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Where We Go To School: Latino Students and the Public Schools of Boston

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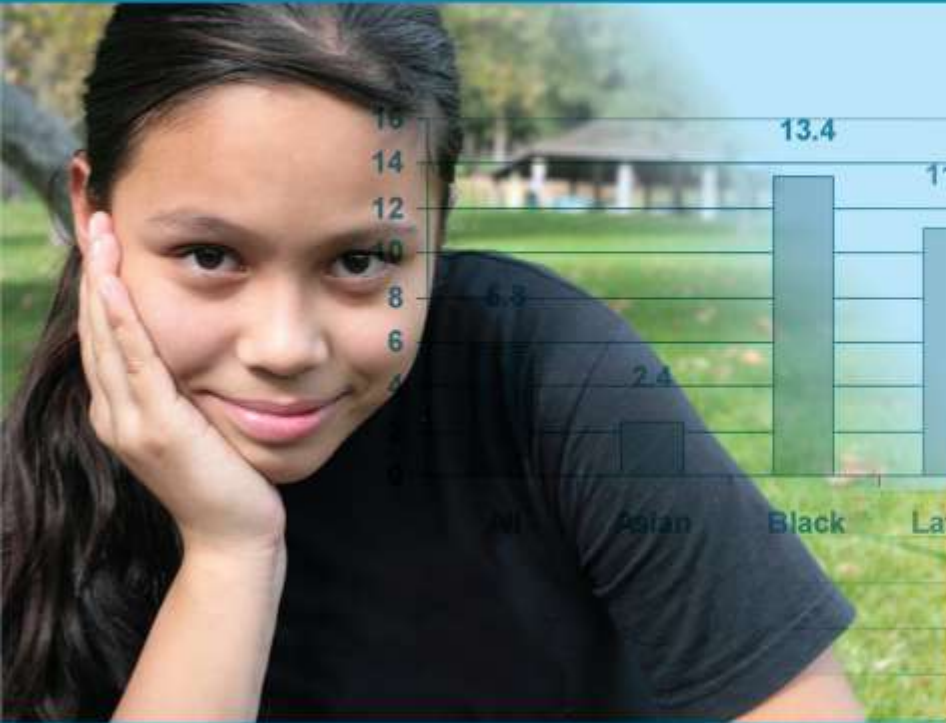
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The Mauricio Gastón Institute for
Latino Community Development
and Public Policy



Suspension for

Where we go to school....

Latino Students and the Public Schools of Boston

by Miren Uriarte, Jie Chen and Mandira Kala

BARR FOUNDATION

Using KNOWLEDGE, NETWORKS and FUNDING
to Build a Better Boston for All



Where we go to school....

Latino Students and the Public Schools of Boston



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Where we go to school....

Latino Students and the Public Schools of Boston

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Miren Uriarte, Jie Chen and Mandira Kala

Executive Summary

Where we go to School: Latino Students and the Public Schools of Boston uses available public data to provide the fullest view possible of that school population group in the Boston Public Schools. Using Latino students as the lens, the report also examines the effect of school quality variables on the drop-out rate and the academic outcomes of students.

Boston Public Schools is the largest school district in the state, enrolling 56,765 students in AY 2006, the school year that is the focus of this study. The information available about Latino outcomes in BPS is worrisome: high drop-out rates and low MCAS scores and overall achievement have been documented now for many years. These outcomes together with the challenges Latinos face in Boston schools because of their racial diversity, their immigrant experience, their English language proficiency, and the level of poverty of Latino families in Boston underscore the urgency to understand the experience of Latino children in Boston's public schools.

This study focuses on Latino students in the Boston Public Schools and seeks to address the following questions:

1. What are the characteristics of schools that Latino students attend?
2. What are the outcomes (engagement and academic achievement) of Latino children in Boston schools with different characteristics?

Data and Methods

This study is largely based on publicly available data from the Massachusetts Department of Education and the Boston Public Schools. Data for AY2006 served as the base data for the study and includes public data available at the websites of the Massachusetts Department of Education and the Boston Public Schools. It includes also data from custom data runs from the Massachusetts Department of Education and the Boston Public Schools. The study included 136 of the 144 schools in the Boston district. It includes 116 district schools, 17 pilot schools, and 3 exam schools. The study excluded schools serving special populations and those about which there was no available outcome data as well as the 15 charter schools operating in the city of Boston. The analyses used a dataset of Boston schools developed for the study that includes AY 2006 enrollment characteristics, school characteristics, school quality variables, and outcome variables for groups of students defined by race and ethnicity.

The variables used in this study are limited by those available in public data and disaggregated by race and ethnicity. They include student socio-demographic variables (such as gender, students eligible for free and reduced lunch, first language not English, and limited English proficiency); program participation variables (like grade level, participation in SPED, and participation in programs for English language learners); student engagement and academic outcome indicators (such as attendance, missed days, suspensions, retention rate, drop-out rate, graduation rate, and the MCAS pass rates in ELA and in math, cumulative performance index); school characteristics (grade levels in the school, type of school, zone, high/low poverty school, and the size of the school) and school quality variables: accountability status in ELA and math, percentage of teachers licensed in teaching assignment, percentage of highly qualified teachers teaching in core academic areas, and student teacher ratios).

Major Findings and Recommendations

1. The characteristics of Latino children in BPS are very similar to those of other BPS students except for the following:

- a higher percentage of them have a home language other than English (64.8% vs 41.4%) and are designated as of limited English proficiency (30.7% vs 16%)
- a higher percentage of them attend special programs (SPED or ELL programs) (46% vs 35%).

2. Where a Latino child goes to school—whether a district, pilot or exam school or schools that are large or small—is an important element of both their engagement with and of their achievement in BPS. Latino students most frequently attend schools that:

- have a traditional grade configuration, that is, K-5 elementary school, 6-8 middle school, and 9-12 high school.
- are district schools; 87.1% of Latino students attend a district school. Latino children are under-represented in pilot schools, where 28% of students are Latino, but more severely so in the exam schools, where only 12% of the enrollment is Latino.
- are large in size, at both elementary and high school levels
- that are “high poverty” schools, that is, where the poverty rate is over 75%.

All of these characteristics were associated with high drop-out rates and low MCAS pass rates for Latino students in BPS. Parents and students and community-based organizations working with youth should be familiar with those factors related to better engagement and achievement.

- **Recommendation 1.** Support Latino students’ access to exam schools through programs such as UMass Boston’s Alerta and TAG and other programs geared to identifying and supporting academically talented Latino students.
- **Recommendation 2.** Make pilot schools more accessible to Latino students by supporting education about the benefits of pilot schools geared to both Latino students and their parents. Orient parents to select pilot schools for their children, particularly in high school.
- **Recommendation 3.** Identify those district schools where Latino children are doing well. Orient parents to select:
 - small schools.
 - schools that have met adequate yearly progress in both Math and ELA.

3. Latino students have a dismal engagement with Boston schools. They trail all student groups in Boston and even their Latino peers across the state in key engagement indicators: attendance, drop-out, and graduation rates. Twenty-six percent of Latino students drop out of Boston schools before finishing high school.

4. For Latino students in BPS, dropping out of school begins as early as the 6th grade and continues unabated through the high school years. By the end of middle school 3% of Latino students have dropped out; in 2006, the year of our observation, 15.2% of those Latino students who dropped out did so in middle school. Only 50.6 percent of Latino students graduate in 4 years; 57% graduate in 5.

- **Recommendation 4.** Assess district high schools with an eye to identifying factors that lead to the very high drop-out rates among Latino students in each of those schools and to putting in place short-term initiatives to alleviate such massive school leaving on the part of Latino students.
- **Recommendation 5.** Establish a state-of-the-art dropout prevention program in Boston Public Schools that
 - identifies risk factors in the early grades
 - supports the development of strategies school by school
 - addresses key risk factors before students enter high school.
- **Recommendation 6.** Support Mass Senate Bill (S 2462) to improve dropout prevention and reporting of graduation rates. The bill proposes to raise the compulsory attendance age to 18 years, to establish a Graduation and Drop-out Commission and to provide grants to implement in-district “early education indicator systems” to track students unlikely to graduate on-time from high school.
- **Recommendation 7.** Support a family and community education initiative to reduce the drop-out rate by
 - focusing on improving attendance and reducing absenteeism
 - supporting the role of families in maintaining children in school.
 - expanding access to a broad range of types of after-school programs for middle school students
 - involving the media in reinforcing these messages.

5. Teachers are a key element in increasing the graduation rate and holding down the drop-out rate in schools: teachers are in many ways the “Anti-Drop-Out.” The role of licensed and highly qualified teachers impacted more the engagement variables than was the case for the indicators of academic achievement.

- **Recommendation 8.** Gain a better understanding of the role of teachers in engaging Latino students and maintaining them in school by conducting qualitative field research in schools with lower drop-out rates (exams and pilots), to highlight those elements of the student / teacher relationship that support student engagement.
- **Recommendation 9.** Develop teacher mentoring programs focused on dropout prevention, where teachers strategize with teachers about ways to maintain children in school.

6. Latino academic outcomes are the most depressed of any racial/ethnic group in the district. Latino MCAS pass rates at all levels and in both ELA and math (with the exception of 8th grade math) are the lowest of all groups.

The assessment of the achievement gap using the Composite Performance Index developed by the Department of Education shows that the **achievement gap between Latino and White students is twice as large in Math as in ELA and that the non-Latino–Latino gap is almost three times as large in Math as in ELA.**

- **Recommendation 10:** Provide professional development opportunities that orient staff and teachers to factors related to the drop-out rate, the achievement gap and, in general, the differential engagement and academic performance of groups of students.

7. In addition to the type of school a student attends, academic achievement is impacted by the level of poverty in the school. All of Boston's schools have a high percentage of students who are poor (eligible for free and reduced lunch). There is evidence that the actual additional cost of educating low-income children is between two and two-and-a-half times the cost of educating non-poor students.

- **Recommendation 11.** Support a process of school financing at the state level that takes more account of the proportion of students who are poor or who require special services, such as SPED or ELL services, and that targets high-poverty and high-service-need districts.

8. School achievement for Latino students, as measured by both MCAS pass rates and CPI's for the group, is also correlated with whether or not a school met its annual progress goals. This is especially the case in middle school and high school. In AY 2006, close to 80% of Latino students attended a school that had not met its expected yearly progress overall or for its racial subgroups, as measured by the state's Adequate Yearly Progress measures.

- **Recommendation 12.** Conduct a full school assessment of each school that falls behind its AYP goals. This assessment should include curriculum and instruction as well as school culture and climate, leadership, its success in parental involvement, and its perspective on students and their families. Assessments should involve teachers, administrators, parents, and district staff.
- **Recommendation 13.** Start from the frame of reference that a student only has one chance to be in 3rd (or 4th or 6th or 10th) grade. A continued unsuccessful schooling experience is difficult to remediate. Therefore, expedite the process of intervention in schools that do not meet expected progress for two years in a row. Support those schools that engage successfully in a transformation of their practices. Take strong remedial action in schools that fail to make enough change to improve the outcomes of their students.
- **Recommendation 14.** Develop parent education materials on the AYP, including its meaning and where to find each school's rating to support parents' school choices in Boston. Orient parents to choose schools that meet AYP goals.

Where we go to school....

Latino Students and the Public Schools of Boston

Miren Uriarte, Jie Chen and Mandira Kala

Introduction

Where we go to School: Latino Students and the Public Schools of Boston focuses on the experience of Latino children in the Boston Public Schools (BPS). Using available public data that had not previously been compiled, it aims at the fullest view possible of the Latino school population.

Boston Public Schools is the largest school district in the state, enrolling 56,765 students in AY 2006, the school year that is the focus of this study. School enrollments in Boston have been both shrinking and diversifying (Table 1). In 2000-2001, for example, enrollments numbered 63,024; just five years later, enrollment was 9.6% lower. Driving this drop in numbers was a decrease in the enrollment of Asian, Black, and White students. Only Latinos and “others” increased in this period. The latter increased as function of new racial classifications. The former increased as a reflection of the growth of the Latino population in the city.

Although Boston has only the eighth highest percentage of Latino students in its public schools (after Lawrence, Chelsea, Holyoke, Springfield, Lynn, Fitchburg, And Southbridge), its nearly 19,000 Latino students give Boston the highest Latino enrollment of any Massachusetts city (Lavan & Uriarte, 2008a).

The information available about Latino outcomes in BPS is worrisome. In 2001, Lorna Rivera’s work on Boston’s Latino students pointed to severe problems: high drop-out rates, low scores on the Massachusetts Comprehensive Assessment System (MCAS) tests, and an overall achievement level that was well below that of other groups. Since that time, assessments of BPS student outcomes emerging from the media have continuously underscored the low test scores experienced by Latino students and the widening gap in achievement between them and other groups in BPS (Jan, 2006a, 2006b; Sacchetti, 2005; Walker, 2007). More recent reports focus not only on the depressed outcomes of Latino students but also in their high drop-out rates (Boston Youth

Table 1. Changes in Enrollment by Race.

	AY 2001	AY 2006	% change
Total	62,959	56,853	-9.7
Asian	5672	4824	-15.0
Black	30503	24348	-20.2
Latino	17628	18999	10.0
White	9264	7718	-16.7

Sources: Mass DOE.

www.doe.mass.edu/infoservices/reports/enroll/?yr=0001

www.doe.mass.edu/infoservices/reports/enroll/?yr=0506

Table 2. NAEP Rankings in reading and Math. Massachusetts, 2005 and 2007				
	4 th grade		8 th grade	
	2005	2007	2005	2007
All MA Reading and Math	1 st	1 st	1 st	1 st
MA Latino Reading	27 th	16 th	25 th	14 th
MA Latino Math	23 rd	17 th	15 th	13 th

Source: U.S. Department of Education, National Center for Educational Statistics

Transitions Task Force, 2006; Citizen's Commission on Academic Success for Boston's Children, 2006). Latino students in Boston have the lowest academic outcomes and the highest drop-out rates of any racial/ethnic group in the district.

Statewide trends, although appearing more hopeful, are also of concern. In Massachusetts, Latino educational outcomes have shown some improvements in MCAS scores and a very slight narrowing of the achievement gap. Latino annual and four-year drop-out rates have slightly improved but still remain the highest in the state (Lavan & Uriarte, 2008; Uriarte & Lavan, 2006).

But, while Massachusetts as a whole has attained the top placement nationally in National Assessment of Educational Progress (NAEP) testing for almost 10 years, Latino students in Massachusetts have lagged well behind their counterparts elsewhere. In 2005, for example, the state's Latino students ranked 23rd in 4th grade math and 27th in 4th grade reading among Latinos nationally, while Latino 8th graders ranked 15th in Math and 23rd in reading. By 2007 there had been improvement but Massachusetts still trails New York, Florida, California, Texas, Ohio, Maryland, New Jersey, and Connecticut, among other states, in its outcomes with Latino students (NCES, 2007a). The process of educational reform in Massachusetts has successfully catapulted the state to the top of achievement in the nation, but the success hides deep gaps in achievement and persistent institutional gaps in addressing the needs of all of the state's students.

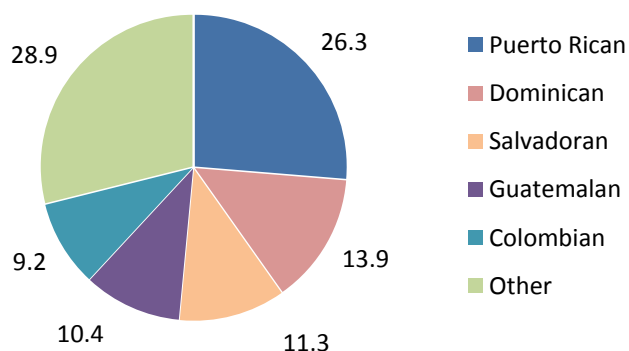
Latino students' consistently tenuous engagement and depressed academic outcomes in Massachusetts are often framed as a factor of the rate of poverty in the group. This reflects well established findings that the levels of parental education and income are often cited as the best predictors of academic achievement among American students (see Rothstein, 2004 and Kao and Thompson, 2003 for excellent reviews). The demography of the Latino population of the state and the city of Boston does reflect a very depressed economic and educational experience for Latino adults. According to Borges-Méndez, Lavan, and Jones (2006), 24.2% of Latino families in Boston are poor and the median household income for Latinos is barely two-thirds (68%) of that of the overall population of the city. Latinos often work in service occupations—a full 36.6% do—and often in low-wage positions. Only 16.1% of Latinos in Boston work in managerial and professional occupations. Compounding the precarious occupational status is the low level of educational attainment among Latinos: 24.7% of Latinos

have less than a ninth-grade education and an additional 28.9% have only a high school degree. Only 16.8% of Latinos have a college (graduate or undergraduate) degree.

Although “Hispanic” or “Latino” denotes a cultural or ethnic identification, it is often used as a “racial” category, notwithstanding the fact that Latinos are a multiracial group (Rodriguez, 2001). Latino populations (and therefore their children) reflect the racial makeup of their countries of origin as well as the continued mixture of races that has taken place as they live in the U.S. Puerto Ricans, Dominicans and Cubans, for example, reflect the mixture of African slaves and Spaniards that is common in these Caribbean islands. Native peoples (Maya, Inca, and many others) combined with Spaniards in the continent and give Mexicans, Salvadorans, Guatemalans, Hondurans, and Colombians their particular racial and cultural makeup. Among Latinos one can find –often in the same family- a gamut of color that defies easy definition in U.S. racial terms. Largely because of this mixture and regardless of the actual color of their skin, Latinos are perceived by the majority as a group “of color” and their experience in the United States largely reflects this.

As has been well documented, racial differences are also a predictor of academic outcomes among students. In many ways, it is now taken as a norm that the achievement of Black, Native American (and Latino) students will generally be lower than those of White and Asian students (Noguera, 2000). The explanations have run the gamut from genetic differences (Jensen, 1973), through analyses of deficiencies of students and their families, to the effect of long term oppressive relations as a result of slavery and colonization (Ogbu, 1991). Although, clearly there have been advances in the narrowing of racial disparities in education (or what is now referred to as the achievement gap) differences persist. Noguera (2000), for example, points to entanglement of the effects of race and class and explains that the continuing disparities in the educational outcomes of affluent children and those who are poor (and disproportionately Black and Latino) are largely explained by the inequality of their educational experience –that is, the differences in the quality of schools that each group attends. But he also underscores that the

Figure 1. Latino National Groups. Boston, 2006



Source. Shea and Jones, *Latinos in Massachusetts: A Mid-Decade Status Report, 2006*

persistently lower performance of middle class Black and Latino children, who have access to better schools and better educated parents, point to factors beyond the combined effects of race and class (Noguera, 2000).

Another often mentioned factor in the depressed outcomes for Latino students in Massachusetts is the large proportion of immigrant students in the process of acquiring English proficiency. In Boston, 49.4% of Latinos are foreign-born (U.S. Census Bureau, 2006); about 30% of Latino students in BPS are English Language Learners. Immigration fuels the growth of Boston's Latino population, in which Dominicans, Central Americans, and Colombians are a fast-growing sector. The characteristics of the settlement of Latinos in Massachusetts make Boston's Latino community the most diverse in the whole state (Figure 1). Although Puerto Ricans are still the largest national group in Boston, no group dominates numerically, as is the case in Holyoke and Springfield, where Puerto Ricans are by far the majority (Shea & Jones, 2006). Puerto Ricans are U.S. citizens at birth, whether born in the U.S. mainland or in the island and do not undergo a formal "immigration" process. Nevertheless, their migration to the U.S. does entail dramatic changes in their social, cultural, language, and economic contexts.

In Boston, large numbers of Latinos are newcomers, in the midst of the process of im/migrant integration and cultural adaptation. This experience, when unsupported, is a challenge for students, their families, and the institutions that serve them (Suárez-Orozco, & Suárez-Orozco, 2002; Portes and Rumbaut, 1996). Differences in immigrant status within families and between children and parents—and the reluctance of many parents to engage with public institutions—are consequences of this experience in the current policy environment (Uriarte & Granberry, 2006). These problems are exacerbated by many parents' difficulty with English, as well as their lack of knowledge of the workings and the expectations of U.S. educational institutions. The immigrant experience is also a challenge in relation to the methods of teaching and learning for students who enter schools unable to speak English well. Recent changes in policy have narrowed the options for districts to address the needs of English Language Learners, something that has had a significant effect on the education of immigrant children in Boston (Tung et al., 2008).

These factors —economic status and educational attainment of the parents, race and the im/migrant experience- are all critical factors to consider as one focuses on the outcomes of Latino students. But they should not be the only ones. In large measure, focusing solely on these complex and intractable problems makes the education of poor, immigrant children of color seem an impossible challenge. As a result, policy makers, school districts, and educators often accept lower expectations and lower achievement as the norm.

Research on the education of racial and immigrant minorities suggests that we must attain a clear understanding of the structural position of the groups in question to truly ascertain the causes of educational disadvantage among their children and to act upon them effectively. , Echoing the observations of Noguera (2000), this line of work points to how factors such as community, social capital, cultural and racial identity and the process of immigrant adaptation, among others, interact differentially with youth's aspirations, and with students' and families'

attitudes towards education (Portes & Rumbaut, 2001; Suarez Orozco & Suarez Orozco, 1995; Portes & Zhou, 1993; Gibson & Ogbu, 1991). This calls for significant knowledge of how culture, race and class position affect critical aspects of the life of children and for cultural competence in designing educational processes that will engage children from very diverse racial, cultural and economic experiences.

Others assume that race and class will have an effect on educational achievement, but do not accept that this absolves public institutions from delivering an education that is appropriate for the advancement of all children, including newcomers and those from low-income families. Instead they focus on the ways in which educational institutions interact with the children from these groups to sustain these disparities (Espinoza-Herold, 2003; Noguera, 2003; Nieto, 1999; Valenzuela, 1999; Reyes, Scribner, & Paredes Scribner, 1999; Darder, 1991 among many others). The focus here is on the changes that these public institutions (as many of them are) must undergo to meet their mandate to provide an education for all, regardless of race, ethnicity or economic status. Attention to their structure, their curriculum, the role of teachers, teacher quality and teacher preparation, the resources available for the task, and the policies and practices which guide the process of teaching and learning in schools are critical to the transformation of schools into agents of achievement for all students.

We approach this research from the latter perspective, that is, while not denying that poverty, race and immigrant status are important factors in Latino students' achievement, we focus on the institutional context in which these characteristics play out and these behaviors take place. The focus on school factors provides not only a broader institutional perspective but also an arena where intervention –and therefore change- is possible.

Organization of the Report

The report is organized in five sections. The first section, “The Latino Students in the Boston Public Schools,” presents demographic descriptions of the Latino students in the district. This is followed by “Characteristics and Quality of Schools Where Latino Children Are Enrolled,” an overview of school characteristics, noting the distribution of Latino students in school with these descriptors. “The Engagement and Academic Outcomes of Latino Students in the Boston Public Schools” presents information on drop-out and graduation rates, MCAS pass rates and the achievement gap between Latino students and students from other groups in BPS. In the last data section, “Engagement, Achievement, and Schools,” we examine the relationship between the engagement and academic outcomes of Latino students and the characteristics of the schools that they attend in Boston. We end the report with a set of Conclusions and Recommendations

Data and Methods

This study focuses on Latino students in the Boston Public Schools and seeks to address the following questions:

- What are the characteristics of schools that Latino students attend?
- What are the outcomes (engagement and academic achievement) of Latino children in Boston schools with different characteristics?

It is largely based on publicly available data from Massachusetts Department of Education and the Boston Public Schools for the AY 2006 (2005-2006). It includes also data from custom data runs from the Massachusetts Department of Education and the Boston Public Schools. The study includes 136 of the 144 schools in the Boston district. It includes 116 district schools, 17 pilot schools, and 3 exam schools. The study excluded schools serving special populations and those about which there was no available outcome data.¹ The study also excludes the 15 charter schools operating in the city of Boston.²

The variables used in this study are limited to those available in public data and disaggregated by race and ethnicity. The variables include:

- **Student Socio-Demographic Variables:** gender, eligible for free and reduced lunch, first language not English, and limited English proficiency.
- **Program Participation Variables:** grade level, participation in SPED, and participation in programs for English language learners
- **Student Engagement and Academic Outcome Variables:** attendance, missed days, suspensions, retention rate, drop-out rate, graduation rate, and the MCAS pass rates in ELA and in math, cumulative performance index
- **School Characteristics:** grade configuration, type of school, poverty rate, and the size
- **School Quality Variables:** accountability status in ELA and math, percentage of teachers licensed in teaching assignment, percentage of highly qualified teachers teaching in core academic areas and student teacher ratios.

This report also includes estimates of the gap in achievement between Latino students and other students in BPS, using the Massachusetts Department of Education's Composite Performance Index (CPI) (MDOE, 2006). The CPI, a 100-point index, is a measure of the extent to which students in a group are progressing toward proficiency (a CPI of 100) in English language arts (ELA) and mathematics. The index assigns 100, 75, 25, or 0 points to each student participating in MCAS and MCAS-alternative tests based on their performance, and relies on the

totality of testing events in which a student participates, not just one. The total points assigned to each student are added together and the sum is divided by the total number of students assessed. The result is a number between 0 and 100, which represents a district's, school's, or subgroup's CPI for the subject and student group. CPI's are generated separately for ELA and Math and at all levels: state, district, school, and student group. The CPI provides a measure of achievement that can be used to compare schools, districts, and subgroups crosssectionally or longitudinally, which facilitates the assessment of the achievement gap between Latino students and other students.

The definitions of the variables used in this report appear in Appendix 1. All are reported publicly by the Massachusetts Department of Education or the Boston Public Schools. A listing of the type of data available disaggregated by race/ethnicity at the state, district, and school levels appears as Appendix 2.

Data Organization and Analysis

A database was created to organize the information available about each school in the Boston Public School district. Information from the different sources was matched to each school using the school code. This data was then transferred into SPSS for analysis.

In analyzing the characteristics of the schools attended by Latino students, although the focus is on the schools in the aggregate, the analysis used student counts to ascertain the distribution of "All BPS students" and "Latino students" along schools exhibiting different characteristics (type of school, zone, etc). The sections on engagement and academic achievement, presents cross-tabulations of the school characteristics and school quality variables with the outcomes (graduation and drop-out rates, MCAS pass rates) of all students and of Latino students in each school averaged across schools. In the case of MCAS, outcome data is weighted by test-takers to control for their numeric differences in each school. CPI outcomes are weighted by enrollment to control for the size of schools.

Descriptive statistics are provided for demographic and school characteristic and quality variables. Correlations, t-test, and analyses of variance (ANOVA) were used to analyze the relationships between school characteristics and outcome variables depending on whether the variables were dichotomous, categorical, or continuous. In presenting the data, a cross-group comparison on the outcome variable is first presented, followed by an in-depth analysis of the impact of school quality variables on the outcome focused on Latino students.

Limitations of the Data and the Approach

As is the case with any study that relies on administrative data, this one is bound to the limitations of data which were not collected for research purposes. This impacts the results of this study in at least the following ways:

- Most of the data for this study is limited to that which is publicly available. One of the purposes of this work was to provide persons who are not researchers with ways to access available information (for information on where specific data can be found, see Appendix 2). This means for example that there are limitations on the cross tabulations (race by gender, for example) that are possible as well as on the availability of information at the different levels (suspensions by race available at the state level but not at the district or school level). It also means that one has to accept the incompleteness of the data as it is reported. We offset the impact of these limitations by requesting special runs of data from the state and from the district.
- The data in this study is limited to that which is available disaggregated by race. The patchwork quilt of availability of data disaggregated by race is a major barrier to the true understanding of the experience and outcomes of subgroups at the state, district and school levels. Appendix 2 shows the data which is available disaggregated by race at the state, district and school levels.
- The unevenness in availability and quality of the administrative data precluded the development of the database that was clean and reliable enough for high levels of statistical analysis and modeling. We conduct analyses and report here on that which we felt met the standards for the tests conducted.
- This study focuses on the AY 2005-06 only and does not offer insight as to trends in regards to any of these indicators.

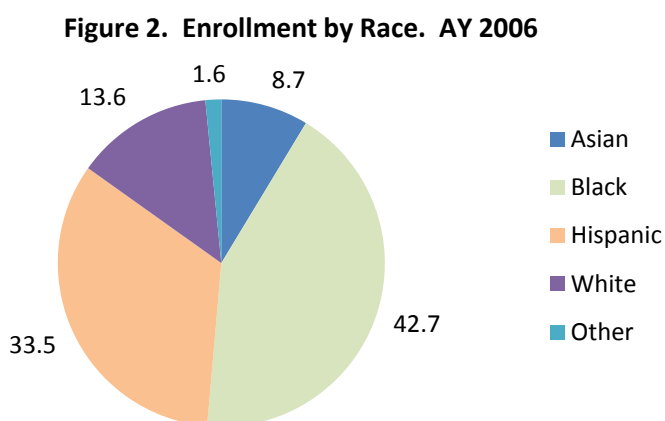
Latino Students In The Boston Public Schools

Latino students are similar in characteristics to the rest of the BPS population except in that (1) far more Latinos are identified as having Limited English Proficiency and are therefore involved in programs for English Language Learners.

In AY 2006, 18,999 Latino children attended the Boston Public Schools, accounting for 33.5% of the enrollments in the district. Latinos are second only to Blacks in their representation in the Boston schools (Figure 2). For almost a decade now, the Latino student population in Boston has grown and the population of the other groups has declined (Table 1).

Latino students have much in common with the overall BPS population. For both groups, a slight majority was male (51.4%, Table 4). A large percentage of both Latino and all BPS students are poor. Counting students who qualify for a free and reduced lunch is a common way to ascertain the level of poverty in a school population. In BPS nearly four-fifths of the Latino students (79.4%) qualified for free or reduced lunch, a higher percentage than the already large 73.1% of the overall BPS population (Table 4). The high incidence of poverty among Latino students in BPS reflects the income status of the Latino population of the city: in 2006, 24.2% of Latino families and 37.1% of Latino children were poor (U.S. Census Bureau, 2006). This high incidence of poverty among students in public schools is a well-documented challenge to the effective performance of schools in educating these students (NCES, 1998).

Reflecting the dynamics of immigration so characteristic of the overall Latino population, described earlier, 64.8% of Latino students in BPS speak a language other than English at home (Table 3). Almost one out of three has been designated as of limited English proficiency (LEP).



Source: Mass DOE, <http://profiles.doe.mass.edu/enrollmentbyracegender.aspx?mode=&orderBy=&year=2006&filterBy=>

Table 3. Demographic Characteristics of Latino Students. AY 2006		
Characteristics	All	Latino
<i>Enrollment</i>	56,765	18,999
% male	51.4 ¹	51.4 ²
% eligible for free and reduced lunch ³	73.1	79.4
% home language other than English ²	41.4	64.8
% Limited English Proficiency	16.0 ³	30.7 ²

Sources:

(1) Mass DOE, <http://profiles.doe.mass.edu/enrollmentbyracegender.aspx?mode=&orderBy=&year=2006&filterBy=>;

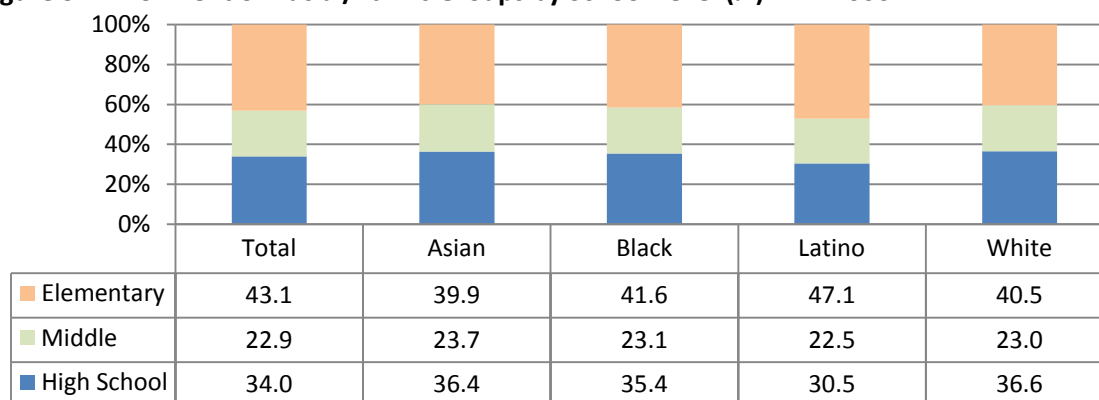
(2) Boston Public Schools (May 2007) Special run of student-level data 2002-2006, June data.

(3) Mass DOE, <http://profiles.doe.mass.edu/selectedpopulations.aspx?mode=&year=2006&orderBy=&filterBy=>;

Participation in BPS Programs

Fifty-four percent of the Latino students in BPS attend a regular BPS program. Most Latino children in the district are enrolled in elementary schools (47.1%), where they make up the largest racial/ethnic cohort. A large number of Latino students in BPS are enrolled in some type of program for special populations. Of these the larger number are enrolled in programs for English language learners: 30% of Latino students are identified as having limited English proficiency and 27.6% are enrolled in programs for English Language Learners. In contrast, among all BPS students only 15.2% are identified as LEPs and 16.0% participate in ELL programs. In AY 2006, 61% of all students in ELL programs in the Boston district were Latino (Lavan & Uriarte, 2008b).

Figure 3. Enrollment of Racial/Ethnic Groups by School Level (%). AY 2006



Source: Boston Public Schools (May 2007) Special run of student-level data 2002-2006, June data.

Table 4. Special Education and English Language Learners' Program Participation of Latino Students. AY 2006		
	All	Latino
<i>Enrollment</i>	56,765	18,999
% in Regular Education Programs	65.1	53.7
% in SPED ¹	19.2	19.1
% Mainstreamed ¹	10.4	10.7
% Substantially Separate ¹	8.8	8.4
% in ELL Programs ²	15.2	27.6

Sources: (1) Boston Public Schools (March 2008) Special run of student-level data 2002-2006, June data;
(2) Mass DOE, www.doe.mass.edu/ell/statistics/lep_langgroup.pdf

Latino enrollments in Special Education programs, on the other hand, are slightly below the norm for the overall population of the Boston Public schools. The SPED rate for Latino children is 19.1 compared to 19.2 for the overall BPS population. A similarly slight difference exists between the two groups in the rate of enrollment in substantially separate and mainstreamed programs. Latino students are actually under-represented among SPED students: about 31.9% of all SPED students are Latino in contrast to the Latino BPS enrollment of 33.4% (Mass DOE, 2007).

Engagement and Academic Outcomes Of Latino Students In The Boston Public Schools

Latino students have a dismal engagement with Boston schools. They trail all student groups in Boston and even their Latino peers across the state in key engagement indicators: attendance, dropping out, and graduation rates. Twenty-six percent of Latino students drop out of Boston schools before finishing high school; they begin to do so in the 6th grade. By the end of middle school 3% of Latino students have dropped out; in 2006, the year of our observation, 15.2% of those Latino students who dropped out did so in middle school. Only 50.6 percent of Latino students graduate in four years; 57% graduate in five.

Recently reported state-wide Latino engagement patterns suggest that maintaining Latino students in school to completion continues to be a major challenge. Lavan and Uriarte (2008a) report that Latino students in Massachusetts have the highest numbers of days absent (12.8 days) of any group and rates of suspension second only to the high suspension rates of Blacks. They report high drop-out rates (25.5% cohort rate) and low rates of graduation (56.9% after 4 years).

With the exception of the suspension rates, the picture for Latino students in Boston is, in fact worse than those of Latino students state-wide. Attendance rates for Latino students are the lowest of any group because of the high number of absences (15.88 days): Latino students in Boston miss more than three weeks of school every year. As was the case at the state level, suspension rates are behind only those of Blacks, even though they are much lower than those found among Latinos across the state.

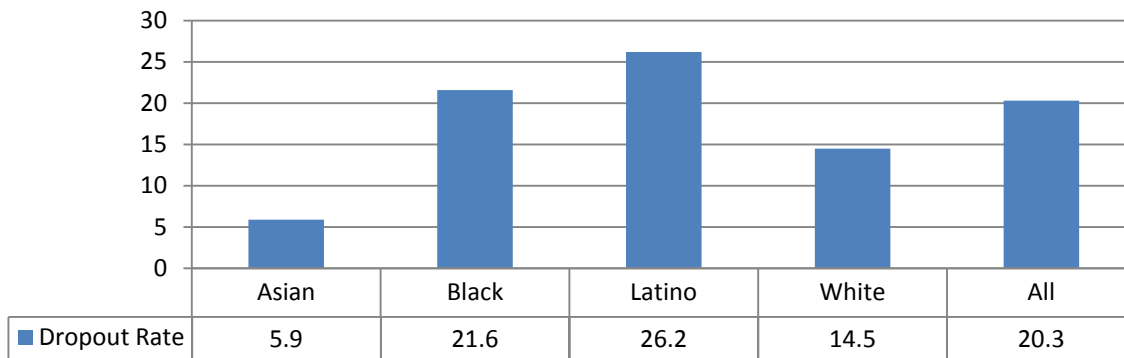
Most disturbing are the drop-out rates. Among Latino students in Boston, more than one out of every four (26.2%) do not finish high school. Latinos have the highest drop-out rate of any group in the district (Figure 4).

Table 5. Attendance, Suspensions, and Retentions. AY 2006

	Asian	Black	Latino	White	All
Attendance Rate	95.7	91.3	90.4	92.3	91.5
Number of Missed Days	7.4	14.5	15.9	13.2	14.2
In School Suspension Rate	0	.3	.2	.1	.2
Out of School Suspension Rate	1.8	10.8	6.6	3.9	7.6

Source: Mass DOE, Requested Data: Boston Student Indicators by race/ethnicity, 2007 and www.doe.mass.edu/infoservices/reports/retention/

Figure 4. Cohort Drop-out (4 Year) Rate of Racial-Ethnic Groups. Boston Public Schools, AY 2006



Source: Mass DOE, profiles.doe.mass.edu/gradrates.aspx

Table 6. Annual High School Drop-out Rate of Latino students by LEP Status, AY 2006

	Drop-out Rate
All non-LEPs	12.3
Never classified as LEP	11.9
Formerly classified as LEP	13.6
LEPs	14.2

Source: Adapted from Lavan and Uriarte, 2008b

Table 7: Latino Annual Drop-out Rate by Grade and Grade Level in Which Student Dropped Out. AY 2006.

Grade Level	Annual Drop-out rate	Grade Level of Dropout
6 th	4.5	7.2%
7 th	2.3	3.7%
8 th	2.7	4.3%
Middle School	3.1	15.2%
9 th	10.4	23.6%
10 th	13.4	22.2%
Early High School	11.7	45.8%
11 th	12.6	18.4%
12 th	15.8	20.6%
Late High School	14.1	39.0%

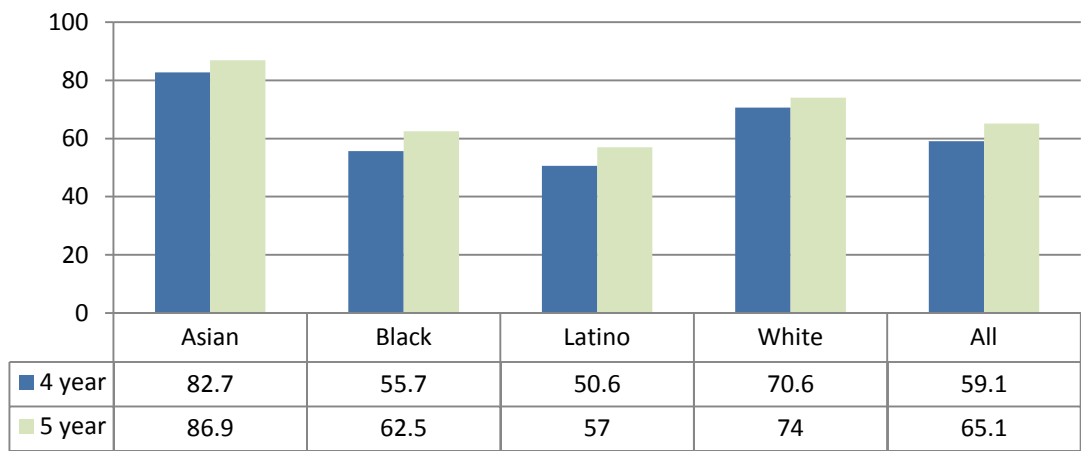
Source: Adapted from Lavan and Uriarte, 2008b.

Lavan and Uriarte (2008b), using a student-level data set of BPS report that among Latino students, in AY 2006, the majority of drop outs where in regular programs (76%) but the highest drop-out rates occurred among those students in programs for English Language Learners, where the annual drop-out rate was 10.3% (Lavan and Uriarte, 2008b). xxxx

Lavan and Uriarte (2008b), using a student-level data set of BPS students, document that Latino students begin to drop out in 6th grade; in AY 2006, of all the Latino students who dropped out, 15.2% did so in the middle school grades. Early high school, and most especially 9th grade, is when the highest number of Latino students drop out. Twenty-three percent of all Latino students who dropped out from BPS in AY 2006 did so in the 9th grade.

As a result of the high attrition of Latino students, graduation rates for Latino students in Boston are the lowest of all groups. They are lower also than those found among Latino students across the state (Lavan and Uriarte, 2008a)

Figure 5. 4 and 5 Year Graduation Rates of Racial-Ethnic Groups. AY 2006



Source: Mass DOE, <http://profiles.doe.mass.edu/gradrates.aspx>

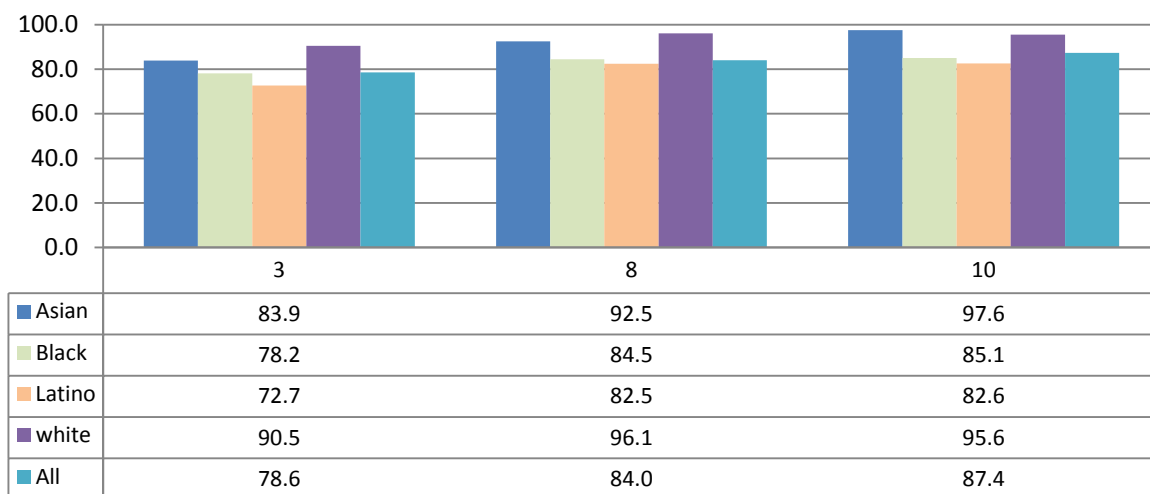
Academic Outcomes Of Latino Students

Latino academic outcomes are the most depressed of any racial/ethnic group in the district. Latino MCAS pass rates at all levels and in both ELA and Math (with the exception of 8th grade Math) are the lowest of all groups. Measuring achievement using the school’s CPI scores for sub-groups, shows the same picture. The gap is especially wide in Math: the gap between Latino and White students is twice as large (23.7 points) in Math as in ELA, while the non-Latino/Latino gap is almost three times as large in Math as it is in ELA.

Since 2001, the Massachusetts Comprehensive Assessment System (MCAS) tests are the primary measure of achievement for Massachusetts public school students and, more recently, the basis of the Adequate Yearly Progress mandated by No Child Left Behind for students, schools, and districts. Although the reliance on standardized testing as the sole measure of student achievement has been amply criticized,³ it is still the only method to determine the achievement of students as a whole as well as that of subgroups of students. Since 2006, students are tested in Reading in Grade 3; in English Language Arts in Grades 4, 5, 6, 7, 8, and 10; in Math in Grades 4, 5, 6, 7, 8, and 10; and in Science and Technology in Grades 5 and 8. In Grade 10, the test becomes a “high stakes” test: students must pass both ELA and Math MCAS in order to graduate from high school. The state reports the results at four performance levels: Advanced, Proficient, Needs Improvement, and Warning (for Grades 3-8) or Failure (Grade 10). Advanced, Proficient, and Needs Improvement are all “passing” levels; we add numbers of students scoring at each of these grade levels, then divide by the total number of test-takers that year to determine the pass rate, which is the measure we report here.

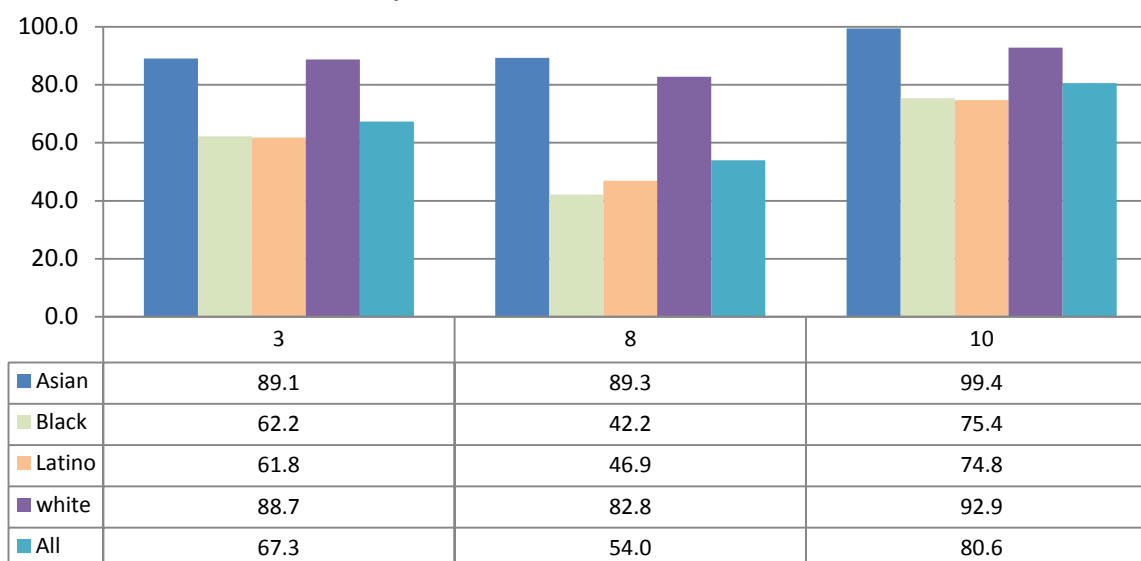
Rivera (2001) reported on the 1999 Latino MCAS scores in Boston. That year, 23% of Latino 8th graders and 15% of 10th graders passed the Math test; only 34% passed the ELA in the 10th grade. There is no doubt that there has been improvement in the pass rates for Latinos and for all students in Boston, as is shown in Figures 6 and 7. Nevertheless, Latino MCAS scores in Boston remain the lowest of all racial/ethnic groups at all levels except 8th grade Math, where the pass rate of Latino students, (46.9%) is slightly above that of Blacks (42.2%).

Figure 6. Pass Rates in MCAS English Language Arts (ELA) by Race. Grades 3, 8 and 10. AY 2006



Source: <http://profiles.doe.mass.edu/mcas.aspx>

Figure 7. Pass Rates in MCAS Math by Race. Grades 3, 8, and 10. AY 2006



Source: <http://profiles.doe.mass.edu/mcas.aspx>

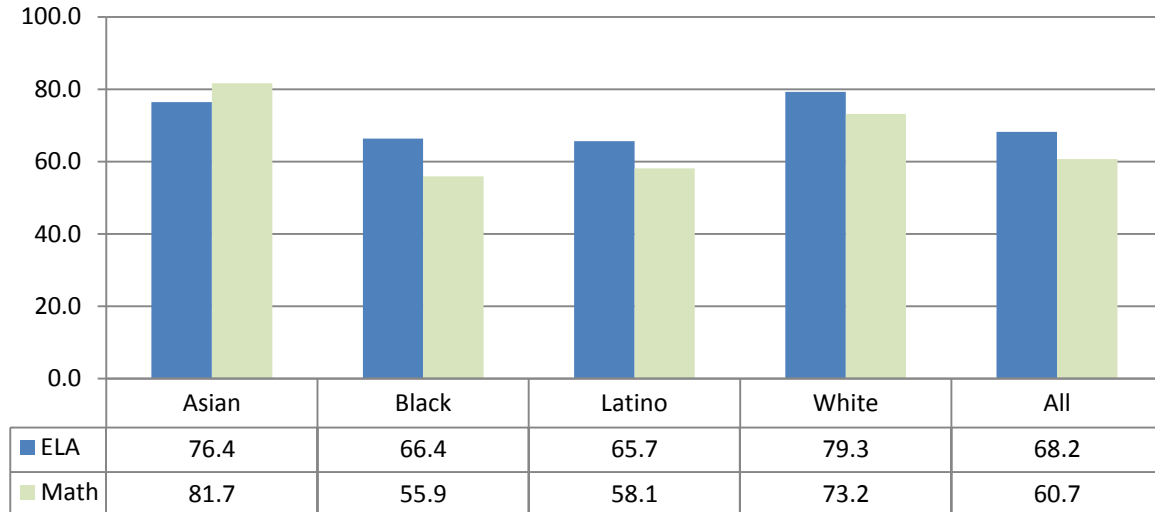
Across all grades, Latino pass rates are better in ELA than in Math. As is true of all Boston students, the tendency is for ELA pass grades to improve as children reach higher grades. But the improvements are more salient among Latino students, among whom there is a 10 point difference between the 3 and 8th grade pass rates in ELA (compared to 6 points among all students). In Math, most students suffer a decrease in the pass rate between grade 3 and grade 8, and all improve by grade 10.

The Achievement Gap

The MCAS is also the basis for determining the Adequate Yearly Progress (AYP) in Math and ELA of all students and subgroups of students in a school, a district, and in the state. NCLB requires that all schools, districts, and states work toward meeting or surpassing specific performance goals in both Math and English Language Arts (ELA). In Massachusetts the performance goal is that all students will achieve proficiency in both Math and ELA, as measured by the MCAS, by 2014.

The state uses the Composite Performance Index (the CPI) to measure the AYP as part of the state's effort to meet the mandates of the federal No Child Left Behind. The CPI is a 100-point index that assigns 100, 75, 25, or 0 points to each student participating in MCAS and MCAS-alternative tests based on their performance. The total points assigned to each student are added together and the sum is divided by the total number of students assessed. The result is a number between 0 and 100 that represents a district's, a school's, or a subgroup's CPI for the

Figure 8 . ELA and Math Composite Performance Index (CPI) of Racial-ethnic Groups. AY 2006



Note: Scores represent the average of schools' CPI's by race weighted by the number of test-takers in the schools.
Source: Mass DOE, <http://profiles.doe.mass.edu/app2006.aspx?mode=school&orderBy=>

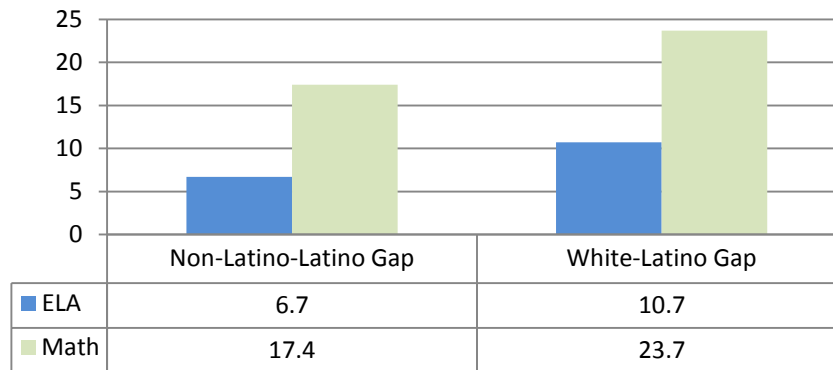
subject and student group. The Massachusetts Department of Education assigns the following categories to the scores: Very High (90 - 100); High (80 - 89.9); Moderate (70 - 79.9); Low (60 - 69.9); Very Low (40 - 59.9); and Critically Low (0 - 39.9).

In order to meet the 2014 NCLB mandate that all students should be scoring at the proficient level, the state issues biennial targets for the districts and the schools within each district. In the two-year cycle in which 2006 (the year of our observation) fell, the state's CPI target was 80.5 for ELA and 68.7 for Math (MDOE, 2006b). Figure 8 presents the ELA and Math CPI scores for all racial/ethnic sub-groups in Boston. Neither the district nor any of the racial/ethnic groups in Boston met the state's CPI targets in ELA and only Asians and Whites met the targets in Math. Within that context, Latinos show the lowest CPI in ELA and the second lowest CPI in Math.

In this report we use the CPI score assigned to racial subgroups within schools and average those values to determine the CPI by racial/ethnic group of the schools analyzed here. Because the CPI uses the same measures to assess the progress of different subgroups defined by race/ethnicity, income, language, and disability, it offers the possibility of a precise comparison of the status and the progress of each subgroup at one point or over time.

The difference between the CPI of one group and another is what we will call the "CPI gap," which equals the gap in achievement between the two groups, or the "achievement gap." Here we have measured the "gap" between Latino and White students in BPS, White students being the most common comparative group. But because of the dearth of White students in the

Figure 9. ELA and Math CPI Gap, AY 2006



Notes: (1) Non-Latino CPI is the average of White, Black, and Asian student CPI.
Source: Mass DOE, <http://profiles.doe.mass.edu/ayp2006.aspx?mode=school&orderBy=>

Boston district, we also compare Latino and non-Latino students in BPS and present those CPI gaps as well. We have weighed school's CPI values by the number of students who took the tests in order to control for the effect of schools with large and small numbers of test-takers.

In AY 2006, the gap between Latino and white students in BPS was 10.7 points in ELA and 23.7 points in Math. These gaps are slightly smaller than those found between Latino and White students at the state level, where they range between 20 and 30 points (Lavan & Uriarte, 2008a). The gap between Latino and white students is much larger than that between Latinos and the overall population of BPS. The gap between Latino and non-Latino students is 6.7 points in ELA and 17.4 points in Math.

Engagement, Achievement and Schools

This section examines, first, the characteristics of schools where Latino children are enrolled and follows with an analysis of the interaction between school characteristics and the engagement and academic achievement of Latino children. The selection of school characteristics corresponds to those publicly available from the Massachusetts Department of Education (Mass DOE) and the Boston Public Schools which reflects variables usually associated with academic outcomes. These include grade configurations, types of schools (district, pilot, or exam), size of the school, the school's poverty rates. Variables related to school quality are also available and thus were included. These are the school's adequate yearly progress (AYP) in both ELA and Math, and its percentage of teachers licensed in their teaching assignment, its percentage of core academic teachers rated highly qualified, and its student/teacher ratios. The outcome variables used are the Latino drop-out rate and the MCAS pass rate in ELA and Math for the schools.

Characteristics of Schools Where Latino Children Are Enrolled

The schools that most Latino children attend have characteristics that are often associated with lower student achievement

- They have a traditional grade configuration, that is, K-5 elementary school, 6-8 middle school, and 9-12 high school.
- They are district schools: 87.1% of Latino students attend a district school. Latino children are under-represented in pilot schools, where 28% of students are Latino, but more severely so in the exam schools, where only 12% of the enrollment is Latino.
- At both elementary and high school levels, they are schools that are large in size.
- They are high-poverty schools, where the poverty rate is over 75%.
- They are schools that are struggling to meet its Adequate Yearly Progress (AYP)

A similar proportion of Latino students as the general BPS population attend schools where teachers are licensed in their teaching assignment and where teachers in core areas are identified as highly qualified.

The study by de los Reyes, Nieto, and Diez (2008) that accompanies this report, *If Our Students Fail, We Fail. If They Succeed We Succeed: Case Studies of Five Boston Public Schools*, highlights the elements of schools that make them successful in helping Latino students achieve. These BPS schools have a characteristic welcoming and affective school climate. They are schools with a culture that promotes academic achievement and success and an organization where roles are clear and administrators and faculty give themselves both the leeway and the support to work on common challenges. These schools have a shared understanding of the context in

which children and families live and adjust to their needs. Finally, these are schools in which both teachers and administrators take their full share of responsibility for student failure and do not tolerate low expectations for their students' academic outcomes (de los Reyes, Nieto, & Diez, 2008).

This complexity, captured by days of observation, is impossible to approach with the data available. A priori, we underscore the limits of the indicators used here to portray the “quality” of a school or to depict anywhere near the totality of the factors necessary to determine that a school has a good environment for teaching and learning. We use them because they are the only indicators that are gathered uniformly across schools and therefore allow for comparisons.

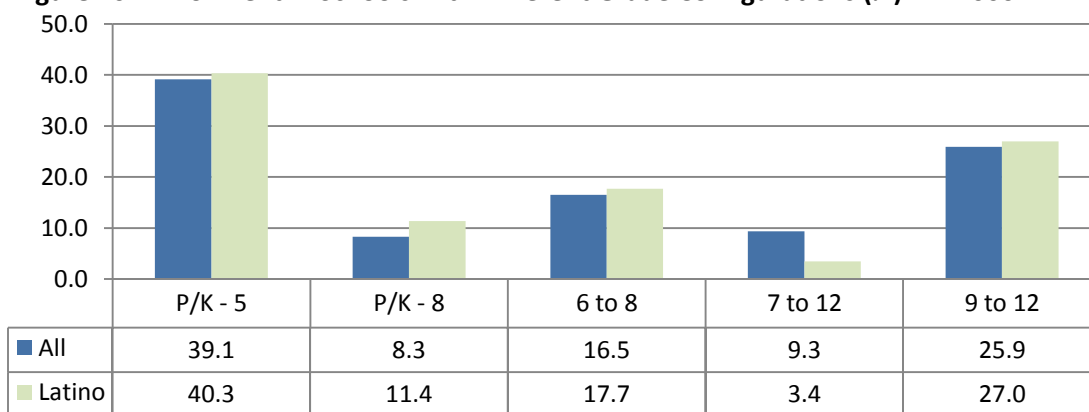
This section, then, presents the proportion of Latino enrollments in schools showing different characteristics including grade configurations, type of school, size of school, poverty rate of the school, the school's accountability status and its percentages of teachers licensed in their teaching assignment and of core academic teachers rated highly qualified.

● *Grade Configuration*

The Boston Public Schools offers its students a wide array of grade configurations. These include Early Learning Centers (K-Grade 1), Elementary Schools (K-5), Elementary/Middle Schools (K-8), Middle Schools (6-8), Middle Schools/ High Schools (7-12) and High Schools (9-12). These grade configurations attempt to offer alternatives at all levels, but most frequently, for middle school education where there is some evidence that 6th, 7th, and 8th graders find some advantage in K-8 schools (Klump, 2006).

Most Latino children are enrolled in schools with traditional configuration: a K-5 elementary school, a 6-8 middle school, or a 9-12 high school. Enrollment in both K-8 and 7-12 (exam schools) configurations are much smaller.

Figure 10. Enrollment in Schools with Different Grade Configurations (%). AY 2006⁴



Source: Mass DOE, www.doe.mass.edu/infoservices/reports/enroll/?yr=0506 and Boston Public Schools (2007)

● *Type of School*

BPS generally presents itself as having three types of schools: district, pilot, and exam schools. Exam schools are schools with a Grade 7-12 configuration that only admit students on the basis of the results of entrance examinations.⁵ There are three exam schools in the Boston district: The Boston Latin School, the Boston Latin Academy, and the John D. O'Bryant School of Mathematics & Science. Exam schools have high academic outcomes and are recognized as the most outstanding schools in the system.

A second type of school is the pilot school. These are schools of all grade configurations (elementary, elementary-middle, middle, middle-high, and high schools) that are granted administrative “autonomies” over budget, curriculum, governance, staffing, and schedule. In 2006, there were 19 pilot schools in the district.⁶ There is growing evidence of the effectiveness of pilot schools, which have better results in key engagement indicators such as attendance, suspensions, MCAS pass rates, and college-going rates than the district schools (CCE, 2006, 2007).

The third type is the vast network of district schools. These are by far the largest set of schools (123 in AY 2006), mainly including elementary, middle, and high schools.⁷ They also include alternative schools. These are schools with programs such as the Small School Network (24 small high schools organized around specific themes) as well as many programs oriented to English Language Learners and children with special learning needs. There is a vast array in terms of programs and of quality among Boston’s district schools.

Latino children are enrolled in the three types of schools, but they are largely concentrated in the district schools. Eighty-seven percent of Latino students attend a district school. About 10% of all Latino students attend a pilot school; they represent about 28% of the pilot school enrollment. Latinos are far more under-represented among the students in the exam schools. Only 650 Latino students attend Boston’s exam schools, accounting for only 12% of exam school enrollments.

Table 8. Latino Enrollment by Type of School (%), AY 2006

		# of Schools		Enrollment	
				All	Latino
Total Enrollment				56,765	18,999
District	116			79.6	87.1
Pilot	17			11.0	9.5
Exam	3			9.3	3.4

Sources: Mass DOE, www.doe.mass.edu/infoservices/reports/enroll/?yr=0506;
Boston Public Schools, *Introducing the Boston Public Schools, 2007*

● *Size of the School.*

BPS has moved aggressively to decrease the size of its schools, particularly its high schools. Beginning in 2001, under a grant from the Carnegie Foundation, Boston Public Schools began to transform the size of its high schools. This process was accelerated by collaboration between several Boston institutions and the Boston Public Schools that led to a grant from the Bill and Melinda Gates Foundation focused on the creation of smaller schools in the district.⁸ Between 2001 and 2006, 17 new small high schools were developed.⁹ This initiative responds to research that points out that smaller schools, in general, provide a safer place, a positive school climate for students, teachers, and families. There is evidence that, in these more personalized environments, there are fewer discipline problems and better outcomes for students (Nathan and Thou, 2007). The size of elementary schools is recommended at between 100-350 students and that of high schools below 500 students (Wasley et al., 2000).

Among the schools observed for this study, most elementary schools and high schools are the optimal size. Nevertheless, most Latino students at every level are concentrated in the larger schools. In elementary school, 58.3% of Latino students attend a school that is larger than 350 students. In both middle school and high school, over 65% of Latino students are enrolled in schools larger than 500 students. The majority of Latino high school students attend a school with more than 1,000 students, twice the number that is recommended as optimal for urban schools. This tendency for enrollment in larger schools is not unlike that of the overall student population in BPS, indicating that although there is a brisk turnover into small schools, most of the district students still attend schools that are large.

Table 9. Latino Enrollment in Schools of Different Sizes, AY 2006			
	# of Schools	Enrollment	
		All	Latino
Elementary	84	24,460	8,939
Large (\geq 600 students)	8	20.6	20.5
Medium (350-599 students)	19	32.5	37.8
Small ($<$ 350 students)	57	46.9	41.7
Middle	20	13,016	4,273
Large (\geq 1000 students)	0		
Medium (999-500 students)	10	75.0	65.0
Small ($<$ 500 students)	10	25.0	35.0
High School	32	19,289	5,787
Large (\geq 1000 students)	8	61.0	63.1
Medium (999-500 students)	1	3.9	2.3
Small ($<$ 500 students)	23	35.1	34.6

Source: Mass DOE, <http://www.doe.mass.edu/infoservices/reports/enroll/?yr=0506>

● *Rate of Poverty in the Schools*

The relationship between poverty and academic achievement is well established. Intervening variables include health, nutrition, mobility due to unstable housing and employment, family's educational achievement, and the availability of community resources.¹⁰ But student achievement is also affected by the overall rate of poverty in the school population; that is, the presence of many poor children may have an additional effect on the achievement of poor students.

High-poverty rates in schools have been associated with the presence of less stable and less qualified teaching staff and with lower achievement on the part of students (Orfield & Lee, 2005). The U.S. Department of Education's National Center for Education Statistics, for example, reports on the "dramatic gaps" in achievement, particularly in reading, between high- and low-poverty schools (NCES, 1998). High-poverty schools are those in which the poverty rate in the student population is more the 75%; low-poverty schools are those where the poverty rate among students does not reach 25%. Massachusetts uses "eligibility for free and reduced lunch" as the proxy for poverty in the schools, since children who qualify for these benefits have been determined to belong to a family in poverty.¹¹

The lion's share of Boston schools (57%) qualifies as high-poverty schools, and there are no schools in Boston with poverty rates below 25%. Most students in Boston (55.1%) attend a "high-poverty" school. But that figure is much higher for Latino students, among whom 65% attend a high-poverty school. Latino children are not only affected by the poverty status of their own families and community, but are independently affected by the fact that their schooling in Boston takes place primarily in schools where most children come from similar situations.

Table 10. Latino Enrollment in Schools with Different Poverty Rates¹². AY 2006

	# of Schools	Enrollment	
		All	Latino
Enrollment		56,765	18,999
Poverty rate <25% (low poverty)	0	0	0
Poverty rate between 25 and 74%	54	44.94	35.03
Poverty rate >75% (high poverty)	82	55.06	64.97

Source: Mass DOE, <http://profiles.doe.mass.edu/selectedpopulations.aspx?mode=&year=2006&orderBy=&filterBy=>

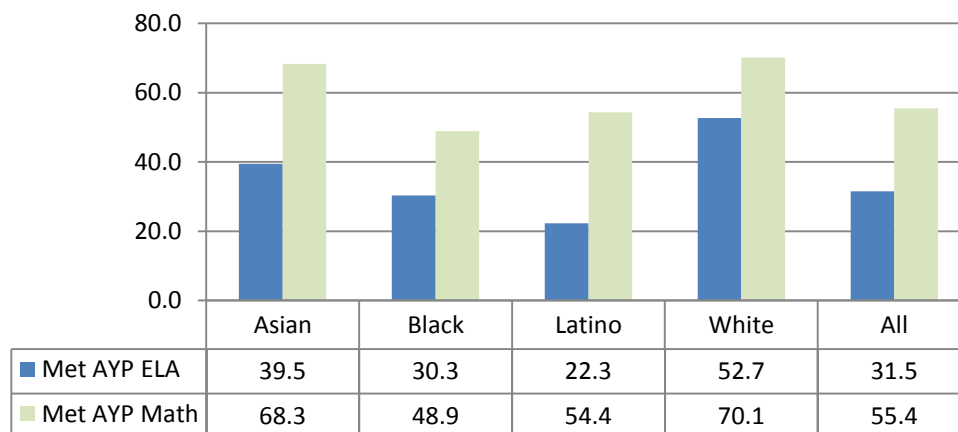
● *School's Adequate Yearly Progress (AYP).*

The federal No Child Left Behind Act (NCLB) requires that all schools, districts, and states work toward meeting or surpassing specific performance goals in both Math and English Language Arts (ELA). In Massachusetts the performance goal is that all students will achieve proficiency in both Math and ELA, as measured by the MCAS, by 2014. AYP reports are issued every year for both schools and districts, documenting the progress of all students as well as students of specific subgroups toward this goal. Subgroups include racial/ethnic, income, disability, and those with limited English proficiency. To have met AYP in 2006, schools had to have met a 95% student participation in the MCAS tests, 92% attendance rate (or an improvement of 1% over 2005), and either the state or the district's performance target.

The district's and the school's performance targets are measured by the state's Composite Performance Index (CPI). The CPI measures the extent to which students in a school or a district are making progress toward proficiency in ELA and Math. In order to meet the 2014 NCLB mandate that all students should be scoring at the proficient level, the state issues biennial targets for the districts and the schools within each district. In the two-year cycle in which 2006 (the year of our observation) fell, the state's CPI target was 80.5 for ELA and 68.7 for Math (MDOE, 2006b).

Figure 11 presents the enrollments by race in schools that met Adequately Yearly Progress. Only 26% of Latino students were enrolled in schools that met their AYP in ELA, the lowest enrollment of all groups in the district. This was a much lower percentage than the 31.5% enrollment in these schools on the part of the overall school population. In Math, Latino enrollments (at 54.4%) in schools that met the AYP in this subject were much closer to the norm of 55.4% for all students.

Figure 11. Enrollments by Race in Schools Meeting AYP, AY 2006



Source: Mass DOE, www.doe.mass.edu/infoservices/reports/enroll/?yr=0506 and profiles.doe.mass.edu/ayp2006.aspx?mode=school&orderBy

In those cases where districts or schools do not meet the AYP for two or more consecutive years, they may be identified for Improvement, Corrective Action, or Restructuring for all students or for specific racial/ethnic, disability, income or language subgroup (MDOE, 2006b). These are called accountability statuses. Each of these status designations triggers specific actions that include parental notification of the school's status, planning for improvements at the school level, the provision of technical assistance by the district, and changes in school governance and staffing.

Table 11 presents the percentage of Latino students enrolled in schools with different accountability statuses. A high percentage of Latino students were enrolled in schools determined to need improvement or corrective action (71.9%). In Math, most Latino students are enrolled in schools that met their AYP in that subject; only 36.8% are enrolled in a school that is categorized as needing improvement or corrective action. The pattern of higher enrollments in schools which do not meet ELA goals and the opposite in Math is true of the overall BPS enrollment, but is more noticeable among Latino students. A very small percent of Latino students were enrolled in schools undergoing restructuring, but the proportion was slightly higher than for the overall BPS population.

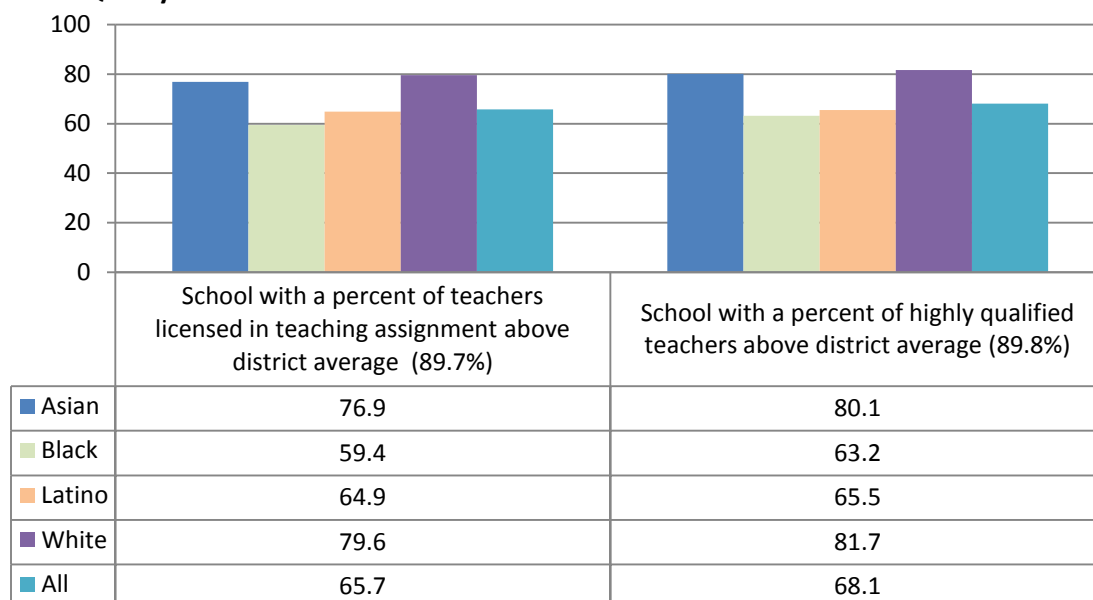
Table 11. Latino Enrollment In Schools With Different Accountability Statuses (%), AY 2006				
	ELA		Math	
	All	Latino	All	Latino
Enrollment	56,765	18,999	56,765	18,999
Met AYP	31.5	22.3	55.4	54.3
Needs Improvement	40.5	43.4	20.3	16.3
Corrective Action	23.4	28.5	16.6	20.5
Restructuring	4.6	5.8	7.7	8.8

Sources: Mass DOE, www.doe.mass.edu/infoservices/reports/enroll/?yr=0506 and profiles.doe.mass.edu/ayp2006.aspx?mode=school&orderBy

● *Presence of Licensed and Highly Qualified Teachers.*

The No Child Left Behind Act also requires reporting on the qualifications of teachers. Massachusetts requires a count on October 1 of all teachers meeting specific criteria, which are reported for all districts and schools by the Department of Education. The first is the percentage of teachers in a school and a district who are licensed in their teaching assignment. The second is the percentage of teachers in core academic areas¹³ who are determined to be “highly qualified.” To be determined as highly qualified, teachers must be licensed and

Figure 12. Percentage of Students from Racial/Ethnic Groups Attending Schools Displaying Selected Teacher Quality Indicators. AY 2006



Source: Mass DOE, www.doe.mass.edu/infoservices/reports/enroll/?yr=0506 and profiles.doe.mass.edu/teacherdata.aspx?mode=school&year=2006&orderBy=&filterBy=

demonstrate subject matter competency in the areas they teach. The latter may be demonstrated through coursework or through testing (MDOE, 2006a).

In 2005-2006 in BPS, 89.7% of the teachers were licensed and 89.8% were deemed to be highly qualified. Figure 12 presents the percentage of students from each racial group who attended schools with percentages above the average for the district. Over 60% of the Latino students attended a school where teachers were licensed and highly qualified. This rate was similar to the overall rate for the district as a whole but lower in comparison to the percentage of White and Asian students enrolled in schools with teachers exhibiting these criteria.

School Characteristics, Drop-Out Rates and MCAS Pass Rates

One of the purposes of this research was to ascertain the interaction between school characteristics and the engagement and academic achievement of Latino children. In order to arrive at an understanding of this interaction, we analyzed the relationship between the key outcomes (Latino drop-out rates and Latino MCAS pass rates) and the characteristics of schools—including, where appropriate, grade configuration, the type of school, size of the school, the rate of poverty in the school, the AYP, the teacher quality indicators, and the

student/teacher ratio. An analysis of the interaction of these school-related indicators and the achievement gap was also conducted and is reported here. Bi-variate analyses were conducted and statistical tests were applied to assess these relationships and their significance for the Latino student population.

Latino cohort drop-out rates are lower in schools...

- ✓ *That are exam or pilot schools*
- ✓ *With a high percentage of core academic teachers identified as highly qualified*

Tables 12 and 13 show the result of the cross-tabulations of the outcome and the school-related indicators. The outcome in this instance is the cohort drop-out rate of all Boston students and of Latino students.

The cohort drop-out rate of Latino students is lower among high schools with a 7-12 configuration. The 7-12 high schools in Boston are primarily the exam schools. The drop-out rate for Latino students in the 9-12 high schools is 30.7%, slightly above the overall Latino rate for the district. It is important to note that no dropout data is available for middle schools, which is an important gap in information since a considerable number of Latino students drop out in these early grades. None of these relationships were found to be statistically significant.

Table 12. Latino Cohort Drop-Out rate (4 year) in Schools with Selected Characteristics, AY 2006			
Characteristics of Schools	# of Schools	Cohort Drop-Out Rate	
		All	Latino
Grade Configuration			*
Schools with grades 7 to 12	3	0.9	0.9
Schools with grades 9 to 12	29	24.4	30.7
School Types			**
District schools	22	26.4	34.1
Pilot schools	7	15.3	19.9
Exam Schools	3	0.8	0.9
Poverty Rate in Schools			
High poverty school (> 75% fri)	4	20.3	35.1
Not a high-poverty school	29	21.8	27.1
School Size (# of students)			
Large (>= 1000)	8	15.6	18.2
Medium (999-500)	1	28.2	46.4
Small (< 500)	23	23.4	30.4

Notes: (1) These rates represent the mean drop-out rate of all schools reporting; (2) Statistical tests reported are only for Latino subgroup. (3) * Statistical tests are significant (p<.05) based on One-Way ANOVA F-test and Nonparametric Kruskal Wallis Test, ** Statistical tests are significant (p<.01) based on One-Way ANOVA F-test and Nonparametric Kruskal Wallis Test,

Table 13. Latino Cohort Drop-Out rate in Schools with Selected Characteristics, AY 2006			
Characteristics of Schools	# of Schools	Cohort Drop-Out Rate	
		All	Latino
AYP/ Accountability (ELA)			
Met Adequate Yearly Progress	25	20.78	27.60
Needs Improvement	5	24.52	29.34
Corrective Action	2	24.65	27.75
AYP / Accountability Statuses (Math)			
Met Adequate Yearly Progress	25	19.96	27.08
Needs Improvement	5	29.52	31.96
Corrective Action	2	24.65	27.75
Percentage of teachers licensed in teaching assignment that is above or below the district's average (89.7%)			
Below district average	18	23.30	30.38
Above district average	14	19.51	24.67
Percentage of core academic teachers identified as highly qualified that is above or below the district's (89.8%)			*
Below district average	20	24.63	33.33
Above district average	12	16.54	18.80

Notes: (1) These rates represent the mean drop-out rate of all schools reporting; (2) Statistical tests reported are only for Latino subgroup. (3) * Statistical tests are significant ($p < .05$) based on One-Way ANOVA F-test in this dichotomous form and Nonparametric Mann – Whitney U test.

Sources for Tables 13 and 14: Boston Public Schools, *Introducing the Boston Public Schools, 2007*; Mass DOE, profiles.doe.mass.edu/ayp2006.aspx?mode=school&orderBy=; profiles.doe.mass.edu/gradrates.aspx and profiles.doe.mass.edu/teacherdata.aspx?mode=school&year=2006&orderBy=&filterBy=

That is not the case for the type of school. There is a statistically significant difference in the drop-out rate depending on the type of school Latino children attend. Students in the exam schools have a minimal drop-out rate. It is higher in the pilot schools, where it reaches almost 20%. But the drop-out rate for Latino students in the district schools is 34%.

Drop-out rates are higher in schools with high poverty rates; this is consistent with the literature. Not consistent with past research is the presence of high rates of school desertion in smaller high schools. The fact is that several small high schools had just been developed for the 2005-2006 school year, so this may not be a good test of the relationship of school size and school leaving. Neither the poverty rate nor the size of the school was found to be statistically significant.

Table 13 presents the result of the cross tabulations of the cohort drop-out rate with the school quality variables. In general, drop-out rates are lower in schools that have met their AYP in either Math or ELA but, contradictorily, they are just as low in those schools that are in the process of corrective action. This relationship is not significant. Similarly, there was no significant relationship between the student/teacher ratio in the school and the drop-out rate among Latino students.

The qualifications of teachers, both as licensed in the area of their teaching assignment and core academic teachers who are highly qualified, were statistically significant in relationship to the drop-out rates in the schools. There is also a negative correlation between the two variables when the teacher variables are used in their continuous form; that is, the higher the percentage of teachers with these qualifications, the lower the drop-out rate. Drop-out rates are lower in schools where the percentage of teachers in core academic areas deemed as highly qualified is higher than the average for the district.

The analysis of the interaction of school characteristics and MCAS pass rates is presented in three sections corresponding to the three grades we have been analyzing – Grade 3, Grade 8, and Grade 10, since the interaction varies depending on the grade.

MCAS Pass Rates are Higher in Schools.....	
ELA	Math
3 rd Grade	
<ul style="list-style-type: none"> that are small with a higher percentage of teachers licensed in teaching assignment with a higher percentage of core academic teachers identified as highly qualified 	<ul style="list-style-type: none"> that are small that met AYP
8 th Grade	
<ul style="list-style-type: none"> that are exam schools that are not high-poverty schools that met AYP with a higher percentage of teachers licensed in teaching assignment with a higher percentage of core academic teachers identified as highly qualified 	<ul style="list-style-type: none"> that are exam schools that are not high-poverty schools that met AYP
10 th Grade	
<ul style="list-style-type: none"> that are exam schools, closely followed by pilots that are small schools that met AYP with a higher percentage of core academic teachers identified as highly qualified 	<ul style="list-style-type: none"> that are exam schools, closely followed by pilots that are small schools that met AYP with a higher percentage of teachers licensed in teaching assignment with a higher percentage of core academic teachers identified as highly qualified

Grade 3. Table 14 shows the cross-tabulations of the school characteristics with the 3rd grade MCAS pass rates in ELA and Math for all students and for Latino students in BPS. The variables that appear to impact the pass rates of Latino 3rd graders are the size of the school, the qualification of teachers in the case of ELA, and the AYP/Accountability Status of the school. In terms of size, both Math and ELA pass rates are higher in the smaller schools. They are also higher in Math in those schools that met their AYP goals in Math. Teacher qualifications make a difference for MCAS scores in both ELA and Math but are significant only for ELA scores. The relationship between the type of school and 3rd grade MCAS scores is not significant but the lower ELA pass rate among students in pilot schools is an unexpected finding.

Table 14. Latino Grade 3 MCAS Pass Rates in Schools With Different Characteristics. AY 2006				
	ELA Pass Rate		Math Pass Rate	
	All	Latino	All	Latino
Grade Configuration				
P/K-6	78.3	72.7	66.8	62.2
P/K-8	80.3	72.5	70.2	60.5
School Type				
District	78.3	73.0	66.3	61.8
Pilot	80.8	68.2	74.7	62.1
Poverty Rate				
High Poverty School	76.6	72.2	65.1	61.4
Not a High Poverty School	85.2	76.5	74.4	64.9
Size		*		*
Large (≥ 600 students)	71.2	61.1	63.1	51.5
Medium (350-599 students)	78.8	75.5	67.5	62.6
Small (< 350 students)	81.7	76.9	69.0	68.5
AYP / Accountability Status				*
Met AYP	86.00	78.02	78.10	66.17
Needs Improvement	78.59	72.58	66.94	55.93
Corrective Action	76.19	69.96	63.81	55.10
Restructuring	72.22	74.62	59.78	32.81
Teachers Licensed in Teaching Assignment		*		
Below average	73.74	64.09	63.69	56.66
Above average	79.80	74.49	68.20	62.93
Core Academic Teachers Identified as Highly Qualified		**		
Below average	73.53	65.44	63.70	58.49
Above average	79.31	74.01	67.80	62.44

Note: * Chi Square is significant ($p < .01$); ** Chi Square is significant ($p < .05$)

Source: profiles.doe.mass.edu/mcas.aspx ; www.doe.mass.edu/info services/reports/enroll/?yr=0506;
profiles.doe.mass.edu/ayp2006.aspx?mode=school&orderBy=
profiles.doe.mass.edu/selectedpopulations.aspx?mode=&year=2006&orderBy=&filterBy=
profiles.doe.mass.edu/teacherdata.aspx?mode=school&year=2006&orderBy=&filterBy=

Grade 8. The characteristics most associated with higher pass rates in Math and ELA among Latino 8th graders are grade configuration, type of school, and the poverty rate of the school. Grade configuration was significant for both Math and ELA pass rates, with the higher rates taking place in the exam schools (the configuration of 7-12) and in the P/K-8 configuration, although the difference between the latter and the low-scoring middle schools was not very wide. The real significance appears to be the type of school rather than the specific configuration. Attending a school with a lower percentage of students who qualify for free/reduced lunch also appears to be a factor in the MCAS scores of Latino 8th graders. Meeting their AYP goals reverted to higher pass rates in both Math and ELA for Latinos in those schools. Teacher qualifications were relevant to higher pass rates in ELA.

Table 15. Latino Grade 8 MCAS Pass Rates in Schools With Different Characteristics, AY 2006				
	ELA Pass Rate		Math Pass Rate	
	All	Latino	All	Latino
Grade Configuration		*		*
P/K-8	85.82	82.5	53.7	53.8
6-8	82.35	81.2	41.4	41.8
7-12	100	100.0	97.7	100.0
School Type		*		*
District	83.73	84.33	44.51	44.70
Pilot	77.89	60.71	36.01	34.87
Exam	100.00	100.00	97.71	100.00
Poverty Rate		*		*
High Poverty School	81.77	80.72	41.63	43.02
Not a High Poverty School	98.7	100.00	86.99	84.83
Size				*
Large (>= 1000 students)	96.22	80.62	88.54	67.94
Medium (999-500 students)	83.80	81.97	45.57	44.63
Small (< 500 students)	82.45	86.06	39.94	43.18
AYP/Accountability Status		**		*
Met AYP	98.48	100.00	85.90	82.72
Needs Improvement	83.05	77.31	46.90	32.37
Corrective Action	81.13	83.98	39.44	42.46
Restructuring	91.87	0.00	0.00	43.53
Teachers Licensed in Teaching Assignment		*		
Below average	81.82	78.17	44.62	46.03
Above average	88.78	85.49	59.11	47.48
Core Academic Teachers Identified as Highly Qualified		*		
Below average	81.82	78.17	44.62	46.03
Above average	88.78	85.49	59.11	47.48

Note: * Chi Square is significant (p<.01); ** Chi Square is significant (p<.05) Source: profiles.doe.mass.edu/mcas.aspx; www.doe.mass.edu/infoservices/reports/enroll/?yr=0506; [profiles.doe.mass.edu/ayp2006.aspx?mode=school&orderBy=](http://profiles.doe.mass.edu/ayp2006.aspx?mode=school&orderBy;); profiles.doe.mass.edu/selectedpopulations.aspx?mode=&year=2006&orderBy=&filterBy=; profiles.doe.mass.edu/teacherdata.aspx?mode=school&year=2006&orderBy=&filterBy= and Boston Public Schools, *Introducing the Boston Public Schools, 2007*

Aside from the expected high scores of the Latino students in the exam schools, the results on the relationship between school type and MCAS pass rates are unexpected. In both ELA and Math, the district schools showed higher pass rates than the pilot schools in this middle school grade.¹⁴ Also unexpected is the direction of the relationship between student/teacher ratios and MCAS scores: the higher the ratio of students to adults, the higher the pass rates in both Math and ELA.

Grade 10. The school characteristics most strongly related to the MCAS pass rates of Latino 10th graders were the type of school, its size, its AYP/ accountability status, and the percentage of teachers defined as highly qualified. Exam and pilot schools showed higher pass rates for Latino students in both Math and ELA, as did smaller high schools and those that had met their AYP targets. Those schools with above-average (for the district) percentages of teachers in core academic areas regarded as highly qualified also showed higher MCAS pass rates for Latino students.

Table 16. Latino Grade 10 MCAS Pass Rates in Schools With Different Characteristics. AY2006				
	ELA Pass Rate		Math Pass Rate	
	All	Latino	All	Latino
Grade Configuration				
7-12	100	100	100	100
9-12	82.93	80.96	73.77	72.37
School Type		*		*
District	80.90	78.53	71.52	69.90
Pilot	95.94	97.39	88.71	89.28
Exam	100.00	100.00	100.00	100.00
Poverty Rate				
High Poverty School	86.66	81.45	79.28	77.42
Not a High Poverty School	87.45	82.77	80.76	74.34
Size		*		*
Large (>= 1000 students)	87.41	79.46	83.49	73.66
Medium (999-500 students)	72.80	75.00	47.41	43.48
Small (< 500 students)	88.64	88.19	79.01	78.49
AYP/Accountability Status		**		*
Met AYP	85.75	89.64	86.00	81.87
Needs Improvement	71.35	80.37	78.81	73.45
Corrective Action	98.48	72.33	60.58	60.16
Restructuring	83.05	0.00	0.00	0.00
Teachers Licensed in Teaching Assignment				*
Below average	82.19	80.83	72.31	71.43
Above average	92.79	85.75	89.11	80.52
Core Academic Teachers Identified as Highly Qualified		*		*
Below average	82.09	80.19	72.34	70.58
Above average	93.18	87.42	89.64	83.07

Note: * Chi Square is significant (p<.01); ** Chi Square is significant (p<.05)

Source: profiles.doe.mass.edu/mcas.aspx ; www.doe.mass.edu/infoservices/reports/enroll/?yr=0506;

profiles.doe.mass.edu/ayp2006.aspx?mode=school&orderBy;

profiles.doe.mass.edu/selectedpopulations.aspx?mode=&year=2006&orderBy=&filterBy=;

profiles.doe.mass.edu/teacherdata.aspx?mode=school&year=2006&orderBy=&filterBy= and Boston Public Schools,

Introducing the Boston Public Schools, 2007

Findings and Recommendations

What are the characteristics of schools that Latino students attend? and *What are the outcomes of Latino students in Boston schools with different characteristics?* were the two questions which initiated this analysis. From our review of publicly available data, we conclude that the schools that most Latino students in BPS attend schools with characteristics that are often associated with lower student achievement:

- they are schools with a traditional grade configuration, that is, K-5 elementary school, 6-8 middle school, and 9-12 high school. At both elementary and high school levels, they are schools that are large in size. Relatively few Latino students are participating in the district's experimentation with schools structures which are believed to lead to higher outcomes for children, especially at the high school level.
- Latino students are enrolled primarily in district schools: 87.1% of Latino students attend a district school. They are severely under-represented in the exam schools, which control access through testing and standards of prior achievement. But even in the pilot schools, where enrollment is controlled by lottery, Latino students are under-represented as well. Both exam and pilot schools represent schools where students tend to demonstrate higher achievement.
- They are high-poverty schools, where the poverty rate is over 75%. A higher number of Latino students are impacted not only by their own economic situation but by the fact that most children around them are also poor.
- Latino children attend schools that are struggling to meet its Adequate Yearly Progress (AYP).

A similar proportion of Latino students as the general BPS population attend schools where the percentages of teachers who are licensed in their teaching assignment and of teachers in core areas who are identified as highly qualified are higher than the average for the district. Given the description above for the types of schools Latino children attend, this indicates that the majority of Boston's most experienced teachers are teaching in some of the most challenging schools.

In analyzing the relationship of these school characteristics to the outcomes of Latino students enrolled in those schools, **we found that where Latino children went to school made a difference in both their drop-out rate and their MCAS pass rate.** Exam and pilot schools engaged students and exhibited low rates of dropping out. Exam schools showed high level of achievement for Latino students in both 8th and 10th MCAS tests, with 100% pass rates in both. Attending a pilot school led to higher MCAS pass rates for high school students but this was not the case for elementary or middle school students. In fact, in the 8th grade Latino pilot school students had a lower pass rate in Math than their district school peers. This appears to be the case because Latino 8th grade pilot school students are concentrated in two struggling schools.

Nevertheless, the relationship between the type of school and student outcomes found here is statistically significant across the board (with the exception of the grade 3 MCAS pass rates).

The presence of a high percentage of core academic teachers who are highly qualified also proved to be a significant variable across the board. We found a relationship between schools with a percentage of highly qualified teachers that was above the mean for the district and, both, lower drop-out rates and higher MCAS pass rates (particularly in ELA) at all grades for Latino students. **The role of expert teachers in engaging students and enabling their achievement is clear.**

Latino students had better academic outcomes (as measured by MCAS pass rates) in schools which met their Adequate Yearly Progress goals. This was the case across all grades, and in 3rd, 8th and 10th grade Math and 8th and 10th grade ELA, the relationship was statistically significant. More analysis needs to take place to clarify this relationship since MCAS is the basis of the AYP measure and therefore may confound this outcome.

Of the remaining variables observed, school size impacted the MCAS pass rates of Latino students in 3rd, 8th and 10th grade. **The tendency was for students to do better in smaller schools.** Other variables were less consistent in their impact. Grade configuration was important in some grades but not others, and even in those where the impact was large, the co-existence of the grade configuration with a particular type school (for example the 7-12 configuration of the exam schools) confounded this relationship. The rate of poverty in the school was found to be statistically significant only in its relationship to middle school math pass rates. This too needs to be further explored with a more suitable set of data.

Below we detail the specific findings and the recommendations that derive from each:

1. The characteristics of Latino children in BPS are similar to those of other BPS students except for the following:

- a higher percentage of them have a home language other than English (64.8% vs 41.4%) and are designated as of limited English proficiency (30.7% vs 16%)
- a higher percentage of them attend special programs (SPED or ELL programs) (46% vs 35%).

2. Where a Latino child goes to school—whether a district, pilot or exam school or schools that are large or small—is an important element of both their engagement with and of their achievement in BPS. Latino students most frequently attend schools that:

- have a traditional grade configuration, that is, K-5 elementary school, 6-8 middle school, and 9-12 high school.
- are district schools; 87.1% of Latino students attend a district school. Latino children are under-represented in pilot schools, where 28% of students are Latino, but more severely so in the exam schools, where only 12% of the enrollment is Latino.
- are large in size, at both elementary and high school levels
- that are “high poverty” schools, that is, where the poverty rate is over 75%.

All of these characteristics were associated with high drop-out rates and low MCAS pass rates for Latino students in BPS. Parents and students and community-based organizations working with youth should be familiar with those factors related to better engagement and achievement.

- **Recommendation 1.** Support Latino students' access to exam schools through programs such as Alerta and TAG and other programs geared to identifying and supporting academically talented Latino students.
- **Recommendation 2.** Make pilot schools more accessible to Latino students by supporting education about the benefits of pilot schools geared to both Latino students and their parents. Orient parents to select pilot schools for their children, particularly in high school.
- **Recommendation 3.** Identify those district schools where Latino children are doing well. Orient parents to select:
 - small schools.
 - schools that have met adequate yearly progress in both Math and ELA.

3. Latino students have a dismal engagement with Boston schools. They trail all student groups in Boston and even their Latino peers across the state in key engagement indicators: attendance, drop-out, and graduation rates. Twenty-six percent of Latino students drop out of Boston schools before finishing high school.

4. For Latino students in BPS, dropping out of school begins as early as the 6th grade and continues unabated through the high school years. By the end of middle school 3% of Latino students have dropped out; in 2006, the year of our observation, 15.2% of those Latino students who dropped out did so in middle school. Only 50.6 percent of Latino students graduate in 4 years; 57% graduate in 5.

- **Recommendation 4.** Assess district high schools with an eye to identifying factors that lead to the very high drop-out rates among Latino students in each of those schools and to putting in place short-term initiatives to alleviate such massive school leaving on the part of Latino students.
- **Recommendation 5.** Establish a state-of-the-art dropout prevention program in Boston Public Schools that
 - identifies risk factors in the early grades
 - supports the development of strategies school by school
 - addresses key risk factors before students enter high school.
- **Recommendation 6.** Support Mass Senate Bill (S 2462) to improve dropout prevention and reporting of graduation rates. The bill proposes to raise the compulsory attendance age to 18 years, to establish a Graduation and Drop-out Commission and to provide grants to implement in-district "early education indicator systems" to track students unlikely to graduate on-time from high school.

- **Recommendation 7.** Support a family and community education initiative to reduce the drop-out rate by
 - focusing on improving attendance and reducing absenteeism
 - supporting the role of families in maintaining children in school.
 - expanding access to a broad range of types of after-school programs for middle school students
 - involving the media in reinforcing these messages.

5. Teachers are a key element in increasing the graduation rate and holding down the drop-out rate in schools: teachers are in many ways the “Anti-Drop-Out.” The role of licensed and highly qualified teachers impacted more the engagement variables than was the case for the indicators of academic achievement.

- **Recommendation 8.** Gain a better understanding of the role of teachers in engaging Latino students and maintaining them in school by conducting qualitative field research in schools with lower drop-out rates (exams and pilots), to highlight those elements of the student / teacher relationship that support student engagement.
- **Recommendation 9.** Develop teacher mentoring programs focused on dropout prevention, where teachers strategize with teachers about ways to maintain children in school.

6. Latino academic outcomes are the most depressed of any racial/ethnic group in the district. Latino MCAS pass rates at all levels and in both ELA and math (with the exception of 8th grade math) are the lowest of all groups.

The assessment of the achievement gap using the Composite Performance Index developed by the Department of Education shows that the **achievement gap between Latino and White students is twice as large in Math as in ELA and that the non-Latino–Latino gap is almost three times as large in Math as in ELA.**

- **Recommendation 10:** Provide professional development opportunities that orient staff and teachers to factors related to the drop-out rate, the achievement gap and, in general, the differential engagement and academic performance of groups of students.

7. In addition to the type of school a student attends, academic achievement is impacted by the level of poverty in the school. All of Boston’s schools have a high percentage of students who are poor (eligible for free and reduced lunch). There is evidence that the actual additional cost of educating low-income children is between two and two-and-a-half times the cost of educating non-poor students.

- **Recommendation 11.** Support a process of school financing at the state level that takes more account of the proportion of students who are poor or who require special services, such as SPED or ELL services, and that targets high-poverty and high-service-need districts.

8. School achievement for Latino students, as measured by both MCAS pass rates and CPI’s for the group, is also correlated with whether or not a school met its annual progress goals. This is especially the case in middle school and high school. In AY 2006, close to 80% of Latino students attended a school that had not met its expected yearly progress overall or for its racial subgroups, as measured by the state’s Adequate Yearly Progress measures.

- **Recommendation 12.** Conduct a full school assessment of each school that falls behind its AYP goals. This assessment should include curriculum and instruction as well as school culture and climate, leadership, its success in parental involvement, and its perspective on students and their families. Assessments should involve teachers, administrators, parents, and district staff.
- **Recommendation 13.** Start from the frame of reference that a student only has one chance to be in 3rd (or 4th or 6th or 10th) grade. A continued unsuccessful schooling experience is difficult to remediate. Therefore, expedite the process of intervention in schools that do not meet expected progress for two years in a row. Support those schools that engage successfully in a transformation of their practices. Take strong remedial action in schools that fail to make enough change to improve the outcomes of their students.
- **Recommendation 14.** Develop parent education materials on the AYP, including its meaning and where to find each school's rating to support parents' school choices in Boston. Orient parents to choose schools that meet AYP goals.

Appendix One. Variable Definitions

Variable	Definition
Student Demographic Variables	
Gender	Percentage of students of each gender
Eligible for Free and Reduced Lunch	Percentage of students eligible for free or reduced price lunch
First Language other than English	Percentage of students whose first language is a language other than English.
Limited English Proficiency (LEP)	Percentage of enrollment who are of limited English proficiency (LEP). A LEP is defined as “a student whose first language is a language other than English who is unable to perform ordinary classroom work in English.”
Program Participation	
School Level	Percentage of students in elementary, middle, and high schools.
Special Education Programs (SPED)	Percentage of students participating in special education programs, both mainstream and substantially separate programs
Programs for English Language Learners (ELL)	Percentage of students participating in ELL programs
Student Engagement and Academic Outcome Variables	
Attendance Rate	Average percentage of days in attendance for students enrolled in grades 1 - 12.
Missed Days	Average number of days students have been absent in a year in grades 1-12
Suspension Rates (in and out of school)	Percentage of enrolled students who received one or more in-school or out-of-school suspensions.
Retention Rate	Percentage of enrolled students who were repeating the grade in which they were enrolled the previous year
Drop-out rate	Percentage of students in grades 9-12 who dropped out of school between July 1 and June 30 prior to the listed year and who did not return to school by the following October 1. Dropouts are defined as students who leave school prior to graduation for reasons other than transfer to another school.
Graduation Rate	Percentage of students who graduate with a regular high school diploma within 4 years. The cohort count is as of the end of the 2005-06 school year. The status (e.g. graduate, enrolled) is updated as of October 1, 2006.
MCAS ELA and Math Pass Rates	Percentage of MCAS test takers in each subject who scored in the Advanced, Proficient, and Needs Improvement range.
Cumulative Performance Index (CPI)	CPI is a 100-point index that assigns 100, 75, 50, 25, or 0 points to each student participating in MCAS and MCAS-Alt tests based on their performance. The total points assigned to each student are added together and the sum is divided by the total number of students assessed, resulting in values between 0 and 100 for a district, school or subgroup for that subject and student group. CPI is a measure of the extent to which students in a group are progressing toward proficiency (a CPI of 100) in ELA and math.
School Characteristics	
Enrollment (district, school) by Race	Percentage of enrollment by race/ethnicity.
Grade Levels (district)	P/K-5 Elementary School

	P/K-8 Elementary and Middle School P/K-12 Elementary, Middle, and High School 6 to 8 or 7 to 8 Middle School 6 to 12 or 7 to 12 or 9 to 12 High School
Type of School	Three types of schools – Pilot, Exam, and District
School Quality Variables	
Accountability Status	A school's Adequate Yearly Progress (AYP) data for the selected year.
Teachers Licensed In Teaching Assignment	Percentage of teachers who are licensed with Provisional, Initial, or Professional licensure to teach in the area(s) in which they are teaching
Highly Qualified Teachers Teaching In Core Academic Subjects	The percentage of staff, measured in "full-time equivalency," teaching core academic areas who meet the NCLB definition of highly-qualified. To meet the definition, teachers must hold a valid Massachusetts license AND demonstrate subject matter competency in the areas the teach.).

Appendix 2: Data Availability

	STATE	BY RACE	DISTRICT	BY RACE	SCHOOL	BY RACE	AVAILABLE
Enrollment	x	x	x	x	x	x	http://www.doe.mass.edu/infoservices/reports/enroll/?yr=0506
FILINE, LEP, SPED, Low Income			x		x		http://profiles.doe.mass.edu/selectedpopulations.aspx
Attendance	x	x	x		x		http://profiles.doe.mass.edu/indicators.aspx
In school suspensions	x	x	x		x		http://profiles.doe.mass.edu/indicators.aspx
Out of school suspensions	x	x	x		x		http://profiles.doe.mass.edu/indicators.aspx
Retentions	x	x	x		x		http://profiles.doe.mass.edu/indicators.aspx
				x			http://www.doe.mass.edu/infoservices/reports/retention/
Exclusions	x	x	x (lim)				http://www.doe.mass.edu/infoservices/reports/exclusions/
MCAS Test results	x	x					http://profiles.doe.mass.edu/home.asp?mode=o&view=tst&ot=0&o=0000&so=-&mcasyear=2006
			x	x	x	x	http://profiles.doe.mass.edu/mcas.aspx
					x	x	http://boston.k12.ma.us/schools/schname.asp
Drop Out	x	x	x	x	x		http://www.doe.mass.edu/infoservices/reports/dropout/
					x		http://boston.k12.ma.us/schools/schname.asp
CPI					x		http://profiles.doe.mass.edu/ayp2006.aspx
						x	http://profiles.doe.mass.edu/ayp2006.aspx
School variables							
Accountability Status	x		x		x		http://profiles.doe.mass.edu/ayp2006.aspx
Student/teacher ratio			x		x		http://profiles.doe.mass.edu/teacherdata.aspx
% of teachers licensed in teaching assignment					x	x	http://boston.k12.ma.us/schools/schname.asp
							http://www.doe.mass.edu/infoservices/reports/educator/04data.xls
	x		x		x		http://profiles.doe.mass.edu/teacherdata.aspx
% of Core Acad teachers id'ed as high qualified					x	x	http://boston.k12.ma.us/schools/schname.asp
	x		x		x		http://www.doe.mass.edu/infoservices/reports/educator/04data.xls
	x		x		x		http://profiles.doe.mass.edu/teacherdata.aspx

Notes

¹ Carter Development Day Care Center, Expulsion Alternative Program, Horace Mann, McKinley Schools, Middle School Academy, Young Adult Center. In addition, the Egleston Community High School, Boston Day and Evening Academy, and Boston Adult Academy were also excluded because they served adult students and because outcome data was not consistently available.

² About 1100 students attend the 15 charter schools, according to the Massachusetts Department of Elementary and Secondary Education.

³ See Phillips (2006) and Altshuler and Schmautz (2006). For an analysis of the effect of MCAS on Latino students, see Uriarte (2002).

⁴ (1) Total BPS enrollment equaled 56,765 students in AY 2006; Latino enrollment equals 18,999. (2) The study included 79 schools with a P/K-5 configuration; 9 with P/K-8; 19 middle schools with 6-8 configuration; 3 schools with 7 to 12, and 29 schools with a 9 to 12 grade configuration.

⁵ All exam schools are represented in this study.

⁶ Seventeen of the 19 pilots are included in the study. Excluded were Greater Egleston Community High School and Boston Day and Evening Academy. Both alternative schools, they had no MCAS or AYP scores.

⁷ One hundred and sixteen district schools are included in this study. Excluded are: Carter Development Day Care Center, Community Academy, Expulsion Alternative Program, Horace Mann, McKinley Schools, Middle School Academy, Young Adult Center, and Boston Adult Academy.

⁸ See Boston Public School's Office of High School Renewal: www.highschoolrenewal.org/carnegieproposal.pdf and www.highschoolrenewal.org/gatesproposal.pdf

⁹ These were: Brook Farm Business and Service Career Academy, Community Academy of Science and Health, Media Communications Technology High School, Parkway Academy of Technology and Health, Social Justice Academy, The Engineering School, Urban Science Academy, Community Transition School, Academy of Public Service, Another Course to College, Boston International High School, Edward G. Noonan, Jr. Business Academy (NBA), Boston Community Leadership Academy, TechBoston Academy, Excel High School, Monument High School and Odyssey High School. See the Boston Public Schools Office of High School Renewal (www.highschoolrenewal.org/schools/default4.asp).

¹⁰ This relationship is well established in the literature. For a recent review of this work see Rothstein (2004).

¹¹ Children qualifying for a free school lunch are part of families whose household income is at or below 130% of the federal poverty line; those qualifying with reduced lunch belong to families whose household income is between 130% and 185% of the poverty line. See Carey (2002).

¹² The poverty rate in the school represents the percent of students who are eligible for free and reduced lunch.

¹³ The following are defined by Mass DOE as Core academic areas: Foreign Languages Arts, Reading, English/Language Arts, History/Social Studies (includes Geography), Sciences, Mathematics, Civics/Government/Political Science/Political Philosophy and Economics

¹⁴ Most pilot middle school students (55%) are served by two schools: Orchard Gardens, with a P/K-8 configuration, and Lila Frederick, with a configuration of 6-8. These two schools were determined as pilots by the district in 2003 and did not go through the usual process of selection by the faculty, nor were they founded with the typical "autonomies" granted to the pilots by the BPS.

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