, including the monthly Current Population Surveys, the October 2011 Current Population Survey Supplement, and publications of the U.S. Department of Education. The monthly CPS surveys for 2011 were used to estimate the percentage of the nation's young adults with at least a high school diploma who held some type of college degree. These estimates were used to compare the findings on the college degree holding rates of BPS high school graduates from the Classes of 2000 and 2005 with those of their national peers. The October 2011 CPS supplement was used to estimate the college enrollment rate of U.S. adults 23-25 and 26-29 years old with a high school diploma but no college degree with those for BPS graduates from the Class of 2000 and 2005. Finally, the national data from the U.S. Department of Education on two-year and four-year college graduation rates in recent years were used to compare those findings with those of BPS high school graduates for the Classes of 2003 and 2005.⁷

Trends in Cumulative College Enrollments Over Time for the BPS Graduating Classes of 2000, 2003 and 2005

The annual follow-up survey of Boston Public Schools graduates has collected information on the college enrollment experiences of graduates in the late winter/spring of the calendar year following their graduation from high school. While a majority (70-72 percent) of those who will attend college in the first decade following graduation appear to enroll in the first two semesters following graduation (the fall 2000 and winter/spring 2001 semesters for the graduating Class of 2000), there are many additional graduates who will ultimately choose to enroll in college in following years. Knowledge of the cumulative numbers of graduates enrolling in college in the years following high school graduation is, thus, important for understanding their longer-term college transition and graduation experiences. The trends in the cumulative college enrollment rates of the Classes of 2000, 2003 and 2005 can be seen in **Chart 2**, which shows the Class of 2005 outpacing the Classes of 2000 and 2003 in enrollment. Part of the increase in cumulative enrollment in the early years is attributable to increased student coverage in the NSC survey; however the Boston PIC's annual follow-up surveys also find rising college enrollment for this same time period. Findings from the National Student Clearinghouse (as supplemented by the information provided by four local colleges) on the college enrollment experiences of BPS graduates from the Classes of 2000, 2003 and 2005 were used to track the flows of new college enrollees into the post-secondary educational system for each year from the

CHART 2
Cumulative College Enrollment Rates of BPS Graduates, Classes of 2000, 2003 and 2005 (in %)*



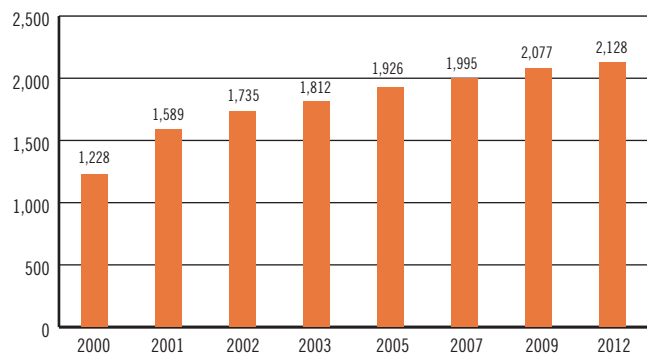
* Base is all high school graduates

TABLE 1
The Distribution of College Enrolled BPS Graduates from the Classes of 2000, 2003 and 2005 by the Initial Year of College Enrollment

Initial Year of Enrollment	(A) Class of 2000	(B) Class of 2003	(C) Class of 2005
2000	1,228	0	0
2001	361	0	0
2002	146	4	0
2003	77	1,320	1
2004	55	230	0
2005	59	204	1,622
2006	37	105	306
2007	32	79	138
2008	47	45	67
2009	35	28	42
2010	25	34	42
2011	22	35	30
2012*	4	7	7
Total**	2,164	2,267	2,345

* Data for 2012 are only for schools reporting through May of this year.
 ** Totals include students with missing initial enrollment dates

CHART 3
Trends in the Cumulative Number of BPS Graduates from the Class of 2000 Who Enrolled in College at Some Point Following Graduation, 2000 – 2012*



* There were 36 college enrollees from the Class of 2000 with missing initial enrollment data. Data for 2012 were only available through May of that year. Not all colleges have reported their winter/spring 2012 data to the Clearinghouse.

year of graduation through the early spring of 2012 (See **Table 1**). For the Class of 2000, there were 1,228 graduates who enrolled in college by the end of calendar year 2000 and another 361 had enrolled in the following year (**Table 1**, Column A). New enrollment levels tended to decline fairly steadily after this, declining to 25 and 22 new enrollees in years 10 and 11 after graduation. As will be shown later, however, there were many more college enrollees from earlier years still attending college in 2010 and 2011. Total cumulative enrollment for the Class of 2000 through the early spring of 2011 was 2,164 of which 1,589 or 73% had enrolled in the first 18 months following graduation from high school in June 2000.

The time patterns of college enrollment for BPS graduates from the Classes of 2003 and 2005 appear to be quite similar to those for the graduating Class of 2000. Overall enrollments are clearly highest in the year of graduation followed by the next calendar year then tend to fade fairly steadily, but remain positive through each year for at least 12 years. For example, 1,320 graduates from the Class of 2003 attended college by the end of 2003 and another 200 plus enrolled in the following two years before dropping to 105 in 2006 and to 34-35 in calendar years 2010 and 2011. Many more college attendees from earlier years also were still enrolled in college in 2011. The cumulative data on college enrollees over time can be combined with information on their demographic and schooling characteristics to estimate *cumulative college enrollment rates* both overall and across these various gender, racial-ethnic, and high school types.

One of the major objectives of the longitudinal tracking study of Boston Public Schools graduates is to identify the share of graduates who will attend college at some time after leaving high school. The National Student Clearinghouse data as supplemented by enrollment information from four other local colleges and universities were used to identify the number of graduates from each BPS graduating class (2000, 2003, 2005) who attended college at some point through the end of calendar year 2011 or the winter/spring semester of 2012. *The cumulative number of college attendees was then divided by the number of high school graduates to estimate a cumulative college enrollment rate as of late 2011/early 2012.*⁸ These cumulative college enrollment rates were estimated for all graduates combined, for men and women, for each of the four racial-ethnic groups, and by type of high school attended.

TABLE 2

The Number and Percent of BPS Class of 2000 Graduates Who Enrolled in College at Some Point Between the Fall of 2000 and Fall of 2011/Spring of 2012, All and by Gender, Racial-Ethnic Group, Type of High School

Characteristics	(A) Number of Graduates	(B) Number Enrolled in College	(C) Percent Enrolled in College
All	2,967	2,164	72.9
Men	1,355	939	69.3
Women	1,612	1,225	76.0
Asian	347	298	85.9
Black	1,487	1,032	69.4
Hispanic	587	395	67.3
White, not Hispanic	515	408	79.2
Exam High Schools	722	669	92.7
Non-Exam High Schools	2,245	1,495	66.6

For graduates from the Class of 2000, our earlier study (*Getting to the Finish Line*) found that slightly over 64% of the graduates had attended a college at some time through June 2007.⁹ Four to five years later, the cumulative college graduation rate had risen to just under 73%. For graduates from the Class of 2003, the cumulative college enrollment rate had already reached 75% by 2011 and it stood at 77% for graduates from the Class of 2005 only 6 to 7 years after graduation (See **Tables 3 and 4**).

Comparisons of the cumulative college enrollment rates of BPS graduates from the Classes of 2000, 2003, and 2005 approximately 7 years after graduation are displayed in **Chart 4**. The Class of 2003 was the first graduating class required to pass the MCAS test to obtain a regular high school diploma. Earlier data on their college enrollment rate in the first year after graduation based on PIC follow-up questionnaires had shown a higher college enrollment rate for the Class of 2003 in comparison to earlier graduating classes. *The cumulative college enrollment rate of Class of 2003 graduates seven years after graduation was just under 74%, or 10 percentage points higher than it was for the Class of 2000 at approximately the same number of years post-high school graduation.* The Class of 2005 graduates performed even better. Their cumulative college enrollment rate six to seven years after grad-

TABLE 3

The Number and Percent of BPS Class of 2003 Graduates Who Enrolled in College at Some Point Between the Fall of 2003 and Fall of 2011/Spring of 2012, All and by Gender, Racial-Ethnic Group, Type of High School

Characteristics	(A) Number of Graduates	(B) Number Enrolled in College	(C) Percent Enrolled in College
All	3,025	2,267	74.9
Men	1,332	921	69.1
Women	1,693	1,346	79.5
Asian	365	307	84.1
Black	1,511	1,098	72.7
Hispanic	580	397	68.4
White, not Hispanic	529	425	80.3
Exam High Schools	777	726	93.4
Non-Exam High Schools	2,248	1,541	68.5

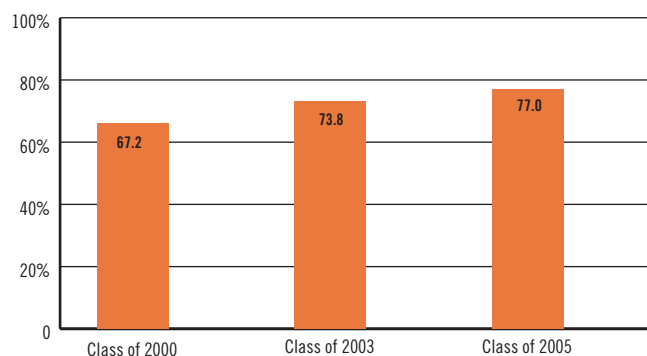
TABLE 4

The Number and Percent of BPS Class of 2005 Graduates Who Enrolled in College at Some Point Between the Fall of 2005 and Fall of 2011/Spring of 2012, All and by Gender, Racial-Ethnic Group, Type of High School

Characteristics	(A) Number of Graduates	(B) Number Enrolled in College	(C) Percent Enrolled in College
All	3,045	2,345	77.0
Men	1,388	1,004	72.3
Women	1,657	1,341	80.9
Asian	388	336	86.6
Black	1,420	1,079	76.0
Hispanic	685	468	68.3
White, not Hispanic	517	427	82.6
Exam High Schools	804	755	93.9
Non-Exam High Schools	2,241	1,590	71.0

CHART 4

Comparisons of the Cumulative College Enrollment Rates of Classes of 2000, 2003, and 2005 BPS Graduates at Seven Years Following Graduation from High School (in %)



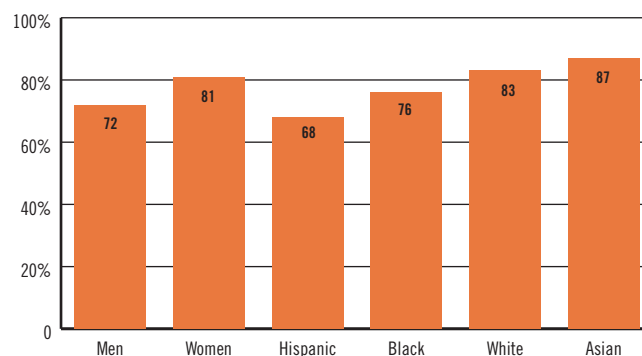
uation was *already* 77% or 10 percentage points higher than the Class of 2000. The major question is whether these increased college enrollment rates were accompanied by improved college persistence and graduation rates.

For each of the three BPS graduating classes, the cumulative college enrollment rates of female high school graduates through 2011/2012 were above those of their male counterparts. The percentage point sizes of these gender gaps in college graduation rates ranged from 7 percentage points (Class of 2000) to slightly more than 10 percentage points for the class of 2003. The cumulative college enrollment rates for each graduating class also varied consistently across racial-ethnic groups. The enrollment rates for Asian graduates were consistently the highest followed by those of White, non-Hispanics than by Black and Hispanic graduates. For graduates from the Class of 2005, the cumulative college enrollment rates ranged from 68% among Hispanic graduates to a high of 87% among Asian graduates.

The cumulative college enrollment rates of BPS graduates also varied as expected by type of high school attended. Graduates from the city's three exam high schools (Boston Latin, Latin Academy, O'Bryant Technical) achieved cumulative college enrollment rates in the 93 to 94 percent range in each of the three graduating classes. These cumulative enrollment rates exceeded those of graduates from the city's other high schools by 23 to 26 percentage points. Over time, however, there has been steady improvement in the college enroll-

CHART 5

Comparisons of the Cumulative College Enrollment Rates of Class of 2005 BPS Graduates in the Fall 2011/ Winter-Spring 2012 by Gender and Racial-ethnic Group (in %)



ment rates of graduates from the city's non-exam high schools. Only 57-58 percent of the non-exam school graduates from the Class of 2000 had ever attended college by the spring of 2007. In comparison, 71% of the Class of 2005 graduates from the non-exam schools had enrolled in college within seven years of graduation.

The cumulative college enrollment rates of men and women in each major racial-ethnic group for the Classes of 2000, 2003, and 2005 are displayed in **Tables 5 through 7**. Overall, we earlier showed that women were more likely than men to be enrolled in college each year. These gender disparities have also prevailed in each racial-ethnic group for every graduating class with one exception, i.e., Asians in 2000.¹⁰ For the graduating class of 2005, the cumulative college enrollment rates of women were anywhere from 4 percentage points (Whites) to nearly 12 percentage points (Blacks) higher than those of men (See **Tables 5 through 7**, and **Chart 6** next page).

These higher college enrollment rates among women have been accompanied by higher college persistence and graduation rates which, when combined with higher high school graduation rates, produce some rather *large gender disparities in college degrees awarded to BPS graduates both overall and across racial-ethnic groups*, especially among Blacks and Hispanics. We will return to this issue in a following section of this chapter.

TABLE 5
Comparisons of the Cumulative College Enrollment Rates of Class of 2000 BPS High School Graduates Through Spring 2012, All and by Gender and Racial-Ethnic Group

Group	(A) Men	(B) Women	(C) Woman – Men
All	69.3	76.0	+6.7
Asian	88.4	83.3	-5.1
Black	63.9	73.9	+10.0
Hispanic	61.8	71.1	+9.3
White, not Hispanic	75.8	82.9	+7.1

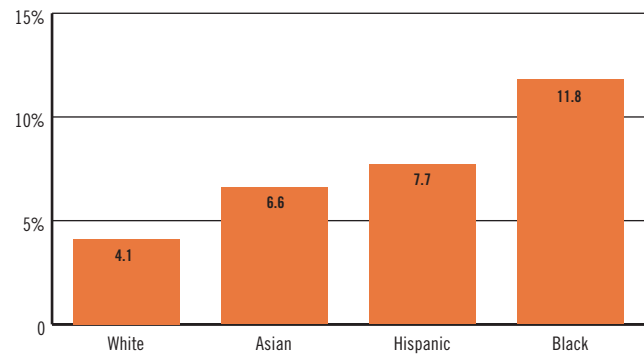
TABLE 6
Comparisons of the Cumulative College Enrollment Rates of Class of 2003 BPS High School Graduates Through Spring 2012, All and by Gender and Racial-Ethnic Group

Group	(A) Men	(B) Women	(C) Woman – Men
All	69.1	79.5	+10.4
Asian	82.7	85.2	+2.5
Black	66.4	77.3	+10.9
Hispanic	61.0	74.2	+13.2
White, not Hispanic	73.8	86.6	+12.8

TABLE 7
Comparisons of the Cumulative College Enrollment Rates of Class of 2005 BPS High School Graduates Through Spring 2012, All and by Gender and Racial-Ethnic Group

Group	(A) Men	(B) Women	(C) Woman – Men
All	72.3	80.9	+8.6
Asian	83.2	89.8	+6.6
Black	69.5	81.3	+11.8
Hispanic	64.1	71.8	+7.7
White, not Hispanic	80.4	84.5	+4.1

CHART 6
Gender Gaps in Cumulative College Enrollment Rates of BPS Graduates from the Class of 2005 by Racial-ethnic Group in the Fall 2011/Spring 2012 (in %)



Types of Colleges and Universities Attended by Boston Public Schools Graduates from the Classes of 2000, 2003, and 2005

Graduates of the Boston Public Schools attend a substantial array of different types of colleges and universities although four-year colleges tend to account for the majority (two-thirds) of all those who will enroll in college upon graduating from high school. The graduates from the Class of 2000 attended at least 233 different colleges and universities through the spring of 2007, with initial enrollees in four-year colleges accounting for 65% of total enrollment.¹¹

Findings on the types of colleges/universities first attended by graduates from the Classes of 2000, 2003, and 2005 are presented in **Table 8**. The estimates are based on cumulative college enrollments through the end of calendar year 2011 or the spring semester of 2012. *In each of these three years, enrollments in four-year colleges and universities accounted for close to two-thirds of all college enrollees.* For each year, the highest share of first time college enrollees attended private four-year colleges with 43 to 44 percent of first time enrollees from the BPS graduating classes of 2003 and 2005 attending such institutions. Among attendees of two-year colleges, however, the vast majority (90%+) enroll in public community colleges dominated by Bunker Hill and Roxbury Community College. The graduation rates of two-year college attendees are, thus, overwhelmingly influenced by the graduation experiences of the public colleges.

TABLE 8
Cumulative College Enrollees by Type of Institution First Attended, Classes of 2000, 2003, and 2005

Type of College	Class of 2000		Class of 2003		Class of 2005	
	(A) Number	(B) Percent	(A) Number	(B) Percent	(A) Number	(B) Percent
Two-Year, Total	769	36	769	34	774	33
Two-Year Public	694	32	720	32	737	31
Two-Year Private	75	4	49	2	37	2
Four-Year, Total	1,395	64	1,498	66	1,571	67
Four-Year Public	534	24	505	22	568	24
Four-Year Private	861	40	993	44	1,003	43

Analysis of the time trajectories of college enrollment reveals that a rising share of new college enrollees over time come from the two-year colleges. For example, the share of cumulative first time college enrollees from the Class of 2003 that enrolled in college in the first year following graduation ranged from highs of 80 to 85 percent for four-year public and private universities to lows of 45 to 50 percent for first time enrollments in two-year colleges. Similar patterns prevailed for first time college enrollees from the Class of 2005. Among first time attendees in four-year private colleges, 84% enrolled in such colleges in the first year following graduation and 93% of those in four-year public colleges did so. In contrast, only 63% of the first time college enrollees in two-year public universities enrolled in such institutions in the first year after graduation from high school. More of the BPS graduates who delay enrolling in college until several years after high school graduation will attend two-year colleges, especially public community colleges.

CHART 7
Share of Cumulative First Time College Enrollees that Enrolled in College in the First Year Following Graduation by Type of College, Class of 2003 (in %)

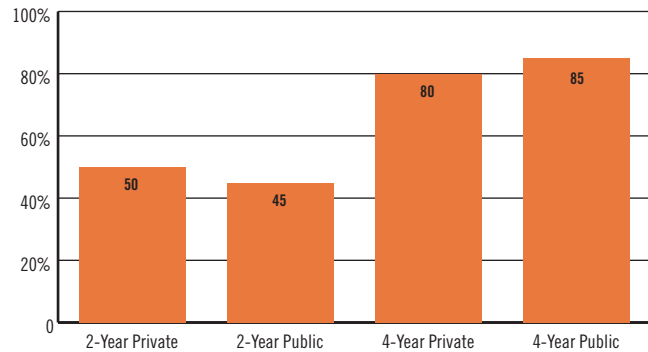


CHART 8
Share of Cumulative First Time College Enrollees that Enrolled in College in the First Year Following Graduation, Class of 2005 (in %)

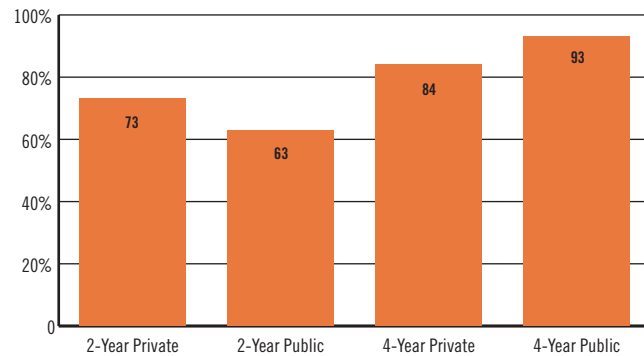


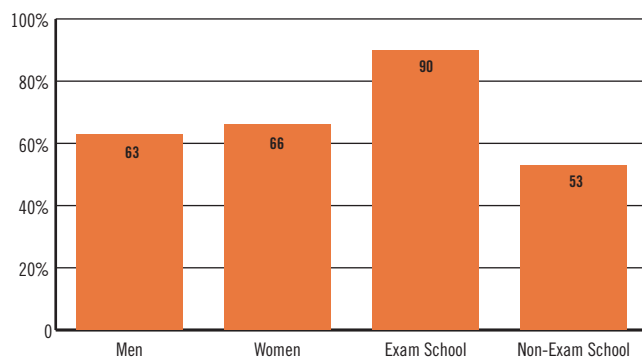
TABLE 9
**Percent Distribution of Cumulative College Enrollees from the Class of 2005
 by Type of Educational Institution First Attended by Gender by Type of High School Attended**

Type of College First Attended	(A) Men	(B) Women	(C) Exam School Graduates	(D) Non-Exam School Graduates
Four-Year, Total	63	66	90	53
Four -Year Private	39	41	60	31
Four-Year Public	24	25	30	22
Two-Year, Total	37	34	10	47
Two-Year Private	4	3	1	5
Two -Year Public	33	31	9	42

The college enrollment patterns of BPS high school graduates from the Class of 2005 were analyzed for men and women separately and for graduates of the exam and non-exam high schools (See **Table 9**). Female college enrollees were somewhat more likely than males to attend four-year colleges (66% vs. 63%) with slightly higher shares enrolling in both private and public four-year colleges (See **Chart 9**). Male enrollees were slightly more likely to end up in public two-year colleges.

College enrollment patterns of exam school and non-exam school graduates were quite different from one another. The exam school graduates were far more likely to enroll in four-year colleges (90% vs. 53%), with very large differences in the shares attending four-year private colleges (60% vs. 31%), a relative difference of nearly two to one. The non-exam school graduates were far more likely to enroll in two-year colleges (a relative difference of nearly five to one) with public two-year colleges dominating the enrollments of the non-exam school graduates. For BPS graduates from the Class of 2005, nearly 9 of every 10 two-year college attendees from the non-exam schools enrolled in a public community college. The college graduation fate of BPS graduates from the non-exam schools will, thus, be very dependent on the graduation experiences of those attending two-year public colleges.

CHART 9
**Percent of First Time College Enrollees from the
 BPS Class of 2005 Attending Four-year Colleges
 by Gender and Type of High School Attended**



The College Graduation Rate Experiences of College Enrollees from the BPS Graduating Classes of 2000, 2003, and 2005

Knowledge of the success rates of college enrollees in persisting and graduating from college is crucial to educational policymaking and program planning as well as the future labor market success of these youth themselves. On average, those young adults who obtain two and four-year college degrees achieve substantially higher annual earnings than their peers who attend college but leave before receiving a college degree or certificate.¹² Tracking these graduation outcomes on an ongoing basis for recent graduates from the Boston Public Schools is also critical to judging progress in achieving the graduation goals of the Success Boston College Initiative.

The data from the National Student Clearinghouse allow us to track time trends in the number of college graduates from a given high school graduating class. The number of college graduates from a given high school graduating class tends to peak four years after graduation but remains quite high for the following year before falling off more sharply but still continuing at a fairly high level through 10 years after graduation. **Charts 10** and **11** illustrate these trends for the BPS graduating Classes of 2000 and 2003.

The number of college graduates from the BPS Class of 2000 peaked at 360 in calendar year 2004. Another 182 individuals graduated from college in the following year (2005) before declining below 100 in each year thereafter but still remaining quite high. From 2008 to 2010, anywhere from 56 to 59 additional graduates obtained their first college degree. More than 200 high school graduates or 7% of the graduating class obtained their first college degree 8 to 11 years after graduating from high school. Similar time patterns prevailed for graduates from the Class of 2003. The peak number of college graduates (473) occurred in 2007, four years after high school graduation. Over the next four years, the number of college graduates declined steadily but remained at high levels. Nationally, there also has been an increasing time lag in graduating from college. These changing time trends in college degree reciprocity rates call for a lengthening of the time period used to track the college degree status of future BPS graduates and those in high schools throughout the Commonwealth.

CHART 10

Trends in the Number of New College Graduates from the Fourth to the Eleventh Years Following High School Graduation, BPS Graduating Class of 2000

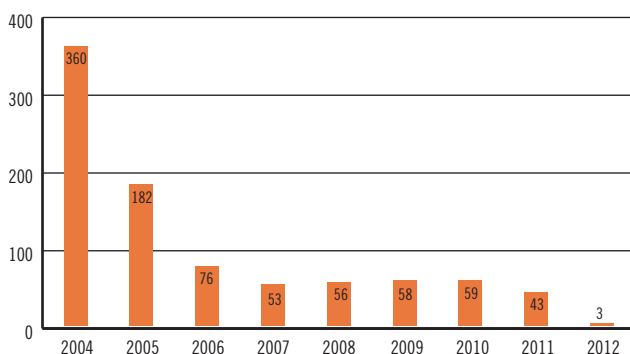
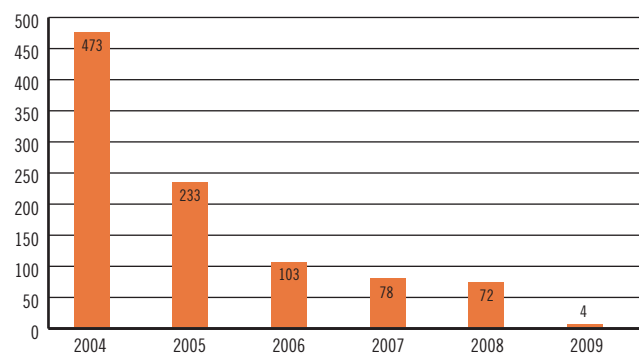


CHART 11

Trends in the Number of New College Graduates from the Fourth to the Eighth Year Following High School Graduation, BPS Graduating Class of 2003



College Graduation Rates Among College Enrolled High School Graduates from the BPS Graduating Classes of 2000, 2003, and 2005

Knowledge of the college enrollment experiences of high school graduates is important to identify the ability of high schools to successfully transition their graduates into college in the years following graduation from high school. Entry into college by itself, however, is no guarantee that the students will successfully obtain some type of college degree for their efforts. In Massachusetts, in recent years, close to 68% of the first time, full-time students entering a four-year college in 2004 were able to obtain a Bachelor's degree within 6 years, and among two-year college students entering college in 2007, the fraction of entering, full-time students achieving a degree within three years was closer to 17%.¹³ College entry by itself is, thus, no guarantee of receiving a college degree and those who enter college but fail to receive a degree fare substantially less well in the labor market than their peers with an Associate's or Bachelor's degree. In fact, even young Associate and Bachelor degree holders in the U.S. and Massachusetts have been facing more severe difficulties in finding a job related to the college labor market in

recent years, with rising mal-employment problems that have been reducing their weekly and annual earnings and the rate of return on their college investments.¹⁴

The personal economic rewards to adults in the Boston Metropolitan area from obtaining a college degree can be gauged by comparing the annual earnings from employment of younger adults with varying levels of formal schooling. In **Table 10**, we provide estimates of the 2010 annual earnings of 25-34 year olds in the Boston metro area for four educational subgroups: those with only a high school diploma/GED,¹⁵ those with one or more years of college but no degree, those with an Associate's degree, and those with a Bachelor's degree only. Findings are presented for all 25-34 year olds combined and for men and women separately.

For all young adults, the median annual earnings of those with some college but no degree outpaced those with a high school diploma by around \$5,000. If the young adult obtained an Associate's degree, the median annual earnings advantage would rise to \$13,100 and would increase substantially more to \$27,200 if he/she obtained a Bachelor's degree. *This latter annual earnings difference was more than five times as high as that for adults who completed some college but obtained no degree.*

TABLE 10

Median Annual Earnings of 25-34 Year Old Adults in the Boston Metropolitan Area in 2010 by Years of Schooling Completed, All and by Gender (Includes Non-Workers, but Excludes Anyone Enrolled in College)

Years of Schooling	(A) All	(B) Men	(C) Women
High school diploma / GED, no college	20,152	24,183	15,114
Some college, no degree	25,191	35,267	19,145
Associate's degree	33,252	40,305	28,213
Bachelor's degree	47,358	52,396	40,758
Some college – high school diploma	5,039	11,084	4,031
Associate's – high school diploma	13,100	16,122	13,099
Bachelor's – high school diploma	27,206	28,213	25,644

Source: U.S. Census Bureau, American Community Surveys, 2010, public use files, tabulations by authors.

Both men and women who obtained a college degree earned substantially more than their peers with only a high school diploma, but the size of the earnings advantages of college graduates over those with some college were bigger for women. For example, among men, those who held a Bachelor's degree earned \$28,200 more than a high school graduate and \$17,100 more than a male with some college but no degree. Among women, Bachelor degree holders earned \$25,600 more than high school graduates but also \$21,600 more than their peers who completed some college but obtained no degree. For many women, those with a Bachelor's degree were more likely to work, to work more hours during the year, and to earn higher hourly wages than their peers with some college but no formal degree. Keeping both men and women in college through graduation, thus, has important consequences for the young adults themselves as well as for society at large through higher real output, labor productivity, and increased payments of federal, state, and local taxes.

The findings on the cumulative college enrollment experiences of BPS graduates from the Classes of 2000, 2003, and 2005 have been combined with information on their college graduation experiences through the fall of 2011/early spring of 2012 to calculate college graduation rates. We have made one adjustment to the data on cumulative college enrollments before calculating these graduation rates. For each of these three graduating classes, some of the college enrollees without any type of college degree were still enrolled in college at the end of the reporting period. Their numbers ranged from 213 for graduates from the Class of 2000 to 431 for those from the Class of 2005. We have excluded these *active college enrollees* (without any degrees) from the cumulative number of college attendees. Their numbers appear in Column C for each of the three graduating classes. The "college graduation rates" for each high school graduating class and for each demographic/high school subgroup appear in Column E. The *graduation rate* represents the percent of non-active, college enrollees who received either a college degree (Associate or Bachelor's) or a certificate from the colleges that they had attended.

For the BPS graduating Class of 2000, a slight majority (51.5%) of all inactive college enrollees as of late 2011/early 2012 had graduated from college (See **Table 11** next page).

Very similar graduation ratios prevailed for inactive college enrollees from the Classes of 2003 and 2005 (See **Chart 12**). For all three graduating classes, the college graduation rate ranged from slightly above 50 to slightly under 52 percent. However the graduates from the Classes of 2003 and 2005 have 3-5 more years to obtain their college degrees in comparison to those from the Class of 2000.

These college graduation rates of college enrolled BPS graduates in each of these three years varied across gender and racial-ethnic group and by type of high school attended (exam school versus non-exam high school). For each of the three graduating classes, women college enrollees were not only more likely than men to attend college after graduation, but they also graduated at higher rates. For example, for college enrollees from the Class of 2000, nearly 57% of female college enrollees had obtained a college degree by the end of our reporting period versus only 45% of the men, a difference of nearly 12 full percentage points. Very similar gender differences prevailed for college enrolled graduates from the Classes of 2003 and 2005. In a later section, these gender differences will be shown to be greater among Blacks and Hispanics than among Whites and Asians.

CHART 12
Percent of Inactive College Enrollees with a College Degree,
BPS Graduating Classes of 2000, 2003 and 2005

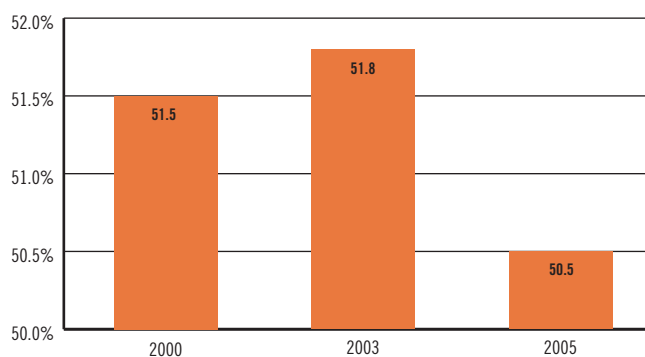


TABLE 11

The Number and Percent of College Enrolled BPS High School Graduates from the Class of 2000 Who Obtained a College Degree by the Fall of 2011/Spring 2012, All and by Gender and Racial-Ethnic Group, and Type of High School Attended

Type of High School/ Gender or Racial-Ethnic Group	(A) Enrolled at Any Time	(B) Enrolled in Fall 2011 / Spring 2012 Without A Degree	(C) All Enrollees, Excluding Fall 2011 / Spring 2012 Enrollees Without a Degree (A-B)	(D) College Graduates	(E) % with College Degree (D/C)
All Schools					
All	2,164	213	1,951	1,004	51.5
Men	939	83	856	386	45.1
Women	1,225	130	1,095	618	56.4
Asian	298	6	292	194	66.4
Black	1,032	128	904	400	44.2
Hispanic	395	57	338	137	40.5
White	408	22	386	267	69.2
Exam Schools					
All	669	32	637	493	77.4
Men	293	16	277	202	72.9
Women	376	16	360	291	80.8
Asian	151	3	148	121	81.8
Black	204	22	182	130	71.4
Hispanic	54	3	51	34	66.7
White	256	4	252	207	82.1
Non-Exam Schools					
All	1,495	181	1,314	511	38.9
Men	646	67	579	184	31.8
Women	849	114	735	327	44.5
Asian	147	3	144	73	50.7
Black	828	106	722	270	37.4
Hispanic	341	54	287	103	35.9
White	152	18	134	60	44.8

TABLE 12

The Number and Percent of College Enrolled BPS High School Graduates from the Class of 2003 Who Obtained a College Degree by the Fall of 2011/Spring 2012, All and by Gender, Racial-Ethnic Group, and Type of High School Attended

Type of High School/ Gender or Racial-Ethnic Group	(A) Enrolled at Any Time	(B) Enrolled in Fall 2011 / Spring 2012 Without A Degree	(C) All Enrollees, Excluding Fall 2011 / Spring 2012 Enrollees Without a Degree (A-B)	(D) College Graduates	(E) % with College Degree (D/C)
All Schools					
All	2,267	269	1,998	1,035	51.8
Men	921	108	813	354	43.5
Women	1,346	161	1,185	681	57.5
Asian	307	24	283	204	72.1
Black	1,098	153	945	421	44.6
Hispanic	397	60	337	136	40.4
White	425	32	393	274	69.7
Exam Schools					
All	726	43	683	521	76.3
Men	287	22	265	182	68.7
Women	439	21	418	339	81.1
Asian	196	10	186	150	80.6
Black	183	10	173	126	72.8
Hispanic	64	10	54	35	64.8
White	282	13	269	210	78.1
Non-Exam Schools					
All	1,541	226	1,315	514	39.1
Men	634	86	548	172	31.4
Women	907	140	767	342	44.6
Asian	111	14	97	54	55.7
Black	915	143	772	295	38.2
Hispanic	333	50	283	101	35.7
White	143	19	124	64	51.6

TABLE 13

The Number and Percent of BPS High School Graduates from the Class of 2005 Who Obtained a College Degree by the Fall of 2011/Spring 2012, All and by Gender, Racial-Ethnic Group, and Type of High School Attended

Type of High School/ Gender or Racial-Ethnic Group	(A) Enrolled at Any Time	(B) Enrolled in Fall 2011 / Spring 2012 Without A Degree	(C) All Enrollees, Excluding Fall 2011 / Spring 2012 Enrollees Without a Degree (A-B)	(D) College Graduates	(E) % with College Degree (D/C)
All Schools					
All	2,345	431	1,914	966	50.5
Men	1,004	170	834	370	44.4
Women	1,341	261	1,080	596	55.2
Asian	336	41	295	219	74.2
Black	1,079	239	840	342	40.7
Hispanic	468	103	365	137	37.5
White	427	48	379	268	70.7
Exam Schools					
All	755	69	686	540	78.7
Men	328	40	288	211	73.3
Women	427	29	398	329	82.7
Asian	211	21	190	163	85.8
Black	208	22	186	127	68.3
Hispanic	59	11	48	36	75.0
White	277	15	262	214	81.7
Non-Exam Schools					
All	1,590	362	1,228	426	34.7
Men	676	130	546	159	29.1
Women	914	232	682	267	39.1
Asian	125	20	105	56	53.3
Black	871	217	654	215	32.9
Hispanic	409	92	317	101	31.9
White	150	33	117	54	46.2

College graduation rates of college enrollees from each of the three BPS graduating classes varied even more widely across the four major racial-ethnic groups. *Asian and White, non-Hispanic graduates achieved graduation rates that were well above those of their Black and Hispanic counterparts in each year.* Very similar developments prevail across the entire state. For example, for the BPS graduating Class of 2005, the college graduation rates of the college enrolled ranged from lows of 37% among Hispanics and nearly 41% among Black college enrollees to highs of 71% among White, non-Hispanics and 74% among Asians. These Asian college enrollees from the BPS Class of 2005 were twice as likely to graduate from college as their Hispanic peers.

The college graduation experiences of college enrolled high school graduates also can be examined by type of high school attended (exam versus non-exam high school). Findings for all three BPS graduating classes reveal that exam school graduates were about twice as likely to graduate from college as their peers from the non-exam schools (See **Chart 15**). For example, for the BPS Class of 2005, nearly 80% of college enrollees from the city’s three exam schools had obtained a college degree versus only 35% of those from the non-exam high schools. Very similar graduation patterns prevailed for the Class of 2000 and 2003. These large differences in college graduation rates in favor of exam school graduates prevailed among both men and women and across each of the four racial-ethnic groups. For the Class of 2005, the relative differences in college graduation rates were particularly large for men (73% vs. 29%) and for Hispanics (75% vs. 32%). A part of these differences in college graduation rates is attributable to the higher reading and math proficiencies of exam school graduates, but findings of our multivariate statistical analysis of the factors influencing the college graduation rates of BPS graduates from the Class of 2005 will reveal that, even after controlling for differences in MCAS reading and math scores, those college students from the exam high schools were significantly more likely to graduate from college.

CHART 13
Comparisons of the Percent of Female and Male Inactive College Enrollees with a College Degree, BPS Graduating Classes of 2000, 2003, and 2005

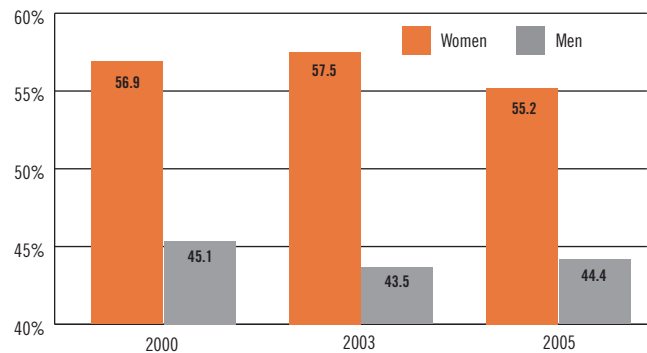


CHART 14
Percent of Inactive College Enrollees with a College Degree by Racial-ethnic Group, Class of 2005

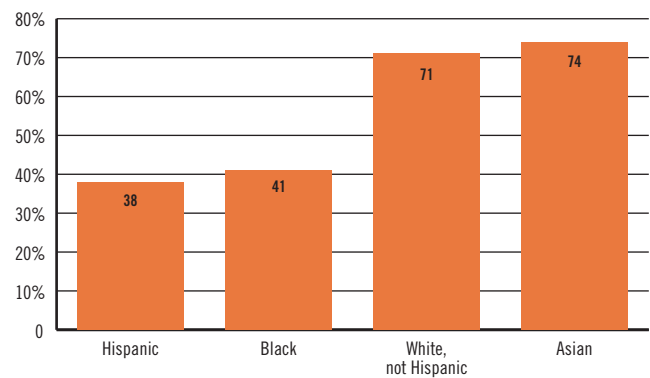
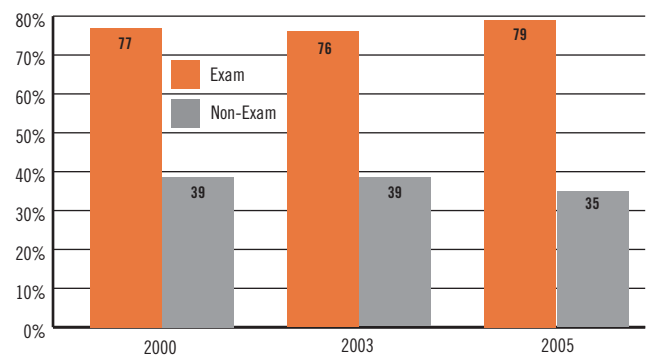


CHART 15
Comparisons of the College Graduation Rates of Exam and Non-Exam High School Graduates Who Were No Longer Actively Enrolled in 2011, BPS Graduating Classes of 2000, 2003 and 2005



Modeling the Probability of Class of 2009 BPS College Students Obtaining a College Degree by the End of 2011

The above analyses have focused on the college enrollment and college graduation experiences of BPS graduates from the Class of 2005. Variations in these college enrollment rates and college graduation rates across gender, racial-ethnic, and academic achievement groups of graduates by types of high school attended, and type of college attended also were examined. The links between the college graduation rates of those attending college and these various demographic and schooling traits were typically examined one trait at a time. In this section, we present the findings of a multivariate statistical analysis (based on a linear probability regression model) of the college graduation outcomes for those BPS graduates from the Class of 2005 who enrolled in some type of college in the first year following their graduation from high school.

The dependent variable in this model is the college degree status of the college student by the end of calendar year 2011 or six and one half years after their graduation from high school. The variable takes on the value of 1 if the individual had received a college degree (Associate's, Bachelor's or in a few cases a certificate) and the value of 0 if he/she had not yet obtained a degree. The explanatory variables include the gender, racial-ethnic status of the respondent, whether they graduated from one of the city's three exam schools, whether they first enrolled in a two-year rather than a four-year college, and their scores on the MCAS reading and math test.¹⁶ Key findings of the analysis for the entire group of students are displayed in **Table 14** while those for key subgroups are displayed in **Table 15**. Gender and racial-ethnic status did have significant impacts on the probability of obtaining a college degree. Holding all other predictors constant, being male lowered the probability of graduating from college by 7 percentage points and being Black or Hispanic reduced their probability by 8 to 10 percentage points.

Those students who graduated from an exam high school were 15 percentage points more likely to graduate from college than their peers from other high schools. The impacts of attending an exam school were quite strong for graduates in each gender and racial-ethnic group with the estimated size of these impacts ranging from 10 to 18 percentage

TABLE 14
Findings of the Linear Probability Model of the College Graduation Status of Those BPS Graduates, Class of 2005, Who Enrolled in College in the First Year Following Graduation from High School

Variable	(A) Coefficient	(B) Sig. Level of Coefficient
Constant	.45	.01
Male	-.07	.01
Black	-.08	.01
Hispanic	-.10	.01
Asian	.03	--
Exam School	.15	.01
First enrolled in two-year college	-.23	.01
Missing reading score	-.20	.10
Failed MCAS reading	.00	--
Proficient reading	.04	.10
Advanced reading	.10	.01
Missing math	.12	--
Failed male	-.04	.10
Proficient math	.07	.01
Advanced math	.15	.01

Summary Statistics: R2 = .271; F = 63.15; Sig. .01.
Note: -- implies not significant at .10 level.

points (**Table 15**). The strong academic curriculum of the exam schools likely was a key factor, but our analysis of college persistence rates for graduates from the Class of 2009 showed that exam school graduates also were more likely to receive scholarship assistance, work more on campus in work study jobs, and work less often off campus for 20 or more hours, all of which significantly contribute to persistence in college.

Those individuals who first enrolled in a two-year college were significantly less likely (23 percentage points less likely) to graduate from college by 2011 than their peers who first attended a four-year college. The negative impacts of enrollment in a two-year college were quite sizable and statistically significant for each

gender and racial-ethnic group, ranging in size from 18 to 43 percentage points (See **Table 15**). Efforts to improve the staying power of two-year college students need to be put in place. Some of the early findings from the Success Boston Initiative on improving persistence are promising.

The reading and math proficiencies of these college students as measured by their scores on the MCAS tests had significant impacts on their probabilities of graduating from college by the end of 2011. Those with

“Proficient” scores on the reading and math tests were four to seven percentage points more likely to graduate from college than their peers with a “Needs Improvement” score on both tests. Those who scored “Advanced” on the reading and math tests were 10 and 15 percentage points, respectively, more likely to graduate from college by the end of 2011. All of these estimated impacts were statistically significant, frequently at the .01 level. The impacts of strong reading and math tests, especially Advanced math scores, were quite favorable for members of each gender and racial-ethnic group (See **Table 16**).

TABLE 15
Estimated Independent Impacts of Attending an Exam High School and a Two-year College Upon the Expected Probability of Graduating from College by the Early Spring of 2012, BPS Graduates Class of 2005

Group	Attended Exam School		Attended a Two-year College	
	(A) Coefficient	(B) Sig.	(A) Coefficient	(B) Sig.
All	.15	.01	-.23	.01
Men	.16	.01	-.23	.01
Women	.15	.01	-.23	.01
Asian	.18	.01	-.37	.01
Black	.15	.01	-.18	.01
Hispanic	.10	.10	-.19	.01
White, not Hispanic	.16	.01	-.43	.01

TABLE 16
Estimated Impacts of MCAS Reading and Math Proficiencies on the Expected Probability of Graduating for College by the Early Spring of 2012, BPS Graduating Class of 2005 by Gender and Racial-Ethnic Group

Group	(A) Proficient Reading	(B) Advanced Reading	(C) Failed Math	(D) Proficient Math	(E) Advanced Math
Men	0	.07*	-.08**	0	.08*
Women	.07**	.10	0	.09*	.21**
Asian	0	0	0	.10*	.22**
Black	.06*	0	-.05*	.07**	.15***
Hispanic	0	.22***	0	0	.16***
White	0	.15**	0	0	0

Notes: *** Sig. .01; ** Sig. .05; * Sig. .10; 0 Not Significant.

The College Degree Attainment of BPS Graduates by Type of College First Attended and Type of College Awarding Degrees, Classes of 2000, 2003 and 2005

Knowledge of the types of colleges from which BPS graduates achieve their degrees also can be obtained through an analysis of the NSC data. Since the annual earnings of adults vary systematically by the type of degree they receive, this information is very important to the long-run labor market and income success of BPS graduates. The number of degrees received by college enrolled BPS graduates can be measured in two different ways. Transfers of students to other types of colleges over their college careers will produce differences in results for the two methods. First, we can identify degrees received by enrollees based on the type of college they first attended regardless of which college ultimately gave them the degree. For example, if a student started college at Bunker Hill Community College, transferred to the University of Massachusetts at Boston, and earned his degree at U-Mass Boston, we would assign this degree to public two-year colleges since this was the initial entry point into the higher education system. Under the second methodology, this degree would be allocated to the college awarding the degree (University of Massachusetts – Boston) and, thus, be counted in degrees received by BPS graduates from public four-year colleges. If there were no transfers of students across different types of colleges, the two methods would yield the same results. Such, however, is not the case although the differences are not very large.

Findings on college degrees received by BPS graduates from the Classes of 2000, 2003 and 2005 by type of college through the end of calendar year 2011 or early spring 2012 are displayed in **Table 17**. A total of 1,004 BPS graduates from the Class of 2000 had received a college degree (or certificate) by the end of this reporting period. If we allocate these degrees by first type of college institution attended by the graduate, then 161 or 16% go to graduates who first attended a two-year college with the vast majority of these two-year degrees received by attendees at two-year public colleges. The remaining 84% of the college degrees go to students who first attended a four-year college, with four-year private colleges accounting for about two-thirds of this total.

If we distribute the degrees earned by BPS graduates from the Class of 2000 to colleges by the institution that awarded the degree, then the number of college degrees awarded to four-year colleges rises from 843 to 870 and their share of all degrees awarded rises modestly from 84% to 87%. Thus, 87 of every 100 college degrees earned by BPS graduates from the Class of 2000 were obtained in four-year colleges (See **Chart 16**). This increase in degrees awarded by four-year colleges is primarily due to transfers of community college students to these institutions who then obtain degrees in numbers that exceed those earned by transfers of four-year college students to the two-year colleges.

Very similar patterns of college degree awards prevailed for BPS graduates from the Classes of 2003 and 2005. Assigning college degrees to the institution first attended by a BPS graduate from the Class of 2003 gives 85% of the degrees to four-year colleges and the remaining 15% to two-year colleges, with public community colleges capturing nearly 90 percent of these two-year degrees. When we assign these degrees to the colleges that actually awarded them to graduates, then the share of degrees awarded by four-year colleges rises from 85% to 89% with private colleges accounting for nearly 59% of all degrees awarded by four-year colleges (**Table 17** and **Chart 16**).

For BPS graduates from the Class of 2005, 89% of all degrees by type of first college attended went to four-year colleges, and the ratio rises to 91% when we allocate these degrees to the institutions that actually awarded them to the graduates from the Class 2005, with private four-

CHART 16
Percent of All College Degrees Received Through April 2012 from Four-year Colleges and Universities, BPS Classes of 2000, 2003, 2005

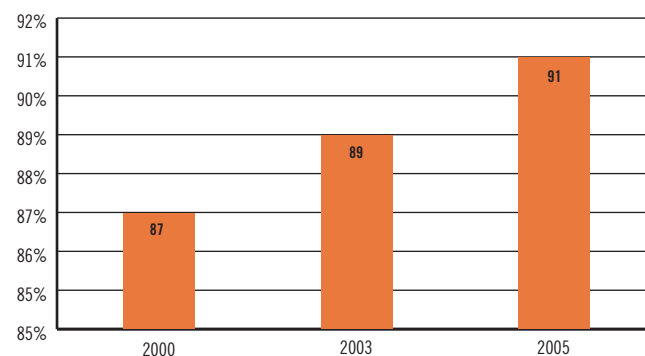


TABLE 17
**Comparisons of College Graduates by Institution First Attended Versus Institution from Which Degree Obtained,
 BPS Graduating Classes of 2000, 2003 and 2005**

Graduating Class / Type of College	(A) Colleges Graduates from First Institution Attended	(B) Percent of College Graduates	(C) College Graduates from Institution Awarding Degree	(D) Percent of All Degrees Awarded
2000				
2 Year Private	25	2	22	2
2 Year Public	136	14	112	11
4 Year Private	553	55	572	57
4 Year Public	290	29	298	30
Total	1,004	100	1,004	100
2003				
2 Year Private	18	2	17	2
2 Year Public	134	13	95	9
4 Year Private	599	58	612	59
4 Year Public	284	27	311	30
Total	1,035	100	1,035	100
2005				
2 Year Private	13	1	11	1
2 Year Public	86	9	76	8
4 Year Private	573	59	579	60
4 Year Public	294	30	300	31
Total	966	100	966	100

year colleges again accounting for two-thirds of the total number of degrees from all four-year colleges. The rising share of college degrees awarded to BPS graduates by four-year colleges for recent graduating classes (the increase from 87% for the Class of 2000 to 91% for the Class of 2005) is due to differences in the timing of the receipt of different types of degrees. The share of degrees received from two-year colleges tends to rise somewhat over time as the length of time since high school graduation increases. As illustrated earlier in

our analysis of college enrollment behavior, more of the college attendees who postpone enrollment until several years after graduation from high school will enroll in two-year colleges. The college graduation success of these delayed enrollees in two-year colleges will have a major influence on long-term graduation rates.

Overall, 91% of the college degrees obtained by BPS graduates from the Class of 2005 through the early spring of 2012 came from four-year colleges and universities. Graduates from the city's three exam high schools were more likely than graduates from the non-exam high schools to earn their degrees from four-year colleges. *Ninety-seven percent of the college degrees received by exam school graduates came from four-year colleges versus 83% for college graduates from the non-exam schools (Table 18).* Among both male and female college graduates from the exam schools, 97% of their degrees through early 2012 came from these four-year colleges. Male graduates from the non-exam schools were somewhat more likely than their female counterparts to obtain their degrees from two-year colleges (20% vs. 15%).

Measuring the College Graduation Rates of BPS College Enrollees by Type of College Attended: Findings for the Classes of 2000, 2003 and 2005

The above findings on the college graduation experiences of BPS graduates from the Classes of 2000, 2003 and 2005 have shown that the vast majority of degrees (87% to 91%) have been received from four-year colleges and universities. Findings for the Class of 2007 provide further confirmation of these trends. Of the 618 graduates from that class who received a college degree through the early spring of 2012, 93% obtained their degree from a four-year college.

Why is the share of college degrees from four-year colleges so high among BPS high school graduates? For

all 25-34 year olds in the U.S. in 2011, approximately 20% of all college degrees held were Associate degrees as opposed to 10 percent for Boston graduates in recent years. The explanation can lie in two different directions: a below average share of college enrollees in two-year colleges and/or a lower rate of college graduation among those attending two-year colleges. To answer this important question, we have calculated first time enrollments in two and four-year colleges by public/private status among BPS graduates from the Classes of 2000, 2003, 2005, and the college graduation rates from these alternative post-secondary educational institutions.

As was discussed above in our analysis of the college graduation rates of BPS graduates, there are multiple formulas that can be used in calculating college graduation rates. Different formulas will yield different estimates of college graduation rates for different types of colleges. At the national level, the U.S. Department of Education has developed a cohort specific graduation rate methodology for estimating college graduation rates for enrollees in two and four-year colleges. The approach basically starts with first-time, full-time students in a given college (e.g., a four-year college) and tracks them for four to six years after initial enrollment. The number of those receiving a college degree from that college in six years is then divided by the number of first time, full-time enrollees to estimate a *college graduation rate* six years later.¹⁷ For two-year college enrollees, a similar methodology is adopted with a 3 year time horizon frequently used to calculate graduation rates. These methodologies do not adjust for the number of students still enrolled in college at the end of these 3 or 6 year periods nor do they adjust for transfers to other post-secondary institutions.

TABLE 18
Percent of College Graduates Obtaining Their Degree from Four-year Colleges by Type of High School Attended, All and by Gender, BPS Class of 2005

Gender Group	(A) All High Schools	(B) Exam High School	(C) Non-Exam High School	(D) Exam-Non-Exam High Schools
All	91	97	83	+14
Men	90	97	80	+17
Women	92	97	85	+12

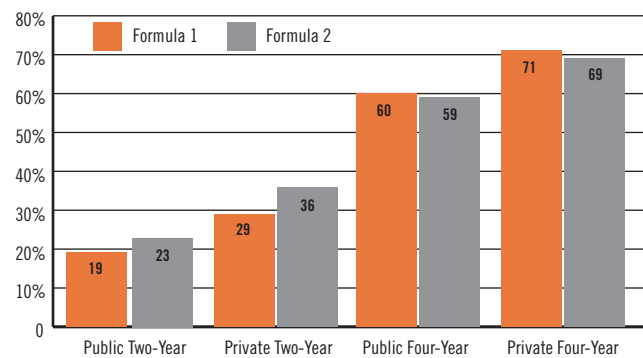
Our estimates of college graduation rates of BPS graduates from two- and four-year colleges are based on a more liberal methodology where we adjust for the number of college students without a degree who still remain in college at the end of the reporting period. We utilize two different methods for estimating these college graduation rates. The first methodology assigns the college degree to the institution that awarded the degree regardless of where the student started her college work. If a BPS graduate first attended Middlesex Community College, then transferred to Salem State College and graduated from there, she would be classified as a graduate of a four-year public college. Under methodology two, we would give Middlesex Community College credit for the degree to recognize her transfer from that college to degree status.

Table 19 provides data on the first time college enrollment experiences of BPS graduates from the Classes of 2000, 2003 and 2005 and their college graduation status with degrees assigned to college institutions under the two different methodologies. For the BPS Class of 2000, there were 2,164 college enrollees. Nearly 65% of these enrollees first attended a four-year college and the remaining 35% a two-year college, with public community colleges clearly dominating enrollments (90%) in such colleges. At the end of 2011 (early 2012), there were 213 BPS graduates still enrolled in college without yet receiving any degree. There were 1,004 college graduates as of 2011 of whom 870 or nearly 87% had received a degree from a four-year college. Applying methodology one for calculating the college graduation rate for each set of post-secondary institutions, we divide the number of *college graduates from each type of institution* by the adjusted number of college enrollments (Col. A – Col. B). The overall college graduation rate for all colleges combined is 51.5%. These college graduation rates varied from a low of 19% for two-year public colleges to highs of 60% and 71% for public and private four-year colleges, respectively.

Under methodology two, which assigns college degrees to the institution in which the student first enrolled, the college graduation rates modestly rise for two-year colleges, especially public colleges, and slightly decline for four-year colleges (See **Chart 17**). There are still very large differences in college graduation rates across the four types of institutions ranging from 23% among public two-year colleges to 69% among private four-year colleges. *The very high share (87%) of college degrees earned*

by the graduates of four-year colleges was, thus, largely attributable to their much higher college graduation rates for the BPS graduating Class of 2000. If each type of college had obtained the same graduation rate, then 37% of college graduates rather 13% would have received their degree from a two-year college.

CHART 17
Comparing the College Graduation Rates of College Enrolled BPS Graduates by Type of Institution Attended / Graduated, Class of 2000 (in %)



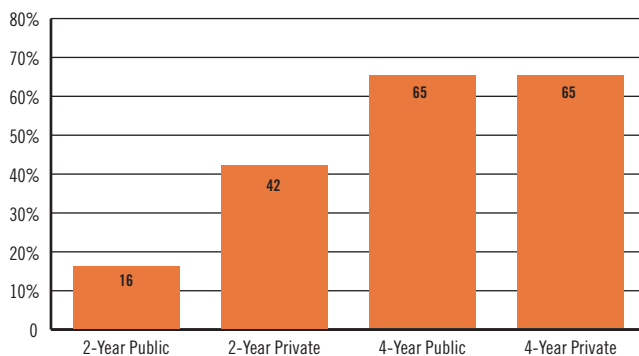
Very similar graduation rate patterns prevailed for the BPS graduating Classes of 2003 and 2005. The overall graduation rate for Class of 2005 college enrollees was just under 52%, but under our first methodology the graduation rates for different types of colleges ranged from a low of 16% for public two-year colleges to a high of nearly 70% for private four-year colleges. Using methodology two, the college graduation rate of public two-year colleges rises from 16 to nearly 23 percent while that of private four-year colleges declines to 69 percent, still leaving a relative difference of nearly three to one for the top and bottom performing institutions on this measure of college graduation.

For college enrolled graduates from the Class of 2005, who are no longer actively enrolled in college, the graduation rate at the end of six years was slightly over 50%. On the first graduation measure, the college graduation rates ranged from a low of 14% among two-year public college enrollees to highs of 66% for both public and private colleges, a relative difference of nearly 5 times. If measure two is used to calculate college graduation rates, then the college graduation rate for public two-year colleges rises to close to 16% while the college graduation rates for four-year colleges decline very modestly to 65%.

TABLE 19
**Alternative Measures of College Graduation Ratios for BPS College Students
 by Type of Institution First Attended, Classes of 2000, 2003, 2005**

Graduating Class/ Type of College	(A) First Time Enrollees in College	B) Still Enrolled, No Degree	(C) Graduates From This Type of College	(D) First Time Enrollees Graduated Anywhere	(E) Graduate Rate #1 (C/A-B)	(F) Graduate Rate #2 (D/A-B)
2000						
2 year private	75	6	22	25	29.3	36.2
2 year public	694	106	112	136	19.1	23.1
4 year private	861	60	572	553	71.4	69.0
4 year public	534	41	298	290	60.4	58.8
Total	2,164	213	1,004	1,004	51.5	51.5
2003						
2 year private	49	11	17	18	44.7	47.4
2 year public	720	129	95	134	16.0	22.7
4 year private	993	70	612	599	66.3	64.9
4 year public	505	59	311	284	69.7	63.7
Total	2,267	269	1,035	1,035	51.8	51.8
2005						
2 year private	37	61	11	13	35.4	41.9
2 year public	737	194	76	86	14.0	15.8
4 year private	1,003	119	579	573	65.5	64.8
4 year public	568	112	300	294	65.8	64.5
Total	2,345	431	966	966	50.5	50.5

CHART 18
**College Graduation Rates of Class of 2005 BPS Graduates
 as of Early Spring 2012 by
 Type of College First Attended (in %)**



How do the college graduation rates of BPS graduates from the Class of 2005 compare with those of their national counterparts in each type of college? The estimated graduation rates for the national 2007 cohort of two-year college students and the 2004 cohort of four-year college students are displayed in **Table 20** together with the graduation rates for BPS graduates from the same institutions.¹⁸ The graduation rates for national college students ranged from a low of 22% among two-year public institutions to a high of 65% for four-year, private, nonprofit colleges. The national graduation rates for two-year colleges exceeded those of BPS college students in both sets of two-year colleges with an 8 to 9 percentage point gap in graduation rates for public two-year colleges (22% for U.S. students vs. 14% BPS). *However, the graduation rates for BPS college students from four-year private colleges (65%) matched that of their national counterparts and the graduation rate for public four-year colleges exceeded that of their U.S. counterparts by close to 10 percentage points.* The gaps in college graduation rates between two and four-year public colleges and private colleges are clearly bigger for BPS graduates than they are for their U.S. counterparts.

Achieving the college graduation goals for the Success Boston College Initiative will clearly require a major boost in the college graduation rates of students attending two-year colleges. A following chapter will review the persistence behavior of two- and four-year college students from more recent BPS graduating classes (the graduating Classes of 2007, 2008 and 2009) and identify strategies and policies for strengthening persistence and college graduation, such as the case management/support services from career coaches in the Success Boston Initiative.

TABLE 20
**Comparing the College Graduation Rates of
 U.S. College Students in Selected Types of Colleges
 with Those of College Enrolled Graduates from the
 Boston Public Schools, Class of 2005 (in %)**

Type of College	(A) U.S.	(B) Boston	(C) Boston – U.S.
2 Year Private (Non-profit)	53.1	35.4	-17.7
2 Year Public	22.5	14.0	-8.5
4 Year Private (Non-Profit)	65.4	65.5	+1
4 Year Public	56.0	65.8	+9.8

Source: U.S. Department of Education, National Center for Educational Statistics, "Graduation Rates at Title IV Institutions"

College Graduation Rates for Class of 2005 BPS Graduates by Individual College Attended

The graduates of the city's public high schools attend a substantial array of colleges and universities in the state and the nation (as well as a few international post-secondary institutions). Graduates from the Classes of 2000 and 2005 attended more than 200 different colleges and universities across the country. Many of these colleges attract only a handful of BPS graduates (sometimes as few as one); however, there is a subset of both two-year and four-year colleges that enroll a relatively high number of BPS graduates. For the graduating Class of 2005, there were 14 colleges and universities (all of which were located in the state of Massachusetts) that enrolled 35 or more first time college enrollees; i.e., the

first college that they attended after graduation.¹⁹ These included four two-year colleges (all public) and 10 four-year colleges, four of which were public colleges and universities. These 14 colleges and universities were responsible for 1,347 first time enrollees from the BPS graduating Class of 2005 or about 55% of all first time enrollees through the early spring of 2012 (See **Table 21**).

For each of these 14 colleges, we have used the National Student Clearinghouse data and the individual data provided by four local colleges to provide findings on the number of first time college enrollees in each of these institutions through late 2011/spring 2012, the number who obtained a college degree from that institution, and the number who earned a college degree anywhere in the country. With these data, for each college, we have calculated two alternative college graduation rates similar to those used in the previous section. The first graduation rate appearing under Column E represents the share of inactive college enrollees who obtained their degree from the institution in which they first enrolled; e.g. for all individuals who first enrolled in UMass-Boston and were no longer enrolled in college in the spring of 2012 how many of them had graduated from UMass-Boston by the end of the reporting period. The second graduation rate under Column F measures the percent of first time inactive college enrollees within the college who obtained a college degree from anywhere in the world. Under the second formula, an individual who first enrolled in UMass-Boston would count as a college graduate from UMass-Boston no matter where he obtained his college degree. By definition, college graduation rates under formula two must always exceed those under formula one. The second formula is designed to give some credit to the first enrolling college for helping an individual obtain a college degree.

The findings on the graduation rates of first time college enrollees in individual colleges and universities in **Table 21** need to be interpreted with some caution. They are *not* meant to be *measures of comparative effectiveness* in graduating students. Such direct comparisons of these measures would only be proper if BPS graduates were randomly assigned to each college. Then, any observed differences in graduation performance could be attributed to the University. Research findings in this paper and in a set of other papers on the college enrollment behavior of BPS graduates shows consistently that students in two-year and four-year colleges

and within individual institutions in these two groups of schools often have substantially different academic backgrounds (MCAS test scores, types of high school attended), demographic characteristics, family income backgrounds and motives for initially enrolling that will independently influence the graduation outcomes of these individual schools. For example, four-year college enrollees, especially those in many private colleges, contain a disproportionate number of persons with advanced MCAS scores and with diplomas from the exam schools.

Still, knowledge of the graduation experiences of college enrollees in individual colleges is important for understanding the sources of aggregate graduation performance, for tracking progress in improving college persistence and graduation outcomes over time, and for achieving the longer-term graduation goals of the Success Boston Initiative.

Combined results for the four, two-year colleges reveal that these were 673 first time enrollees from the BPS Class of 2005.²⁰ At the end of the reporting period, 168 of these students without any degree were still enrolled in college, yielding 585 inactive college enrollees. Sixty of these had graduated from the first college in which they enrolled, yielding a 12% college graduation rate and 90 received a degree from some college, yielding a combined graduation rate of nearly 18% (See Column F). This 18% graduation rate is pretty close to the 2007 cohort graduation rate for these same four colleges according to findings from the U.S. Department of Education.²¹ The individual college graduation rates under formula two (which counts graduation anywhere) ranged from lows of 16 to 17 percent for Bunker Hill and Roxbury Community College to highs of 23 to 24 percent for Mass Bay and Quincy Colleges. It should be noted, however, that one-third of the total number of graduates from these four schools took place in other types of colleges.

For the 10, four-year colleges and universities meeting our minimum criteria for first time enrollees, total first time enrollments were 672 of whom 124 were still enrolled in college at the end of the reporting period, leaving 548 inactive college enrollees. Of this latter group, 308 had graduated from the same college in which they initially enrolled, yielding a college specific graduation rate under formula one of 56% (See Column E). Under our second graduation rate formula, which

TABLE 21
**Alternative Measures of College Graduation Ratios for BPS College Students
 by Type of Institution First Attended, Classes of 2000, 2003, 2005**

Type of College	(A) First Time Enrollees in College	(B) Still Enrolled, No Degree	(C) Graduates From This Type of College	(D) First Time Enrollees Graduated Anywhere	(E) Graduation Rate from First Institution (C/A-B)	(F) Graduation Rate from Any Institution (D/A-B)
Two-year Colleges						
Bunker Hill	398	84	37	50	11.8%	15.9%
Mass Bay	101	29	11	17	15.2%	23.6%
Quincy College	55	16	5	9	12.8%	23.0%
Roxbury	119	39	7	14	8.8%	17.5%
4 Colleges Combined	673	168	60	90	12.0%	18.0%
Four-year Colleges						
Boston College	43	4	33	34	84.6%	87.2%
Boston University	70	5	4	55	83.0%	84.6%
Fisher College	37	8	7	8	24.1%	27.7%
Newbury College	42	6	15	20	41.1%	55.5%
Northeastern Univ. (1)	38	2	31	32	86.0%	88.8%
Salem State Univ.	75	21	16	19	29.6%	35.3%
Suffolk University	37	7	23	24	76.6%	80.0%
UMass-Amherst	158	19	95	109	68.3%	78.4%
UMass-Boston	134	47	42	49	48.3%	56.3%
UMass-Dartmouth	38	5	12	17	36.3	51.5%
10 Colleges Combined	672	124	308	367	56.2%	67.0%

Note: (1) Some FERPA blocking occurred for a number of enrollees.

counts those obtaining a college degree anywhere, the graduation rate for four-year colleges rises to 67%. Four-year college students from the BPS Class of 2005 were more likely than their two-year counterparts to graduate from the college of first enrollment (84% among graduates of four-year colleges versus 66% among graduates from two-year colleges).

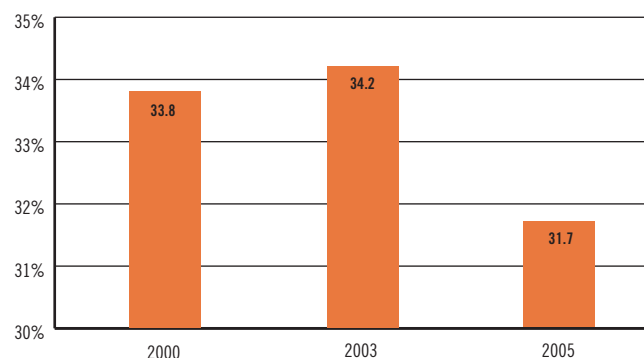
The college graduation rates of individual four-year colleges under formula two varied quite widely, ranging from lows of 28 to 35 percent for Fisher College and Salem State University to highs of 78 percent or higher for Boston College, Boston University, Northeastern University, Suffolk University and UMass-Amherst. The combined college graduation rate of these ten individual four-year colleges was more than four times as high as that for the combined two-year colleges (67% vs. 15%). While there is clearly some room for improvement in the graduation rates of individual colleges in both sets of these institutions, steady and substantive improvements in the college graduation rates of the area's two-year colleges will be needed to achieve the goals of the Success Boston Initiative. More frequent year-to-year monitoring of progress is needed.

The College Graduation Rates of BPS High School Graduates from the Classes of 2000, 2003 and 2005

The previous section of this chapter described and assessed the college graduation experiences of those BPS graduates who had enrolled in college at some point since graduating from high school. In this section, we will conduct a similar analysis of college graduation outcomes; however, our focus is on the college degree attainment rates of all BPS high school graduates regardless of whether they attended college. *This educational outcome is influenced by both the college enrollment rate of a given group of high school graduates and the college graduation rate by late 2011 of those who did enroll in college.* Findings are presented for all BPS graduates from the Classes of 2000, 2003 and 2005 and for those in gender and racial-ethnic groups and by type of high school attended (exam versus non-exam).

For all high school graduates from the BPS Class of 2000, slightly more than one-third had graduated from college by the fall of 2011, more than 11 years later. Very similar findings prevailed for graduates from the Class of 2003 (a graduation rate of 34%) even though they had three fewer years to graduate. Slightly under 32% of high school graduates from the Class of 2005 had graduated from college by 2011 but they had five fewer years to graduate than the class of 2000 (See **Chart 19**). If graduation trends for the class of 2003 and 2005 match those for the class of 2000, their graduation rates at the end of the period will be 6 to 7 points higher than the class of 2000 at the end of the 11 year period. While available evidence suggests a moderate long-term upward shift in the college graduation rate from 2003 onward, there appears to be stagnation in the rate of increase unless future evidence for the Class of 2005 reveals an accelerated rise in the college graduation rate of those still enrolled in college in the fall of 2011.

CHART 19
Percent of BPS High School Graduates from the Classes of 2000, 2003 and 2005 Who Obtained a College Degree by the End of 2011



For each BPS graduating class, the college graduation rate was higher for women than for men with the gender gap ranging from 10 to nearly 14 percentage points in each of these three years. Within each gender group, the college graduation rates varied widely across members of the four racial-ethnic groups. They were highest among Asians and White, non-Hispanics and lowest among Blacks and Hispanics. For example, among male graduates from the Class of 2000, only 16% of Hispanic males and 20% of Black males had graduated from college by 2011 versus 46% of Whites and 51% of Asians (See **Table 23**). Taking

into account both the gender and racial-ethnic characteristics of the graduates from the Class of 2003, we find college graduation rates ranging from highs of 58 to 61 percent among Asian and White females to lows of 17 to 18 percent among Black and Hispanic males (**Table 24**). Given a high school graduation rate under 60% for both groups of men, *these two findings would imply that only 1 of every 10 Black and Hispanic males attending ninth grade for the graduating Class of 2003 would have obtained a college degree of some type by 2011*. These low expected college graduation rates among these two groups of male high school students need to be given a major priority by administrators and managers in the Boston Public Schools. Very similar problems prevail in most large cities across the country.

TABLE 23
The Number and Percent of BPS High School Graduates from the Class of 2003 Who Obtained a College Degree by the End of 2011, All and by Gender and Racial-Ethnic Group

Group	(A) High School Graduates	(B) College Graduates	(C) % with College Degree
All	3,025	1,035	34.2
Men, All	1,332	354	26.6
Asian	162	86	53.1
Black	643	116	18.0
Hispanic	254	43	16.9
White, not Hispanic	260	109	41.9
Women, All	1,693	681	40.2
Asian	203	118	58.1
Black	868	305	35.1
Hispanic	326	93	28.5
White, not Hispanic	269	165	61.3

TABLE 22
The Number and Percent of BPS High School Graduates from the Class of 2000 Who Obtained a College Degree by the End of 2011, All and by Gender and Racial-Ethnic Group

Group	(A) High School Graduates	(B) College Graduates	(C) % with College Degree
All	2,967	1,004	33.8
Men, All	1,355	386	28.5
Asian	173	89	51.4
Black	667	134	20.1
Hispanic	238	39	16.4
White, not Hispanic	264	122	46.2
Women, All	1,612	618	38.3
Asian	174	105	60.3
Black	820	266	32.4
Hispanic	349	98	28.1
White, not Hispanic	251	145	57.8

TABLE 24
The Number and Percent of BPS High School Graduates from the Class of 2005 Who Obtained a College Degree by the End of 2011, All and by Gender and Racial-Ethnic Group

Group	(A) High School Graduates	(B) College Graduates	(C) % with College Degree
All	3,045	966	31.7
Men, All	1,388	370	26.7
Asian	191	90	47.1
Black	640	123	19.2
Hispanic	306	44	14.4
White, not Hispanic	240	113	47.1
Women, All	1,657	596	36.0
Asian	197	129	65.5
Black	780	219	28.1
Hispanic	379	93	24.5
White, not Hispanic	277	155	56.0

Estimates of college graduation rates for graduates from the city’s exam and non-exam high schools in 2000, 2003 and 2005 are displayed in **Tables 25 through 27**. Findings are presented for all high school graduates in the two groups of schools and by gender and racial-ethnic group. For each graduating class, the graduates from the exam schools were about three times as likely to obtain a college degree as their peers in the non-exam schools. For example, by the fall of 2011, 67% of the graduates from the exam schools in 2005 had earned a college degree versus only 19% of those from the non-exam schools. In each racial-ethnic group of graduates from the Class of 2005, the graduates from the exam schools were anywhere from 38 percentage points (Asians) to 49 percentage points (Whites) more likely to have secured a college degree by the late fall of 2011. These college graduation rates varied from a low of 16% among Hispanic graduates from the non-exam schools to highs of 72 to 73 percent among Asian and White graduates from the city’s three exam high schools.

TABLE 25
The Number and Percent of BPS Exam and Non-Exam High School Graduates from the Class of 2000 Who Obtained a College Degree by the Fall of 2011/Spring 2012, All and by Gender and Racial-Ethnic Group

Group	(A) High School Graduates	(B) College Graduates	(C) % with College Degree
Exam High Schools			
All	722	493	68.3
Men	317	202	63.7
Women	405	291	71.9
Asian	166	121	72.9
Black	219	130	59.4
Hispanic	55	34	61.8
White	278	207	74.5
Non-Exam High Schools			
All	2,245	511	22.8
Men	1,038	184	17.7
Women	1,207	327	27.1
Asian	181	73	40.3
Black	1,268	270	21.3
Hispanic	532	103	19.4
White	237	60	25.3

TABLE 26
The Number and Percent of BPS Exam and Non-Exam High School Graduates from the Class of 2003 Who Obtained a College Degree by the Fall of 2011/Spring 2012, All and by Gender and Racial-Ethnic Group

Group	(A) High School Graduates	(B) College Graduates	(C) % with College Degree
Exam High Schools			
All	777	521	67.1
Men	310	182	58.7
Women	467	339	72.6
Asian	214	150	70.1
Black	196	126	64.3
Hispanic	70	35	50.0
White	296	210	70.9
Non-Exam High Schools			
All	2,248	514	22.9
Men	1,022	172	16.8
Women	1,226	342	27.9
Asian	151	54	35.8
Black	1,315	295	22.4
Hispanic	510	101	19.8
White	233	64	27.5

TABLE 27
The Number and Percent of BPS Exam and Non-Exam High School Graduates from the Class of 2005 Who Obtained a College Degree by the Fall of 2011/Spring 2012, All and by Gender and Racial-Ethnic Group

Group	(A) High School Graduates	(B) College Graduates	(C) % with College Degree
Exam High Schools			
All	804	540	67.2
Men	348	211	60.6
Women	456	329	72.1
Asian	225	163	72.4
Black	224	127	56.7
Hispanic	63	36	57.1
White	292	214	73.3
Non-Exam High Schools			
All	2,241	426	19.0
Men	1,040	159	15.3
Women	1,201	267	22.2
Asian	163	56	34.4
Black	1,196	215	18.0
Hispanic	622	101	16.2
White	225	54	24.0

Gender Disparities in College Degrees Awarded to Boston Public Schools Graduates, Classes of 2000, 2003 and 2005

For nearly a decade now, concerns have been raised over growing gender disparities in key education outcomes for Boston Public Schools graduates, including high school graduation, college attendance, and college graduation rates.²² The existence of these gender disparities in most large urban school districts in the state has also been noted, together with very large gaps in male high school graduation and college enrollment rates between the state's large school districts and its more affluent suburban districts.

When combined with findings on gender gaps in high school graduation rates, the previous findings in this chapter on gender differences in college enrollment rates and in college graduation rates among those who do enroll clearly suggest the existence of large gender gaps in the number of college degrees earned by men and women from the Boston Public Schools.²³ Data on the number of total college degrees and four-year college degrees obtained by female and male graduates from the Classes of 2000, 2003 and 2005 will be used to calculate the size of the gender disparities in college degrees awarded, both overall and in each major racial-ethnic group.

Tables 28, 29 and 30 present data on the absolute and relative size of the gender differences in total college degrees awarded to men and women from the graduating classes of 2000, 2003 and 2005.²⁴ For the graduating Class of 2000, women had received 618 degrees versus only 386 for men, *a ratio of 160 degrees for women per 100 for men* (**Table 28**). For graduates from the Class of 2003, this gender disparity had widened to 192 degrees for women per 100 men before falling back to 161 per 100 for graduates from the Class of 2005. See (**Chart 20**.)

In each year, these gender disparities in college degrees awarded varied fairly widely across the four racial-ethnic groups. For the graduating Class of 2000, these ratios ranged from lows of 118 to 119 among Asians and Whites to highs of just under 200 for Black, non-Hispanics and 251 for Hispanics. Over the next five years, the gender disparity ratios would rise considerably for Asians and Whites but moderate somewhat among Blacks and Hispanics (See **Table 30**). Even in early 2012, however, the gender disparity ratios for the Class

TABLE 28
The Numbers of College Graduates from the BPS High School Graduating Class of 2000 by Fall of 2011/Spring 2012, All and by Gender and Racial-Ethnic Group

Racial-Ethnic Group	(A) Men	(B) Women	(C) Woman per 100 Men
All	386	618	160
Asian	89	105	118
Black, not Hispanic	134	266	199
Hispanic	39	98	251
White, not Hispanic	122	145	119

TABLE 29
The Numbers of College Graduates from the BPS High School Graduating Class of 2003 by Fall of 2011/Spring 2012, All and by Gender and Racial-Ethnic Group

Racial-ethnic Group	(A) Men	(B) Women	(C) Woman per 100 Men
All	354	681	192
Asian	86	118	137
Black, not Hispanic	116	305	263
Hispanic	43	93	216
White, not Hispanic	109	165	151

TABLE 30
The Numbers of College Graduates from the BPS High School Graduating Class of 2005 by Fall of 2011/Spring 2012, All and by Gender and Racial-Ethnic Group

Racial-ethnic Group	(A) Men	(B) Women	(C) Woman per 100 Men
All	370	596	161
Asian	90	129	143
Black, not Hispanic	123	219	178
Hispanic	44	93	211
White, not Hispanic	113	155	137

TABLE 31

The Number of Four-Year College Graduates from the BPS High School Graduating Class of 2000 by the Fall of 2011/ Spring 2012, All and by Gender and Racial-Ethnic Group

Racial-ethnic Group	(A) Men	(B) Women	(C) Women per 100 Men
All	332	538	162
Asian	80	93	116
Black, not Hispanic	106	229	216
Hispanic	32	77	241
White, not Hispanic	113	139	123

TABLE 32

The Number of Four-Year College Graduates from the BPS High School Graduating Class of 2003 by the Fall of 2011/ Spring 2012, All and by Gender and Racial-Ethnic Group

Racial-ethnic Group	(A) Men	(B) Women	(C) Women per 100 Men
All	308	615	200
Asian	81	117	144
Black, not Hispanic	94	265	282
Hispanic	33	76	230
White, not Hispanic	100	157	157

TABLE 33

The Number of Four-Year College Graduates from the BPS High School Graduating Class of 2005 by the Fall of 2011/ Spring 2012, All and by Gender and Racial-Ethnic Group

Racial-ethnic Group	(A) Men	(B) Women	(C) Women per 100 Men
All	332	547	165
Asian	85	128	151
Black, not Hispanic	104	190	183
Hispanic	37	78	211
White, not Hispanic	106	151	142

CHART 20

Trends in the Ratio of College Degrees Earned by Women Per 100 Men, BPS Classes 2000, 2003, 2005

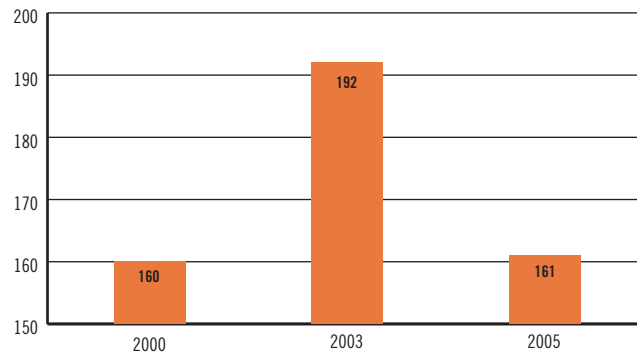
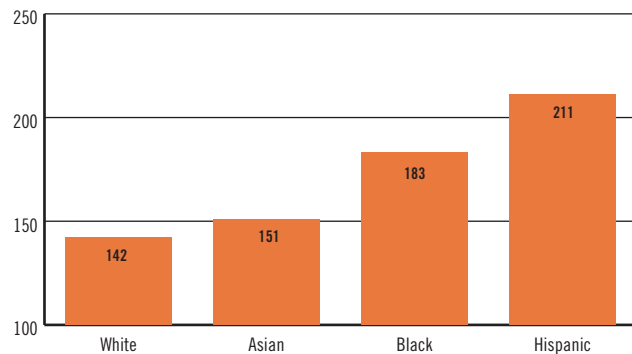


CHART 21

Number of Four-Year College Degrees Earned by Women Per 100 Men in Each Racial-ethnic Group, Class of 2005



of 2005 remained much higher for Blacks (178) and Hispanics (211) than for Whites (137) and Asians (143).

While a substantial majority (87-91 percent) of all college degrees received by BPS graduates in recent years have been from four-year colleges, women tend to receive a slightly higher share of their degrees from such colleges than men. As a consequence, the sizes of the gender disparities in four-year degrees are somewhat higher for each graduating class and for most racial-ethnic groups.²⁵

The overall gender gap in four-year degree attainment was 200 per 100 for the Class of 2003, and then fell back to 165 per 100 for the Class of 2005. The gender disparities in four-year college degree attainment for graduates from the Class of 2005 ranged from a low of 142 among White, non-Hispanics to 182 among Black youth, to a high of 211 among Hispanics (See **Chart 21**).

The lower college degree attainment rates among males from the Boston Public Schools are accompanied by a number of adverse labor market, income, household formation and child well-being consequences. Less educated men in Massachusetts tend to be employed less often, obtain much lower annual earnings than their college educated peers, are less likely to form independent households and to marry, more likely to father children out-of-wedlock, and become incarcerated.²⁶ New educational policies and programs at both the high school and college level are needed to boost male college enrollments and graduations, especially among Blacks and Hispanics. New demonstration programs should be tested in a rigorous evaluation format.

Comparisons of the College Graduation Rates of BPS Graduates from the Classes of 2000 and 2005 with Those of Their National Counterparts

The above findings have focused on the college graduation rates of BPS high school graduates from the Classes of 2000, 2003 and 2005 primarily through the end of calendar year 2011. How do the college graduation rates of BPS high school graduates compare to those of their national counterparts, both overall and across gender and racial-ethnic groups? To answer this question, we obtained data from the national Current Population Surveys on the college degree status of various age subgroups of young adults who were high school graduates in 2011. A “college graduate” for this national analysis is an individual who reported to the Census Bureau interviewer that he/she held some type of college degree (Associate’s, Bachelor’s, Master’s or higher). Self-reporting of educational attainment in the household surveys has been found to be slightly upward biased. Our estimates of “college graduates” for BPS graduates are based on data from the National Student Clearinghouse as supplemented by the four local colleges and universities.

For the BPS graduating Class of 2000 slightly under 34% of the graduates had obtained a college degree by the end of 2011 (Table 34). This college graduation rate was 15 percentage points below that for the entire national pool of 28-30 year old high school graduates in calendar year 2011.²⁷ Gender disparities in college

graduation rates prevailed in both the nation and the city; however, the college graduation rates of both male and female BPS graduates from the Class of 2000 fell 15 to 16 percentage points below those of their national peers. Gaps in college graduation rates between the nation and the city varied far more considerably across the four racial-ethnic groups. They ranged from a low of only 2 percentage points among White, non-Hispanics to 6 percentage points among Hispanics to a high of 16 percentage points among Asians. White BPS graduates came the closest to matching the college graduation rates of their national peers.

TABLE 34
Comparisons of the College Graduation Rates of Class of 2000 BPS Graduates by the Year 2011 With Those of Their National Counterparts Ages 28-30, All and by Gender and Racial-Ethnic Group

Group	(A) Boston Class of 2000	(B) U.S. High School Graduates, 28–30 Years Old	(C) Boston– U.S.
All	33.8	48.9	-15.1
Men	28.5	44.4	-15.9
Women	38.3	53.4	-15.1
Asian	55.9	72.0	-16.1
Black	26.9	36.7	-9.8
Hispanic	23.3	29.7	-6.4
White, not Hispanic	51.8	54.2	-2.4

The college graduation rates of Class of 2005 BPS graduates through the spring of 2012 were compared to those of their national counterparts ages 23-25 in 2011. Overall, the college graduation rate for BPS graduates was slightly under 32%, which was 8.6 percentage points below the U.S. average *but the gap in college graduation rates was considerably smaller than it was for the Class of 2000*. Both male and female BPS graduates fell 8 to 9 percentage points below those of their national counterparts; however, *the gaps in college graduation rates across racial-ethnic groups were considerably smaller and in one case (White, non-Hispanics) the BPS college graduation rate exceeded that of their national peers*. It should be noted that in both the nation and the city, college graduation rates

of these young adults varied widely across racial-ethnic group. In 2011, the college graduation rates of 23-25 year old high school graduates in the U.S. ranged from a low of 24% among Hispanics to a high of 59% among Asians. The gaps in college graduation rates between the city and the nation were only 2 to 4 percentage points for Asians, Blacks, and Hispanics, and among Whites the BPS graduation rate exceeded that of the nation by nearly 6 percentage points. The city appears to have made important progress in reducing college graduation rates between itself and the nation in recent years although important gender and racial-ethnic graduation disparities exist within both areas. The college enrollment rates for recent BPS graduates from the Classes of 2008-09 nearly match those of the U.S. and modestly exceed those for their counterparts living in central cities across the nation.²⁸

TABLE 35
Comparisons of the College Graduation Rates of Class of 2005 BPS Graduates by the Year 2011 With Those of Their National Counterparts Ages 23-25, All and by Gender and Racial-ethnic Group

Group	(A) Boston Class of 2005	(B) U.S. High School Graduates, 23–25 Years Old	(C) Boston– U.S.
All	31.7	40.3	-8.6
Men	26.7	35.3	-8.6
Women	36.0	45.1	-9.1
Asian	56.4	59.1	-2.7
Black	24.0	26.7	-2.7
Hispanic	20.0	23.9	-3.9
White, not Hispanic	51.8	46.0	+5.8

Time Trends in the College Graduation Rates of Those BPS Graduates Who First Enrolled in College in the Fall or Spring Semester Following Their Graduation from High School: Classes of 2000, 2003 and 2005

The findings in the 2008 report (*Getting to the Finish Line*) on the college graduation experiences of graduates who had enrolled in a two or four-year college at some time since leaving high school revealed that only 35.5% of them had received a college degree (or certificate) by June 2007.²⁹ If we exclude the 267 college attendees without a degree who were still attending college in the winter/spring semester of 2007, the college graduation rate of graduates from that class rises to slightly above 41%.

Following the release of the above report, a Success Boston College Completion Initiative was established by Boston Mayor Thomas Menino with the goal of improving the long-term college persistence and graduation rates of Boston Public Schools students. Among the specific objectives of this initiative were to increase the college graduation rates of those high school graduates who would enroll in college in the first year following graduation from high school. For *those graduates from the Class of 2009, the objective was to increase the college graduation rate within six years to 52%*. For the Class of 2011, the objective was to increase the college graduation rate to 70% within six years, a near doubling of the original graduation performance of graduates from the Class of 2000.

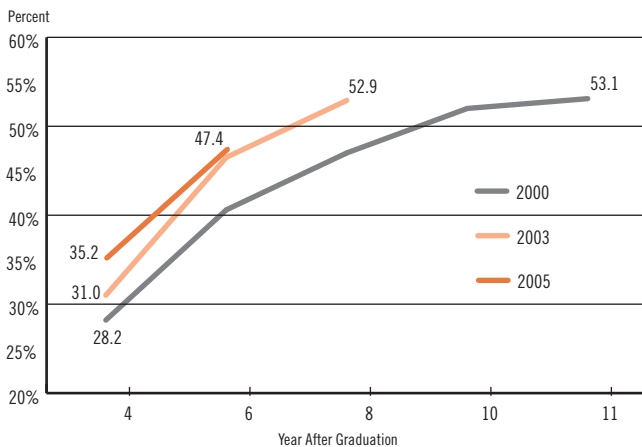
To place these college graduation objectives in context and to provide evidence of any trends in college graduation rates for BPS graduates over time, we analyzed findings on college graduation trends for BPS graduates who enrolled in college in the first year after graduation for the Classes of 2000, 2003 and 2005 with some initial data for the Class of 2007 (See **Table 36**). For each of these graduating classes, we estimated the fraction of initial college enrollees (enrolled in first year after graduation) who obtained a college degree (or certificate) within 4, 6, 8, 10 and 11 years (if applicable) of their graduation from high school.³⁰

TABLE 36
Time Trends in the College Graduation Rates of Those BPS Graduates Who Enrolled in College in the First Year Following Graduation from High School, Classes of 2000, 2003, 2005 (in %)

Number of Years After High School Graduation	(A) Class of 2000	(B) Class of 2003	(C) Class of 2005	(D) Class of 2007
Four	26.2	31.0	35.2	35.0
Six	40.6	46.5	47.4	--
Eight	46.0	52.9	--	--
Ten	51.3	--	--	--
Eleven	53.1	--	--	--

For college enrolled graduates from the Class of 2000 only 26% had obtained a college degree within four years. This ratio rose steadily but at a diminishing rate over time. By 2006, this rate had risen to 40.6%, it would increase to 46% by 2008, exceed 50% by year 10, and rise to 53% by 2011. It took 10 years to achieve a college graduation rate of 50% for this group of enrollees, but the findings make clear the importance of continuing to track the college graduation experiences of graduates well beyond the six year period, which is used as a benchmark in calculating college graduation rates for

CHART 22
Time Trends in College Graduation Rates of BPS Graduates Who Enrolled in College in First Year Following Graduation from High School, Classes of 2000, 2003, 2005 (in %)



four-year college students at the national and state level. The college graduation rate of Class of 2000 graduates was 12 percentage points higher in 2011 than it was in 2006, just six years after graduation.

The college graduation rates of college enrollees from more recent BPS graduating classes appear to have been on a modest upward trajectory (See **Chart 22**). For graduates from the Class of 2003, the first class required to pass the MCAS test to obtain a high school diploma, those who enrolled in college in the first year after graduation had surpassed the graduation rates of their Class of 2000 counterparts at the end of years four, six and eight. By year eight (2011), their graduation rate had reached 53%, 5 percentage points higher than that of their peers from the Class of 2000. At the end of year six, there was still only a 46% graduation rate, 6 percentage points below the current benchmark for the Class of 2009.

Graduates from the Class of 2005 have done marginally better than their peers from the Class of 2003, achieving a 47% college graduation rate six years after leaving high school. This was one percentage point higher than that for the Class of 2003. For graduates from the Class of 2007, we only have estimated college graduation rates at the four-year mark (2011). Their four-year college graduation rate was slightly above 35% in close align with that for the graduating Class of 2005. While it appears that some further improvements in 6 year graduation rates will be needed to enable the Class of 2009 to achieve the 52% objective set by the Success Boston Initiative, the major challenge will be to achieve the 70% college graduation rate within 6 years for the Class of 2012. Attainment of this goal will require a major increase in existing college graduation rates, especially for men, Blacks, and Hispanics, graduates of the non-exam schools, and those attending a two-year college. A comprehensive set of strategies will likely be needed, including strengthened academic proficiencies, more financial aid, broadened case management services, and greater integration between work and school life.

The Number of Active College Attendees in Fall 2011/Spring 2012 by BPS Graduating Class (2000, 2003, 2005)

Our earlier chapter on the college enrollment and graduation experiences of Class of 2000 Boston high school graduates revealed that there were still 391 individuals actively enrolled in college in the Spring of 2007 of whom 267 had not yet received any type of degree.³¹ Over the next four years, between 47 and 68 additional persons from that graduating class obtained a college degree, yielding an additional 236 college graduates by the end of 2011. Given that high level of degree attainment, knowledge of the college attendance behavior of the graduates from the Classes of 2000, 2003 and 2005 at the end of 2011 would seem highly desirable for gauging the potential future number of college graduates from the city's public schools.

Nationally, the number of young adults in their mid-20s to late 20s who have been attending college in recent years has been on the rise due in large part to the adverse employment impacts of the Great Recession of 2007-09, which took a steep toll on employment opportunities among the nation's young adults under 30. Our analysis of the national October 2011 CPS survey supplementary questionnaire findings on the college enrollment rates of young adults (23-25 and 25-29) without any college degrees is presented in **Chart 23** and **24**.³² The data appearing in these two tables was restricted to those adults who had earned a

high school diploma or a GED certificate and those who had completed one or more years of college but had not earned a college degree.

In October 2011, approximately 26% of the nation's 23-25 year old adults (with at least a high school diploma but no college degree) were enrolled in college. This enrollment rate was 7 percentage points higher than it was in October 2000. The college enrollment rate of women in this age group was several percentage points above that of men (28% vs. 24%). College enrollment rates across the major racial-ethnic groups varied from 22% among Hispanics to a high of 36% among Asian youth.

Among the nation's 25-29 year olds who met the above educational criteria, nearly 14% were enrolled in college in October 2011. Again, women were more likely to be enrolled in college than men (16% vs. 12%), and enrollment rates ranged from a low of 10% among Asians to a high of nearly 19% among Black adults.

Findings of our analysis of the college enrollment experiences in the fall semester of 2011 of BPS graduates from the Classes of 2000, 2003 and 2005 are displayed in **Table 37, 38** and **39**. As expected, the number and percent of high school graduates who were enrolled in college in the Fall of 2011 declined as we moved from the earlier graduating Class of 2000 through the Class of 2005. Still, more than 11 years after graduation from high school, there were 213 graduates without a college degree from the Class of 2000 or 7% of all high school graduates who were enrolled in college. Among BPS

CHART 23

Percent of 23-25 Year Old U.S. Adults with a High School Diploma/GED or Some College but No Degree Who Were Enrolled in College in October 2011, All and by Gender and Racial-ethnic Group

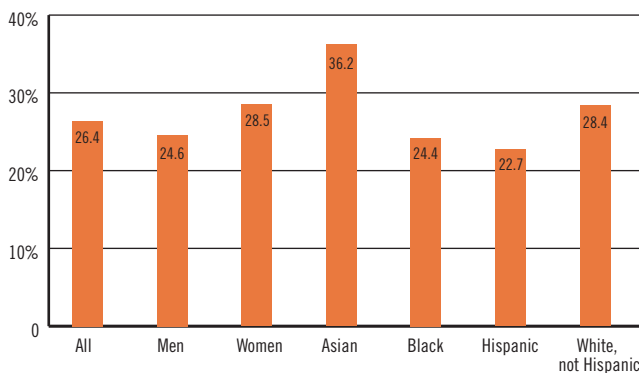


CHART 24

Percent of 25-29 Year Old U.S. Adults with a High School Diploma/GED or Some College but No Degree Who Were Enrolled in College in October 2011, All and by Gender and Racial-ethnic Group

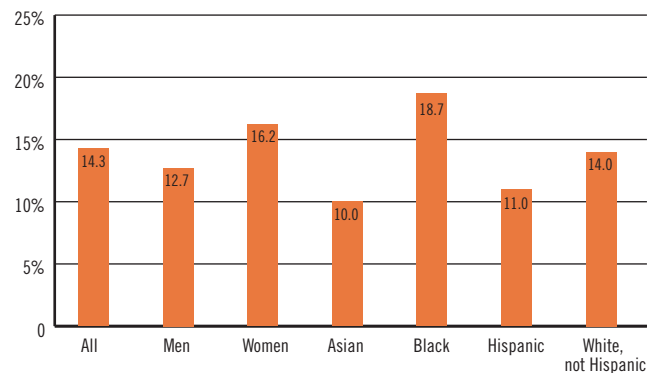


TABLE 37
The Number and Percent of BPS Class of 2000 High School Graduates Still Attending College in the Fall 2011 or Spring 2012 (Those Without a College Degree)

Characteristics	(A) Number of College Attendees	(B) Number of High School Graduates	(C) Percent of High School Graduates
All	213	2,967	7.2
Men	83	1,355	6.1
Women	130	1,612	8.1
Asian	6	347	1.7
Black	128	1,487	8.6
Hispanic	57	587	9.7
White, Not Hispanic	22	515	4.3
Exam High Schools	32	722	4.4
Non-Exam High Schools	181	2,245	8.1

TABLE 38
The Number and Percent of BPS Class of 2003 High School Graduates Still Attending College in the Fall 2011 or Spring 2012 (Those Without a College Degree)

Characteristics	(A) Number of College Attendees	(B) Number of High School Graduates	(C) Percent of High School Graduates
All	269	3,025	8.9
Men	108	1,332	8.1
Women	161	1,693	9.5
Asian	24	365	6.6
Black	153	1,511	10.1
Hispanic	60	580	10.3
White, Not Hispanic	32	529	6.0
Exam High Schools	43	777	5.5
Non-Exam High Schools	226	2,248	10.1

TABLE 39
The Number and Percent of BPS Class of 2005 High School Graduates Still Attending College in the Fall 2011 or Spring 2012 (Those Without a College Degree)

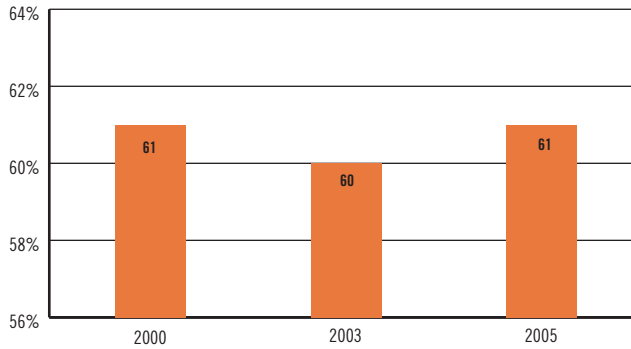
Characteristics	(A) Number of College Attendees	(B) Number of High School Graduates	(C) Percent of High School Graduates
All	431	3,045	14.2
Men	170	1,388	12.2
Women	261	1,657	15.8
Asian	41	388	10.6
Black	239	1,420	16.8
Hispanic	103	685	15.0
White, Not Hispanic	48	517	9.3
Exam High Schools	69	804	8.6
Non-Exam High Schools	362	2,241	16.2

graduates from the Classes of 2003 and 2005, there were 269 and 431 active college students in the fall semester of 2011, respectively, accounting for 8.9% and 14.2% of all high school graduates from those two classes (Tables 38 and 39). The vast majority of the graduates from the Class of 2005 would have been 23-25 years old in 2011. Thus, if we adjust the denominator to exclude those high school graduates with a college degree, the college enrollment rate of BPS graduates (with no college degree) from the Class of 2005 would have been around 21% which was in close accord with the results of their national counterparts in that same year.

A review of the gender characteristics of the college enrolled graduates from the Classes of 2000, 2003 and 2005 reveals that *women were a clear majority of those attending college in each year, accounting for 60 to 61 percent of all college attendees each year* (See Chart 25). The college enrollment behavior of BPS graduates in their later young adult years will, thus, not do much to reduce the rather large gender disparities in college degree attainment.

CHART 25

Percent of College Attendees in Fall 2011 or Spring 2012 That Were Female by Year of High School Graduating Class



For each graduating class, both Black and Hispanic high school graduates were more likely than their Asian and White counterparts to be enrolled in college.³³ Between 80 and 90 percent of the college enrollees (without an existing degree) were either Black or Hispanic for each of the three graduating classes. The higher college enrollment share attributable to Blacks and Hispanics has the potential to modestly ameliorate the relatively large racial-ethnic differences in college graduation rates among Boston high school graduates.

An analysis of the types of colleges attended in the fall of 2011 by college enrolled graduates from the Classes of 2000, 2003 and 2005 reveals that the enrolled were about evenly divided between those attending two-year colleges and those in four-year colleges (**Table 41**). This ratio is substantially different from the very large difference in the ratio of graduates attending four-year colleges in the first year following graduation from high school when nearly 80% attended a four-year college. Community colleges, thus, have an opportunity to boost their college graduation rates by having these older high school graduates successfully obtain their Associate degrees in their mid to late 20s. On average, the economic return to the community college degree in the Boston metropolitan area in recent years appears to be quite high, and these young adults have many years to recoup their costs of their investments.

TABLE 40

Number and Percent of BPS Classes of 2000, 2003 and 2005 High School Graduates (Without a College Degree) Still Attending College in Fall 2011 or Spring 2012

Graduating Class	(A) Number Attending College	(B) Percent of High School Graduates
2000	213	7.2
2003	269	8.9
2005	431	14.2

TABLE 41

Number and Percent of BPS Classes of 2000, 2003 and 2005 High School Graduates (Without a College Degree) Still Attending College in Fall 2011 or Spring 2012

Graduating Class	(A) Two-year College	(B) Four-year College
2000	49	51
2003	53	47
2005	52	48

CHAPTER TWO

The College Enrollment, Persistence and Early Graduation Experiences of Boston Public Schools Graduates from the Classes of 2007, 2008 and 2009: Implications for Success Boston

This chapter conducts similar types of analyses for Boston Public Schools graduates from the Classes of 2007, 2008 and 2009. The main objective is to track the college enrollment, college retention and graduation experiences of the graduates from these three classes from the time of their graduation from high school through either the end of 2011 or the spring of 2012. Findings of key enrollment, persistence and graduation outcomes for each of the three years will be compared to each other and to earlier years (Class of 2005) to track progress in each of these areas over time.

It begins with a review of the various local, state and national data bases that were used in conducting all of the empirical analyses appearing in this chapter. These include data on individual student characteristics of BPS graduates from the Classes of 2007, 2008 and 2009 provided by the Boston Public Schools, follow-up survey data on the college enrollment and employment behavior of Boston Public Schools graduates in the year following their graduation,¹ and college enrollment, persistence and graduation data from the National Student Clearinghouse.

The review of data sources is followed by a description and analysis of the college enrollment data for Boston graduates from the Classes of 2007, 2008 and 2009. Their college enrollment behavior in the fall semester immediately following graduation from high school, in the year after graduation, and through the early spring of 2012 will be tracked. Comparisons of these college enrollment rates over time, including those for the Class of 2005, will be presented together with estimates of college enrollment rates across gender and racial-ethnic groups and types of high schools from which the students graduated (exam, pilot, other). College enroll-

ments across types of institutions (two-year and four-year colleges) also will be tracked.

The findings on college enrollment behavior are supplemented by an analysis of the college persistence behavior of those BPS graduates who enrolled in college in the fall following their graduation from high school. Their persistence behavior over a two- to four-year period following initial enrollment in college is tracked. Findings are presented for each graduating class by gender, racial-ethnic group, type of high school attended and type of college first attended. The analyses of college persistence behavior is followed by a review of available data on the college graduation experiences through early spring 2012 of those BPS graduates from the Classes of 2007 to 2009 who enrolled in college in the year immediately following their graduation from high school. The numbers and rates of college graduation for Class of 2007 graduates are provided for those enrolled in two-year and four-year colleges while those for the Classes of 2008 and 2009 are confined to two-year college students given the short time interval for four-year college students.²

The final sections of the chapter will be devoted to findings of the effects of case management/college coaching services on the persistence and selected graduation outcomes for BPS college students.³

Data Sources for the Analysis of the College Enrollment, Persistence and Graduation Experiences of BPS Graduates from the Classes of 2007, 2008 and 2009

The findings on the college enrollment, persistence and graduation experiences of BPS graduates appearing in this chapter are based on a number of different data sources. The data on the demographic characteristics of BPS graduates (gender, racial-ethnic group), their MCAS reading and math scores, and the high schools from which they graduated were provided by the Boston Public Schools. A second source of data is the annual follow-up surveys of BPS high school graduates conducted by the Boston Private Industry Council, a workforce development agency in the city. This survey is administered by PIC career specialists to high school graduates in the late winter and spring of the year following their graduation from high school. For example, the graduates from the Class of 2007 were interviewed in the late winter and spring of 2008. The follow-up questionnaire is used to collect information from graduates on their college, post-secondary training, and employment status, including military service, at the time of the follow-up survey and key characteristics of their college and job experiences. College enrolled students are asked to identify the college they are attending, the part-time/full-time nature of their current enrollment status, their college major, their financial aid status, and their employment status, including the name of their employer, occupational job titles, and their weekly hours of work.

The third source of data is the information on the college enrollment status and graduation status of Boston Public Schools graduates from the National Student Clearinghouse (NSC). The National Student Clearinghouse was established by the higher education community back in 1995 to serve as a central location for storing and retrieving information on the college enrollment status and graduation status of students in colleges and universities that are members of the Clearinghouse. One of the most important functions of the Clearinghouse is to provide services to local school districts and educational researchers who wish to obtain access to the data base that today covers between 93 and 94 percent of total enrollment in the nation's colleges and universities. As a result of agreements

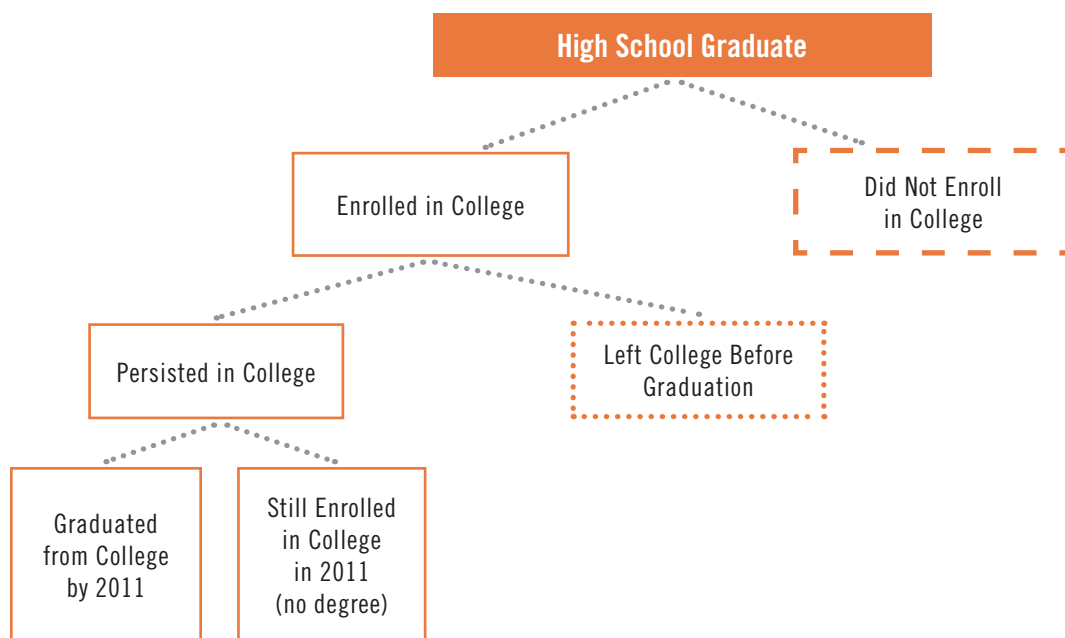
between the Boston Public Schools, the Boston Private Industry Council, and the National Student Clearinghouse (NSC), the Center for Labor Market Studies was able to obtain listings of the names of all Boston Public Schools graduates from the graduating Classes of 2007, 2008 and 2009. The NSC then provided the Center for Labor Market Studies with information on the college enrollment status and the college graduation status of each BPS graduate for each semester from the date of high school graduation through either the fall semester or the early spring of 2012.⁴ The Clearinghouse data provide information on the college attended by each individual student, including its name, whether it is a two-year or four-year college, and its private/public nature.⁵ A subset of colleges will provide information on the type of degree obtained by the graduate (Associate, Bachelor) or the type of certificate, but not all do so.

Tracking the College Enrollment, Persistence and College Graduation Behavior of BPS Graduates from the Classes of 2007, 2008 and 2009

Our study is designed to track the college enrollment behavior, the persistence behavior and available graduation outcomes for BPS high school graduates from the Classes of 2007 to 2009. For each individual high school graduate, we will identify whether he/she enrolled in college at some point in time following graduation through either the end of 2011 or early spring of 2012 (See **Chart 1**).⁶ College enrollment status can be measured at different points in time. We will use *three enrollment measures*: those who enrolled in college in the fall following graduation from high school, those who enrolled in the first full year (12 months) following graduation, and those who enrolled in college at any point in time through the end of the reporting period (See **Table 1**).

For each student who enrolled in college in the fall immediately following graduation from high school, this chapter tracks their *college persistence* rates for two to four years depending on their year of graduation. Those graduates from the Class of 2007 are tracked through four years. College persistence implies that the individual remained in college through each consecutive year or obtained a degree. For graduates from the class of 2007 who enrolled in college in the fall of 2007,

CHART 1
Tracking the Links Between High School Graduation, College Enrollment, College Persistence, and College Graduation / Retention Among BPS High School Graduates Class of 2007



one year persistence indicates whether they remained in college through the following fall (2008), two-year persistence indicates whether they were still enrolled in the fall 2009, and so on. This chapter also identifies whether the college student was still enrolled in college at the end of the reporting period. Knowledge of the number of active college enrollees (with no degree or certificate) is used to help calculate our college graduation rates.

There are several measures of *graduation outcomes* used in this chapter. We first identify whether the student obtained a college degree or certificate from the college in which he first enrolled. The second graduation measure includes college degrees obtained anywhere in the system. Estimates of the number of degrees received from two-year and four-year colleges also will be provided. It should be noted that not all degrees obtained from four-year colleges are Bachelor’s degrees. Some students will receive an Associate’s degree or a certificate rather than a Bachelor’s degree; however, not all members of the National Student Clearinghouse

TABLE 1
Classifying College Enrollment, Persistence and Graduation Outcomes for Boston Public Schools Graduates

College Enrollment Behaviors
Enrolled fall semester after graduating from high school
Enrolled in first year after graduating from high school
Enrolled at any time since graduating from high school
College Persistence Behaviors ¹
Persisted in college for one year
Persisted in college for two years
Persisted in college for three years
Persisted in college for four years
Still enrolled, no degree yet received
Graduation Outcomes
Obtained a degree from the college in which initially enrolled
Obtained a degree from another college
Type of college from which degree was earned

Note: (1) College persistence measures include those who obtained a college degree (certificate) within the relevant time period.

provide specific information on the type of degree obtained by their graduates.⁷ Findings on the numbers of college enrollees, the numbers of active enrollees at the end of the reporting period, and degrees received will be used to calculate a set of graduation rates for all colleges combined and for two and four-year colleges.

The College Enrollment Behavior of BPS Graduates from the Classes of 2007, 2008 and 2009

The college enrollment behavior of high school graduates is a dynamic process rather than a fixed time set of behaviors. While a clear, strong majority of the members of a new graduating class will enter college in the fall immediately following graduation, others will delay college entry until the winter semester of the following year or until later years as they adjust their career plans, home life, or financial situation to allow them to afford college. The cumulative number of college enrollees from a given high school graduating class (e.g., 2007) will rise steadily but at a diminishing rate over time for a decade or longer.⁸ As will be revealed below, the demographic characteristics and academic proficiencies of those graduates who delay entry into college differ in a number of key respects from those who enter college immediately after graduation, and they tend to attend different types of schools; i.e., a higher fraction will attend two-year colleges.

To provide greater insight into the college enrollment behavior of BPS graduates from the Classes of 2007, 2008 and 2009, we have measured three different enrollment

rates: those who enrolled in college in the fall semester following graduation, those who entered college in the first year following graduation, and those who enrolled at any time through April 2012, the ending point of our data from the National Student Clearinghouse.

Findings on the fall college enrollments of BPS graduates from the Classes of 2007, 2008 and 2009 are presented in **Table 2** together with data on the total number of high school graduates from each class. Of the 3,323 graduates from the Class of 2007, nearly 1,900 enrolled in college in the fall, yielding a college enrollment rate of just under 57%. The number of high school graduates increased by 317 over the next two years, an increase of nearly 10%, but the number of college enrollees grew at an even higher pace (by 16%). As a result the college enrollment rate rose from 57% in 2007 and 2008 to 61% in the fall of 2009.

The fall college enrollment rates of graduates from the Classes of 2007, 2008 and 2009 can be compared with that for the Class of 2005 (See **Chart 2**). The fall 2005 college enrollment rate of BPS graduates was only 55%. It rose to nearly 57% for the Classes of 2007 and 2008 and to 60% for the Class of 2009. This represents a gain of more than five percentage points in the fall college enrollment rate over this four-year period.⁹

Estimates of the fall college enrollment rates of BPS graduates from the Classes of 2007, 2008 and 2009 by gender and racial-ethnic group appear in **Table 3**. Fall college enrollment rates rose across the board in each gender and racial-ethnic group. Gains were slightly higher for men than for women, thereby modestly reducing the gender gap in fall college enrollment rates

TABLE 2
The Number of BPS High School Graduates, the Number Attending College in the Fall, and the Fall College Enrollment Rate, Graduating Classes of 2007 to 2009

Variable	(A) 2007	(B) 2008	(C) 2009	(D) Change, 2007-2009 (% points)
Number of High School Graduates	3,323	3,582	3,640	+317
Number Enrolled in College in Fall	1,891	2,037	2,193	+302
Percent Enrolled in College	56.9	56.9	61.2	+4.3

CHART 2
Trends in Fall College Enrollment Rates of BPS Graduates from the Classes of 2005, 2007, 2008 and 2009 (in %)

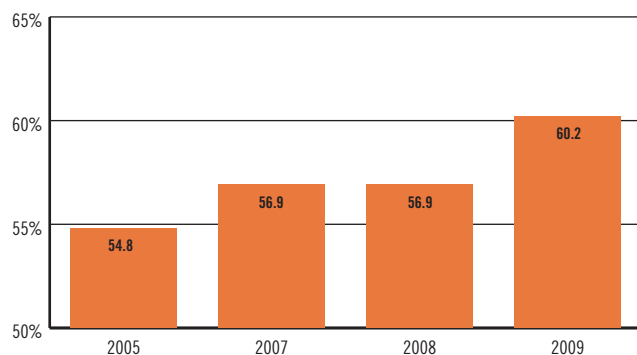
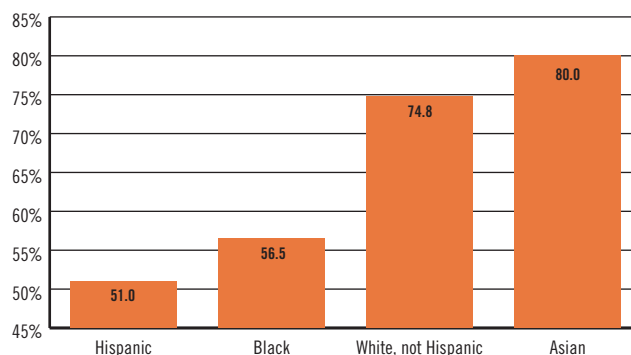


CHART 3
Fall College Enrollment Rates of BPS Graduates from Class of 2009 by Racial-ethnic Group (in %)



from 9 to slightly under 7 percentage points. While enrollment gains occurred in each racial-ethnic group, the increases were actually slightly higher for Asians (+5) and Whites (+5) than for Blacks (+3) and Hispanics (+3). Racial-ethnic disparities in fall college enrollment rates, thus, widened somewhat over the past few years. In 2009, these fall college enrollment rates ranged from a low of 51% among Hispanic graduates to a high of 80% among Asians, a near 30 percentage point gap.

Estimates of fall college enrollment rates by type of high school attended by BPS graduates from the Classes of

2007 to 2009 are presented in **Tables 4** and **5**. In each of these three years, the fall college enrollment rates of exam school graduates exceeded those of the non-exam high schools by anywhere from 34 to 39 percentage points (**Table 4**). For example, for the Class of 2009, fall college enrollment rates were 52% for the non-exam high school graduates and 87% for graduates of the exam high schools. For the Class of 2008 and 2009, we divided the non-exam schools into two groups: college enrollment rates for pilot high schools were 9 to 11 percentage points higher than those of the other non-exam high schools combined.

TABLE 3
Fall College Enrollment Rates of BPS Graduates from the Classes of 2007, 2008 and 2009 by Gender and Racial-Ethnic Group

Group	(A) Class of 2007	(B) Class of 2008	(C) Class of 2009	(D) Change, 2007-2009 (% points)
Men	51.6	52.5	56.7	+5.1
Women	60.9	60.6	63.3	+2.4
Women – Men	+9.3	+8.1	+6.6	-2.7
Asian	75.1	79.9	80.0	+4.9
Black	53.3	52.4	56.5	+3.2
Hispanic	47.5	47.7	51.0	+3.5
White, not Hispanic	69.4	70.0	74.8	+5.4

TABLE 4
Fall College Enrollment Rates of 2007, 2008 and 2009 BPS Graduates by Type of High School Attended

Type of High School	(A) Class of 2007	(B) Class of 2008	(C) Class of 2009
Exam High School	82.6	87.3	87.3
Non-Exam High School	48.7	48.4	51.9
Pilot High School	--	56.5	58.1
District and Alternative High Schools	--	45.6	49.5
Exam – Non-Exam High Schools	+33.9	+38.9	+35.4

TABLE 5
Fall 2009 College Enrollment Rates of BPS Graduates from the Class of 2009 by Exam vs. Non-Exam High School and Gender, Race-Ethnic Group (in %)

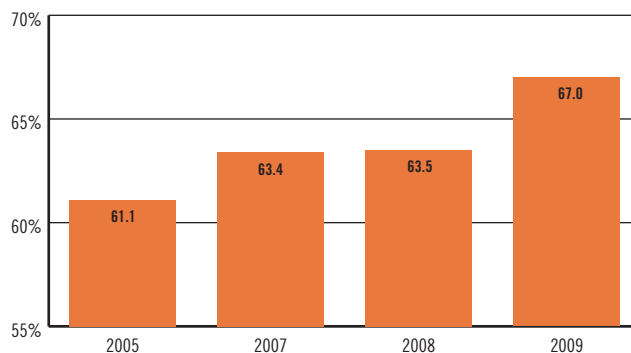
Group	(A) Exam School	(B) Non-Exam School	(C) Exam – Non-Exam
All	87.3	51.9	+34.4
Men	87.7	48.5	+39.2
Women	87.0	54.9	+32.1
Asian	86.3	71.8	+14.5
Black	84.0	52.1	+31.9
Hispanic	87.7	46.7	+41.0
White, not Hispanic	90.3	56.8	+33.5

To identify whether the college enrollment gaps between the exam school graduates and the non-exam school counterparts varied across gender and racial-ethnic groups, we estimated them separately for graduates from the Class of 2009 (See **Table 5**). For both male and female graduates, there were very large differences in these fall college enrollment rates between the exam school and other high school graduates. The percentage point gap for men was larger than that of women (39 versus 32 percentage points). Both male and female Class of 2009 graduates from the city's three exam

schools had nearly identical fall college enrollment rates; however, women in the non-exam schools were somewhat more likely to attend college than their male counterparts (55% vs. 48%). Within each racial-ethnic group, exam school graduates were more likely to attend college than their peers in the non-exam schools with gaps of 32 to 41 percentage points for Blacks, Whites and Hispanics. In each of the four racial-ethnic groups, 84 to 90 percent of the exam school graduates from the Class of 2009 attended college in the fall following graduation.

Our second measure of college enrollment activity is based on the number of high school graduates who will enroll in college in the year following graduation (i.e., either the fall semester or winter semester of the following year). These *one year college enrollment rates* for the Classes of 2005, 2007, 2008 and 2009 are presented in **Chart 4**. In each of these four years, the one year college enrollment rates were between 6 and 7 percentage points higher than those of the fall college enrollment rates. For example, the one year college enrollment rate for BPS graduates from the Class of 2009 was 67% versus only 61% for the fall term. Over the past four years, there was an increase in the one year college enrollment rate from 61% to 67% in the National Student Clearinghouse data. The 67% college enrollment rate from NSC closely matches the 68-69% college enrollment rate from the Boston PIC follow-up surveys.

CHART 4
Trends in College Enrollment Rates of BPS Graduates in the First Year Following Graduation from High School, Classes of 2005, 2007, 2008 and 2009 (in %)



The one year college enrollment rates of BPS graduates by gender and racial-ethnic group for the Classes of 2007-2009 are displayed in **Table 6**. The one year college enrollment rates increased for both men and women with the gender gap modestly declining from 10 to 7 percentage points. The one year college enrollment rates also increased for each racial-ethnic group; however, there was no reduction in the disparity gaps. For graduates from the Class of 2009, the one year college enrollment rates ranged from nearly 60% for Hispanics to a high of 83% for Asians.

TABLE 6
College Enrollment Rates in the First Year Following Graduation from High School for BPS Graduates from the Classes of 2007, 2008 and 2009 by Gender and Racial-Ethnic Group (in %)

Demographic Group	(A) Class of 2007	(B) Class of 2008	(C) Class of 2009
Men	57.4	58.5	63.3
Women	67.9	67.8	70.9
Women – Men	+10.5	+9.3	+7.6
Asian	78.2	82.3	83.2
Black	60.5	59.8	64.2
Hispanic	55.6	56.7	59.7
White	73.7	73.6	77.3

The one year college enrollment rates for graduates from the exam and non-exam high schools are displayed in **Table 7**. These enrollment rates improved for students from both sets of schools between 2007 and 2009, however, the enrollment gaps between the two sets of high schools remained nearly unchanged over this three year period. *Nearly 90% of the exam school graduates had enrolled in college within the first year following graduation from high school versus only 60% of the non-exam school graduates, a gap of nearly 30 percentage points.*

Our third set of college enrollment rate measures are categorized as *cumulative college enrollment rates*. They measure whether a BPS graduate had enrolled in any type of college between the date of graduation and April 2012. Since high school graduates from earlier

TABLE 7
College Enrollment Rates in the First Year Following Graduation from High School for BPS Graduates from the Classes of 2007, 2008 and 2009 by Type of High School Attended (in %)

Type of High School	(A) Class of 2007	(B) Class of 2008	(C) Class of 2009
Exam	85.6	90.9	89.7
Non-Exam	56.3	55.9	59.9
Exam – Non-Exam	+29.3	+35.0	+29.8

years had more time to enroll in college, one must adjust for these timing differences in interpreting the results for different graduating classes. The cumulative college enrollment rates of BPS graduates from the Classes of 2007 to 2009 are presented in **Chart 5**. Each of these rates were in the 75 to 77 percent range. While BPS graduates from the Class of 2009 nearly matched the college enrollment rate of Class of 2007 graduates, they had two fewer years to enroll in college. It, thus, appears that cumulative college enrollments rates are rising over time although future enrollment data for the Class of 2009 are needed to verify this proposition.

Earlier, we noted that the college enrollment process is a dynamic one in which individuals choose to enter and withdraw from college at different times. To illustrate this, we compared the fall 2009 college enrollment

CHART 5
The Cumulative College Enrollment Rates from High School Graduation Through May 2012 of BPS Graduates from the Classes of 2007, 2008 and 2009 (in %)

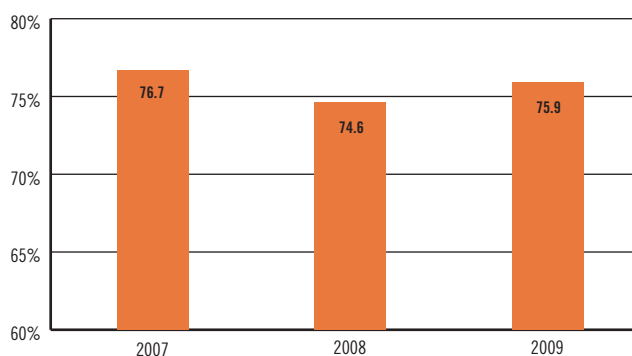
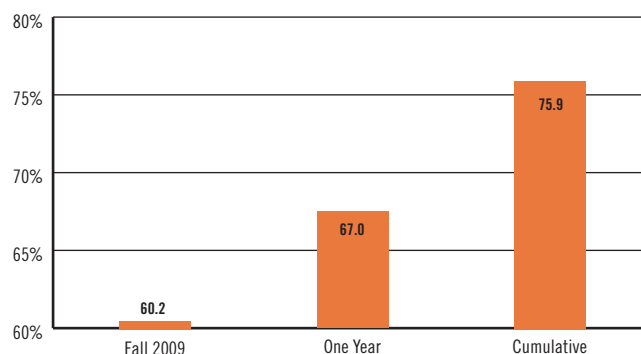


CHART 6
Comparisons of the Fall 2009, One Year and Cumulative College Enrollment Rates of BPS Graduates from the Class of 2009

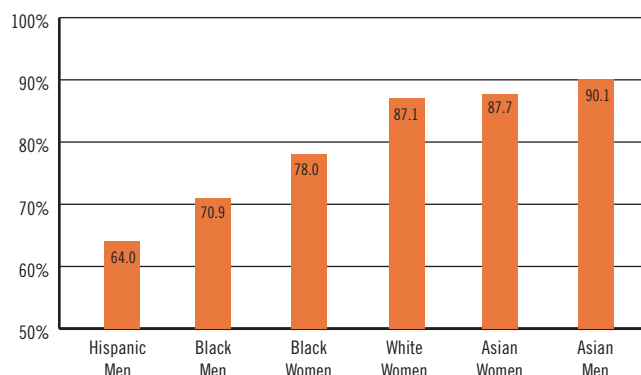


rate, the one year college, and the cumulative college enrollment rate of BPS graduates from the Class of 2009 (Chart 6). College enrollments rose throughout this two and one-half year period. While slightly over 60% were enrolled in college in the fall, over three-fourths of the graduates (76%) had enrolled in college at some point since leaving high school.

The cumulative college enrollment rates of BPS female graduates exceeded those of their male counterparts for each of the three graduating classes by 7 to 9 percentage points; however, the gender gap in cumulative college enrollment rates had modestly declined over the past few years. Cumulative college enrollment rates varied more widely by racial-ethnic group, with Hispanics trailing Asians by close to 20 percentage points for the BPS graduating Class of 2009 (89% vs. 70%). For a given graduating class, however, the size of these racial-ethnic differences in college enrollment rates tend to decline over time as both more Hispanic and Black graduates enroll in college after the first year relative to Asians and Whites. The gap in fall 2009 college enrollment rates between Asian and Hispanic graduates was 29 percentage points, but the gap in cumulative college enrollment rates between these same two groups by the winter of 2012 was down to 19 percentage points.

In each racial-ethnic group, with the exception of Asians, cumulative college enrollment rates for BPS graduates from the Class of 2009 were higher for women. The values of the cumulative college enrollment rates for each gender/racial-ethnic group were calcu-

CHART 7
Cumulative College Enrollment Rates of Selected Gender and Racial-ethnic Groups of BPS Graduates from the Class of 2009 (in %)



lated and ranked. Findings for 6 of these subgroups, covering the full range from lowest to highest, are displayed in Chart 7. These cumulative college enrollment rates varied from lows of 64 % among Hispanic men and 71% among Black males to highs of 87 to 90 percent for Asian and white women and Asian men. The enrollment gap between Asian men and Hispanic men was about 26 percentage points.

TABLE 8
The Cumulative College Enrollment Rates of BPS Graduates from the Classes of 2007, 2008 and 2009 by Gender and Racial-Ethnic Group (in %)

Demographic Group	(A) Class of 2007	(B) Class of 2008	(C) Class of 2009
Men	71.6	69.5	72.2
Women	80.6	78.8	79.3
Women – Men	+9.0	+9.3	+7.3
Asian	89.7	86.8	88.9
Black	74.9	71.8	74.7
Hispanic	71.3	70.7	69.9
White	81.6	80.9	81.9

The cumulative college enrollment rates of BPS graduates from the exam high schools exceeded those from the non-exam high schools by 22 to 25 percentage points for the three graduating Classes of 2007, 2008 and 2009 (See **Table 9**). Between 93 and 94 percent of the graduates from the exam schools had enrolled in college at some point in time by the winter of 2012 versus an average of about 70% of the graduates from the city’s non-exam schools.¹⁰

More of the graduates from the city’s non-exam schools tend to delay their initial entry into college relative to the behavior of the exam school graduates. As a consequence, the gaps in enrollment rates between exam school and non-exam school graduates tend to diminish somewhat over time. In the fall of 2009, the college enrollment rate of exam school graduates was 35 percentage points above that of the non-exam school graduates (See **Table 10**). By the spring of 2012, the enrollment rate gap had fallen slightly below 30 percentage points and would drop further to 22 percentage points by the end of the reporting period. Past evidence for earlier graduating classes, however, suggests that those who delay initial entry tend to experience above average persistence problems.

The Types of Colleges Attended by BPS Graduates in the Fall and First Year After Graduation from High School

The National Student Clearinghouse data on college enrollees also can be used to identify the names and types (2 year, 4 year) of colleges attended by BPS graduates.¹¹ The distribution of college enrollees from the BPS graduating Classes of 2007 – 2009 who entered college in the fall immediately following graduation by type of college attended is displayed in **Table 11**. Over this three year period, there was an increase of about 16% in the total number of fall college enrollees, with their numbers rising from 1,891 to 2,193. While a substantial majority (74 to 77 percent) of these fall enrollees in each year attended a four-year college, the growth rate in fall enrollees was higher in two-year colleges.

TABLE 9
The Cumulative College Enrollment Rates of BPS High School Graduates from the Classes of 2007, 2008 and 2009 by Type of High School Attended (in %)

Type of High School	(A) Class of 2007	(B) Class of 2008	(C) Class of 2009
Exam	93.5	94.1	92.7
Non-Exam	71.4	69.1	70.8
Difference (Exam – Non- Exam)	22.1	25.0	21.9

TABLE 10
Comparisons of the College Enrollment Rates of Class of 2009 BPS High School Graduates from Exam and Non-Exam High Schools in the Fall of 2009, the First Year Following Graduation, and Through May 2012

Type of High School	(A) Class of 2007	(B) Class of 2008	(C) Class of 2009
Exam	87.3	89.7	92.7
Non-Exam	51.9	59.9	70.8
Difference (Exam – Non- Exam)	35.4	29.8	21.9

TABLE 11
Distribution of Fall College Enrollees by Type of College Attended, BPS Graduating Classes of 2007, 2008 and 2009

Type of College	(A) Class of 2007	(B) Class of 2008	(C) Class of 2009
Two-year	430	502	573
Four-year	1,461	1,535	1,620
Total	1,891	2,037	2,193
Percent in Four-year Colleges	77.3%	75.4%	73.9%

TABLE 12
Distribution of Fall College Enrollees in the First Year Following Graduation from High School by Type of College Attended,⁽¹⁾ BPS Graduating Classes of 2007, 2008 and 2009

Type of College	(A) Class of 2007	(B) Class of 2008	(C) Class of 2009
Two-year	567	666	742
Four-year	1,539	1,610	1,695
Total	2,106	2,276	2,437
Percent in Four-year Colleges	73.1%	70.7%	69.6%

Note: (1) Data are based on first type of college attended by the graduate.

Between 2007 and 2009, the number of fall enrollees in two-year colleges increased from 430 to 573, a growth rate of 33% versus an increase of 159 enrollees or 11% in four-year colleges. The share of fall college enrollees attending a four-year college declined modestly above 77% in 2007 to slightly below 74% in 2009.

Similar findings prevail when trends in college enrollments over the first full year following graduation from high school are examined. Total college enrollments in the first year increased from 2,106 to 2,437, a gain of about 15% (Table 12). While enrollments increased in both two and four-year colleges, the rate of increase was sharply higher in two-year colleges (32% versus 10%). As a consequence of these divergent growth rates, the share of enrollments in two-year colleges rose from only 27% for the Class of 2007 to 30% for the Class of 2009.

The College Persistence Behavior of BPS Graduates from the Classes of 2007-2009

Getting into college is one of the important behaviors to be tracked, but equally important is persisting in college long enough to obtain a degree, certificate, or a solid set of new skills. For all BPS graduates who enrolled in college in the fall immediately following graduation, we tracked their college persistence behavior for anywhere from two to four years depending on their graduating class. A student is considered as “persisting” in college if she was actively enrolled in college in the following fall or had obtained a college degree or certificate by that fall.

Estimates of the one to four-year persistence rates of BPS graduates from the Class of 2007 are displayed in Table 13. By the end of year one, the persistence rate of fall 2007 enrollees was 81%. It would decline by about 10 percentage points per year over the next three years falling to 52% by year four, implying that nearly half of all initial college enrollees had left college by the end of four years without obtaining a degree. Women were more likely than men to persist in college each year with a 5 percentage point gap prevailing at the end of year four. Persistence rate gaps were substantially larger among racial-ethnic groups. By year four, these persistence rates varied from a low of slightly under 42% among Hispanics to a high of nearly 73% among Asian graduates. There also were very large persistence rate gaps between graduates of the exam and non-exam high schools. The size of these persistence rate gaps actually increased in size over the first three years from 20 percentage points in year one to 28 percentage points in year two, to 33 percentage points in years three and four. Only 40% of Class of 2007 graduates from the non-exam schools persisted in college (or graduated) for four years.

The four-year college persistence rates of BPS graduates varied widely across gender/racial-ethnic (See Chart 8). Hispanic males had a four-year persistence rate of only 35.2%. White males fared better, achieving a 58.2 percent persistence rate. At the upper end of the scale were Asian males and females. Their four-year persistence rates were 69.4 and 75.8 percent, respectively.

The college persistence rates of Class of 2007 BPS graduates by type of college first attended are presented in Table 14. In each year, the college persistence rate of

TABLE 13

The One Year, Two-Year, Three-Year and Four-year College Persistence Rates of BPS Class of 2007 High School Graduates Who Enrolled in College in the Fall of 2007, All and by Gender, Racial-Ethnic Group and Type of High School Attended (in %)

Group	(A) One Year	(B) Two Year	(C) Three Year	(D) Four Year
All	81.3	71.0	61.5	52.0
Men	79.3	67.6	58.4	49.0
Women	82.5	73.1	63.4	53.9
Asian	91.5	85.7	78.2	72.7
Black	78.5	66.5	55.2	45.3
Hispanic	73.8	61.4	51.7	41.6
White	87.8	79.8	72.9	62.1
Exam School	94.1	89.3	83.1	73.2
Non-Exam School	74.3	61.1	49.8	40.6
Exam – Non-Exam	+20	+28	+33	+33

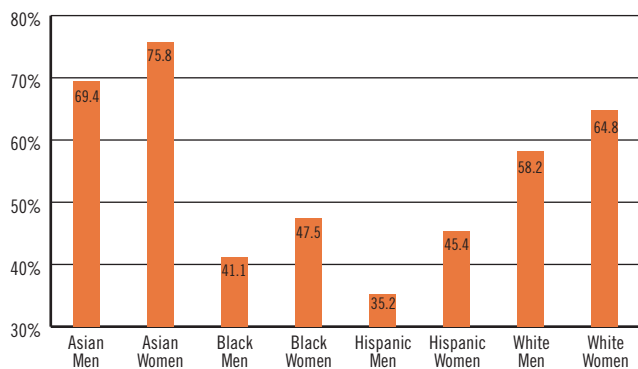
TABLE 14

One, Two, Three and Four-year Persistence Rates of Class of 2007 BPS Graduates Who Attended College in the Fall Following Graduation by Type of College Attended (in %)

Type of College	(A) One Year	(B) Two Year	(C) Three Year	(D) Four Year
Two-Year	60.7	42.3	28.1	22.1
Four-Year	87.3	79.4	72.2	61.6
Four-Year – Two-Year	+26.6	+37.1	+44.1	+39.5

CHART 8

Four-year College Persistence Rates of Class of 2007 BPS Graduates, by Gender and Racial-ethnicity Combined (in %)



four-year college attendees substantially exceeded that of their two-year college counterparts, and the size of those gaps widened over the first three years. The one year persistence gap was over 26 percentage points; it increased to 37 percentage points in year two, and was 44 percentage points in year 3. Only 22 of every 100 initial two-year college attendees had either obtained a college degree or remained enrolled in college by year four. For four-year college attendees, this persistence rate stood at just under 62% in year four.

Findings on the college persistence rates of BPS graduates from the Class of 2008 are presented in **Tables 15** and **16**. For this group of graduates who entered college in the fall of 2008, estimates of their one, two and three year persistence rates are available. The results are very similar to those for the Class of 2007. Slightly over 82% of the fall enrollees persisted for one year, and the persistence rate fell by an average of 11 percentage points over the next two years, declining to 61% by year three, nearly the same as that for the Class of 2007. The college persistence rates of female graduates exceeded those of men in each of the three years, with the size of these persistence gaps rising over time unlike the results for the previous graduating class. By year three, the gender gap in college persistence rates had widened to just under 13 percentage points. As was the case for the previous class, gaps in these college persistence rates were even wider across racial-ethnic groups. By year three, the college persistence rates ranged from a low of 50% among Hispanics to highs of 73% and 77% among White, non-Hispanics and Asians. The size of these gaps had been widening over time from year one

TABLE 15

One, Two and Three Year College Persistence Rates of BPS Class of 2008 Graduates Who Attended College in the Fall Following Graduation, All and by Gender, Racial-Ethnic Group and Type of High School Attended

Group	(A) One Year	(B) Two Year	(C) Three Year
All	82.5	68.6	60.7
Men	80.9	63.0	53.4
Women	83.8	72.7	66.7
Women – Men	+2.9	+9.7	+12.7
Asian	94.3	81.4	76.7
Black	80.1	64.5	55.4
Hispanic	76.1	59.3	49.8
White, not Hispanic	86.6	79.0	73.0
Exam School	94.6	89.4	86.0
Pilot School	78.3	59.6	49.8
All Other Schools	75.7	57.6	47.4

TABLE 16

One, Two and Three Year College Persistence Rates of Class of 2008 BPS Graduates Who Attended College in the Fall Following Graduation by Type of College Attended (in %)

Type of College	(A) One Year	(B) Two Year	(C) Three Year
Two-year	67.5	44.8	31.1
Four-year	87.5	76.4	70.4
Four-year – Two-year	+20.0	+31.6	+39.3

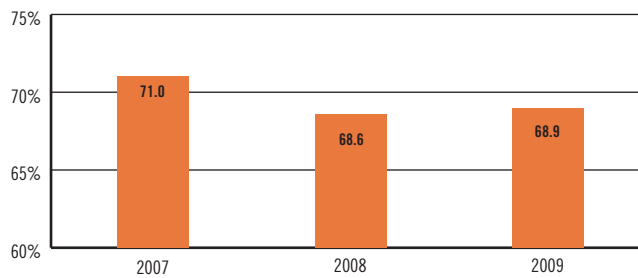
to year three. Finally, the college persistence rates of exam school graduates exceeded those of pilot school and other school graduates in each year and the size of these gaps also widened considerably over time. By year three, the persistence rate of exam school graduates exceeded those of pilot school graduates by 36 percentage points and those of all other high schools by 39 percentage points.

In each of the first three years, the college persistence rates of four-year college attendees from the Class of 2008 exceeded those enrolled in two-year colleges, and the size of these gaps in persistence widened considerably over time (**Table 16**). By year one, the persistence gap was already 20 percentage points and it would rise steadily and considerably to 39 percentage points by year three. In that last year, 70% of the four-year college students persisted in college versus only 31% of the two-year attendees. These persistence difficulties of two-year college students were sharply reducing their graduation prospects.

A comparison of the one and two-year college persistence rates of BPS graduates from the Class of 2007, 2008 and 2009 appear in **Table 18**. The patterns are very similar between the three graduating classes. Comparisons of two-year persistence rates for the past three graduating classes show no upward trend. The one-year and two-year persistence rates for the Class of 2009 was about two percentage points below that of the Class of 2007.

We also find the persistence rates of exam school graduates exceeding those of students from other types of high schools (**Table 17**). For the Class of 2007, exam

CHART 9
Comparisons of Two-year College Persistence Rates of BPS Graduates From the Classes of 2007, 2008 and 2009



school graduates had one and two-year persistence rates of 94.1% and 89.3% respectively. They were more likely to persist than graduates from pilot schools who had one and two-year persistence rates of 73.7% and 61.2% as well as graduates from other high schools with persistence rates of 74.7% and 61.0%. The gaps

in persistence rates between exam schools and other schools grows over time as exam school graduates have a four-year persistence rate of 73.2% in comparison to the 39.3% persistence rate for graduates from non-exam, non-pilot high schools.

Again, the one and two-year college persistence rates of four-year college attendees were markedly higher than those of two-year college enrollees. The size of these gaps in persistence rates also widened over time, increasing from 26.4 percentage points in year one to 37.1 percentage points in year two for the Class of 2007. Similar growths in persistence gaps between two and four-year colleges are seen for the Classes of 2008 and 2009. These large persistence gaps unless overcome in future years will lead to substantially different rates of college graduation between two and four-year college enrollees. *Raising the persistence rates of two-year college enrollees will be critical to attaining the longer term college graduation goals of the Success Boston Initiative.*

TABLE 17
One-year to Four-year College Persistence Rates of BPS Class of 2007 Graduates Who Were Enrolled in College in the Fall Following Graduation, by High School Type (in %)

School Type	One-Year Persistence	Two-Year Persistence	Three-Year Persistence	Four-Year Persistence	N
Exam Schools	94.1	89.3	83.1	73.2	663
Pilot Schools	73.7	61.2	52.6	43.4	399
All Other Schools	74.7	61.0	48.5	39.3	829
All Schools	81.3	71.0	61.5	52.0	1891

TABLE 18
One-year to Two-year College Persistence Rates for BPS Class of 2007, 2008, 2009 Graduates Who Enrolled in College in the Fall Following Graduation, by Type of College (in %)

School Type	One-Year Persistence			Two-Year Persistence		
	2007	2008	2009	2007	2008	2009
Two -year	60.9	67.5	62.8	42.3	44.4	44.0
Four-year	87.3	87.5	85.9	79.4	75.6	77.8
Four-year - Two-year	+ 26.4	+ 20.0	+ 23.1	+ 37.1	+ 31.2	+ 33.8

College Graduation Experiences of BPS College Enrolled Graduates from the Classes of 2007, 2008 and 2009

Tracking the college persistence behavior of BPS graduates is important for monitoring their success in remaining on track for eventual graduation from college. The primary goal, however, is to help them successfully graduate from college, given the important personal economic benefits associated with obtaining a college degree as opposed to simply completing a year or two of college.

The National Student Clearinghouse data were used to identify those BPS graduates from the Classes of 2007, 2008 and 2009 who enrolled in college in the first year following their graduation from high school. For each such graduate, their college enrollment behavior in early 2012 was tracked together with their success in obtaining some type of college degree. College graduation rates were then estimated using two different formulas. The first graduation rate formula estimates the share of “inactive college enrollees” (those no longer enrolled in college at the end of the reporting period) who obtained a college degree from the institution that they first attended; i.e., a student who first attended Suffolk University and graduated from Suffolk University. Our second formula estimates the share of inactive enrollees from a given college who obtained a college degree from any institution by the end of the reporting period. For example, a BPS graduate who first attended Bunker Hill Community College but then transferred to U-Mass, Boston and earned a college degree there would be counted as a graduate from Bunker Hill

Community College, given the fact that it was the home of the first college attended. Using both of these measures of college graduation in appraising the graduation outcomes for the BPS graduates and the institutions they attended is desirable.

Findings on the college graduation results for Class of 2007 BPS college enrollees through the early spring of 2012 are displayed in **Table 19**. The group being analyzed are those high school graduates who enrolled in college in the first year following their graduation from high school. There were 2,106 graduates who met this enrollment criterion of whom 726 were still enrolled in college at the end of the reporting period, leaving 1,380 inactive college enrollees. Of this total, 611 or 44% had graduated from the *same individual college* in which they had enrolled by either late 2011 or early 2012, about 4.5 to 5 years after graduation from high school. When all college graduates are considered regardless of whether it was the same college initially attended, the college graduation rate rises to 50%.

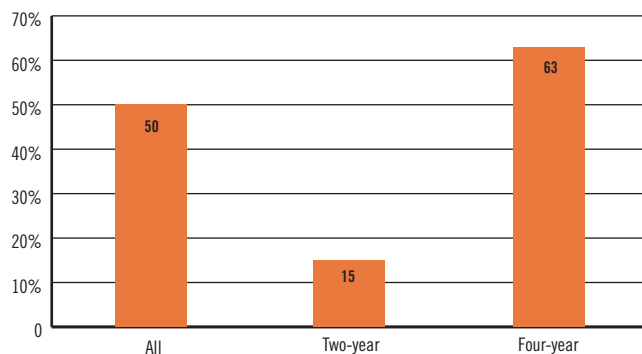
The graduation rates under formula two for BPS graduates from the Class of 2007 varied quite widely across different types of colleges. For those initially enrolled in two-year colleges, the graduation rate (including graduations elsewhere) was 15% versus a graduation rate of 63% for four-year college graduates, a relative difference of 4.2 times.

Findings for the college graduation rates of Class of 2008 BPS graduates are confined to two-year colleges since fewer than four years had gone by at the end of the reporting period, a time interval too low to give most four-year college students a reasonable chance to

TABLE 19
Graduation Rate Experiences for BPS Class of 2007 Graduates Who Enrolled in College in the First Year Following Graduation, by Type of College (in %)

Type of College	(A) College Enrollees	(B) Still Enrolled In College (no Degree)	(C) Inactive College Enrollees	(D) Graduated from Same College in Which Enrolled	(E) Total Graduates	(F) Graduation Rate 1 (in %)	(G) Graduation Rate 2 (in %)
Two-Year	567	212	355	31	54	9%	15%
Four-Year	1,539	514	1,025	580	639	56%	63%
All	2,106	726	1,380	611	693	44%	50%

CHART 10
Percent of BPS Class of 2007 Graduates Who Enrolled in College in First Year Following Graduation Who Obtained a College Degree by the Early Spring 2012, All and by Type of College First Attended



graduate.¹² Of the 666 initial enrollees in these two-year colleges, 286 were still attending college in either late 2011 or spring 2012, yielding an inactive college enrollee count of 380. Only 34 of these inactive enrollees had graduated from the same college in which they had initially enrolled, generating a “same college graduation rate” of 9%. When graduates from other colleges

are considered, the total count of graduates rises to 50, yielding a graduation rate of 13% for two-year graduates, three to four years after initially enrolling.

For the BPS Class of 2009, there were 742 graduates who initially enrolled in a two-year college in the year after graduation of whom 403 were still enrolled in college at the end of the reporting period. This total pool of two-year college enrollees was 31% higher than two years earlier due to a combination of a larger number of high school graduates and an increased enrollment rate in two-year colleges. Of the 339 inactive enrollees, few, 14, had graduated from the same college in which they had initially enrolled; a college graduation rate of only 4% though many of the initial enrollees (nearly half) were still attending the same college. If we include graduates from all institutions, the college graduation rate rises to 8.3%. Clearly, many of the two-year college attendees who leave school within the first 2.5 to 3 years after initially attending do *not* graduate with a degree or certificate. Persistence problems for this group remain severe and deserve the further attention of educational policymakers. A comprehensive set of strategies will likely be needed to improve these outcomes. Examples of such strategies will be presented in the concluding section of this paper.

TABLE 20
College Graduates and College Graduation Rates of BPS Graduates from the Class of 2008 Who Enrolled in a Two-year College in the First Year Following Graduation

Type of College	(A) College Enrollees	(B) Still Enrolled In College (no Degree)	(C) Inactive College Enrollees	(D) Graduated from Same College in Which Enrolled	(E) Total Graduates	(F) Graduation Rate 1 (in %)	(G) Graduation Rate 2 (in %)
All Two-Year Colleges	666	286	380	34	50	9%	13%

TABLE 21
College Graduates and College Graduation Rates of BPS Graduates from the Class of 2009 Who Enrolled in a Two-year College in the First Year Following Graduation

Type of College	(A) College Enrollees	(B) Still Enrolled In College (no Degree)	(C) Inactive College Enrollees	(D) Graduated from Same College in Which Enrolled	(E) Total Graduates	(F) Graduation Rate 1 (in %)	(G) Graduation Rate 2 (in %)
All Two-Year Colleges	742	403	339	14	28	4%	8%

Gender Disparities in College Degrees Received by BPS Graduates from the Class of 2007

Nationally and in Massachusetts over the past few decades, there has been a rising gender disparity in college degrees received, with women outpacing men by an increasingly wider margin over time. In our 2008 report, *Getting to the Finish Line*, which looked at BPS graduates from the class of 2000, and in Chapter One of this report, which focuses on BPS graduates from the Classes of 2003 and 2005, large gender disparities in college degrees were noted. Particularly large gender gaps in degree receipt prevailed among Blacks and Hispanics, with the ratios often exceeding 200 degrees for women per 100 men for both racial-ethnic groups.

Findings on the number of college degrees received by male and female graduates from the BPS Class of 2007 through April 2012 are presented in **Table 22**. These represent a count of all degrees (and certificates) received by these graduates regardless of when they first enrolled in college. Findings are presented for all college graduates by gender and for each racial-ethnic group. Overall, 757 college degrees had been obtained by BPS graduates from the Class of 2007 through April 2012.

Of these 757 degrees received, women earned 509 versus 248 for men, a gender gap of 205 women per 100 men. This ratio was much higher than that prevailing for BPS graduates from the Class of 2005 through early 2012 (a ratio of 161 degrees for women per 100 men). The relative size of these gender gaps varied widely across the four major racial-ethnic groups. They ranged from a low of 111 for Asians to over 200 for each other racial-ethnic group, with Hispanic and Black women receiving 258 and 265 degrees for every 100 obtained by men, respectively. These continuing large gender disparities in college degree attainment need to be addressed by state and local educational policymakers. They reflect the outcomes of an array of behaviors including higher rates of high school graduation among women, a higher rate of college enrollment among female high school graduates, and higher college graduation rates among women. In each racial-ethnic group, the college graduation rate of female college enrollees exceeded that of men. Across the eight gender, racial-ethnic groups, college graduation rates as of April 2012 varied from

TABLE 22
Number of College Degrees(1) Obtained by Boston Public Schools Graduates from the Class of 2007 as of April 2012 by Gender and Racial-Ethnic Group

Racial-ethnic Group	(A) Men	(B) Women	(C) Women Per 100 Men
All	248	509	205
Asian	70	78	111
Black	69	183	265
Hispanic	40	103	258
White, not Hispanic	69	145	210

(1) Degrees include both Associate and Bachelor degrees and certificates.

lows of 15 to 17 percent among Black and Hispanic men to highs of 45 and 57 percent for Asian and White, non-Hispanic women.

Improving College Persistence Through Individualized Case Management and Support Services: The College Persistence Rates of BPS Class of 2009 Participants in the Success Boston Program and Members of A Comparison Group

Among the strategies proposed to improve college persistence among youth identified as at-risk of not completing college is that of personalized case management and support services. On November 17, 2008, Mayor Thomas M. Menino announced the Success Boston program, collaborating with the Boston Foundation, the Boston Public Schools, the Boston Private Industry Council and UMass Boston, as well as numerous college and nonprofit partners. The goal of the initiative is to increase the college graduation rate for Class of 2009 graduates to 52% and to raise the completion rate for the BPS Class of 2011 and beyond to 70%. The program focuses on three key areas to ensure that college bound BPS students are: (1) Getting Ready, (2) Getting In and (3) Getting Through. The Success Boston program starts during the spring in the student's high school senior year and the summer after they gradu-

ate from high school. A Success Boston coach helps the graduate apply for college, get financial aid and help navigate college life. In addition, once the students are in college, the Success Boston coach helps them with registering for courses and addressing other academic and non-academic issues that may arise for college enrollees.

Names of Class of 2009 Success Boston participants enrolled in the Fall 2009 were obtained from the Boston Foundation and matched with National Student Clearinghouse data on college enrollment and graduation. We then tracked their persistence in college in both the following fall (the fall of 2010) and the fall of 2011. We will refer to these persistence rates as one year and two-year persistence rates. Findings revealed that the one-year college persistence rate of Success Boston program participants was nearly 13 percentage-points higher than that of their peers who were not in the program. (Table 23). Among gender and racial-ethnic groups, the one-year college persistence rates for Success Boston participants were 13 to 19 percentage points higher than those of their peers who were not members of the program.¹³ Very similar findings prevailed for two-year college persistence behavior.

To estimate the independent impacts of the Success Boston program on college persistence outcomes for BPS graduates, it is desirable to select a carefully matched comparison group. The matched comparison group is designed to help measure the impacts of the Success Boston program as closely as it could have been if there was a randomized selection of graduates for a control group in the program. Seven colleges and universities enrolling the largest numbers of Success Boston program participants were selected for the matched comparison group. The one-year and two-year college persistence rates were estimated for Success Boston program participants and non-participants in those seven colleges. These seven colleges include two community colleges (Bunker Hill and Roxbury Community College) and five, four-year colleges including the Benjamin Franklin Institute which awards two and four-year degrees. All of these seven colleges were located in Massachusetts and accounted for nearly 87 percent of Success Boston participants from the Class of 2009 (Table 24). All of the graduates enrolled in these seven colleges were from all Boston public high schools other than two exam schools (Boston Latin High School and Latin Academy). These enrollees had very simi-

TABLE 23
Comparisons of One-Year and Two-Year College Persistence Rates of Class of 2009 Success Boston Participants Compared to Non-Participants (in %)

Group/Persistence	(A) Success Boston	(B) Not Success Boston	(C) Difference (A-B)
One-Year Persistence			
All	86.7	73.8	+12.9
Men	84.0	70.9	+13.0
Women	88.5	76.1	+12.3
Black	91.4	72.6	+18.9
Hispanic	83.2	69.6	+13.6
N	211	1,427	
Two-Year Persistence			
All	73.9	61.0	+13.0
Men	67.9	56.3	+11.7
Women	77.7	64.8	+12.9
Black	77.1	59.9	+17.3
Hispanic	68.3	56.2	+12.1
N	211	1,427	

lar academic characteristics. Their MCAS scores were basically identical. It should also be noted that Success Boston serves high school graduates who are in need of help getting through college. Findings revealed that Success Boston program participants had much higher one-year and two-year college persistence rates than their peers who were not members of the program. The one-year college persistence rate of Success Boston participants in these seven colleges was 20 percentage points higher than their peers who were not in the program. The two-year college persistence rate was even higher for Success Boston program participants (73% versus 50%). These findings held true for both men and women and for Blacks and Hispanics. The percentage point size of the two-year persistence rate advantage was highest for Blacks (27.8 percentage points) and Hispanics (23.6 percentage points).

TABLE 24
One-year to Two-year College Persistence Rates for BPS Class of 2007, 2008, 2009 Graduates Who Enrolled in College in the Fall Following Graduation, by Type of College (in %)

Group	Enrolled in Success Boston		Not in Success Boston		Difference		
	One-year Persistence Rate	Two-year Persistence Rate	One-year Persistence Rate	Two-year Persistence Rate	One-year Persistence Rate	Two-year Persistence Rate	N
All	86.4	73.4	66.0	49.9	+20.4	+23.5	711
Male	83.3	66.7	62.5	46.6	+20.9	+20.1	343
Female	88.1	77.1	70.0	53.6	+18.1	+23.5	368
Black	90.3	77.4	64.8	49.6	+25.6	+27.8	306
Hispanic	82.6	66.3	58.6	42.7	+24.0	+23.6	243

To estimate the *independent impacts* of participation in Success Boston on one-year and two-year college persistence rates, linear probability models were used to estimate the independent impact of being a Success Boston participant on the college persistence rate for the first year of college, and the second year of college. The dependent variable in these models is the individual's persistence status. It is a yes/no variable coded as 1 if the individual persisted in college into the following fall and 0 if he/she did not persist. The predictor variables included the individual's gender, racial-ethnic group, MCAS math scores, the college attended,¹⁴ and their participation in the Success Boston program. This last treatment variable also was coded as a dummy variable where one represents a program participant and zero represents a non-participant.

The estimated, independent impacts of Success Boston participation on the one-year and two-year college persistence rates of BPS Class of 2009 graduates were quite large and highly statistically significant (See **Table 25**). For the entire sample, the estimated impact on the one year persistence rate was a very large 16.7 percentage points, which was statistically significant at the .01 level (**Table 25**). The Success Boston program had equally large impacts on the one year persistence rates of both men and women with the impacts for both gender groups ranging from 14.8 to 18.6 percentage points. The linear probability models for the one year college persistence rates of Black and Hispanic graduates also yielded very sizable 22 and 17 percentage point

impacts, both of which were significant at the .01 and .05 level, respectively.

In the model for the two-year college persistence rate, the independent impact of being a Success Boston program participant was an estimated 15.6 percentage points, which was significant at the .01 level. The impacts were quite large for both and women and highly significant. Very favorable results also prevailed for both Blacks and Hispanics at 19 and 14 percentage points, respectively.

TABLE 25
Comparisons of One-Year and Two-Year College Persistence Rates of Class of 2009 Success Boston Participants Compared to Non-Participants (in %)

Group	(A) One-year Persistence Rate	(B) Sig. Level	(C) Two-year Persistence Rate	(D) Sig. Level
All	16.7	.01	15.6	.01
Men	18.6	.01	16.3	.05
Women	14.8	.01	15.9	.01
Black	21.9	.01	18.9	.01
Hispanic	17.0	.01	13.7	.05

Conclusion

Both chapters of this report show promising signs for all of Boston's graduates and particularly for Success Boston participants who receive coaching services. However, plateaued persistence rates and continued wide differences in college enrollment, persistence and graduation rates across high school type, college type, MCAS test scores, race-ethnicity and gender threaten to slow progress for the city's goals. College completion is still a distant dream for many students, especially Black and Hispanic male students from non-exam schools. And Hispanic students have been increasing their share of all BPS high school students in recent years. The impact of MCAS, the importance of financial assistance, college advising and the ability to do college-level work are powerful influences on the ability of students to complete college. In addition, the potential of the Success Boston model and the variables identified in this report suggest that the need to focus aggressively on a set of key policy levers is very strong.

These include curricular alignment and increased academic rigor, the expansion of case management intervention and deeper attention to the role of work, college enrollment patterns and financial aid on student persistence. The Center for Labor Market Studies (CLMS) has produced papers on a number of these areas, which are available at <http://www.northeastern.edu/clms/>. In addition, the Center will continue to study the effect of Success Boston's coaching model as an intervention.

To achieve Success Boston's bold vision for the city's students, we will need deep and widespread engagement and support from civic, educational and business leaders across Boston championing these key issues and keeping the postsecondary success of all BPS students at the forefront of their priorities for the future.

APPENDIX A

**Remedial Placement Rates for Boston Public Schools Graduates
In Fall 2009, 2010 and 2011, by Class Year, Placement Overall
and by Type of Remedial Course**

Fall	High School	Segment	Enrolled as First-Time Student in Fall Term	% Enrolling in at least 1 remedial course	% Enrolling in at least 1 remedial reading course	% Enrolling in at least 1 remedial writing course	% Enrolling in at least 1 remedial math course
2009	Total All High Schools	Total	875	44%	15%	25%	32%
		Community Colleges	439	66%	29%	41%	49%
		State Universities	139	24%	1%	2%	21%
		University of Massachusetts	297	20%	0%	11%	13%
2010	Total All High Schools	Total	946	43%	14%	25%	33%
		Community Colleges	471	64%	27%	42%	49%
		State Universities	127	33%	0%	6%	30%
		University of Massachusetts	348	18%	0%	10%	13%
2011	Total All High Schools	Total	984	35%	13%	20%	26%
		Community Colleges	435	60%	30%	38%	43%
		State Universities	152	21%	1%	3%	18%
		University of Massachusetts	397	14%	0%	6%	10%

Source: Department of Higher Education 2012

APPENDIX B

One-Year and Two-Year College Persistence Rates of Class of 2007 BPS Graduates Enrolled in Fall 2007 (Based on NSC Data as of April 2012) (in %)

High School Type	Race	One-Year Persistence			Two-Year Persistence		
		Female	Male	Total	Female	Male	Total
Exam Schools	Black	94.0	90.5	93.0	87.1	83.3	86.1
	White	96.1	92.3	94.6	92.2	87.5	90.3
	Asian	96.5	92.4	94.4	95.3	89.1	92.1
	Hispanic	90.2	100.0	94.4	90.2	80.0	85.9
	Total	94.9	92.9	94.1	91.1	86.6	89.3
Non-Exam Schools	Black	76.5	71.9	74.8	64.8	56.1	61.6
	White	78.8	66.7	73.3	59.1	55.6	57.5
	Asian	89.1	84.6	87.1	79.7	71.2	75.9
	Hispanic	71.1	67.4	69.8	59.1	52.3	56.6
	Total	76.1	71.5	74.4	63.8	56.7	61.1
Total	Black	80.4	74.8	78.5	69.8	60.4	66.5
	White	90.9	83.5	87.8	82.2	76.6	79.8
	Asian	93.3	89.6	91.5	88.6	82.6	85.7
	Hispanic	74.0	73.5	73.8	63.7	57.4	61.4
	Total	82.5	79.3	81.3	73.1	67.6	71.0

APPENDIX C

Distribution of Class of 2005 College Graduates (Based on NSC Data as of April 2012)

Race	Number With a College Degree (A)			Total College Enrollees (B)			% With a College Degree (A/B)*100		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
Black	219	123	342	634	445	1,079	34.5	27.6	31.7
White	155	113	268	234	193	427	66.2	58.6	62.8
Asian	129	90	219	177	159	336	72.9	56.6	65.2
Hispanic	93	44	137	272	196	468	34.2	22.5	29.3
Total	596	370	966	1,341	1,004	2,345	44.4	36.9	41.2

Endnotes

EXECUTIVE SUMMARY

1. See: (i) Claudia Goldin and Lawrence F. Katz, *The Race Between Education and Technology*, The Belknap Press of Harvard University Press, Cambridge, Massachusetts, 2008; (ii) Andrew Sum, Ishwar Khatiwada, Joseph McLaughlin, et. al., *An Assessment of the Labor Market, Income, Health, Social, Civic, and Fiscal Consequences of Dropping Out of High School: Findings for Massachusetts Adults in the Twenty-First Century*, Center for Labor Market Studies, Northeastern University, Chapter Prepared for the Boston Youth Transition Funders Group, January 2007.
2. See: (i) Claudia Goldin and Lawrence F. Katz, *The Race Between Education and Technology*, The Belknap Press Part of the enrollment gains for the Class of 2005 over and above those of the Classes of 2000 and 2003 at years two and four are due, in part, to improved National Student Clearinghouse coverage (rates).
3. Not all analysts agree. Some, such as Charles Murray, argue that there are too many college graduates and these findings are discussed in greater detail in a research report done by the Center for Labor Market Studies. See Research Report #9, www.northeastern.edu/clms/.

INTRODUCTION

1. See: (i) Gary Orfield (Editor), *Dropouts in America*, Harvard Education Press, Cambridge, Massachusetts, 2006; (ii) Russell Rumberger, *High School Dropouts in the United States*, Russell Sage Foundation, New York, 2011; (iii) Andrew Sum, Ishwar Khatiwada, Mykhaylo Trubskyy and Sheila Palma, *The Impacts of the High School Diploma and GED on the Labor Market, Income, and Cash Transfer Experiences of U.S. Adults with No Postsecondary Schooling*, Chapter Prepared for the U.S. Department of Education, Office of Vocational and Adult Education, Washington, D.C., 2012.
2. See: (i) Claudia Goldin and Lawrence F. Katz, *The Race Between Education and Technology*, The Belknap Press of Harvard University Press, Cambridge, Massachusetts, 2008; (ii) Andrew Sum, Ishwar Khatiwada, Joseph McLaughlin, et. al., *An Assessment of the Labor Market, Income, Health, Social, Civic, and Fiscal Consequences of Dropping Out of High School: Findings for Massachusetts Adults in the Twenty-First Century*, Center for Labor Market Studies, Northeastern University, Chapter Prepared for the Boston Youth Transition Funders Group, January 2007.
3. Not all analysts agree. Some, such as Charles Murray, argue that there are too many college graduates and others argue for a more diverse approach to career preparation especially post-secondary training. See: Charles Murray, *Real Education: Four Simple Truths for Bringing America's Schools Back to Reality*, Crown Forum, New York, 2008; (ii) Robert B. Schwartz, et. al., *Pathways to Prosperity: Meeting the Challenge of Preparing Americans for the 21st Century*, Harvard Graduate School Education, Cambridge, 2011.
4. See: (i) John Schmitt and Heather Boushey, "Why Don't More Young People Go to College", *Challenge*, July-August 2012, pp. 78-93; (ii) Jessica Godofsky, Cliff Zukin, and Carl Van Horn, *Unfulfilled Expectations: Recent College Graduates Struggle in a Troubled Economy*, John J. Heldrich Center for Workforce Development, Rutgers University, May 2011; (iii) Andrew Sum, Ishwar Khatiwada, and Mykhaylo Trubskyy, *Rising Malemployment Problems Among America's Young College Graduates*, Chapter Prepared for Educational Testing Service, Princeton, 2010.

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5. See: Center for Labor Market Studies, Northeastern University, *Getting to the Finish Line: College Enrollment and Graduation, A Seven Year Longitudinal Study of Boston Public Schools Class of 2000*, Chapter Prepared for the Boston Private Industry Council and the Boston Public Schools, Boston, November 2008.

CHAPTER ONE

1. The Current Population Survey (CPS) is a monthly national household survey used primarily to estimate the labor force, employment and unemployment status of the working-age population.
2. The National Student Clearinghouse data for the first half of 2012 is not yet complete at this time. Graduation data were not yet submitted by all colleges.
3. We will focus on the college enrollment behavior of two age groups in October 2011: those 23-25 years old and those 26-29 years old.
4. Not all participating colleges cite the specific type of college degree or certificate received by an individual. For graduates from a four-year college that does not provide degree information, we assume that the degree was a Bachelor's degree. Findings from our earlier analysis of the type of college degrees received from four-year colleges by BPS graduates from the Class of 2000 revealed that about 85% of the degrees were Bachelor degrees and another 14% were Associate's degrees.
5. The data for 2012 ended in April and early May of that year and will not contain graduations in the late spring of that year.
6. For more details on these merging procedures, See: Center for Labor Market Studies, Northeastern University, *Getting to the Finish Line: College Enrollment and Graduation*, pages 9-11.
7. A related data set from the U.S. Department of Education provides similar data on graduation rates from individual two-year and four-year colleges in Massachusetts and other New England states.
8. Not all colleges attended by BPS graduates were members of the National Student Clearinghouse for each of these years. As noted earlier, four local universities that were not members of the Clearinghouse in the early half of the last decade provided us with desired data on enrollments and graduation. For graduates from the Class of 2000, we estimated that we were undercounting total college enrollments by 4 to 5 percent.
9. See: Center for Labor Market Studies, *Getting to the Finish Line*, p. 12.
10. The cumulative college enrollment rate of Asian males from the Class of 2000 through the end of 2011 was about five percentage points higher than that of women. Since then, Asian women have enrolled at higher rates than men.
11. The total of 233 includes 26 colleges that were neither members of the National Student Clearinghouse nor one of the four colleges and universities providing us with enrollment and graduation data for their specific institutions.
12. This "degree" effect on earnings has been referred to as a sheepskin effect in the economics literature. For recent information on this issue for the state of Florida, See: Louis Jacobson, "Improving Community College Outcome Measures, *Challenge*, November-December 2011, pp. 93-117.
13. These estimates pertain to the cohort of Bachelor's degree students who first entered a four-year college in 2005. See: U.S. Department of Education, *Data on College Graduation Rates of Two and Four-year Colleges in Massachusetts*, tabulations by the Center for Labor Market Studies, Northeastern University, Boston.
14. See: Andrew Sum, Ishwar Khatiwada, and Sheila Palma, *The Employment, Earnings, and Migration Experiences of Young Associate and Bachelor Degree Holders in Massachusetts*, Chapter Prepared for Massachusetts Office of Higher Education, Boston, 2012.

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15. These adults have not completed any years of post-secondary schooling.
 16. The base group for the analysis is a white female who graduated from a pilot or district high school, and who had a score of “needs improvement” on both the MCAS reading and math tests.
 17. Similar graduation rate estimates are also made for four years and five years after initial enrollment in college.
 18. The national data for private colleges are for nonprofits only while those for Boston graduates combine both nonprofit and for-profit colleges. There are few for-profit colleges in the totals.
 19. There are several largely local colleges that are the recipients of a substantial number of transfers from other colleges. These include Bunker Hill, Roxbury Community College, Quincy College, and UMass-Boston. For example, our estimates suggest that UMass-Boston and Quincy College receive two to three times as many BPS graduates from the Class of 2005 as first-time enrollees. For UMass-Boston, the respective numbers of enrollees were 155 and 300, respectively.
 20. Taking into account transfers into these colleges over the six to seven year period there were 1,070 students who attended one of these four community colleges (including some double counting of transfers from the same set of colleges).
 21. The U.S. Department of Education’s cohort graduation rates for two-year colleges allow only three years to graduate from the same college, and they do not adjust for continued enrollments.
 22. Concerns over these rising gender gaps in college attendance were expressed earlier in the decade and in more recent years for local school districts in the state’s larger urban areas. See: (i) Andrew Sum, Neil Sullivan, et.al., *Gender Gaps in High School Dropout Rates and College Attendance Rates in Massachusetts and Its Large Cities: Their Future Economic and Social Consequences*, Boston Private Industry Council and Center for Labor Market Studies, April 2002.
 23. See: Andrew Sum, Ishwar Khatiwada, Jacqui Motroni, Sheila Palma, *On-Time High School Graduation and College Enrollment Behavior of High School Students in Massachusetts: The Substantial Degree of Geographic Disparities in Educational Outcomes Across Local School Districts*, Center for Labor Market Studies, July 2010.
 24. In a small number of cases, especially in two-year colleges, the awards were certificates rather than academic degrees.
 25. The one exception is Hispanics, where the relative gender gap in four-year degree attainment was slightly lower than that for all degrees for graduates from 2000 and of the exact same magnitude for graduates of the Class of 2005.
 26. See: Andrew Sum, Ishwar Khatiwada, Joseph McLaughlin and Sheila Palma, *The Labor Market, Income, Social, Civic, Health, and Fiscal Consequences of Dropping Out of High School*, Chapter Prepared for the Boston Youth Transitions Task Force, Boston, 2008.
 27. We used an age range of 28-30 to represent likely high school graduates from the Class of 2000. They would have been 17 to 19 year-olds in 2000. There will be some overlap with other graduating classes.
 28. These findings are based on comparisons of the college enrollment rates of BPS graduates from the PIC annual follow-up surveys for the Classes of 2008 and 2009 with the findings of the national October CPS surveys for national high school graduating rates.
 29. See: Center for Labor Market Studies, Northeastern University, *Getting to the Finish Line: College Enrollment and Graduation...*, pp. 24-26.
 30. Data on 10 and 11 year graduation rates are only available for the Class of 2000. Eight year graduation rates are available only for 2000 and 2003.
 31. See: Center for labor Market Studies, Northeastern University, *Getting to the Finish Line...*

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32. The monthly October CPS survey contains a supplementary set of questions that collects information on the college enrollment and employment experiences of new high school graduates and the school enrollment status of all persons 3 and older.
 33. A fairly large part of those racial-ethnic differences are due to the fact that higher fractions of Asian and White graduates have already obtained a college degree.

CHAPTER TWO

1. These follow-up data are derived from annual follow-up surveys conducted by the Boston Private Industry Council and analyzed by the Center for Labor Market Studies.
2. Many of the four-year colleges had not yet provided their 2012 graduation data to the National Student Clearinghouse by May 2012.
3. These findings are based on a comprehensive set of research papers prepared by the Center for Labor Market Studies for the Boston Foundation.
4. The data for 2012 ended in April and early May of that year and will not contain graduations in the late spring of that year.
5. Since some four-year colleges provide both two-year and four-year degrees, we cannot automatically assume that a four-year college attendee will be enrolled in a Bachelor's program.
6. The National Student Clearinghouse enrollment data for 2012 are only partial. Not all colleges had submitted their enrollment or graduation data by the late spring.
7. This reporting program is known as Degree Verify. In our initial study of the college graduates from the Class of 2007, we estimated that about 82% of the degrees from four-year colleges were Bachelor's degrees.
8. Findings for the BPS high school graduating class of 2000 revealed that cumulative college enrollees rose each year through 2011, 11 years after graduation.
9. A very small share of this gain may have been due to improved NSC coverage of total college enrollments.
10. Given the fact that about 3 to 4 percent of BPS college enrollees from earlier years were found in colleges not covered by the NSC database, it is possible that 96-97 percent of the exam school graduates had enrolled in college.
11. Information is also available on whether the college is a private or public institution.
12. Of the 1,610 enrollees in four-year colleges, only 57 reported that they had graduated by the end of the reporting period. More than 1,200 were still enrolled in college.
13. Graduates from two exam schools, Boston Latin and Latin Academy, are excluded from the analysis.
14. The base group for the model consists of youth enrolled at Bunker Hill Community College. MCAS scores were represented by performance on the exam: proficient, advanced, and failed. The base group consists of those who passed but classified as needs improvement.

