

**Gender Differences in High School Graduation Rates and the
College Enrollment Rates of Graduates From Boston Public
High Schools in Recent Years: Findings of the Follow-up
Surveys for the Class of 1999 and 2000 and Future Research
Issues**

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Introduction

Since the mid-1980s, the Boston Private Industry Council (PIC) in cooperation with the city of Boston's public schools has actively conducted an annual follow-up survey of each year's high school graduating class. The follow-up surveys are designed to track the success of each year's high school graduates in transitioning to college and the labor market in the first year following graduation. The follow-up survey also collects information on each Boston public high school graduate's college enrollment and employment status, the types of colleges and post-secondary training institutions attended, their financial aid status, and the key characteristics of their jobs, such as hours of work, hourly wages, occupations and industries of their employers, their job related training activities, and their opinions on how well their high schools prepared them for college and the labor market.¹

Three of the main indicators of the success of Boston public high school graduates in making the transition from high school to college and the labor market are the following: the college enrollment rate, the employment rate, and the inactivity rate, i.e., the fraction of graduates neither attending college/or a post-secondary training nor working. Findings of these follow-up surveys were generally quite favorable for the Class of 2000 as well as for the preceding two years' graduating classes. Findings for each of these three indicators also were more favorable for Boston public high school graduates than for most their national counterparts. Nearly 69 percent of the Class of 2000 graduates were attending a post-secondary education or training program at the time of the follow-up survey, the highest college enrollment rate ever recorded in the history of Boston public high schools. The college enrollment rate for Boston public high schools graduates was 2.5 percentage points higher than that of their national counterparts (65.8 percent vs. 63.3

¹ For recently released findings on the opinions of graduates from the Class of 2000 see: Ishwar Khatiwada, Andrew Sum, and Jacqui Motroni, Boston Public School Graduates' Perceptions of Their High Schools' Effectiveness in Preparing Them for College and The Labor Market: Findings from the Follow-up Survey of Class of 2000 Graduates, Center for Labor Market Studies, Northeastern University, Boston, December 2001.

percent).² Nearly 6 out of 10 Boston public high school graduates, including those youth attending college, were working at the time of the winter 2001 follow-up survey. The overall employment rate for Boston public high school graduates was 8.8 percentage points higher than their national counterparts (62.3 percent vs. 53.5 percent).³ At the time of the Winter 2001 follow-up survey, only 7.6 percent of Boston public high school graduates from the Class of 2000 were estimated to be “at-risk”, i.e., neither working nor enrolled in a school or a training program. This “at-risk” rate was the lowest for Boston public high schools since the late 1980’s.

Even though these findings on the college attendance and employment rates of Boston public high school graduates were quite positive, there were other aspects of the follow-up surveys’ findings that should be viewed as disturbing. Gender gaps in key educational outcomes need to be addressed. The number of women who graduated from the Boston public schools was higher than the number of men (118 women per 100 men) despite the fact that there were more males than women in the freshman class three years earlier (89 women per 100 men). Similar to the findings of the previous three years of follow-up surveys, there was a substantially greater number of female graduates than male graduates from the Class of 2000 who were attending college or post-secondary training institutions at the time of the follow-up survey. An analysis of the gender characteristics of Class of 2000 Boston public high school graduates attending college or post-secondary training institutions showed that there were 1189 female graduates but only 825 male graduates attending college. Fairly large gaps between the number of female and male college attendees prevailed for each major race-ethnic group, however, the relative size of the gaps were considerably higher for Black and Hispanic youth than they were for Asian or White, non-Hispanics.

² The college attendance rate of Boston public school graduates was adjusted to exclude those graduates from the Class of 2000 who were attending one year business college or post-secondary vocational/technical programs not leading to a degree. These definitional adjustments were needed to conform to the college attendance definitions of the U.S. Census Bureau in conducting the October CPS.

³ Military service personnel were excluded from the count of the employed in both the city of Boston and U.S in making these comparisons.

In this research report, we will provide a description and analysis of the gender differences in high school graduation rates and college enrollment rates among Class of 2000 Boston public high school graduates. To begin to understand the sources of these differences in college enrollments, we examine freshmen enrollment levels by gender and type of school in 1996-97 when most of the graduating seniors from the Class of 2000 would have begun their high school careers. We also will analyze gender differences in high school graduation rates for these 1996-97 freshman and in college attendance rates for those men and women who graduated from the city's public high schools in 2000. Findings on these college enrollment rates are presented for all men and women and for men and women in each of the following four race-ethnic groups: Asians, Black, not Hispanic, Hispanic, and White, not Hispanic. Findings on gender differences in college attendance rates for Boston's public high schools will be compared to those of the nation for the Class of 2000. Trends in college attendance rates among men and women throughout the nation over the past decade also will be highlighted. The final section of this research paper provides a summary of the main findings, identifies some of their economic and social consequences, and lays out a research agenda to improve our future knowledge of the forces that produce the current large gender gaps in high school graduation and college enrollment rates.

College Enrollment Activities Among Class of 2000 Graduates From the Boston Public High Schools

As mentioned earlier, the annual PIC follow-up survey collects information on the college and post-secondary training activities of each respondent. The findings are used to generate estimates of the total number of Class of 2000 graduates who were attending either a college (two-year, four year) or a post-secondary training institution.⁴ Nearly 69 percent of Class of 2000 graduates were estimated to be enrolled in college or post-

⁴ The survey findings for those graduates with completed follow-up interviews were weighted by race-ethnic group and high school to generate estimates of the population of graduates attending college. The follow-up interview completion rates were nearly identical for men and women, with completion rates ranging from 80 to 81 percent.

secondary training institution at the time of the winter 2000 follow-up survey. The estimated total number of graduates in college or a post-secondary training program was 2,014 of whom 1,189 were women and 825 were men. (Table 1). Thus, there were 144 female graduates enrolled in college or training programs for every 100 male graduates from the Classes of 2000. The ratio of female to male college enrollees was 147 for the Class of 1999. This gender difference in college enrollment levels was not due to an equivalently larger number of female high school graduates. Women were much more likely than men to attend college and they were more likely to graduate from high school.

Table 1: Estimated Number of Class of 2000 Boston Public School Graduates Attending College at the Time of the Follow-up Survey, Total and by Gender

Gender Group	Number Attending a College or Post-Secondary Training Programs
All	2,014
Men	825
Women	1,189
Number of Women Per 100 Men Attending College	144 per 100
Number of Women Per 100 Men Starting the Freshman Year of High School in 1996-1997	89 per 100

The Gender Composition of High School Freshman in 1996-1997 and Their Estimated Graduation Rates

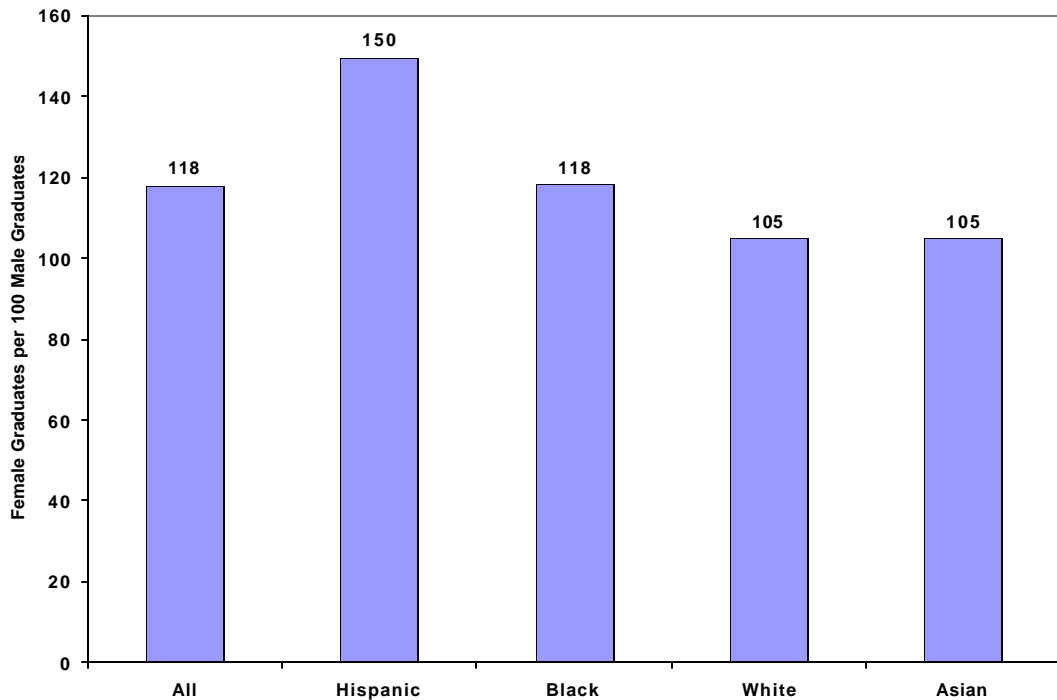
The gender gaps in the number of high school graduates from Boston public high schools over the four year period from 1997 to 2000 are quite striking. (Table 2). For each of these four graduating classes, the number of female high school graduates exceeded the number of male graduates by 19 to 26 percent, with the largest relative difference prevailing for the Class of 1999. Relatively large female-male differences in the number of high school graduates occurred among each of the four major race-ethnic groups, with the largest relative differences prevailing among Blacks and Hispanics. (Chart 1). For example, for the Class of 2000, there were 150 Hispanic female graduates

for every 100 Hispanic male graduates and 118 female Black graduates for every 100 Black male graduates, but only 105 Asian and White female graduates for every 100 Asian and White male graduates.

Table 2: Number of Male and Female Graduates from Boston Public High Schools, Classes of 1997 to 2000

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	1,343	118

Chart 1: Number of Female Graduates per 100 Male Graduates from Boston Public High Schools, Class of 2000, Total and by Major Race-Ethnic Group



There have been large gender differences in the number of graduates from both the exam and district high schools. The higher ratios of female to male graduates in the three exam schools is attributable in part to higher numbers of incoming freshman three years earlier. In both the exam schools and the district schools, the numbers of female

graduates from the classes of 1999 and 2000 were higher than the number of male graduates, with very large differences prevailing for the three exam schools. However, there was a substantive improvement in the gender gaps among exam school graduates in the most recent year. (Table 3). For the Class of 2000, there were 126 women graduating from the city’s three exam schools for every 100 men as compared to 158 women per 100 men for the Class of 1999. Among all other high schools, including the district high schools, there were 116 female graduates for every 100 male graduates from the Class of 2000.

Table 3: Number of Male and Female Graduates from Boston Public High Schools, by Type of High School, Classes of 1998, 1999, and 2000

Graduating Class	Exam Schools			Non-Exam Schools		
	Female	Male	Females per 100 Males	Female	Male	Females per 100 Males
1998	440	298	148	1,245	1,012	123
1999	453	287	158	1,217	1,034	118
2000	400	317	126	1,194	1,033	116

To better understand the sources of gender differences in the number of graduates from the city’s public high schools, we need to identify how many students entered high school as freshman and their gender characteristics. Most of the high school graduates from the Class of 2000 would have begun their freshman year of high school during the 1996-97 year. During that year, there were 5,039 high school freshmen in Boston public schools, of whom 2,666 were men and 2,372 were women. (Table 4). Overall, there were only 89 women per every 100 men in the freshman class. The female/male ratio, however, varied quite considerably between the city’s three exam schools and the district schools. In the three exam schools (Boston Latin, Latin Academy, and O’Bryant Technical High School), there were 114 women in the freshman class for every 100 men while only 83 women attended the city’s district schools for every 100 male freshmen. Within the city’s three exam schools, the number of women per 100 freshmen ranged from 110 in Boston Latin to 121 for O’Bryant Technical High School while in the district

schools, the number of women per 100 male freshmen ranged from 65 in Jeremiah Burke to 133 for Fenway Park High School. Why fewer males than females enter the city's three exam schools as freshman is a research question that needs to be addressed.

Table 4: Number of High School Freshmen in the 1996-1997 School Year, Total and by Gender for All High Schools, Exam Schools, and All Other Schools

Group	All High Schools	Exam Schools	All Other High Schools
All	5,039	1,059	3,980
Women	2,373	563	1,810
Men	2,666	496	2,170
Women per 100 Men	89	114	83

High School Graduation Rates Among Men and Women in the City of Boston's Public High Schools

Our preceding findings revealed that the higher numbers of female college enrollees in recent years were not attributable to a larger number of women among the incoming public high school student population of the city. Of the 5,039 freshmen in the 1996-97 school year, only 2,934 graduated in 2000, representing a "graduation rate" of just above 58 percent. (Table 5). It should be noted that some of the non-graduates transferred to other public high schools outside of the city and to private schools, some were still enrolled in high school in 2001 and others dropped out without receiving a diploma. Over the past few years, it has been observed that women were more likely than men to graduate from Boston public high schools. For the Class of 2000, the number of female graduates as a percent of 1996-97 female freshmen was 67 percent versus only 50 percent for men. An intriguing question is what happened to the remaining 2,134 freshman pupils from the class of 1996-97? Unfortunately, we don't have data on either the graduation status or the current school enrollment status of these students.

Table 5: Class of 2000 Graduates from Boston Public High Schools as a Percent of Incoming Freshmen During the 1996-1997 School Year, Total and by Gender

Gender Group	1996-1997 Freshmen	2000 Graduates	Graduates as a % of Freshmen
All	5,039	2,934	58.2
Women	2,373	1,591	67.0
Men	2,666	1,343	50.4

The overall “high school graduation rate” for 1996-97 freshman students in 2000 was 58.2 percent. Women who entered high school in the 1996-97 school year graduated at a higher rate than men. The high school graduation rate of women from the city’s public high schools was estimated to be 71 percent versus 64 percent for men. In both the exam and district high schools, women were more likely to graduate than men. In the three exam schools, 71 percent of female freshmen graduated with the Class of 2000 versus only 64 percent of the male freshmen, a 7 percentage point difference in graduation rates. (Table 6).

Table 6: Class of 2000 Graduates from the City's Three Exam Schools as a Percent of Incoming Freshmen During the 1996-1997 School Year, Total and by Gender

Gender Group	1996-1997 Freshmen	2000 Graduates	Graduates as a % of Freshmen
All	1,059	717	67.7
Women	563	400	71.0
Men	496	317	63.9

In each of the three exam high schools, the graduation rates of women exceeded those of men, with the size of the gaps ranging from 4 percentage points for O’Bryant Technical High School to nearly 14 percentage points for Boston Latin Academy. (Table 7).

Table 7: Estimated Percent of 1996-1997 Freshmen Who Graduated in 2000 In Each of the Three Exam Schools by Gender

High School	Men	Women	Women-Men
Boston Latin	68.1	73.8	5.7
Boston Latin Academy	61.8	75.5	13.7
O'Bryant Technical	58.8	62.8	4.0

Similar to the findings for the city’s exam schools, women also were more likely than men to graduate from the city’s district high schools. For the district and magnet schools, the number of Class of 2000 graduates as a percent of 1996-97 freshmen was 56 percent, and the graduation rate of women exceeded that of men by 18 percentage points (66 percent vs. 47.6 percent). (Table 8).

Table 8: Class of 2000 Graduates from the City's Non-Exam Schools as a Percent of Entering Freshmen During the 1996-97 School Year, Total and by Gender

Gender Group	1996-1997 Freshmen	2000 Graduates	Graduates as a % of Freshmen
All	3,980	2,227	56.0
Women	1,810	1,194	66.0
Men	2,170	1,033	47.6

The findings of higher dropout rates among males in the city of Boston’s public schools were not unique to the city. Similar findings were revealed by the Massachusetts Department of Education’s 1999-2000 statewide dropout study.⁵ The annual high school dropout rates for males in Massachusetts during the 1999-2000 school year was 4.0 percent versus only 2.9 percent among women, a 38% difference. (Table 9). The dropout rate for male high school students in the city of Boston was 37 percent higher than that of women, with 10.8 percent of the male high school students dropping out versus 7.9 percent of the women. We also examined school dropout rates for men and women in 10 other central cities and low income cities in the state during the 1999-2000 school year.

⁵ See: Massachusetts Department of Education, Dropout Rates in Massachusetts Public Schools: 1999-00, Malden, November 2001.

Dropout rates for men were higher than those of women in all but one of these cities (Springfield). The dropout rates of men were 10 to 147 percent higher than those of women in these nine cities.

Table 9: Estimates of Annual High School Dropout Rates in Massachusetts, the City of Boston, and Other Central Cities in the State, by Gender, 1999-2000 School Year

Area	Men	Women	Men as % of Women
State	4.0	2.9	138
Boston	10.8	7.9	137
Brockton	7.0	4.6	152
Chelsea	10.4	7.8	133
Gardner	5.2	2.1	247
Fall River	8.6	5.3	162
Lawrence	12.8	11.6	110
Lowell	12.2	10.9	112
New Bedford	10.7	6.8	157
Pittsfield	7.2	4.9	147
Springfield	6.0	6.1	98
Worcester	6.7	5.6	120

College Attendance Rates of Boston Public High School Graduates From the Class of 2000

Findings in the previous section revealed higher graduation rates for women than for men from Boston's public high schools. This finding of a higher graduation rate for women also held true for the exam schools and district schools separately and for each race-ethnic group. Once students have graduated from high school are there any substantive gender differences in college attendance rates? To answer this question, we analyzed the findings of the winter 2001 PIC follow-up survey on the college enrollment status of male and female graduates from the Class of 2000. Findings in Table 10 clearly indicate that there were substantive gender differences in college attendance rates between male and female graduates from the Class of 2000. Overall, three of every four female graduates from the Class of 2000 were attending college or post-secondary training institutions at the time of the Winter 2001 follow-up survey versus only 62

percent of the men, a 12.5 percentage point difference in favor of women (Table 10). Women in each race-ethnic group were attending college at a higher rate than their male counterparts at the time of the winter follow-up survey, with the size of these differences ranging from lows of 3 and 7 percentage points for Asian and White graduates to highs of nearly 15 and 22 percentage points for Black and Hispanic graduates, respectively. College enrollment rate also varied substantially among men and women graduating from the exam schools and district schools. College enrollment rates of women were also were higher than those of men graduating from exam schools and district schools. The college attendance rate of women was nearly 14 percentage points higher than that of men in the district schools, but only 5.3 percentage points higher in the exam schools.

Table 10: Estimated College Attendance Rates of Class of 2000 Boston Public High School Graduates by Gender and Race/Ethnic Group
(Numbers in Percent)

	Women	Men	Women-Men
All	74.6	62.1	12.5
Asian	92.1	88.8	3.3
Black, not Hispanic	72.3	57.6	14.7
Hispanic	68.5	46.7	21.8
White, not Hispanic	77.9	71.1	6.8
Exam Schools	93.6	88.3	5.3
District Schools	68.0	54.3	13.7

Overall, the estimated number of female graduates from the Class of 2000 who were attending college or post-secondary training institutions at the time of the follow-up survey was 1,189 versus only 825 men. Thus, there were 144 women attending college or post-secondary training institutions for every 100 male graduates from the Class of 2000. (Table 11). The female/male ratios were even higher for graduates from the Class of 1999 and 1998. The female/male ratio for Class of 2000 graduates was slightly lower than that for the Class of 1999 (147). In each race-ethnic group, the number of female graduates from the Class of 2000 who were enrolled in college at the time of the winter 2000 follow-up survey substantially exceeded the number of men, with the relative size of

these differences ranging from 109 and 115 women per 100 men among Asian and White graduates to highs of 149 and 219 women per 100 men among Black and Hispanic graduates, respectively. While the size of the gender differences in college enrollments narrowed modestly among Asian, Black, and White graduates, it widened among Hispanic graduates from the Class of 2000. (See Table 12).

Table 11: Gender Distribution of College Enrollees from the High School Graduating Class of 2000 (Weighted Cases)

	Male	Female	Females per 100 Males
All	825	1,189	144
Asian	149	162	109
Black, not Hispanic	389	581	149
Hispanic	109	239	219
White, not Hispanic	178	204	115

Table 12: Gender Distribution of College Enrollees from the High School Graduating Class of 1999 (Weighted Cases)

	Male	Female	Females per 100 Males
All	810	1,192	147
Asian	122	154	126
Black, not Hispanic	351	549	156
Hispanic	133	218	164
White, not Hispanic	204	265	130

Table 13: Gender Distribution of College Enrollees from the High School Graduating Class of 1998 (Weighted Cases)

	Male	Female	Females per 100 Males
All	721	1,150	160
Asian	128	156	122
Black, not Hispanic	346	594	172
Hispanic	119	223	187
White, not Hispanic	127	177	139

Comparisons of The College Attendance Behavior of Male and Female Graduates From the Boston Public High Schools With Those for the U.S.

Each year in October, the U.S. Census Bureau includes a set of supplementary questions to the monthly CPS household survey to identify recent high school graduates and their college enrollment status. We have used the findings of the October 2000 CPS survey to make comparisons of college enrollment rates for Boston's public high school graduates with those for their national counterparts from the Class of 2000.⁶ Overall, Boston public high school graduates were 2.5 percentage points more likely to enroll in college than their national counterparts. Male graduates from Boston, however, were 0.5 percentage points less likely than their national male counterparts to be enrolled in college whereas female high school graduates from Boston were 5 percentage points more likely to enroll in college than their U.S. counterparts. (Table 14). Class of 2000 graduates from the city's public high schools in each major race-ethnic group were more likely to be attending college than each of their national counterparts.

Table 14: Comparisons of College Attendance Rates of Boston Class of 2000 Public School Graduates⁷ with Those of Their Counterparts in the U.S., Total and by Gender

Demographic Group	Boston	U.S.	Boston Less U.S.
All	65.8	63.3	+2.5
Men	59.4	59.9	-0.5
Women	71.2	66.2	+5.0

⁶ For data on college enrollment activities of recent high school graduates for the U.S, see: U.S. Bureau of Labor Statistics, "College Enrollment and Work Activity of Year 2000 High School Graduates", Labor Force Statistics from the Current Population Survey, Washington D.C., April 13, 2001.

⁷ Boston's college attendance rates were adjusted to exclude those graduates from the Class of 2000 attending one year business colleges or post-secondary vocational/technical programs. They are not counted as college students in the October CPS surveys.

Trends in The College Attendance Behavior of Young Male and Female High School Graduates and Young Adults in the U.S.

The college attendance rate of new high school graduates in the U.S. has increased modestly over the past decade, increasing from 59.8 percent in 1990 to 63.3 percent in 2000; however, the college attendance rate of new high school graduates fluctuated over the past 10 years. (Table 15). For example, the college attendance rate rose from over 60 percent in 1990 to 67 percent in 1997, a gain of full 7 full percentage points, but, after 1997, the college attendance rate has declined, falling to 63 percent in the past two years. The finding of gender gaps in college attendance rates is clearly not unique to the public high schools of Boston. Such gender gaps in college attendance also prevailed for the nation as a whole and in some years were even wider than those found in the Boston public high schools.

Table 15: October College Attendance Rates of Each Year's New High School Graduates, Total and by Gender, U.S. Classes of 1990 to 2000

Year	All	Men	Women	Women-Men
1990	59.8	57.8	62.0	4.2
1991	62.3	57.5	67.1	9.6
1992	61.6	59.6	63.8	4.2
1993	62.6	59.7	65.4	5.7
1994	61.9	60.6	63.2	2.6
1995	61.9	62.6	61.4	-1.2
1996	61.9	60.0	69.7	9.7
1997	67.0	63.5	70.3	6.8
1998	65.6	62.4	69.1	6.7
1999	62.8	61.4	64.4	3.0
2000	63.3	59.8	66.2	6.4

Data Source: U.S. Bureau of Labor Statistics, "College Attendance of New High School Graduates," Selected Publications, 1991 to 2000.

Gender gaps in college attendance rates for all young adults ages 18-24 in the U.S. have widened considerably over the years. (Table 16). Women in the 18-24 age group markedly increased their college enrollment over the past 15 years. In the mid-

1980s, the college attendance rate among 18-24 year old men was 1.2 percentage points higher than that of women in the same age group⁸; however, at the outset of the 1990s, the college attendance rates of men and women were statistically identical. By 2000, however, the college attendance rate of all 18-24 year old women exceeded that of men by nearly six percentage points. (Table 16).

Table 16: Trends in College Enrollment Rates of All 18-24 Year Old Men and Women in the U.S., Selected Years: 1985-2000

	All Men	All Women	Women-Men
1985	28.4	27.2	-1.2
1990	32.3	31.8	-0.5
1995	33.1	35.5	2.4
2000	32.6	38.4	5.8

Gender gaps in college attendance in favor of women prevailed in each race-ethnic group in October 2000. (Table 17). The college attendance rate for Black women 18-24 years old exceeded that of Black men by 10 percentage points, the largest gap among the three race-ethnic groups. Hispanic women enjoyed a 7 percentage point advantage over their male counterparts, and a smaller gap of 6 percentage points existed between the college attendance rates of White men and women.

Table 17: October College Attendance Rates of 18-24 Year Olds in the U.S., by Gender and Race-Ethnic Origin, October 2000

	Men	Women	Women-Men
All	32.6	38.4	+5.8
Black	24.9	35.1	+10.2
Hispanic	18.5	25.4	+6.9
White	32.8	38.5	+5.7

Data Source: U.S. Bureau of Census, October 2000 CPS Supplement, tabulation by Center for Labor Market Studies.

⁸ The college attendance rate is defined as the ratio of the number of young adults attending college in October 2000 to the estimated number of 18-24 year olds in the civilian non-institutional population. College enrollments include those youth attending junior colleges, community colleges, four-year colleges and universities, and graduate/professional schools.

Bachelor Degree Attainment Rates Among 22-29 Year Olds in the U.S. by Gender

Not only are more women than men throughout the country enrolling in college and remaining in college in their young adult years, but they are also obtaining associate degrees and bachelor degrees at considerably higher rates than men. We have analyzed the findings of the March 2000 and March 2001 national CPS household surveys to identify the educational attainment of all 22-29 year old male and female adults in the civilian non-institutional population⁹. With the available data on their educational attainment, we first estimated the number of persons in the 22-29 year old population that held a bachelor's or more advanced academic degree in each gender group and then calculated the number of women with a bachelor's or higher degree per 100 men. Our findings are presented in Table 17.

On average, during March 2000 and March 2001, there were 128 women (22-29 years old) with a bachelor's or higher degree per 100 men. The number of women with at least a four-year college degree was higher than that of men in each of our five race-ethnic groups. The ratio of college-educated women to men ranged from a low of 117 among Asians to highs of 143 for Hispanics and 213 for American Indians. An analysis of the numbers of young adults holding an Associate's degree yielded very similar gender differences. (Table 19). On average, there were 126 young adult women with an Associate's degree for every 100 men, and these ratios were above 100 for each race-ethnic group, with their sizes ranging from 115 for White, non-Hispanics to 182 for Blacks and 274 for American Indians. These findings represent a substantial departure from those two decades earlier when the number of men obtaining bachelor degrees was higher than that of women.

⁹ The civilian non-institutional population excludes inmates of institutions (jails, prisons, long stay hospitals) and persons serving in a branch of the nation's armed forces whether at home or abroad. A high fraction of male prison inmates do not have diplomas or GED certificates. The data include foreign immigrants who arrived in the U.S. after attending school in their home country, but never attended school in the U.S.

Table 17: Number of 22-29 Year Old Women with a Bachelor's or Higher Degree Per 100 Men, Total and by Race-Ethnic Origin, U.S.: March 2000 and March 2001

Race-Ethnic Group	March 2000	March 2001	Average March 2000-2001
All	132	123	128
American Indian	146	280	213
Asian	124	135	130
Black, not Hispanic	145	135	140
Hispanic	146	141	143
White, not Hispanic	130	122	126

Data Source: March 2000 and March 2001 CPS public use tapes, tabulation by Center for Labor Market Studies

Table 18: Number of 22-29 Year Old Women with an Associate's Degree Per 100 Men, Total and by Race-Ethnic Origin, U.S., March 2000 and March 2001

Race-Ethnic Group	March 2000	March 2001	Average March 2000-2001
All	127	124	126
American Indian	370	178	274
Asian	152	116	134
Black, not Hispanic	196	168	182
Hispanic	148	114	131
White, not Hispanic	113	116	115

Data Source: March 2000 and March 2001 CPS public use tapes, tabulation by Center for Labor Market Studies

Summary of Findings and Further Research Issues

Our research findings on the existence of substantial gender differences in high school graduation rates and college attendance rates among graduates from Boston public schools should be of concern to educational and political leaders, community leaders, workforce development agencies, and the public at large. The estimated graduation rates of men were substantially lower than those of women in both the exam and district schools. Considerably more women than men graduated from the Boston public schools in 2000 despite the fact that there were more males in the freshman class three years earlier. Findings for 2000 were quite similar to those for 1999 and 1998. In addition, college enrollment rates among female high school graduates from the Class of 2000 were markedly higher than those of men.

The high dropout rates and lower college enrollment rates among males, especially in district high schools, will adversely affect their lifetime labor market and economic success. National labor market research has consistently revealed the existence of substantially higher lifetime earnings for high school graduates than those without a high school degree and for college graduates than for high school graduates. Based on 2000 national annual earnings data, males lacking a high school diploma or a GED certificate will obtain lifetime earnings through age 64 of only \$855,000, or \$452,000 less than a typical high school graduate and \$890,000 less than a male obtaining an associate's degree.¹⁰ Males with a bachelor's degree had expected lifetime earnings of \$2.546 million in 2000, exceeding that of high school graduates by \$1.245 million, or nearly 100 percent. The higher dropout rates of young men from the Boston public schools and their lower college enrollment rates will considerably lower their expected life time incomes, reduce their ability to form independent households, to marry, to support their children, and to contribute to the economic well-being and the productivity of their communities and the nation at large. The poorer educational outcomes of young

¹⁰ For similar findings for earlier years, see: Andrew Sum, Neeta Fogg, and Garth Magnum, Confronting the Youth Demographic Challenge: The Labor Market Prospects of Out-of-School Young Adults, Sar Levitan Center for Social Policy Studies, Johns Hopkins University, Baltimore, 2000.

men, thus, deserve the attention of all of the city's educational, political, and community leaders.

There are a number of important research issues regarding the existing gender differences in high school graduation rates and college attendance rates for Boston's public high school. Improving our knowledge of why these key educational outcomes for men in Boston's public high schools are poorer than those of women will require further research in the following areas:

First, why do women continue to gain entry into the city's three exam schools at higher rates than men? Do fewer men than women apply for the tests needed to gain entrance to the city's exam schools? If so, why are there gender gaps in these application rates? Do men perform significantly less well than women on the entrance exams? Or, do men simply not enroll at the same rates as women when they are admitted into the exam schools?

Second, why do males in the city's three exam schools exit from these schools at much higher rates than females prior to graduation? What role does poor academic performance play in influencing the higher exit rates of men? What happens to these male exam school leavers? Do they transfer to other high school in the city, including private schools, do they transfer to high schools outside of the city, or do they eventually drop out of high school altogether? The official annual dropout rates for the city's three exam schools for recent years are very low, i.e., under one percent. If true, does this imply that men from the exam schools are transferring out at much higher rates than women?

Third, why do males in the district schools and the alternative high schools drop out of these high schools at much higher rates than women? Where do these male school leavers go after they exit the Boston public schools? How many of them transfer to other high schools within the city or to other high schools in the state? How many of them actually graduate from high school or obtain a GED certificate? How many simply end

up jobless or involved with the criminal justice system? There is a clear need for more longitudinal tracking of all high school dropouts, both men and women.

Fourth, why do male high school graduates outside of the exam schools attend college at considerably lower rates than their female counterparts? Do these men have significantly weaker academic skills and course grades? Were they less likely than women to take a college-oriented curriculum? Were they less likely to apply to college and to gain admission when they did apply? Can better counseling and monitoring programs improve college enrollment rates of young men?

Fifth, do school-to-career programs or Bridge programs offering assistance in enrolling in college enhance graduation rates and college attendance rates among male and female graduates?

Sixth, how well have recent male and female graduates from the city's public schools fared in college? What are the college retention rates and academic performance of male and female graduates? Longitudinal tracking of performance in each of these areas is critical to evaluating the long-term success of Boston's academic and school-to-career programs.

These are the research questions of paramount importance if we are to obtain a more comprehensive understanding of the lower high school graduation rates and college attendance rates of recent male high school students in the Boston public schools. Once the sources of these problems are better understood, the city can begin to design and implement new education, counseling, mentoring, and college transition programs to bolster the high school graduation and college enrollment rates of men, especially Black and Hispanic men.