

College Enrollment and Labor Market Outcomes For Class  
of 2004 Boston Public High School Graduates: Key  
Findings of the Winter/Spring 2005 Follow-up Surveys of  
the Class of 2004

**Prepared by:**

Ishwar Khatiwada  
Andrew Sum

Center for Labor Market Studies  
Northeastern University

**Prepared for:**

Boston Private Industry Council  
Boston, Massachusetts

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## **Introduction**

Any effort to evaluate the success of high school programs in facilitating the transition of high school graduates to college and the world of work is dependent upon knowledge of the actual, post-high school college and labor market experiences of recent graduates. The ability to track the post-high school college and labor market experiences of recent high school graduates is dependent upon the existence of a comprehensive and statistically representative set of follow-up data on these graduates. Since the mid-1980s, professional staff of Boston Private Industry Council (PIC) have conducted an annual follow-up survey of each year's graduating class from the Boston public high schools.

Boston is one of the few cities in the entire country to conduct the such annual follow-up surveys of its public school graduates. The lack of accountability for outcomes of recent high school graduates by most other public school districts across the nation is rather astounding.<sup>1</sup> The primary objective of the PIC follow-up surveys is to obtain comprehensive information on Boston public high school graduates' transitions from high school to college and the labor market during a nine to ten month period following graduation. The telephone survey captures information on the college and post-secondary training enrollment status of graduates at the time of the interview, the types of colleges and post-secondary training programs attended, their college majors, their financial aid status, their employment status, key characteristics of their jobs, such as hours of work, hourly wages, their occupations, and the industries of their employers, their senior year and summer job experiences during the high school years, and their job-related training activities. The information also can be used to identify those students who were neither enrolled in college nor working.

During the late winter and early spring of 2005, the Boston PIC made an effort to interview each of the 3,030 graduates of Boston public high schools from the Class of 2004. This research report presents and assesses key findings of the winter/spring 2005 follow-up survey. Among the topics covered are the demographic characteristics of Class of 2004 graduates, their college and work activities at the time of the follow-up survey,

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<sup>1</sup> Many public schools conduct exit surveys of the college and work plans of their graduates prior to graduation but do not validate these plans with independent follow-up surveys. The Massachusetts Department of Education compiles findings of college enrollment plans of graduates across public school districts and issues an annual statewide report on the findings of these exit surveys. A recent report has been issued on the plans for graduates from the Class of 2004.

types of schools attended, their college majors, their employment status, their hours of work, hourly and weekly wages, the industries of their employers, their occupations, their training activities, and their participation in school-to-career programs during high school. A comprehensive graphics package providing detailed findings from the follow-up surveys also has been prepared as a supplement to this study.

## **The Number and Demographic Characteristics of Boston Public School Graduates from the Class of 2004**

The total number of Class of 2004 graduates from Boston public high schools was 3,030. (Table 1). Males accounted for 1,334, or 44 percent, of the members of the graduating class while women accounted for 1,696, or 56 percent of the graduates from the Class of 2004.<sup>2</sup> The number of female graduates from Boston public high schools has been considerably higher than the number of male graduates for the last eight graduating classes, i.e., those for 1997 to 2004. Combined with data on the gender characteristics of high school freshmen three years earlier, these results indicate that men are considerably more prone than women to drop out of high school before graduation since the freshman class has typically contained more men. The ratio of female to male graduates for the Class of 2004 was 1.27, a rather substantial increase from the 1.12 ratio that prevailed for the Class of 2001, which was the lowest ratio over the past seven years. (Table 2). In each race-ethnic group, the number of female graduates exceeded the number of male graduates, with the largest relative differences prevailing among Black graduates (140 women for every 100 men) and Hispanic graduates (119 women for every 100 men). Among White graduates there were 118 women for every 100 men and among Asian graduates there were 110 women for every 100 men in the graduating class.

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<sup>2</sup> These data are based on the student records provided to the Boston Private Industry Council by the Boston Public School Department.

Table 1: The Distribution of Class of 2004 Graduates by Gender, Race/Ethnic Group, and Type of High School Attended

Group	Number	Percent of Graduates
All	3,030	100.0
<u>Gender</u>		
# Men	1,334	44.0
# Women	1,696	56.0
<u>Race/Ethnic Group</u>		
# Asian	370	12.2
# Black	1,470	48.5
# Hispanic	643	21.2
# White	547	18.1
<u>Type of School</u>		
# Exam School	789	26.0
# District, Magnet, Alternative School	2,241	74.0

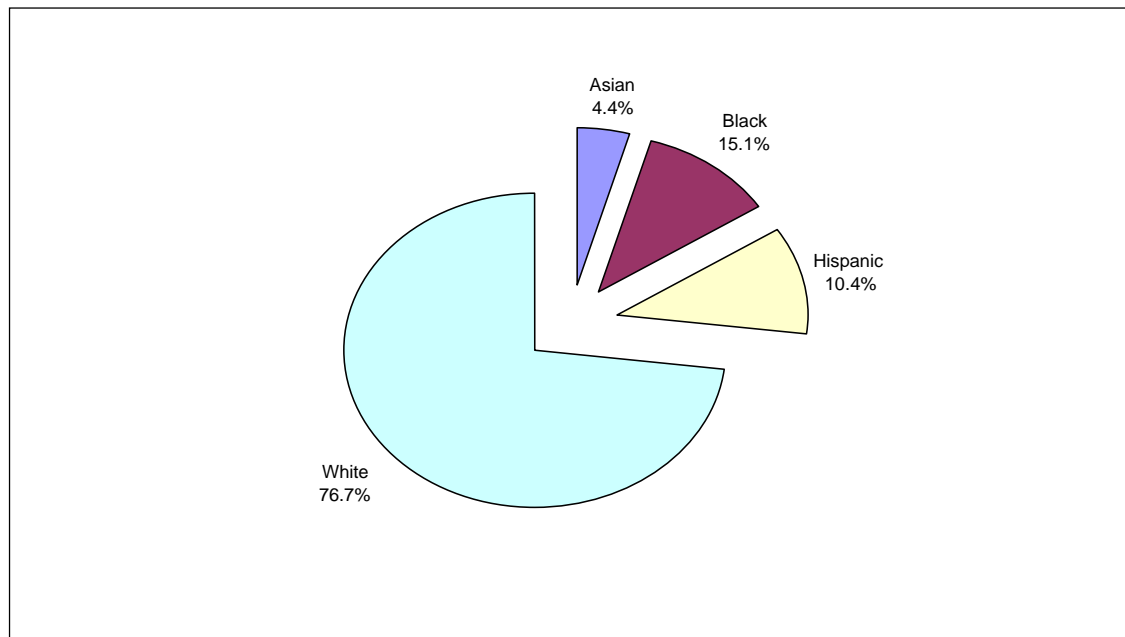
Table 2: Number of Male and Female Graduates from Boston Public High Schools, Classes of 1997 to 2004

Graduating Class	Female	Male	Females per 100 males
1997	1,453	1,217	119
1998	1,685	1,390	121
1999	1,670	1,321	126
2000	1,591	1,340	119
2001	1,708	1,513	113
2002	1,916	1,600	120
2003	1,656	1,282	129
2004	1,696	1,334	127

A breakout of the Class of 2004 Boston public school graduates by their race-ethnic backgrounds reveals that Black students accounted for nearly one half of the total number graduates (48.5%) followed by Hispanics (21.2%), Whites (18.1%), and Asians (12.2%). The racial/ethnic mix of Boston public school graduates differs markedly from that of the nation as a whole. U.S. statistics on high school graduates from the Class of

2004 reveal that only one-quarter of all high school graduates were Black or Hispanic. (Chart 1). However, in Boston, 70 percent of the Class of 2004 high school graduates were Black or Hispanic and an additional 12 percent were Asian.<sup>3</sup> (Table 1).

Chart 1: Percentage Distribution of Class of 2004 U.S. Graduates by Race-Ethnic Group



The graduates from the Class of 2004 attended 29 different high schools, including a number of small alternative schools. There were a total of 789 graduates from the city’s three exam schools (Boston Latin, Latin Academy, and the O’Bryant Technical High School), accounting for 26 percent of the graduating class. The remaining 2,241 graduates (or 74% of the total) attended district, magnet, and small alternative high schools.

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<sup>3</sup> Findings on the estimated numbers and demographic characteristics of Class of 2004 high school graduates throughout the U.S. are based on the following research report: U.S. Department of Labor, Bureau of Labor Statistics, “College Enrollment and Work Activity of 2004 High School Graduates”, Washington, D.C., March 2005.

## **Follow-up Interview Completion Rates for Class of 2004 Boston Public School Graduates**

Follow-up interviews were completed for nearly 71 percent of the graduates from the Class of 2004.<sup>4</sup> This interview completion rate was the lowest in the past eight years and was 10 percentage points lower than that for the Class of 2003 and 11 percentage points lower than that for the Class of 2001, which had the highest interview completion rate achieved over the past ten years. (Chart 2). The follow-up interview completion rate for women was five percentage points higher than that for men (73% vs. 68%). (Chart 3). There were modest variations in interview completion rates among graduates in the four major race-ethnic groups. Interview completion rates were highest for White graduates (76%) followed by Asian and Hispanic graduates (70%) and by Black graduates (69%). Follow-up interview completion rates were 50 percent or higher in all high schools, except for a few of the small alternative and vocational schools. Follow-up interview completion rates by high school ranged from a low of 50 percent for Charlestown High School to a high of 94 percent for graduates from the Health Career Academy. (See Appendix A for a listing of follow-up interview completion rates by high school). The five Boston public high schools with the highest interview completion rates were the Boston Arts Academy (94%), Boston Latin Academy and East Boston High School (87%), Boston Community Leadership Academy (87%), and South Boston High School (86%). In contrast, the five schools with the lowest interview completion rates were English High School (67%), Charlestown High School (72%), Hyde Park High School (73%), Fenway High School (74%), and Snowden International High School (75%).

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<sup>4</sup>This completion rate excludes the Boston Adult Academy, which had a completion rate of only 9.4%. Including the Boston Adult Academy, the follow-up interview completion rate for Class of 2004 BPS graduates was only 67.5%. Due to low its interview completion rate, we have excluded this school in all of our analysis.

Chart 2: Follow-Up Interview Completion Rates for Graduates from Boston Public High Schools, Classes of 1997 to 2004

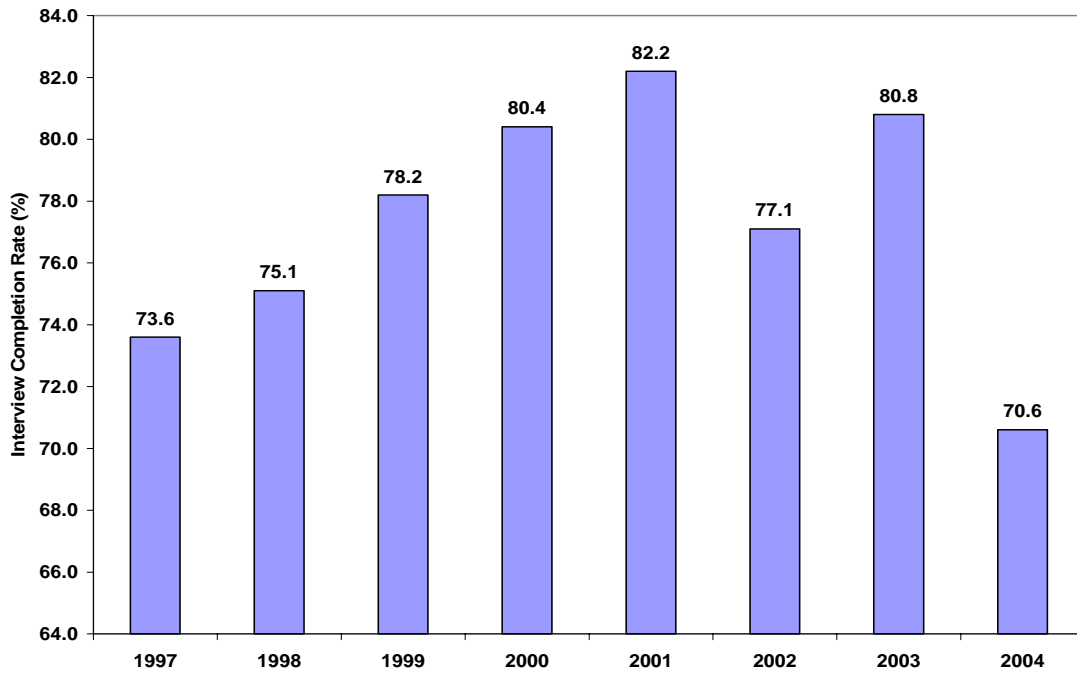
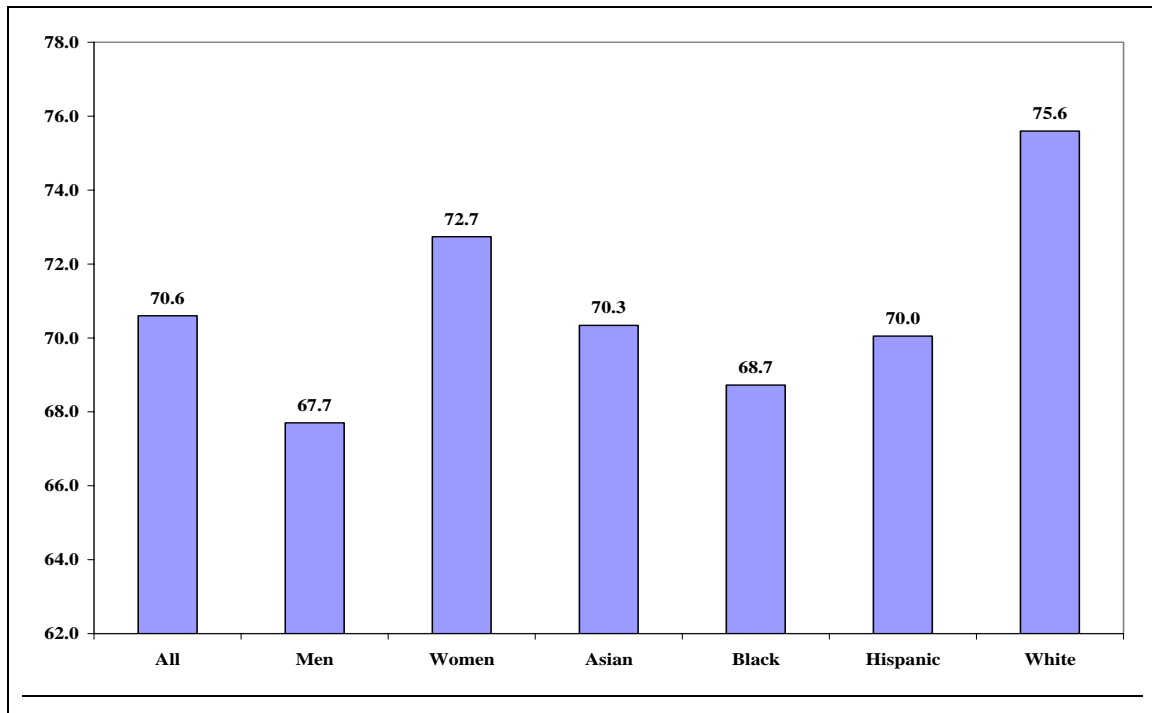


Chart 3: Follow-up Interview Completion Rates for Class of 2004 Boston Public High School Graduates by Gender & Race-Ethnic Group



Follow-up interviews could not be completed with 29 percent of the graduates from the Class of 2004. Only 14 out of 100 non-interviews involved a refusal by either the student or family members to provide the requisite information. (Chart 3). The inability to complete follow-up interviews was primarily due to an absence of valid phone numbers and no responses to phone messages. A listing of reasons for the inability to complete these interviews is presented below in descending order.

Table 3: Reasons for Non-Interviews with Graduates from the Class of 2004

Reasons	Percent
No valid phone number/phone disconnected	48.5
No response to phone messages	21.4
Family members unable to provide information	6.1
Moved from area, no forwarding phone number	5.4
Other	4.3
Student refused to participate	4.1
Family members refused to provide information	3.8
Language Difficulty	3.6
Incarcerated	2.8
Deceased	0.0

### **Employment and Schooling Activities of Class of 2004 Graduates of Boston Public High Schools at the Time of the Followup Interviews**

The follow-up questionnaire for the Class of 2004 was designed to identify all of the college, post-secondary training, employment and job-seeking activities of each high school graduate at the time of the Winter/Spring 2005 survey. The interviews took place between February and May, anywhere from 9 to 11 months following graduation from high school. Among all graduates from the Class of 2004, seventy-six percent were estimated to be attending a post-secondary educational institution or a technical/vocational training program at the time of the winter/spring 2005 follow-up survey.<sup>5</sup> (Chart 4). The post-secondary college/ training program enrollment rate for the

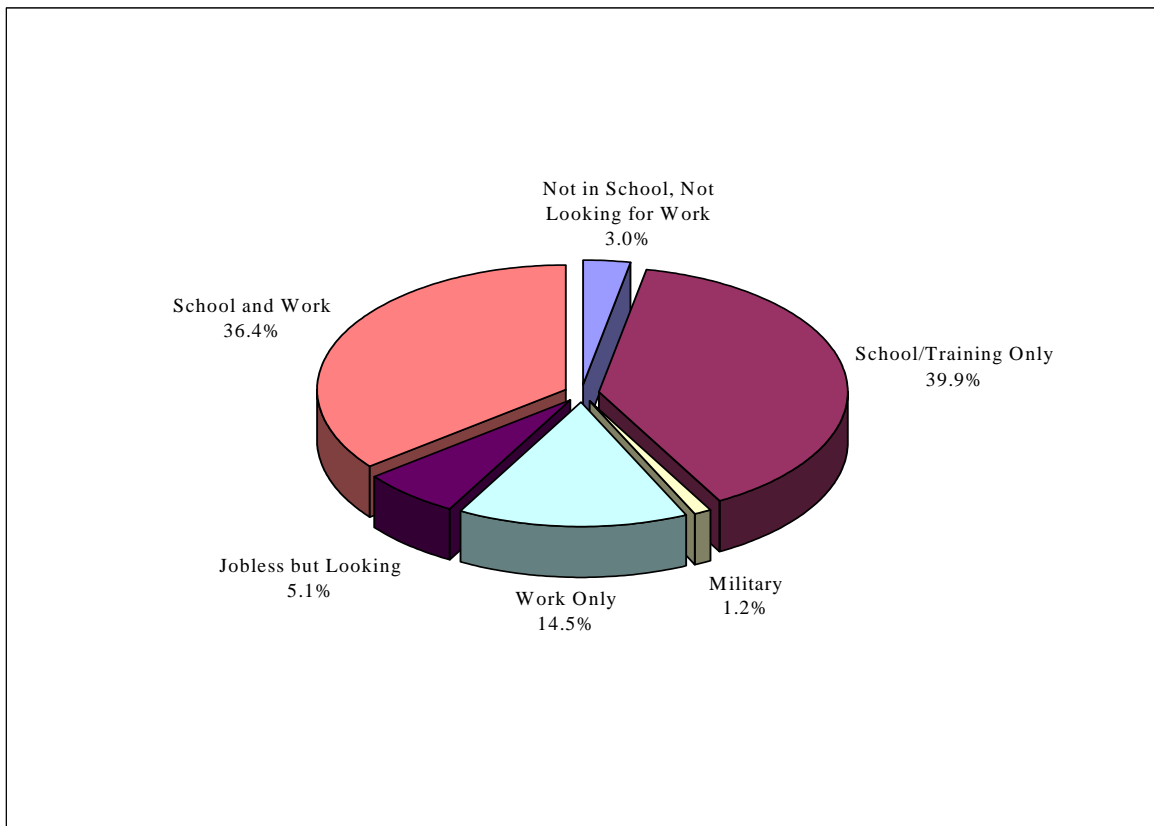
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<sup>5</sup> All of these estimates are based on weighted sample results not on the completed interviews only. These weights are based on follow-up response rates by high school and race-ethnic group within each high school. The weights are constructed to generate the population of high school graduates by high school and race-ethnic group within each high school.

Class of 2004 was the highest enrollment rate recorded in the 19 years of PIC follow-up survey history. The post-secondary college/training enrollment rate for the Class of 2004 was two percentage points higher than that for the Class of 2003.

Nearly half of those attending college or a post-secondary training program also were working at the time of the follow-up survey. Another 16 percent of the graduates were employed in a civilian job or serving in a branch of the nation’s armed forces, but were not attending college or a training program. The remaining 8 percent of the graduates were neither working nor enrolled in a post-secondary school or training program. Of this last group of “at-risk” or “disconnected” graduates, two of every three reported that they were looking for a job at the time of the interview. The remaining 3 percent of the graduates from the Class of 2004 were not working, not enrolled in a school or training program, and not looking for a job at the time of the follow-up interview.

Chart 4: Percentage Distribution of Class of 2004 Boston Public High School Graduates by Their Activity Status at the Time of the Follow-up Survey



The combined college enrollment and employment outcomes for Boston public school graduates had been improving fairly steadily since 1992-93. As noted above, the college/training school attendance rate of 76 percent for Class of 2004 graduates was eight percentage points higher than that for the Class of 2002 graduates and was the highest for the past 19 years. (Table 4).

Part of the improvement in the college attendance rate since 2002 is due to an MCAS effect. The number of high school graduates declined after 2002 due to the inability of a number of seniors to pass the state mandated MCAS exam. A below average fraction of those unable to pass the MCAS would have attended college in the year following graduation. The fraction of graduates reporting “working only” declined to only 14% for the Class of 2004. Graduates in recent years have found it more difficult to obtain in employment. The fraction of graduates who were neither enrolled in school nor working had been characterized by a steadily decreasing trend since the early 1990’s bottoming out at 7.6% for the Class of 2000. The share of Class of 2004 graduates who were “at-risk” was 8%, which was one percentage points lower than the Class of 2003 but nearly three percentage points below that for the Class of 2002. The rise in the incidence of at-risk problems in recent years was attributable to an increased rate of unemployment among those graduates not enrolled in college, which was caused by deteriorating local labor market conditions, especially for young adults.<sup>6</sup>

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<sup>6</sup> See: Andrew Sum and Nathan Pond, The Deteriorating Labor Market for the Nation’s Youth, Center for Labor Market Studies, Northeastern University, Prepared for the National League of Cities, Washington D.C., June, 2003.

Table 4: Percentage Distribution of Boston Public High School Graduates by Their Activity Status at the Time of the Follow-up Survey, Classes of 1998 to 2004

(Numbers in Percent)

Activity	1998	1999	2000	2001	2002	2003	2004
School/Training	65.0	67.4	69.0	69.8	68.3	74.4	76.3
•School/Training Only	32.0	30.1	31.6	35.9	37.1	38.8	39.9
•School and Work	33.0	34.5	37.4	33.9	31.2	35.5	36.4
Work Only	24.5	23.8	21.7	19.2	19.3	15.0	14.5
Military	1.8	2.3	1.6	1.8	1.6	1.3	1.2
“At-Risk”	7.7	9.3	7.6	9.2	10.9	9.3	8.1
•Jobless, but Looking for Work	5.7	6.0	4.2	5.8	8.3	6.3	5.1
•Not Looking for Work	3.0	3.3	3.4	3.4	2.6	3.0	3.0

The major activities of Class of 2004 graduates varied by gender and race-ethnic group. As has been the case over the past seven years, female graduates from the Class of 2004 were more likely than male graduates to be attending a post-secondary educational or training program (82% vs. 67%). (Table 5). The gender gaps in college attendance rates were particularly large among Hispanic (18 percentage points) and Black (15 percentage points), graduates followed by Whites (10.0 percentage points) and Asians (4 percentage points). In contrast, male graduates were nearly twice as likely as their female counterparts to be only working in a civilian job or serving in a branch of the nation’s armed forces (19% vs. 11%). The share of male graduates who were not engaged in any positive work or school activity was only 2 percentage points higher than that of their female counterparts (9.2% versus 7.2%). A high fraction of male high school graduates not attending college were experiencing problems in finding employment.

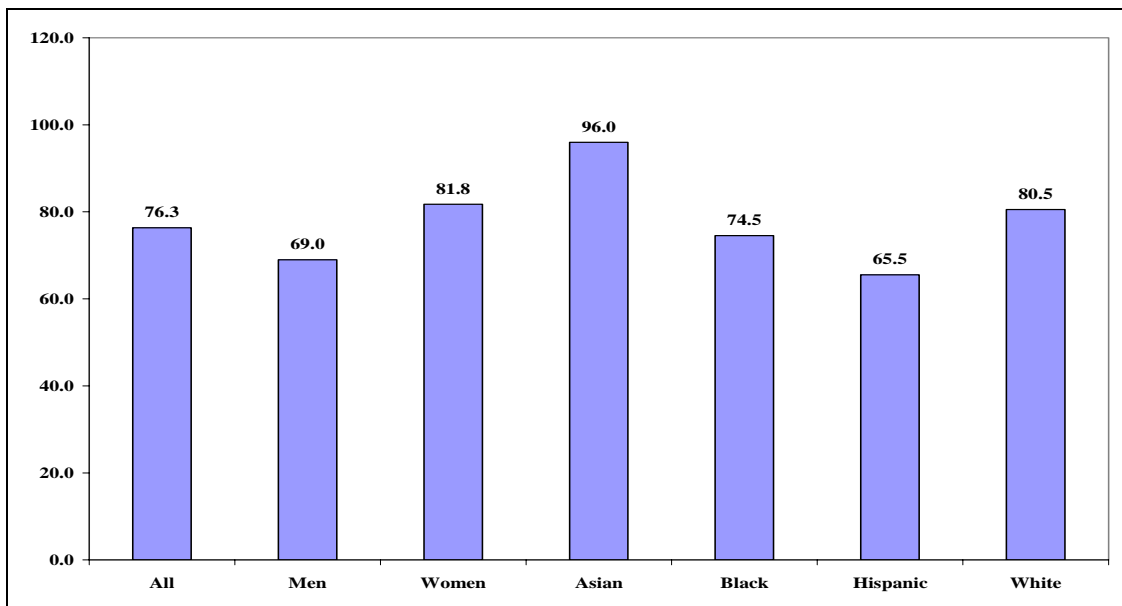
College/training enrollment rates for Class of 2004 graduates ranged across the four major race-ethnic groups from a high of nearly 96% for Asian graduates to 81% for White graduates, 74% for Black graduates, and to a low of 66% for Hispanic graduates. (Chart 5). Hispanic graduates were the most likely to go directly to work in the civilian sector after graduation. The share of Boston public high schools graduates who reported that they were working but not attending college at the time of the follow-up survey

ranged from a high of 21% for Hispanic graduates to a low of 3% for Asian graduates. The percent of Class of 2004 graduates who were classified as “at risk” varied from a low of 1 percent for Asian graduates to highs of nearly 8 to 9 percent for Black and Hispanic graduates, respectively.

Table 5: Major Activities of Class of 2004 Boston Public High School Graduates by Gender and Race/Ethnic Origin (Numbers in Percent)

Activity	All	Female	Male	Black	White	Asian	Hispanic
<b>School/Training</b>	<b>76.3</b>	<b>81.8</b>	<b>68.8</b>	<b>74.5</b>	<b>80.7</b>	<b>96.1</b>	<b>65.3</b>
School and Work	36.4	39.3	32.5	38.7	32.7	36.4	36.4
School/Training Only	39.9	42.5	36.4	35.8	48.0	59.7	39.9
<b>Work Only</b>	<b>14.5</b>	<b>10.9</b>	<b>19.4</b>	<b>15.1</b>	<b>12.5</b>	<b>2.6</b>	<b>21.5</b>
<b>Military</b>	<b>1.3</b>	<b>0.2</b>	<b>2.5</b>	<b>0.8</b>	<b>1.7</b>	<b>0.0</b>	<b>1.2</b>
<b>"At-Risk"</b>	<b>8.1</b>	<b>7.2</b>	<b>9.2</b>	<b>9.6</b>	<b>5.2</b>	<b>1.5</b>	<b>8.0</b>
Not Employed, But							
Looking	5.1	4.1	6.5	6.4	2.2	0.9	5.1
None of the Above	3.0	3.1	2.7	3.2	3.0	0.6	2.9

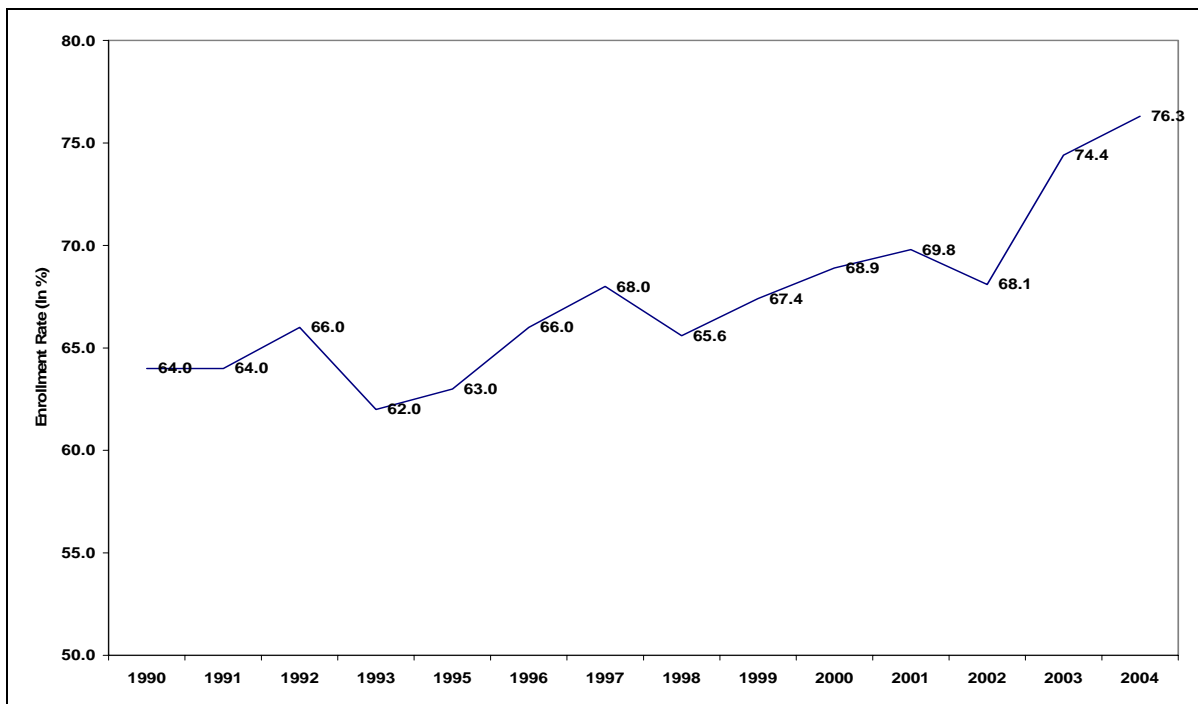
Chart 5: Percent of Class of 2004 Boston Public High School Graduates Who Were Attending a Post-Secondary Education or Training Program at the Time of the Follow-up Survey by Gender & Race-Ethnic Group



## College and Training Program Enrollment Rates for Class of 2004 Graduates

One of the major objectives of the Boston Public Schools is to achieve a high rate of transition of graduates into post-secondary educational and training institutions. As noted above, the college and post-secondary training program enrollment rate for Class of 2004 Boston public high school graduates stood at 76.3 percent in the Spring of 2005, the highest college enrollment rate achieved over the past 19 years for which data are available. (Chart 6). The college/ training program enrollment rate for the city's public school graduates was only 50 percent in 1986, but had increased to just under 70 percent for the Classes of 2000 and 2001 and reached 76 for the Class of 2004. The size of this increase in the college enrollment rate between 1986 and 2004 should be considered a very substantial accomplishment, substantially exceeding that for the nation and for their central cities as a whole over the same period. Keeping these college attendees in school through graduation in the major challenge. Further research on college retention of BPS graduates is critically needed.

Chart 6: Trends in College Enrollment Rates for Boston Public High School Graduates, Classes of 1990 to 2004



Despite improvements over the years in the overall college enrollment rate, there are some disturbing gender gaps in college enrollment rates for Boston public high school graduates. Similar findings apply to most other central cities in Massachusetts and large central cities across the country. More women than men are graduating from high school, and, when they graduate, women are more likely to attend college, especially four year colleges and universities. Eighty-two percent of the female Boston public high school graduates from the Class of 2004 were enrolled in college or a post secondary training institution at the time of the follow-up survey versus a college/training school enrollment rate of only 69 percent for males.

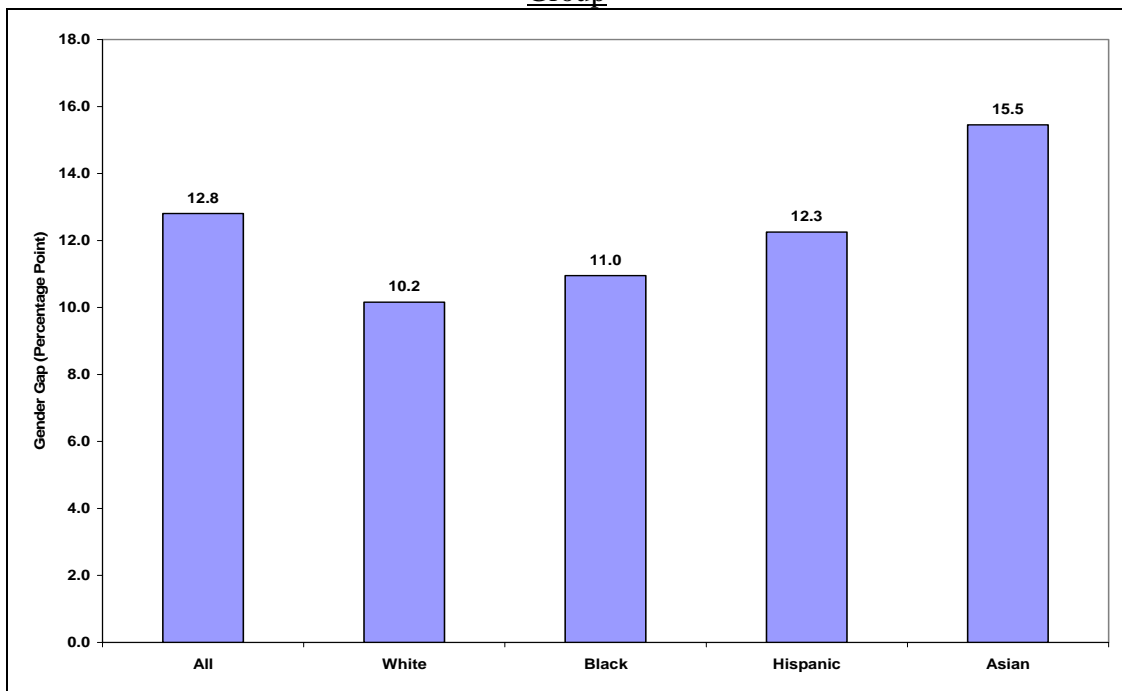
The college/training enrollment rates of Class of 2004 graduates in each race-ethnic group were higher among women than men. (Table 6). The absolute size of the gender gap in the college/training program enrollment rate for all Boston public high school graduates was nearly 13 percentage points. There was a gender gap of 6 percentage points in college enrollment rates in the city’s exam schools ( 98% for women versus 92% for men), but the gender gap in college enrollment rates was much higher for graduates from the district/magnet schools (75% female versus 61% male). The gender gaps in college attendance rates were largest for Hispanics (18 percentage points) followed by Blacks (15 percentage points).

Table 6: Gender Gaps in College/Post-Secondary Training Enrollment Rates of Boston Public High School Graduates by Race/Ethnic Group and Type of School, Class of 2004 (Numbers in Percent)

Group	Men	Women	Percentage Point Gap (Women-Men)
All	69.0	81.8	12.8
Asian	65.7	80.4	14.6
Black, not Hispanic	74.9	84.9	10.0
Hispanic	93.9	97.8	3.9
White, not Hispanic	55.6	73.5	17.9
Exam Schools	60.6	75.5	14.9
District Schools	91.6	97.6	6.1

Among those enrolled in a college or post-secondary training program at the time of the followup survey, women were more likely than men to be attending a four-year college or university (71% vs. 61%). Similar sized variations in four-year college attendance rates were observed for men and women in each of the four race-ethnic groups. The absolute sizes of the differences between the shares of women and men attending 4-year colleges were 15.5 percentage points for Asian graduates, 12 percentage points for Hispanic graduates, 11 percentage points for Black graduates, and 10 percentage points for White graduates. (Chart 7).

Chart 7: Gender Gaps in Four-Year College Enrollment Rates Among Class of 2004 Graduates Attending College or a Post-Secondary Training Institutions by Race-Ethnic Group



Similar to findings for the Class of 2003 and those of earlier years, the college attendance rates of Class of 2004 BPS graduates also varied widely by the high school that they attended. (Table 6). Not surprisingly, given the differences in students' academic backgrounds and achievements, large gaps existed between the college/training enrollment rates of graduates of the city's exam and district high schools. The absolute difference between the college/training enrollment rates of graduates from the exam

schools and the district/magnet schools was 26 percentage points (95% vs. 69%). The college/training program enrollment rates ranged across individual high schools from highs of 97 percent for Boston Latin High School, 96 percent for Boston Latin Academy, and 92 percent for Boston Arts Academy to lows of 44 percent for Monument Academy, 43 percent for McKinley Vocational, and 36 Percent for Greater Eagleston High School.

Table 7: Percent of Class of 2004 Graduates of Boston Public High Schools Who were Enrolled in College or a Post-Secondary Training Program at the Time of the Follow-up Survey, by High School

School	Enrollment Rate (In %)
Boston Latin High School (1010)	97.1
Boston Latin Academy (1020)	95.9
Boston Arts Academy (1420)	92.1
O'Bryant High School (1030)	90.9
ACC (1230)	88.6
Health Career Academy (1440)	86.0
New Mission (1285)	85.0
Charlestown High School (1050)	79.6
English High School (1080)	77.8
Snowden International High School (1200)	77.1
Boston Community Leadership Academy (1195)	73.1
Brighton High School (1040)	72.3
West Roxbury High School (1250)	71.8
APS (1062)	68.9
Burke High School (1120)	67.7
Fenway Park High School (1265)	66.8
Community Academy (1340)	66.7
Madison Park High School (1210)	63.3
Odyssey Academy (1163)	61.8
Hyde Park High School (1100)	61.5
Excel Academy (1162)	61.2
East Boston High School (1070)	60.8
McKinley Tech. (1294)	52.9
EBA (1061)	48.3
Monument Academy (1161)	44.2
McKinley Voc. (1293)	43.1
Greater Eagleston (1430)	37.5
Total	76.3

The overwhelming majority of college students (93 percent) reported that they were attending their post-secondary schools on a full-time basis. Nearly 94 percent of those attending a college or post-secondary training program were enrolled in a post-

secondary educational institution, primarily four-year colleges and universities and community colleges. The ten educational institutions accounting for the largest number of college enrollees from the Class of 2004 are displayed in Table 8. These ten colleges and universities accounted for nearly 46 percent of the total number of enrolled graduates from the Class of 2004. Each of these ten colleges and universities was located in Massachusetts, and all but the University of Massachusetts at Amherst were located in the Boston metropolitan area.

The top ten enrolling colleges and universities for the Class of 2004 were characterized by a substantial degree of overlap with the ten largest enrolling institutions for graduates from the Class of 2003. Eight of the top ten enrolling institutions for the Classes of 2003 and 2004 were the same although several of their rankings were changed. Suffolk University and Franklin Institute of Technology replaced Pine Manor College and Boston College in the top 10 in 2004. The number of Class of 2004 graduates attending the top ten colleges varied only modestly from the Class of 2003.

Table 8: The Ten Colleges and Universities Attended by the Largest Number of Boston Public High School Graduates, Classes of 2003 and 2004

Class of 2003	Number of Students	Class of 2004	Number of Students
Bunker Hill Community College	231	Bunker Hill Community College	161
UMass-Amherst	124	UMass-Amherst	118
UMass-Boston	103	UMass-Boston	105
Massachusetts Bay Community College	72	Boston University	60
Northeastern University	60	Northeastern University	56
Boston University	57	Massachusetts Bay Community College	54
Roxbury Community College	53	Salem State College	52
Quincy Community College	43	Roxbury Community College	46
Pine Manor College	41	Franklin Institute of Technology	34
Boston College	39	Suffolk University	32

### **College Majors of Class of 2004 Boston Public High School Graduates**

Beginning with the Class of 2001, the PIC follow-up questionnaire has included an open-ended question asking graduates enrolled in college to identify their college majors. An analysis of the findings for the Class of 2004 revealed that 22 percent of all graduates enrolled in college had not yet declared a major. Both male and female graduates were equally likely to have not declared a college major at the time of the Winter/Spring 2004 follow-up survey. (Table 9). The most frequently cited major for the combined pool of graduates from the Class of 2004 was business management (12%). Thirteen percent of male graduates reported a business major as did nearly 11 percent of the women. The second most frequently chosen college major for Class of 2004 Boston public high school graduates was nursing (8%); however, there was a large gender difference in the selection of nursing majors. Fewer than two percent of the men identified nursing as their college major versus 12 percent of women. Gender differences in college majors were present in other fields. Slightly more than six percent of male graduates opted for computer science or computer technology as their college major while only 1 percent of the women did so. Overall, male graduates were more likely than women to choose engineering and computer science as their college majors while female graduates were more likely to choose nursing, medical assisting, psychology, communications, and liberal arts as their college majors.

Table 8: Top 10 College Majors of Enrolled Class of 2004 Boston Public High School

Graduates, Total and by Gender

Rank	<u>All</u>		<u>Men</u>		<u>Women</u>	
	College Major	Percent	College Major	Percent	College Major	Percent
1	Undecided	22.0	Undecided	24.0	Undecided	20.7
2	Business Mgmt.	11.7	Business Mgmt.	13.4	Nursing	11.8
3	Nursing	8.0	Criminal Justice	4.1	Business Mgmt.	10.6
4	Criminal Justice	4.0	Computer Sciences	4.1	Psychology	4.8
5	Psychology	3.4	Engineering	3.7	Criminal Justice	4.0
6	Biology	3.0	Communications	2.7	Biology	3.4
7	Liberal Arts	2.5	Liberal Arts	2.6	Liberal Arts	2.5
8	Communications Computer Sciences	2.3	Engineering	2.3	Accountancy	2.4
9	Accountancy	2.2	Biology	2.2	Medical Assistant	2.3
10	Engineering	2.2	Computer Tech	2.1	Communications	2.0
11		1.6	Nursing	1.7	Education	1.8

**Financial Aid Status of College Enrolled Members of the Class of 2004**

A substantial majority of the college enrolled graduates from the Class of 2004 reported to have received some type of financial assistance to attend college or university (82%), and most graduates reported that they received several types of financial assistance. (Table 10). Of those graduates who received some type of financial assistance, 62 percent received loans and grants, respectively, 49 percent received scholarships, and 17 percent were work-study students

Table 10: Percent of Enrolled Class of 2004 Boston Public High School Graduates Who Received Various Types of Financial Aid to Attend College (Weighted Cases)

Type of Financial Aid	Percent Receiving Financial Aid
Any Type of Assistance	81.7
Grants	62.1
Loans	61.9
Scholarships	49.4
Work-Study	17.0

## **The Labor Force Participation Behavior of Class of 2004 Boston Public School Graduates**

As noted earlier, the follow-up survey also collected information on the labor force status of each graduate at the time of the survey. With this information, each graduate was assigned to one of the following three mutually exclusive labor force categories: employed, unemployed, or out of labor force. Those graduates who were working (including military) or actively seeking and available for work at the time of the survey (unemployed) are categorized as members of the labor force. The labor force participation rate for Class of 2004 Boston public school graduates was 73 percent, implying that 73 of every 100 graduates were either working or actively looking for work. (Table 11). The labor force participation rate of graduates from the non-exam schools was 20 percentage points higher than that of graduates from the three exam schools (79% vs. 59%), reflecting the weaker labor force attachment of college students. Males were modestly more likely to be actively participating in the labor force than women (75% versus 72%). In the district schools, there was a seven-percentage point difference between the labor force participation rates of men and women in favor of men. There were more substantial differences in labor force participation rates among members of the four race-ethnic groups. These labor force participation rates ranged from a high of 81 percent for Hispanic graduates to a low of 55 percent for Asian graduates. The sharply lower participation rates of Asian graduates reflects their higher college enrollment rate. There were relatively small differences in the labor force participation rates of men and women within each of the four race-ethnic groups. Asian, Hispanic, and White male graduates were only slightly more likely to participate in the labor force than each of their female counterparts while Black female graduates were equally as likely as their male counterparts to be participating in the labor force.

Table 11: Labor Force Participation Rates (Military Included as Employed) of Class of 2004 Boston Public High School Graduates, Total and by Gender, Race-Ethnic Group, and Type of High School Attended (Weighted Cases)

Group	All	Male	Female
All	73.5	75.0	72.4
Black	78.4	77.6	79.0
White	64.0	69.0	60.0
Asian	55.3	57.7	53.3
Hispanic	81.0	84.5	78.1
Enrolled	69.2	67.4	70.3
Not Enrolled	86.5	90.8	81.1
Exam Schools	59.0	60.4	58.0
Non-Exam Schools	78.9	80.2	77.9

### **Employment Rates of Class of 2004 Boston Public High School Graduates**

At the time of the follow-up interviews, just under 51 percent of the graduates from the Class of 2004 were employed, excluding those serving in a branch of the nation's armed forces. (Table 12). The employment rates of Boston public high school graduates from the Class of 2004 in all demographic groups were more or less the same as those for graduates from the Class of 2003; however, they continue to remain well below those of graduates from the Classes of 2000 and 2001. The employment rate for Class of 2004 graduates was nearly 8 percentage points lower than that for the Class of 2001. The deteriorating labor market for youth in general in both the Boston metropolitan area and the city of Boston in recent years is the major factor underlying the lower employment rate for recent graduates. Payroll employment levels remain well below their peaks in the first quarter of 2001. The 51 percent employment rate for graduates from the Class of 2004, however, represents a substantial improvement over the employment rates of Boston graduates during the early years of the 1990s when the local and state economy were in steep recession. For example, the employment rate for Class of 1991 graduates, who entered the labor market at a time when the state economy was close to its cyclical trough, was only 39 percent. As will be indicated below, however, unemployment rates

among subgroups of graduates from the Class of 2004 were quite high at the time of the 2005 follow-up survey.

Table 12: Employment Rates of Class of 2004 Boston Public High School Graduates at the Time of the Follow-up Survey, Total and by College Enrollment Status  
(Military Excluded as Employed)

Group	Employment Rates for All Graduates	Enrolled in College	Not Enrolled in College
All	50.9	47.7	61.1
Men	51.9	47.1	62.4
Women	50.1	48.0	59.5
Asian	38.7	37.8	60.9
Black	53.8	51.9	59.2
Hispanic	56.4	46.3	62.5
White	45.1	40.5	64.4
Exam Schools	41.0	39.7	67.5
District/Magnet Schools	54.6	51.9	60.7

Both male and female graduates were nearly equally likely to be working at the time of the follow-up survey (52 percent versus 51 percent). Among college students, women were equally likely to be employed as men (48 percent versus 47 percent) while males not enrolled in college were slightly more likely to be employed than their non-enrolled female peers (62 versus 59 percent).

Employment rates of Class of 2004 graduates varied more widely by race-ethnic group. Hispanic graduates had the highest employment rate (56%) followed by Black (54%), White (45%), and Asian graduates (39%). The lower overall employment rate of Asian graduates is primarily attributable to their higher rate of college attendance. In each race-ethnic group, the employment rates of non-enrolled graduates were considerably higher than those of their enrolled peers, with the size of these differences ranging from 7 to 24 percentage points.

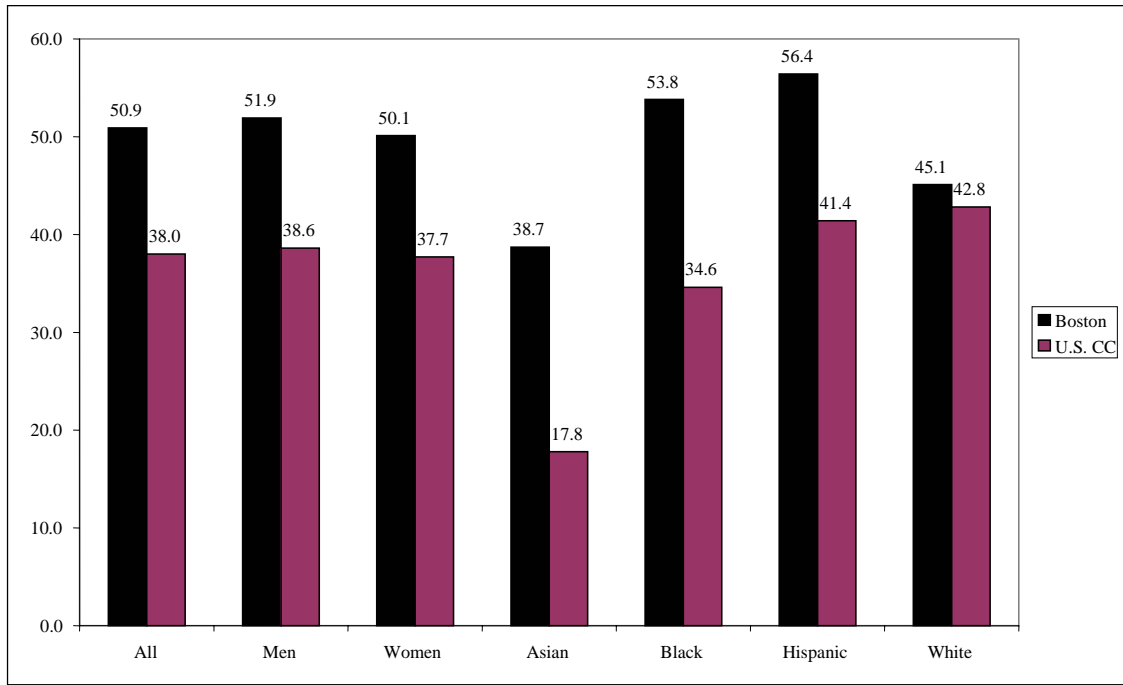
## **Comparisons of the Employment Rates of Class of 2004 Boston Public School Graduates with Those of Their U.S. Central City Counterparts**

As noted above, the employment rate for Boston public high school graduates in recent years has been declining due to a deteriorating labor market in the city and metropolitan area, especially for teens and young adults. The employment rate for Boston public high school graduates from the Class of 2004 was identical with that for the preceding year's graduating class (52%) whereas the employment rate for new high school graduates in the U.S. has increased from 44.4% in 2003 to 46.6% in 2004. In the aggregate, Boston high school graduates from the Class of 2004 were more likely to be employed than all Class of 2004 high school graduates across the nation.<sup>7</sup> (Chart 8). It will be desirable to compare employment rates of Boston public high school graduates with U.S. central city counterparts to see how Boston city fared in generating employment for recent high school graduates. The employment rate for Class of 2004 Boston public high school graduates was 13 percentage points higher than that of all U.S. central city graduates from the Class of 2004. Both male and female graduates from the Boston public schools had higher employment rates than their peers across the country, with 12 to 13-percentage points employment advantage over their national central city peers. Boston public high school graduates in several race-ethnic groups were substantially more likely to be employed than their national central city counterparts. The sizes of the employment advantages for Boston graduates were 2 percentage points for White, 15 percentage points for Hispanics, 19 percentage points for Black and 21 percentage points for Asian high school graduates.

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<sup>7</sup> Findings for U.S. central city graduates from the Class of 2004 are based on the findings of the October 2004 CPS survey which contains a special supplement that identifies new high school graduates.

Chart 8: Comparisons of the Civilian Employment Rates of All Class of 2004 Boston Public School Graduates with Those of Their U.S. Central City Counterparts from the Class of 2004<sup>8</sup>



### **The Employment Status of College Enrolled High School Graduates**

In previous years, many of the high school graduates attending college and post-secondary training institutions were also employed in civilian jobs, the vast majority of which were part-time. Nearly 48 percent of the Class of 2004 graduates from Boston public schools who were attending colleges, universities, or post-secondary training programs at the time of the follow-up interview were simultaneously employed. (Table 13). The employment rate of enrolled Boston public high school graduates was 15 percentage points higher than that of all college enrolled high school graduates from the Class of 2001 living in the U.S. central cities. In each gender and race-ethnic group, Boston’s college enrolled graduates were more likely to be working than their national

<sup>8</sup> Military service personnel are excluded from the count of the employed in both the city of Boston and the U.S. central cities. The October CPS surveys are limited to the civilian, non-institutional population of the U.S.

counterparts. The size of these advantages varied by gender and race-ethnic group but were quite substantial for Blacks and Hispanics. Enrolled male graduates from Boston public high schools were 18 percentage points more likely to be employed than their enrolled national counterparts (47% versus 29%) while Boston females graduates enjoyed a 13 percentage point employment advantage over their national peers. Employment rates of college students by race-ethnic group in the city of Boston in 2004 were in the range of 38 to 53 percent. Fifty two percent of Black graduates and slightly more than 53 percent of Hispanic college students were employed versus only 38 percent of Asian and 40 percent of White students. The graduates from the city’s three exam schools (Boston Latin Academy, Boston Latin, and O’Bryant Technical) were less likely to be working than their enrolled counterparts from the district and magnet schools. In addition, those attending community colleges and post-secondary training programs were more likely to be working than those attending four year colleges and universities.

Table 13: Comparisons of the Employment Rates<sup>9</sup> of Class of 2004 Boston Public School Graduates Enrolled in College with Those of Their Counterparts in U.S. Central Cities

Group	Boston (A)	U.S. Central Cities (B)	Boston-U.S. (A-B)
All	47.7	32.5	+15.2
Men	47.1	28.8	+18.3
Women	48.0	34.7	+13.3
Asian	37.8	10.6	+27.2
Black	51.9	30.0	+21.9
Hispanic	53.3	41.0	+12.3
White	40.5	36.0	+4.5

<sup>9</sup> Military service personnel are excluded from the count of the employed in both the city of Boston and the U.S. The October CPS surveys are limited to Class of 2004 graduates in the civilian non-institutional population of the U.S.

## The Employment Status of Non-Enrolled High School Graduates From the Class of 2004, Comparisons of Findings for Boston and the U.S.

Employment rates for those Class of 2004 graduates not attending colleges or post-secondary training programs at the time of the follow-up interviews were estimated for graduates from Boston public high schools and all U.S. central city high schools. (Table 14). The results indicate that 61 percent of non-enrolled, Boston public school graduates were employed at the time of the follow-up survey, an employment rate that was 13 percentage point higher than that of all high school graduates across central cities in the U.S. (48%). The employment rate of non-enrolled male, Boston public school graduates from the Class of 2004 was slightly more than 8 percentage points above that of their male counterparts across central cities of the U.S. An estimated employment rate advantage of 16 percentage points existed for female graduates of Boston public schools. Both Black and Hispanic Boston public school graduates not attending college were found to enjoy substantial employment advantages over their respective national counterparts. The size of the employment advantage for Hispanic graduates was 23 percentage points and 18 percentage point for Blacks in Boston.<sup>10</sup>

Table 14: Comparisons of Employment Rates of Non-Enrolled Class of 2004 Boston Public School Graduates with Those of Their U.S. Central City Counterparts from the Class of 2004<sup>11</sup>

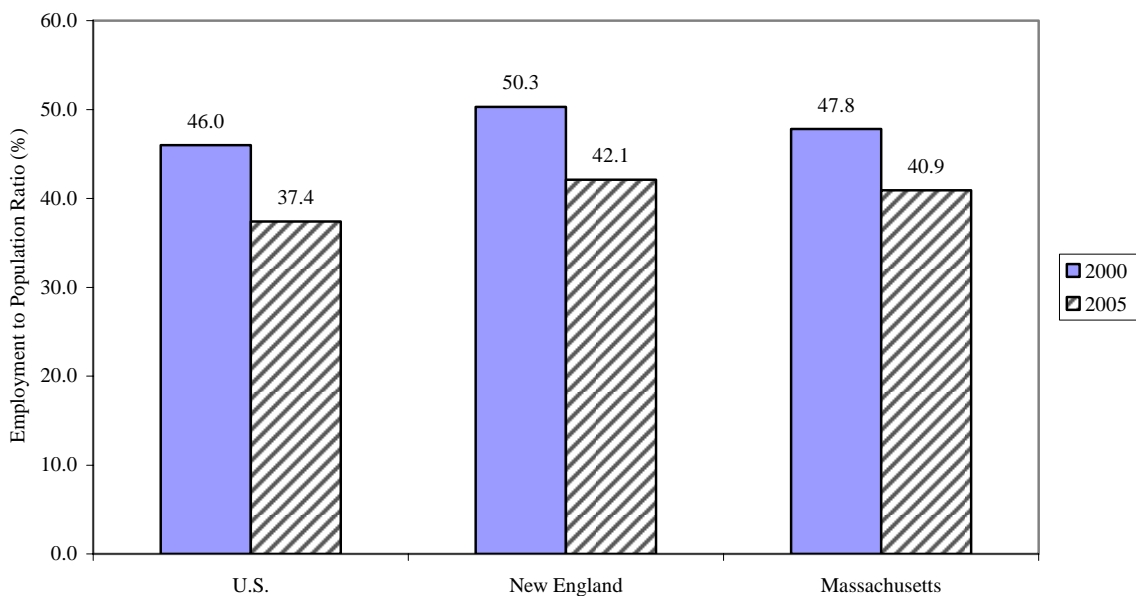
Group	Boston (A)	U.S. Central Cities (B)	Boston-U.S. (A-B)
All	61.1	47.8	+13.3
Men	62.4	53.9	+8.5
Women	59.5	43.3	+16.2
Asian	60.9	50.2	+10.7
Black	59.2	40.9	+18.3
Hispanic	62.5	41.8	+20.7
White	64.4	59.2	+5.2

<sup>10</sup> The U.S. Bureau of Labor Statistics did not provide separate estimates of employment rates for Asian graduates from the nation's public high schools due to small sample size for non-enrolled Asian.

<sup>11</sup> Military service personnel are excluded from the count of the employed in both the city of Boston and the U.S.

Recent high school graduates in Boston, especially those not going on to college, have found it increasingly more difficult to find employment in recent years. The problem of rising joblessness in recent years is not confined to youths in the city of Boston, but it is prevalent across Massachusetts, New England, and the nation as a whole. Teenaged youth were facing more severe difficulties in finding jobs due to limited job growth since the recovery from the 2001 recession, including steep job losses in the Boston metro area payroll, the influx of immigrants competing for jobs at the entry level, and competition from jobless native born adults, including older workers 55 and older. At the peak of the economic boom in 2000, the employment to population ratio of 16-19 year old youth in the U.S. was 46.0 percent; however, it had declined to 37.4 percent by 2005, a substantial decline of 8.6 percentage points between 2000 and 2005. (Chart 9). The 37 percent E/P ratio for teens in 2005 was the lowest in the nation over the post-World War II era.<sup>12</sup> The size of the decline in the employment to population ratio for 16-19 year old youth during the same time period was 8.2 percentage points in New England and just under 7 percentage points in Massachusetts.

**Chart 9: Employment to Population Ratios of 16-19 Year Olds in the U.S., New England, and Massachusetts, 2000 and 2005 (Annual Averages)**



Source: Monthly Current Population Survey (CPS), 2000 and 2005, U.S. Census Bureau, tabulations by authors.

<sup>12</sup> The national CPS employment series for teens begins in 1948.

## **Unemployment Problems of Class of 2004 Graduates From Boston Public Schools and Comparisons With Those for Recent High School Graduates in The U.S.**

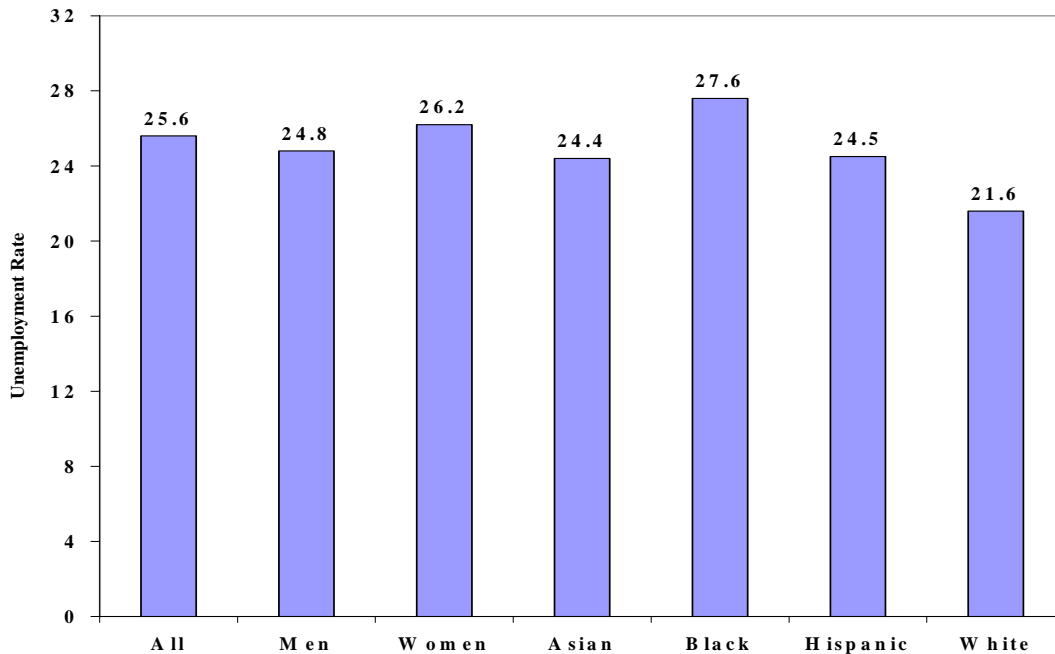
All graduates from the Class of 2004 who reported that they were not working at the time of the follow-up survey were asked if they were actively looking for work and whether they were available to take a job “last week”. All jobless respondents who replied that they had actively sought work in the past four weeks and were available for work at the time of the follow-up survey were classified as unemployed.<sup>13</sup> The unemployment rate for any sub-group of graduates represents the ratio of the number of unemployed to the civilian labor force (sum of the employed and unemployed). Unemployment rates were calculated for the entire graduating class and for each gender and race-ethnic group.

The estimated unemployment rate for the entire graduating Class of 2004 BPS graduates was a very high 26%, but was actually 3 percentage points below the unemployment rate for the previous year’s graduates. (Charts 11). The unemployment rate of female graduates was modestly higher than that of their male counterparts (26.2% versus 24.8%). The unemployment rates among race-ethnic groups ranged from lows of 22 percent among Whites and 24 percent for Asians and Hispanics to a high of nearly 28 percent for Black graduates.

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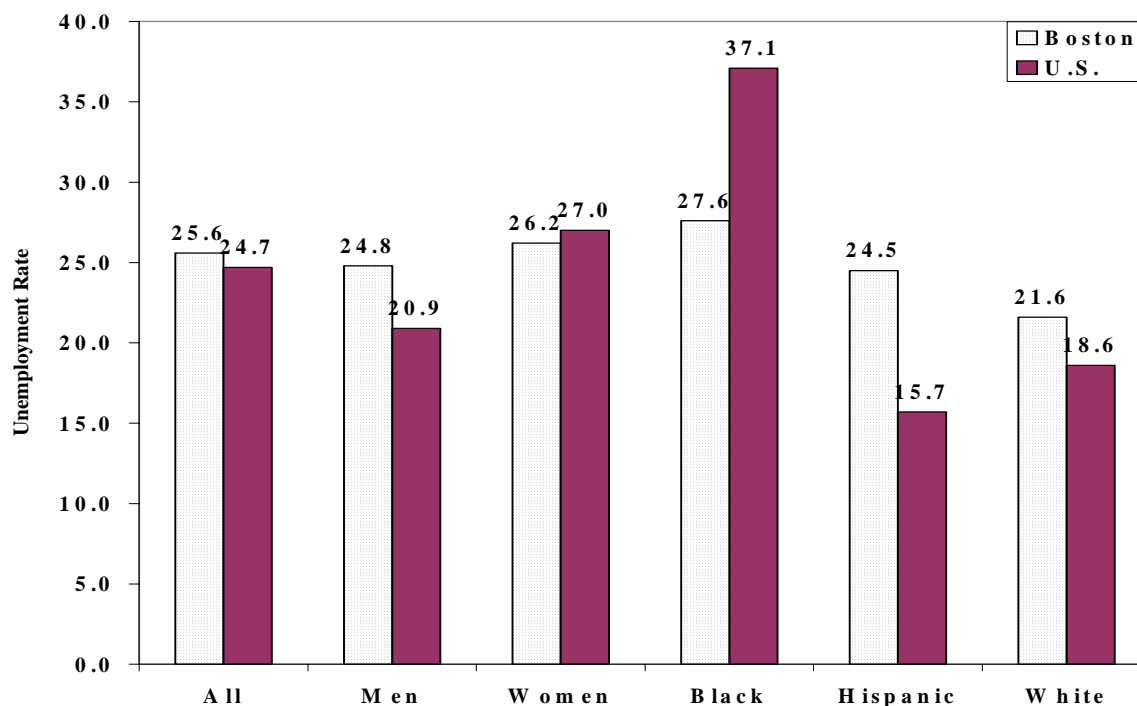
<sup>13</sup> This definition of unemployment is in close accord with that of the U.S. Bureau of Labor Statistics in its analysis of the CPS labor force data.

Chart 11: Unemployment Rates of Class of 2004 Boston Public High School Graduates,  
Total and by Gender and Race-Ethnic Group  
(Military Service Personnel Excluded from the Estimates of the Labor Force)



Comparisons of the unemployment rates of Boston’s Class of 2004 graduates with those for a nationally representative sample of all high school graduates living in central cities of the U.S. are presented in Chart 12. In Boston, the unemployment rate for Class of 2004 graduates was nearly identical to that of their central city counterparts in the U.S. If we compare unemployment rate outcomes for Boston city graduates with those of their U.S. central city counterparts in gender and race-ethnic groups, we find mixed results for Boston graduates. The unemployment rate of male Boston high school graduates was nearly 4 percentage points higher than that of their U.S. central city counterparts while the unemployment rate for female graduates in Boston and all central cities were almost identical. The comparative unemployment position of Boston graduates varied markedly by race-ethnic group. Boston Whites and Hispanics experienced unemployment rates that were markedly higher than those of their U.S. counterparts. In contrast, Black graduates from Boston high schools fared considerably better than their U.S. central city counterparts (28% versus 37%).

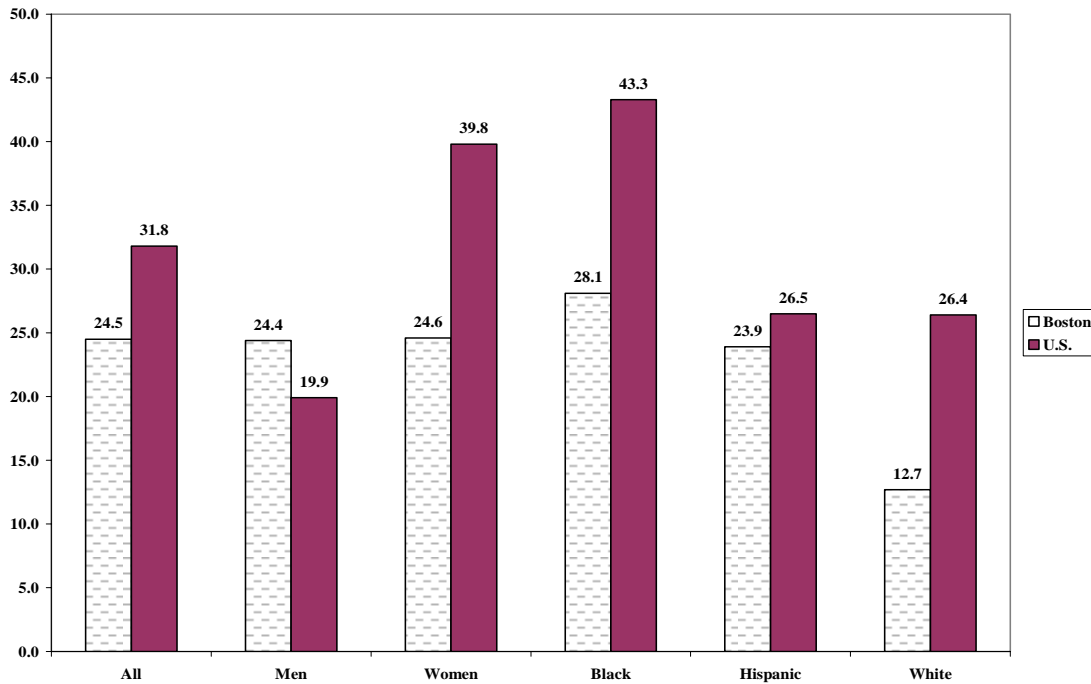
Chart 12: Unemployment Rates of All High School Graduates from the Class of 2004;  
City of Boston versus the U.S. Central City (Military Excluded)



Unemployment rates also were estimated for those graduates who were not enrolled in college or post-secondary training institutions at the time of the follow-up interviews. For all non-enrolled Boston graduates from the Class of 2004, the unemployment rate was 24.5 percent. (Chart 13). Unemployment rates of non-enrolled graduates in Boston ranged from a low of 13 percent for White graduates to a high of 28 percent for Black graduates. Comparisons of the unemployment rates of non-enrolled Boston public school graduates from the Class of 2004 with those of their U.S. central city counterparts are also displayed in Chart 13. For the entire group of non-enrolled graduates, the unemployment rate of Boston graduates was 7 percentage points lower than that of their U.S. central city counterparts (24.5% vs. 31.8%). The unemployment rate of non-enrolled, male high school graduates in Boston was only 4.5 percentage points lower than that of their U.S. central city counterparts (24% vs. 20%) while the unemployment rate for non-enrolled female graduates in Boston was 25% compared to 40% for U.S. central city graduates. In each race-ethnic group, the unemployment rate of

Class of 2004 Boston city graduates was lower than that of their U.S. central city counterparts. (Chart 13).

Chart 13: Unemployment Rates of Non-Enrolled High School Graduates From the Class of 2004, City of Boston and the U.S Central City



As noted earlier, in recent years, joblessness problems among the nation's and state's youth have become more severe, including high school students, high school graduates, and high school dropouts. Higher open unemployment rates among youth since 2000 are largely attributable to the national recession that began in early 2001, the largely jobless recovery of 2002-2003, and a series of structural changes in national labor markets such as the continued influx of immigrants competing for jobs with native born young workers, permanent job losses in manufacturing industries, especially for blue collar production workers, and increased competition from jobless adults. Given the high levels of payroll job losses in both the city and the Boston metropolitan area, Boston public high school graduates have been adversely affected by these developments, resulting in sharply higher unemployment rates over the past three years. The rise in the unemployment rate among recent high school graduates is attributable to a combination

of a rising desire for jobs by new graduates and a reduced ability of the local economy to meet the job desires of these graduates.

### **Full-Time/Part-Time Employment Status, Hours of Work, Hourly Wages, and Weekly Wages of Employed Graduates From the Class of 2004**

The follow-up interviews also were used to collect information from employed respondents on the characteristics of their jobs, including data on their weekly hours of work and their hourly wages. The hourly wage data represent wages before taxes and any other payroll deductions. Based on the employed graduates' reported weekly hours of work, we have classified all workers into either a full-time or part-time status. We have adopted the standard definition of full-time employment of the U.S. Bureau of Labor Statistics. A full-time worker is one who was employed for 35 or more hours per week. Given the high share of employed graduates who were also simultaneously enrolled in college, a substantial majority of Boston public school graduates with jobs were working part-time at the time of the Winter/Spring 2005 follow-up survey. Only 22 percent of the employed graduates reported that they were working full-time while 78 percent of the graduates reported that they were working part-time. As will be revealed below, the relatively low rate of full-time employment is due primarily to the high share of jobs held by graduates who were simultaneously enrolled in college. The share of graduates holding a full-time or part-time job at the time of the survey also varied between men and women. For example, 28 percent of the men held full-time jobs while only 18 percent of the employed women were working full-time. The higher share of employed women enrolled in college helps explain part of the gender difference on this employment outcome.

Mean weekly hours of work for all employed graduates were equal to 23 hours, approximately 1 hour more than the mean hours worked by employed members of the Class of 2003. (Table 15). Those employed graduates who were not enrolled in college worked on average for 32 hours per week while those mixing school and work were employed on average for only 19 hours per week. Keeping work hours of college students below 20 hours per week is desirable for improving college retention. While non-enrolled graduates worked more hours per week than their college enrolled peers,

they were finding it somewhat more difficult to obtain full-time jobs. Only 53 percent of the employed, non-enrolled graduates from the Class of 2003 were working full-time, i.e., 35 or more hours per week versus 65 percent of the employed from the Class of 2000. Obtaining access to full time job is desirable for many reasons. Full-time workers not only earn higher current hourly wages than part-time workers, but they are also much more likely to receive training from their employers, which should boost their future skills and wages as well.<sup>14</sup>

Among those who were employed at the time of the follow-up survey, men tended to work more hours per week than women (25 hours versus 21 hours). Mean hours of work were highest among Hispanic workers (26), followed by Black (23), and White graduates (21). (Table 15). Employed Asian graduates worked on average for only 14 hours per week. The sharply lower mean hours of work among employed Asians was primarily attributable to the higher frequency of part-time employment among Asian college students. Those Asian graduates who were not enrolled in college worked nearly as many hours per week as their peers in the other race-ethnic groups. (Table 16).

The mean hourly wage of all employed graduates was \$9.06. Men earned \$1.00 or 12 percent more per hour than their female counterparts (\$9.62 versus \$8.62), reflecting a combination of fulltime employment and a different occupational mix of job. The mean hourly wages of employed graduates varied only modestly across the four major race/ethnic groups, ranging from highs of \$9.42 among White graduates and \$9.41 among Hispanic graduates to \$8.82 among Black graduates, and \$8.75 among Asian graduates. Those graduates who were enrolled in college or post-secondary training programs earned \$1.22 less per hour than their non-enrolled counterparts (\$9.93 versus \$8.71). Full-time workers fared better than their part-time counterparts. The mean hourly wage of full-time employed graduates was \$1.29 or slightly more than 14 percent higher than that of part-time workers (\$10.23 versus \$8.94).

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<sup>14</sup> See: Ishwar Khatiwada and Andrew Sum, The Full-Time/Part-Time Job Status of Employed Class of 1999 Graduates, Report prepared for the Boston Private Industry Council, Boston, 2001.

Table 15: Mean Weekly Hours of Work, Hourly Wages, and Weekly Wages for Employed Class of 2004 Boston Public High School Graduates, Total and by Gender,

Race-Ethnic Group, and School Enrollment Status

Group	Mean Weekly Hours	Mean Hourly Wage	Mean Weekly Wage
All	22.9	\$9.06	\$215
Men	25.3	\$9.62	\$252
Women	21.0	\$8.62	\$186
Asian	14.2	\$8.75	\$129
Black	23.5	\$8.82	\$216
Hispanic	26.2	\$9.41	\$280
White	21.2	\$9.42	\$204
Enrolled	19.1	\$8.71	\$172
Not Enrolled	32.3	\$9.93	\$324

The findings on the weekly hours of work of employed graduates were combined with those on hourly wages to estimate the weekly earnings of each respondent who was employed in a civilian job. The mean weekly earnings of all employed graduates were equal to \$215. (Table 15). Non-enrolled graduates tended to work more hours per week than enrolled graduates, and they earned more per hour when they did work; thus, their mean weekly earnings were 88 percent higher than those of college enrolled workers (\$324 versus \$172). Employed male workers obtained mean weekly earnings that were \$66 higher than those of employed female graduates (\$257 vs. \$186), reflecting a combination of higher hourly earnings and more hours of work per week. Large differences also were observed among the weekly wages of employed graduates in the four major race-ethnic groups. Mean weekly wages ranged from a low of \$129 among Asians to a high of \$280 for Hispanic workers. Among those not enrolled in school, mean weekly wages ranged from a low of \$241 for Asian graduates to a high of \$361 for White graduates. (Table 16). Overall, non-enrolled graduates from the Class of 2004 typically earned mean weekly wages that were twice as high as those of enrolled graduates in each of the four race-ethnic groups.

Table 16: Mean Weekly Hours of Work, Mean Hourly Wages and Mean Weekly Wages of Class of 2004 Boston Public High School Graduates Not Enrolled in College, Total and by Gender and Race-Ethnic Group

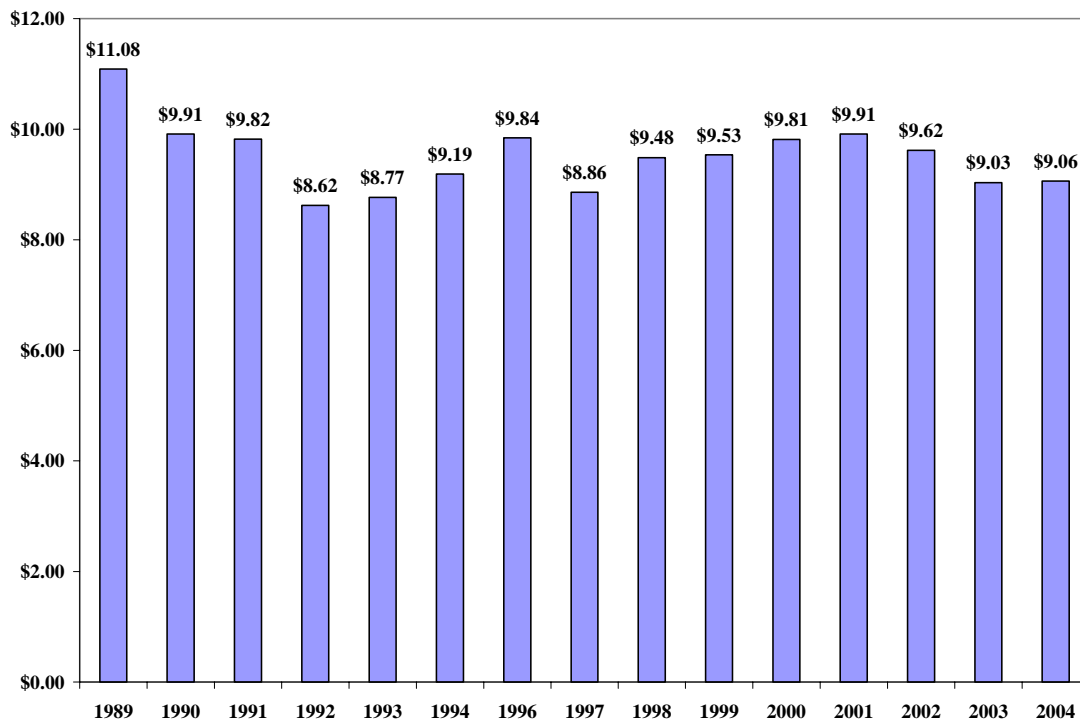
Group	Mean Weekly Hours	Mean Hourly Wage	Mean Weekly Wage
All	32.3	\$9.93	\$324
Men	33.0	\$10.57	\$353
Women	31.3	\$9.08	\$285
Asian	19.9	\$13.68	\$241
Black	31.5	\$9.59	\$307
Hispanic	33.3	\$10.02	\$334
White	33.9	\$10.33	\$361

### **Historical Trends in the Real Hourly Wages of Employed Boston Public High School Graduates, Classes of 1989 to 2004**

The availability of annual follow-up data for Boston high school graduates since the late 1980's allows us to identify trends in the real hourly wages of employed graduates. We have compared the mean hourly wages of employed persons in each year's graduating class back to the Class of 1989. The mean hourly wages of employed members of the Classes of 1989 through 2004 were adjusted for inflation using estimated changes in the Consumer Price Index for All Urban Consumers (CPI-U) for the Greater Boston area between 1989 and 2005. Our findings yielded an inflation-adjusted mean hourly wage of \$11.08 in 1989, \$8.62 in 1992, \$9.91 in 2001, and \$9.06 for graduates from the Class of 2004. (Chart 14). The historical high for real hourly wages was \$11.08, earned by graduates from Class of 1989 at the peak of the state labor market boom at the end of the 1980s. Following a steep deterioration in the mean hourly wages of employed graduates during the severe state and regional recession of the early 1990s, the mean real hourly wages of Boston public school graduates increased from \$8.62 in 1992 to a peak of \$9.91 in 2001, an increase of \$1.29 per hour or 13 percent. For the next two graduating classes, real hourly wages had declined. The mean real hourly wage of employed graduates of the Class of 2003 was only \$9.06 or 9 percent below that of the Class of 2001. The lower average wages for recent graduates appear to be attributable to a combination of a reduction in full-time jobs that pay higher hourly wages and a reduction

in jobs in several industrial sectors (finance, construction industries) paying above average wages. A larger fraction of employed graduates have depended on the lower paying retail trade sectors and leisure and hospitality for their jobs.

Chart 14: Mean Hourly Wages of Employed Boston Public School Graduates, Classes of 1989 to 2004 (In Constant March 2005 Dollars)



### **Industries and Occupations of the Jobs Held by Employed Class of 2004 Graduates**

The follow-up survey questionnaire also was used to collect information from employed respondents on the names of the firms that employed them, the types of businesses operated by those firms, the geographic locations of these firms, and the major duties and occupational titles of their jobs. The above information was used by CLMS research staff to assign both an industry and occupational employment code to each of the jobs held by respondents at the time of the follow-up interviews. Class of 2004 graduates obtained jobs in every major industrial sector of the Boston metropolitan economy;

however, nearly 46% of the employed graduates worked in a service-related industry (professional, business, or personal/entertainment services), and another 42 percent worked in retail trade industries, including eating and drinking establishments. (Table 17). The remaining graduates were employed by transportation/communication/utilities (3%) and finance, insurance and real estate (3.0 percent) and construction (1.7 percent). Only 1 percent of the graduates worked in manufacturing and another 1 percent worked in public administration. Out of an estimated 1,424 employed graduates, only less than 39 or 3 percent were employed in manufacturing or construction industries, the source of many well-paying blue-collar jobs. The manufacturing sector in the U.S. and Massachusetts has been experiencing severe job losses since the late fall of 2000, reducing employment opportunities for older and younger adults.<sup>15</sup> Teens in particular have found it very difficult to find any employment in this set of goods producing industries. Substantial downsizing in the city's financial services industries in recent years also have made it more difficult for new high school graduates to find work in this sector.

There were a number of substantive differences between the industrial distributions of the jobs held by employed female and male graduates from the Class of 2004. Nearly 40 percent of employed women were working in professional and related service industries (colleges, hospitals, other health services, consulting firms) while only 33 percent of the men held jobs in such industries. In contrast, men were more likely than women to obtain employment in business and repair services (6% vs. 3%), construction (4.0% versus 0%), and transportation, communications, and utilities (4.4% vs. 2%). These differences between the industrial distributions of employment of men and women are also related to differences in their occupational employment distributions.

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<sup>15</sup> See: Timothy Appel, Less Sweat, More Tech: A New Blue Collar World, The Wall Street Journal, B1, July 2, 2002.

Table 17: Distribution of Employed Boston Public High School Graduates by Major Industrial Sector of Their Jobs, Class of 2004

Major Industry	Employed	Percent
Retail Trade	604	42.4
Professional & Related Services	462	32.4
Personal, Entertainment, & Recreation Services	106	7.5
Business & Repair Services	89	6.2
Transportation, Communication, and Utilities	44	3.1
Finance	38	2.7
Construction	24	1.7
Agriculture, Forestry, and Fishing	13	0.9
Public Administration	13	0.9
Durable Goods	12	0.9
Wholesale Trade	7	0.5
Non-Durable Goods	3	0.2
Mining	1	0.1
Total	1,424	100.0

Comparisons of the industrial distribution of all wage and salary jobs in the Boston metropolitan area with that of employed graduates from the Class of 2004 revealed that employed graduates were substantially under-represented in construction, manufacturing, wholesale trade, and finance/insurance/real estate industries. Each of these industries tends to pay above average wages to their front line workers. To illustrate this, weekly wages were estimated for all employed graduates and for non-enrolled graduates in each major industrial group. Those graduates who were employed in construction industries earned an average mean weekly wage of \$430, the highest by far of all of the industrial sectors. The high weekly wage advantages of construction sector workers were due to a combination of higher hourly wages and more hours of work per week. Those graduates employed in durable goods manufacturing sector enjoyed the second highest weekly wage (\$351 per week) closely followed by those working in mining (\$340), transportation, utilities, and communications (\$324 per week), business and repair services (\$308), and finance/insurance (\$303). In contrast, the mean weekly wages of workers in non-durable manufacturing, professional related services and retail trade were only \$180, \$164, and \$214, respectively. The lowest weekly wage earners were employed by firms in professional and related services with mean wages of only \$164 per week, but many of the workers in this sector were employed part-time.

Since most employed college students tend to work in the retail trade and professional service industries on a part-time basis, their average weekly wages are held down by their fewer hours of work. To eliminate the effects of part-time work by college students on the estimated weekly earnings of employed graduates, we generated separate weekly earnings estimates for those graduates who were not enrolled in college. Findings in Table 18 reveal that the mean weekly earnings of non-enrolled graduates were twice as high as those of the enrolled. Non-enrolled graduates who were employed in the construction industry obtained the highest mean weekly wages (\$536) followed by transportation, communication and public utilities (\$446), finance, insurance, and real estate (\$418), durable goods manufacturing (\$370), agriculture, forestry and fishing (\$362), personal, and recreation and entertainment services (\$358). Non-enrolled graduates employed in public administration (\$305), wholesale trade industries (\$308) and retail trade (\$295) were characterized by the lowest mean weekly wages. (Table 18). A large fraction of graduates were employed in retail trade industry, thereby holding down their mean weekly wages.

Table 18: Mean Weekly Wages for Class of 2004 Boston Public High School Graduates by College Enrollment Status and by Major Industry

Industry	All	Enrolled	Not Enrolled
Agriculture, Forestry, and Fishing	\$217	\$167	\$362
Mining	\$340	\$340	--
Construction	\$430	\$199	\$536
Non-Durable Goods	\$180	\$180	--
Durable Goods	\$351	\$281	\$370
Transportation, Communication, and Utilities	\$324	\$230	\$446
Wholesale Trade	\$289	\$262	\$308
Retail Trade	\$214	\$178	\$295
Finance	\$303	\$267	\$418
Business & Repair Services	\$308	\$298	\$324
Personal, Entertainment, & Recreation Services	\$254	\$193	\$358
Professional & Related Services	\$164	\$131	\$331
Public Administration	\$219	\$156	\$305
Total	\$218	\$172	\$332

Employed graduates from the Class of 2004 worked for a substantial number of different employers. At the time of the follow-up survey, 517 different local, Massachusetts, and out-of-state firms, including work-study students in colleges and universities, had hired one or more graduates from the Class of 2004. Only 45 firms, including colleges and universities, employed four or more graduates; however, these fifty-one firms employed 381 graduates or nearly 38 percent of all working graduates from the Class of 2004. Slightly more than 16 percent of the employed students, mostly occupying work-study positions, were working in colleges or universities at the time of the Winter/Spring 2005 follow up survey.

Employed graduates also were asked to describe the major duties that they performed at their jobs and to identify their job titles. Based on this information, the jobs held by all employed graduates at the time of the survey were classified by CLMS research staff into a detailed set of SOC-based occupations, which were then combined into eleven major occupational groups. A substantial majority of the jobs held by employed graduates were accounted for by the following three major occupational groups: entry-level sales workers such as cashiers and sales clerks (30%), office/administrative support (24%), and service occupations (23%). (Table 19). Together, these three occupational groups accounted for 77 of every 100 employed graduates. Due to their limited formal educational attainment, only 1 percent of the employed graduates held a professional, technical, or managerial-related position. Slightly over 12 percent of the graduates held blue-collar production and craft positions. Women were more likely than men to work in sales and administrative support positions (59% vs. 43%) while men were more likely to hold blue collar occupations and service related positions (23% vs. 11%)

Table 19: Distribution of Employed Boston Public High School Graduates by Major Occupational Area of Their Jobs, Class of 2004

Major Occupation	Employed	Percent
Low Level Sales	428	30.0
Administrative Support	341	23.9
Service	328	23.0
Machine Operators, Assemblers, and Inspectors	135	9.5
Handlers, Equipment Cleaners, Helpers, and Laborers	70	4.9
Professional Specialty	60	4.2
Precision Production, Craft, and Repair	34	2.4
Executive, Administrative, and Managerial	12	0.8
High Level Sales	12	0.8
Farming, Forestry, and Fishing	3	0.2
Technicians and Related Support	1	0.1
Total	1,426	100.0

The mean weekly wages of employed graduates varied quite widely across these major occupational groups, ranging from highs of \$402 for high level sales, \$381 for precision, production, craft and repair, and \$297 for handlers, equipment cleaners, helpers and laborers to lows of \$123 for machine operators, assemblers and inspectors. (Table 20).

Table 20: Mean Weekly Wages of Employed Class of 2004 Boston Public High School Graduates, Total and by Major Occupational Group

Occupation	All	Enrolled	Not Enrolled
High Level Sales	\$402	\$304	\$436
Precision Production, Craft, and Repair	\$381	\$343	\$400
Handlers, Equipment Cleaners, Helpers, and Laborers	\$297	\$200	\$407
Professional Specialty	\$262	\$156	\$541
Farming, Forestry, and Fishing	\$258	\$258	--
Service	\$243	\$205	\$335
Administrative Support	\$210	\$171	\$341
Low Level Sales	\$198	\$169	\$264
Executive, Administrative, and Managerial	\$183	\$151	\$214
Machine Operators, Assemblers, and Inspectors	\$123	\$98	\$418
Technicians and Related Support	\$100	\$100	--
Total	\$217	\$172	\$333

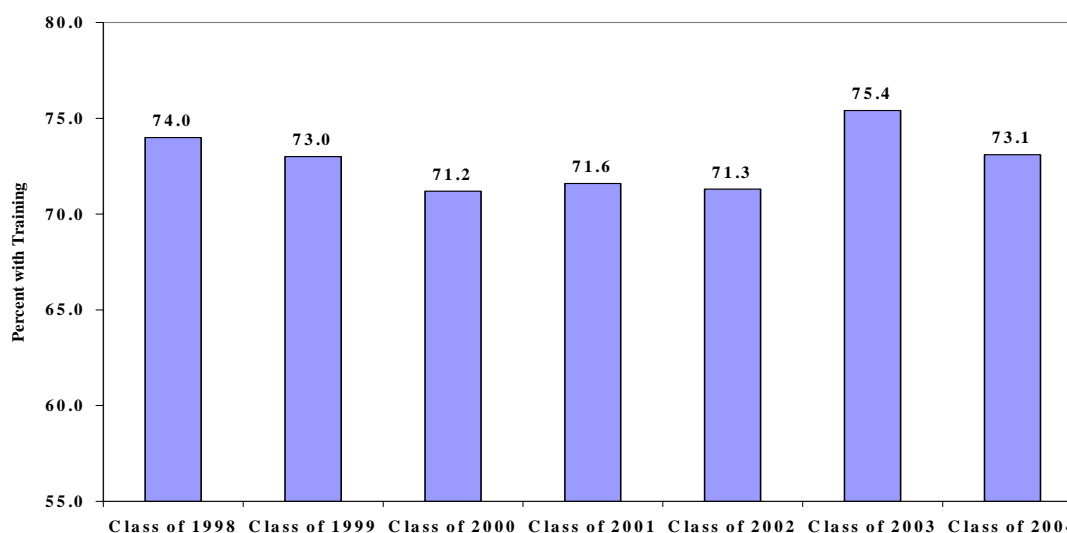
## **The Receipt of Training From Employers by Employed Graduates**

One of the objectives of the Boston PIC-sponsored school-to-career programs is to obtain employment for participants that will lead to further training by the employer. Each employed graduate from the Class of 2004 was asked whether he or she had received some type of training from their current employer. Seventy-three percent of the employed graduates reported that they had received some type of training from their current employer. (Chart 15). The share of Class of 2004 employed graduates receiving some type of training was the second highest in the last five years.

Five categories of activities were used to identify the type of training received, and multiple responses were allowed to this question. These five categories of training were the following:

- Apprenticeship training involving a combination of on-the-job training under the supervision of others and training in a classroom setting to prepare for work in a specific occupation, such as automechanic, electrician, or plumber.
- Basic skills training, including reading, math, writing, and communication skills
- Computer training.
- Formal training involving a structured set of activities on or off the job.
- Informal on-the-job training from fellow workers or supervisors.

Chart 15: Percent of Employed Class of 1998, 1999, 2000, 2001, 2002, 2003, and 2004 Boston Public High School Graduates Who Received Some Type of Training from Their Current Employer



High fraction of both male and female graduates from the Class of 2004 received some training from their current employer (77.0% vs. 74%). Employed non-enrolled graduates were only modestly more likely to obtain training than those employed graduates who were enrolled in college (74% vs. 73%).

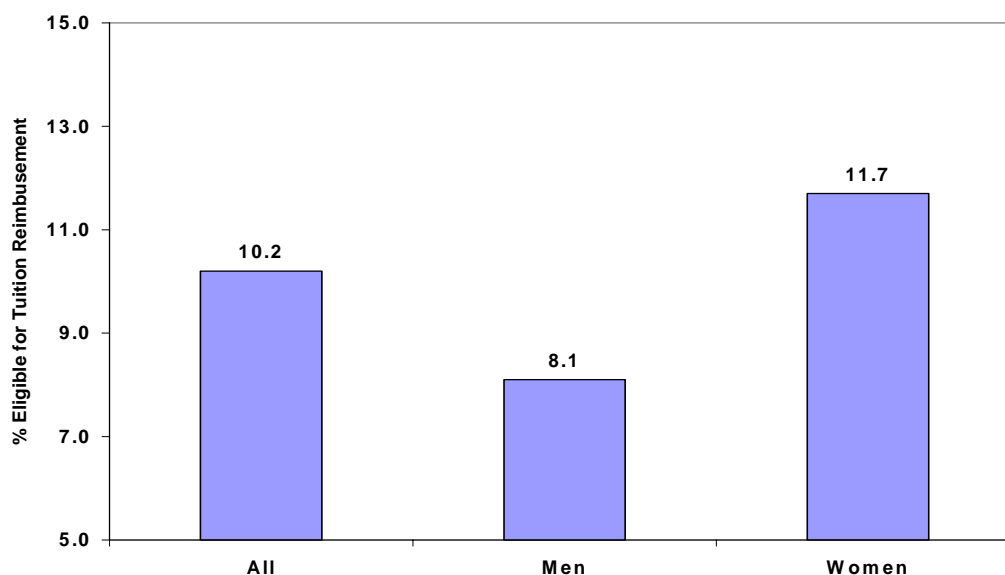
The percentage distribution of all employed youth who received some training by type of training obtained is displayed in Table 24. Respondents reported receiving on-the-job training most frequently, with 97 percent of all employed youth citing this type of training. The second most frequently reported type of training was formal training, with 35 percent of graduates reporting to have obtained such training. National research has consistently revealed that this type of training and apprenticeship training have among the most favorable effects on the future hourly wages of the employed. Each year of completed apprenticeship training has nearly the same effect on hourly wages (8 to 10 percent) as a year of community college training. Receipt of computer training was reported by 17 percent of the graduates followed by 15 percent reporting some basic skills training (writing, math), and only 6.5 percent receiving apprenticeship training.

Table 24: Percent of Employed Class of 2004 Boston Public High School Graduates Receiving Some Type of Training by Type of Training Obtained from Their Employers at the Time of the Follow-up Survey (Multiple Responses Allowed)

Type of Training	Percent of Total
Informal On-the-Job Training	97.0
Formal Training	35.2
Computer Training	17.1
Basic Skills Training	15.1
Apprenticeship Training	6.5

A key employee benefit for young adults in today’s labor markets is tuition reimbursement from the employer for courses taken in post-secondary education and training institutions. Of all employed graduates, 10.2 percent reported that they would be eligible to receive some tuition reimbursement from their current employers. Employed female graduates were more likely than their male peers to eligible for tuition reimbursement from their employers (11.7% versus 8.1%). (Chart 16).

Chart 16: Percent of Employed Class of 2004 Graduates Who Were Eligible for Tuition Reimbursement From Their Current Employer, Total and by Gender



## **Graduates Who were Neither Working Nor Enrolled in School or Training**

One of the major objectives of Boston's school-to-career and high school-to-college transition programs is to minimize the number of graduates who will end up being neither employed nor enrolled in an educational or job training program in the year following graduation. Such youth who lack ties to the post-secondary educational world and the labor market are often referred to as "at-risk" or "disconnected" youth in the youth development literature<sup>16</sup>. Such jobless youth with no post-secondary schooling attachment frequently find it difficult to succeed in the labor market in their later adult years and often end up being poor and economically dependent. Young disconnected males also often end up becoming involved with the criminal justice system, thereby placing themselves at further risk in the labor market as criminal convictions reduce future employability and earnings.

At the time of the Winter/Spring 2005 follow-up survey, 8.1 percent of Boston public school graduates from the Class of 2004 were estimated to be "at-risk"; i.e., neither working nor enrolled in a post-secondary school or training program. (Table 21). This "at-risk" rate for Boston public high school graduates was 1.2 percentage points lower than the preceding year's graduating class. Male graduates were slightly more likely than their female peers to be "at-risk" (9.2% versus 7.2%), but there were even larger differences among race and ethnic groups in the proportion of graduates who were classified at risk. Nearly 11 percent of Hispanic graduates and nearly 10 percent of Black graduates were estimated to be at-risk versus only 5.2 percent of White graduates and 1.6 percent of Asian graduates. The fraction of graduates assigned to the "at-risk" category also varied considerably by type of high school attended. Among graduates from the three exam schools, only 0.9 percent were classified as "at-risk" versus 10.8 percent of non-exam school graduates. Among the non-exam schools, the incidence of "at-risk" problems was as high as 33 percent in Monument Academy, 19 percent in the Economics and Business Academy and just under 19 percent in the Excel Academy, respectively.

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<sup>16</sup> See: (i) Andrew M. Sum, Neal Fogg, and Neeta Fogg, Out-of-School, Out of Luck? The Labor Market Prospects of the Nation's Out of School Youth, Sar Levitan Center for Social Policy Studies, Johns Hopkins University, Baltimore, 1997; (ii) Douglas J. Besharov (Editor), America's Disconnected Youth: Towards a Preventive Strategy, American Enterprise Institute for Public Policy Research and CWAL Press, Washington D.C., 2000.

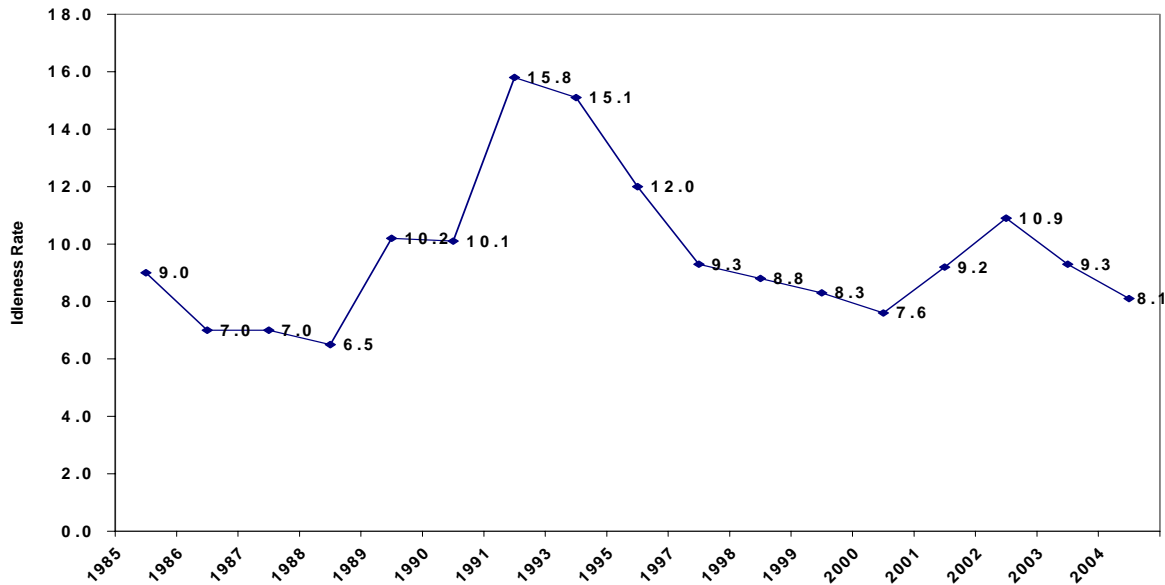
There is a clear need for extending follow-up support and job placement assistance to these at-risk youth by Boston public high schools and the Private Industry Council’s career specialists.

Table 21: Percent of Class of 2004 Boston Public High School Graduates Who Were Neither Working Nor Enrolled in a College or Post-Secondary Training Program at The Time of The Follow-up Survey

Demographic Group	Percent at Risk
All	8.1
Men	9.2
Women	7.2
Asian	1.6
Black	9.7
Hispanic	10.8
White	5.2
Exam School	0.9
Non-Exam School	10.8

Chart 17 displays time trends in the idleness rates of Boston public high school graduates for the Classes of 1985 to 2004. As noted above, the idleness rate was 8.1 percent for Class of 2004 graduates, 1.2 percentage points below the idleness rate of the preceding year’s graduating class. The 7.6% idleness rate for Class of 2000 graduates was the lowest in the past decade. During the severe recessionary years of the early 1990s, the idleness rate reached nearly 16% for the Class of 1991, the highest during the past 18 years. The strength of the city and state economies and expanded and enriched school-to-career programs in the 1990s had improved college enrollment rates and job prospects for those graduates not enrolled in college, thereby lowering the share of graduates occupying an “at-risk” status by more than 50 percent between 1991 and 2000. The economic deterioration in recent years, especially the high rate of job loss in the city and the Boston metro area, has pushed up the idleness rate by nearly two percentage points.

Chart 17: Trends in the Share of Boston Public High School Graduates Who Were Neither Working Nor Enrolled in College or a Post-Secondary Training Program, Graduating Classes, 1985 to 2004



**Job Search Intentions and Job Barriers Among Those Graduates Not in School, Not Working, and Not Seeking Work**

Those graduates who were neither enrolled in school, nor employed, nor actively seeking employment at the time of the follow-up survey were asked why they were not actively seeking work and whether they intended to look for work in the next few months. Findings of their responses to these two questions are displayed in Tables 22 and 23.

One half of these jobless, non-enrolled respondents indicated some intention to look for work over the next few months. Slightly over 76 percent of the jobless respondents responded that they either “definitely would” or “might” seek a job over the next few months. Both male and female respondents equally reported some intention to seek employment (76%).

Table 22: Future Job Seeking Plans of Class of 2004 Graduates Who were Not Enrolled in College, Not Employed, and Not Actively Seeking Work, Total and by Gender

(Numbers in Percent)

Plans to Look for Work	All	Men	Women
Yes	45.2	42.4	47.1
Maybe	31.0	33.3	29.4
No	23.8	24.2	23.5

Jobless respondents who were not actively looking for work were also asked why they were not currently seeking employment. The most frequent response was family responsibilities (49%) followed by do not want to work at this time (33%), waiting to report to school (22%), discouraged (18%), and illness or disability (15%). Women tended to cite somewhat different reasons than men for not seeking work. For example, 71 percent of the women cited family responsibilities while only 15 percent of the men did so. Jobless males cited a wide variety of reasons for not seeking work, including do not want to work at this time (34%), discouraged (16%), family responsibilities and waiting to report to military (15%), respectively. A variety of services will likely be needed by this group of jobless youth to find employment, including childcare, healthcare services, counseling and job development/placement.

Table 23: Percentage Distribution of Jobless Respondents by Reasons For Not Actively Seeking Work (Multiple Responses Allowed)

Reasons	Men	Women	All
Family responsibilities, child care problems	15.4	71.1	48.9
Illness or disability	6.6	22.0	14.8
Discouraged (looked for work but could not find a job)	15.7	21.2	18.3
Waiting to report to a new job or an old job	12.2	0.0	6.7
Waiting to report to military	14.7	0.0	7.9
Waiting to report to school	13.9	28.7	22.1
Do not want to work at this time	34.5	31.4	33.0
Other	71.2	75.8	73.8

## **Participants in School-to-Career Programs; Their College Enrollment and Labor Market Status**

The city of Boston’s School-to-Career programs are designed to enhance the immediate post-high school employability and post-secondary school attendance of youth attending the district and magnet schools by providing a combination of educational services, career guidance, college applications assistance, access to training, and in-school employment in fields such as finance, public administration, health, technical, and travel and tourism and guidance in applying for admissions to post-secondary school. Of the 2,241 graduates from the city’s non-exam high schools, 1,020 graduates reported that they had participated in a school-to-career program. Of those graduates who participated in such programs while in high school, 3.7 percent were enrolled in the Academy of Finance, 4.7 percent in the Academy of Public Service, 7.6 percent were enrolled in the Academy of Travel and Tourism, 7.2 percent in Pro Tech, 7.4 percent in Tech Boston, and the remaining 69.4 percent in other Career Pathways. (Table 25).<sup>17</sup>

Table 25: Numbers of Class of 2004 Boston Public High School Graduates Who Reported that They Had Participated in Some Type of School to Career Program by Type of Program

Program	Number of Graduates	Percent of Graduates
Academy of Finance	38	3.7
Academy of Public Services	48	4.7
Academy of Travel and Tourism	78	7.6
Pro Tech	73	7.2
Tech Boston	75	7.4
Other Career Pathway	708	69.4
Total	1,020	100.0

District school graduates who reported during the interview that they had participated in a School-to-Career program during high school were typically characterized by somewhat more favorable college enrollment and labor market

<sup>17</sup> These findings are based on the responses of graduates and their parents to the follow-up survey questions.

outcomes than their peers who did not participate in such programs. These differences reported in Table 26 by themselves do not represent independent program impacts since youth were not randomly assigned to these programs. A future paper will attempt to derive estimates of program impacts.

The college/post-secondary training enrollment rate among school-to-career program participants was about five percentage points higher (71% as opposed to 66%) than their for their peers in the non-exam schools who did not participate in school-to-career programs. (Table 26). School to career program participants were not only more likely to enroll in college than their peers who did not participate in such programs, but they were also employed at a modestly higher rate (56% versus 54%). Among the non-enrolled, school-to-career participants also were modestly more likely to be employed (63% versus 61%). Among those who were not enrolled in college or a post-secondary training program, mean weekly earnings of employed former school-to-career program participants were \$52 higher than those of their counterparts who did not participate in such programs. As mentioned above, these positive differences between the wage outcomes of school-to-career participants and their comparison group counterparts cannot be automatically attributed to the effects of these programs since youth were not randomly assigned to these programs. A future set of research papers will attempt to estimate the independent effects of participation in school-to-career programs on a set of college and labor market outcomes using data on the demographic, socioeconomic, academic performance, and school behavior characteristics of the participants in these school-to-career programs and their comparison group counterparts.

Table 26: Selected College and Labor Market Outcomes for Class of 2004 Graduates from the District and Alternative High Schools by Their Participation in School-to-Career Programs<sup>18</sup>

Outcome	School-to-Career Participant	Non-Participant	Difference (A-B)
College or Training Program Enrollment	71.1	66.5	+4.6
Employment Rate, All	55.8	54.5	+1.3
Employment Rate of Non-Enrolled	63.2	60.8	+2.4
Weekly Earnings of the Employed (Non-Enrolled)	\$335	\$283	+\$52

Table 27 displays the mean weekly wages of employed, non-enrolled Class of 2004 Boston public high schools who participated in various types of school-to-career programs. The mean weekly wages of non-enrolled school-to-career program participants ranged from highs of \$408 for graduates who participated in the Tech Boston program and \$407 for those who were enrolled in a Pro Tech program to lows of \$309 for graduates who participated in the Academy of Travel and Tourism and \$329 for graduates who participated in other career pathways.

Table 27: Weekly Wages of Employed, Non-Enrolled Class of 2004 Boston Public High School Graduates, by Type of Program

STC Program	Weekly Wage
Academy of Finance	\$225
Academy of Public Services	--
Academy of Travel and Tourism	\$309
Pro Tech	\$407
Tech Boston	\$408
Other Career Pathway	\$329
Non Participant	\$282

<sup>18</sup> These estimates are based on self-reported school-to-career program activities from the PIC follow-up survey. We do not have information on the intensity of these school-to-career programs, since we are not using the data set provided by the school-to-career office from the Boston Public Schools. We merged the data set provided by the STC office with follow-up data and found that nearly 6 out of 10 graduates from district/magnet schools with completed follow-up surveys were school-to-career program participants..

## Summer Job and Senior Year Employment Experiences of Class of 2004 Boston Public High School Graduates

The follow-up survey questionnaire also collected information from graduates on whether they worked during the summers of their high school years and during the senior year of high school<sup>19</sup>. This information also can be used to help predict the likelihood of post-high school employment and the future weekly earnings of employed graduates. Past local and national research has indicated that those graduates who worked more intensively in their senior year and the summers during their high school years had more favorable labor market outcomes in the first year upon graduation. National longitudinal research shows that the impacts of senior year work experience for the non-college bound can be quite long lasting.<sup>20</sup>

Table 28: Senior Year and In-School Summer Job Experiences of Class of 2004 Boston Public High School Graduates, by Gender and Race/Ethnic Group

Group	Percent with Summer Job Experience	Percent with Senior Year Job Experience
All	81.7	57.9
Men	80.4	55.0
Women	82.7	60.0
Asian	77.7	37.3
Black	83.2	60.2
Hispanic	76.2	59.3
White	87.1	64.0

Nearly 82 percent of the graduates from the Class of 2004 reported that they had worked in one or more of the summers during their high school years. (Table 28). Female graduates were somewhat more likely than men to have worked in the summers (83% vs.

<sup>19</sup> The questionnaire also collected data on the number of summers during which they were employed and the number of weeks during the senior year that they worked. For findings on the summer and senior year employment experiences of Class of 1999 graduates, see: Ishwar Khatiwada and Andrew Sum, The Senior Year In-School and Summer Work Experiences of Class of 1999 Boston Public School Graduates, a report prepared for the Boston Private Industry Council, March 2001.

<sup>20</sup> See: Christopher J. Ruhm, "The Extent and Consequences of High School Employment", Journal of Labor Research, Summer 1999, pp. 293-303.

80%). Among graduates from the four major race-ethnic groups, a substantial majority of each group worked at least one summer with White graduates (87%) most likely to have worked in the summer followed by Black graduates (83%), Asian graduates (78%), and Hispanic graduates (76%). Fifty-eight percent of the graduates also reported that they held some type of job during their senior year of high school, an employment rate well above that of all central city youth across the country. The findings for senior year job experience revealed that women graduates were more likely to have worked in the senior year than their male counterparts (60% vs. 55%). Among the race-ethnic groups, 59 percent to 64 percent of White, Black, and Hispanic graduates reported that they worked at some point during the senior year as compared to only 37 percent of Asian graduates. A future research report will examine the nature and intensity of these summer and senior year work experiences and their impacts on a variety of post-high school labor market outcomes. Findings from Class of 2003 revealed that graduates who worked three or more summers and were employed for 1 or more weeks in the senior year were significantly more likely to be employed at the time of the follow-up survey. The size of these effects were fairly large. Working for 13 or more weeks in the senior year, holding all other predictor constant, increased the probability of employment by 23 percentage points. The employment impacts of in-school work experience were quite favorable for both those graduates enrolled in college and the non-enrolled.

**Appendix A: Followup Interview Completion Rates for Class of 2004  
Boston Public High School Graduates by High School**

School Name	Percent with Completed Interview	Number with Completed Interview	Total Graduates
Boston Latin High School (1010)	77.7%	271	349
Boston Latin Academy (1020)	75.4%	178	236
O'Bryant High School (1030)	68.6%	140	204
Brighton High School (1040)	61.1%	110	180
Charlestown High School (1050)	49.7%	76	153
EBA (1061)	70.0%	42	60
APS (1062)	93.8%	45	48
East Boston High School (1070)	77.5%	148	191
English High School (1080)	67.9%	131	193
Hyde Park High School (1100)	69.2%	110	159
Burke High School (1120)	65.5%	76	116
Monument Academy (1161)	75.0%	42	56
Excel Academy (1162)	87.5%	35	40
Odyssey Academy (1163)	63.6%	35	55
Boston Community Leadership Academy (1195)	84.0%	68	81
Snowden International High School (1200)	82.8%	53	64
Madison Park High School (1210)	58.7%	125	213
Boston Adult Academy (1215)	9.4%	16	170
ACC (1230)	79.4%	27	34
West Roxbury High School (1250)	73.4%	116	158
Fenway Park High School (1265)	80.7%	46	57
New Mission (1285)	77.8%	28	36
McKinley Voc. (1293)	50.0%	6	12
McKinley Tech. (1294)	64.7%	11	17
Community Academy (1340)	75.0%	3	4
Boston Evening (1410)	10.0%	1	10
Boston Arts Academy (1420)	56.5%	39	69
Greater Eagleston (1430)	60.0%	6	10
Health Career Academy (1440)	94.2%	49	52
School Name Missing	0.0%	0	3
<b>Total, Excluding Boston Adult Academy</b>	<b>70.5%</b>	<b>2,017</b>	<b>2,860</b>
<b>Total, Including Boston Adult Academy</b>	<b>67.1%</b>	<b>2,033</b>	<b>3,030</b>