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ABSTRACT

Boston Pilot Schools were created in 1994 to promote increased choice options within the school district. Unlike most urban public schools, the Pilot Schools have control over budget, staffing, curriculum, governance, and time, though they continue to operate within the Boston Public Schools. This report examines quantitative indicators of Boston Pilot Schools related to student demographics, engagement, and performance. Data come from the Boston Public Schools and individual Pilot Schools. Results indicate that the Pilot Schools serve their students well. With an enrollment roughly mirroring the district's student population, the Pilot Schools have succeeded in creating communities of learning which meet students' academic and emotional needs. Across indicators of student engagement, the Pilot Schools have among the highest attendance and longest wait lists, and among the lowest transfers out and suspensions in the district. By standardized test scores, Pilot Schools students score at or above the district average in all subjects. These schools have low grade retention rates and high graduation rates, and they send significantly more of their students on to postsecondary education. Their status as Pilot Schools allows them to create unified learning communities with smaller class sizes, higher teacher-student ratios, longer instructional periods, and greater collaboration to improve teaching and learning than most other public schools in Boston. (SM)

CENTER FOR COLLABORATIVE EDUCATION

HOW ARE THE BOSTON PILOT SCHOOLS FARING?

An Analysis of student demographics, engagement, and performance

OCTOBER 2001

How Are Boston Pilot Schools Faring?
An Analysis of Student Demographics, Engagement, and Performance

Center for Collaborative Education
1135 Tremont Street, Suite 490
Boston, MA 02120

October 2001

HOW ARE BOSTON PILOT SCHOOLS FARING?
AN ANALYSIS OF STUDENT DEMOGRAPHICS, ENGAGEMENT, AND PERFORMANCE

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How Are Boston Pilot Schools Faring?
An Analysis of Student Demographics, Engagement, and Performance

EXECUTIVE SUMMARY

Many of our urban public schools are not providing our students, particularly low-income students and students of color, with an equitable, high quality education, and need a radical overhaul if they are to be successful in raising and sustaining achievement for all students. A stubborn gap persists in access to educational opportunities and in academic expectations between White students and Black, Latino/a, and low-income students. A declining confidence in our public schools is apparent by the increase in charter schools, rising enrollments in private schools, and calls for vouchers.

We need to create new, innovative models of urban schools to restore the public's faith in urban public education. Boston Pilot Schools were created in 1994 to promote increased choice options within the school district. Unlike most urban public schools, the Boston Pilot Schools have control over budget, staffing, curriculum, governance, and time, all critical conditions to building a unified learning community in which teaching and learning are personalized and of high quality. They represent a new vision of public schools and districts in which schools are provided flexibility to create challenging learning environments in exchange for increased accountability.

Today, there are eleven Boston Pilot Schools spanning grades K-12 and serving approximately 2600 students, or 4% of the total Boston Public Schools (BPS) enrollment. The student assignment process is the same for Pilot elementary and middle schools as for BPS. Pilot high schools have special admissions processes that screen for fit and commitment to the school's philosophy. Prior academic achievement is not a factor.

In an educational innovation, the ultimate measure of success is the change in students. For urban, mostly low-income students and students of color, there is an urgency to develop models of schooling that provide greater access to quality education. How are students in the Pilot Schools faring, especially as compared to their counterparts in regular BPS schools? Do the Pilot Schools' conditions of smallness and autonomy over resources improve student engagement and performance? The purpose of this report is to answer these questions.

This report examines quantitative indicators of Pilot Schools on three levels: 1) student demographics, 2) student engagement, and 3) student performance. Data in this report was received from the Boston Public Schools and individual Pilot Schools[1].
The report's primary finding is as follows:

[1] The views, findings, and opinions of the authors in this article do not necessarily reflect those held by the City of Boston or the Boston Public Schools.

While the Pilot Schools serve a student population generally representative of the Boston Public Schools, Pilot School students perform well on all available measures of student engagement and performance, and are among the top performing of all Boston Public Schools.

Student Demographics

- The Boston Pilot Schools K-12 student population is generally representative of the larger BPS student population, with some variation by school level. While serving a similar percentage of African American and Asian American students, Pilot Schools serve a slightly higher percentage of White students and a smaller percentage of Hispanic students than the BPS district average.
- Pilot high schools serve significantly more African-American students than the non-Pilot high schools in the district.
- Pilot middle and high schools serve a percentage of low-income students that is similar to the district average, while Pilot elementary schools serve a significantly lower percentage of low-income students than the district average. Pilot Schools serve similar percentages of special education mainstream students, and a lower percentage of bilingual students.

Student Engagement

- Pilot Schools rank among the BPS schools with the highest student attendance rates, reflecting high levels of student engagement.
- Pilot Schools have among the highest student wait lists of any BPS schools. This desirability has remained stable or increased over time, signaling the attraction of Boston families and students to small, personalized schools.
- Pilot middle and high schools have a significantly lower percentage of students who transfer out of school than does the BPS district average, signaling higher "holding power" than regular BPS schools.
- Pilot Schools have among the lowest suspension rates of all BPS schools, indicating that they are safe and personalized cultures.

Student Performance

MCAS

- Pilot elementary schools perform at or above the system average in English Language Arts, Math, and Science, with two schools ranking at or near the top. Science scores have improved dramatically in all three elementary schools over the last few years.
- The Pilot middle school with MCAS scores (Harbor School) performed at or above the system average in all three subjects in 1999-2000, ranking 4th of all middle schools in both English Language Arts and Math.
- Three of the four Pilot high schools had MCAS scores ranked in the top of Boston high schools, placing just behind the exam schools in English Language Arts and Mathematics.

Stanford 9

- Pilot high schools rank in the top six non-exam schools by numbers of students in Levels 3 and 4 for Reading. Two of the schools also perform well compared to the district in Math.
- At the middle school level, four of the five Pilot Schools score solidly in the top ten for numbers of students in Levels 3 and 4 in Reading.
- Two of the three Boston Pilot elementary schools outscore the average Boston elementary schools for both numbers in advanced and proficient categories and a lower percentage of students in the failing category in most years of the SAT9 since 1996.

Retention, Graduation, and Post Graduation Plans

- Pilot Schools have significantly low grade retention rates, a key predictor of dropping out of school. Pilot Schools' favorable scores on the MCAS and Stanford 9 suggest that these low retention rates are more due to students meeting the requirements for promotion to the next grade, rather than an indication of social promotion.
- Pilot high schools have both high rates of graduation and high rates of students planning to attend college. The rate of Pilot high school graduates planning to attend college, and in particular four-year colleges, is dramatically greater than the BPS district average.

Conclusions

The findings in this report demonstrate that the Boston Pilot Schools serve their students commendably. With an enrollment roughly mirroring the district's student population, the Pilot Schools have succeeded in creating communities of learning which meet students' academic and emotional needs. Across indicators of student engagement, Pilot Schools have among the highest attendance and longest wait lists and among the lowest transfers out and suspensions in the district. By standardized test scores, Pilot Schools students score at or above the district average in all subjects. These schools have low grade retention rates, high rates of graduation, and send significantly more of their students on to post-graduate education.

How do Pilot Schools achieve success with their students? Their status as Pilot Schools, with autonomy from the district over budget, staffing, scheduling, governance, and curriculum, allows them to create unified learning communities. Their smallness allows staff and students to know each other well, and structures such as smaller learning communities and advisories allow relationships among school community members to build over time.

The Boston Pilot Schools have begun to demonstrate that when urban public schools are provided increased autonomy and flexibility to adopt innovative practices, and are held accountable for their results, student outcomes across a range of indicators improve. These findings have significant implications for the future of urban public education and suggest a movement toward providing schools with greater autonomy over their resources as a key vehicle for improving urban student engagement and performance.

How Are Boston Pilot Schools Faring?
An Analysis of Student Demographics, Engagement, and Performance

INTRODUCTION

> *What every principal or headmaster should have are the kind of conditions Pilots have. That's everything from size and scale to hiring their own staff to instructional flexibility to governance, the works.* (Pilot School director; Neufeld, 1999)

Accumulating evidence indicates that many of today's urban public schools are not providing our students, particularly low-income students and students of color, with an equitable, high quality education, and need a radical overhaul if they are to be successful in raising and sustaining achievement for all students. Many schools are too large and impersonal to engage significant percentages of students and are structured in a manner that makes it virtually impossible for teachers to know students well. Progress in raising student achievement has been slow and incremental. A stubborn gap persists in access to educational opportunities and in academic expectations between White students and Black, Hispanic, and low-income students. With the nation's population growing increasingly diverse, our schools are leaving many of our students behind. As a result, there is a declining level of confidence and support in our nation's public schools, particularly for urban schools, evidenced in the increase of charter schools, rising enrollments in private schools, and calls for vouchers.

The result of a unique partnership among the Mayor, School Committee, Superintendent, and Teachers Union, Boston Pilot Schools were created in 1994 to promote increased choice options within the school district, largely in response to 1994 state legislation creating first-time charter schools and the subsequent loss of Boston students to area charter schools. The Pilot Schools were to be models of educational innovation and to serve as research and development sites for effective urban public schools. "*The purpose of establishing Pilot Schools is to provide models of educational excellence that help to foster widespread educational reform in all Boston public schools.*" (Boston Public Schools, 1995)

Schools are often hampered by the lack of control over budget, staffing, curriculum, governance, and time, all critical conditions to building a unified learning community, leaving them unable to use their resources in the best manner possible to provide personalized, high quality teaching and learning to students. The Pilot Schools have autonomy over these five areas, giving them increased flexibility to organize school programs and staffing to best meet students' needs. These freedoms, Pilot Schools believe, are the conditions, along with the commitment to creating and maintaining small schools, that are necessary to promote successful learning.

A unique feature of Pilot Schools is that they operate within the Boston Public Schools (BPS), unlike charter schools. All Pilot School teachers are members of the Boston Teachers Union, receive union salaries and benefits, and accrue seniority This attachment with the district

provides the opportunity for Pilot School practices and conditions to influence the larger BPS system, while providing Pilot Schools with the economy of scale advantages of facilities, payroll, and transportation, among others. Pilot Schools are creating a new vision of public schools and districts in which schools are provided maximum flexibility to create challenging learning environments, and the role of the school district is recast to provide these schools with increased support. In 1997 with BPS support, the Pilot Schools and the Center for Collaborative Education, a nonprofit organization dedicated to school reform, formed the Boston Pilot Schools Network. As a result, the Pilot Schools are individually and collectively stronger.

Today, there are eleven Boston Pilot Schools spanning grades K-12 and serving approximately 2,600 students, or 4% of the total Boston Public Schools enrollment. In an educational innovation, the ultimate measure of success is the change in students. For urban districts that serve predominantly low-income students and students of color, the urgency to develop models of schooling for greater access to quality education demands that we look at how students in Pilot Schools are faring. How are students in Pilot Schools faring, especially as compared to their counterparts in regular BPS schools? Do the Pilot Schools' conditions of smallness and autonomy over budget, staffing, curriculum, governance, and time improve student engagement and achievement? The answers to these questions are the purpose of this report.

SUMMARY OF THE FINDINGS

We believe that improvement in student outcomes should be examined through multiple lenses. The current report examines quantitative indicators of practice on the Boston Pilot Schools on three levels: (1) student demographics, (2) student engagement, and (3) student achievement. Data used in this report was received from the Boston Public Schools and individual Pilot Schools [2].

This report presents data that shows that, while Pilot Schools serve a student population that is generally representative of the larger BPS student population, Pilot Schools of all levels perform well on a variety of measures of student achievement and student engagement as compared to regular BPS schools, and are always among the top performing of all Boston Public Schools.

Pilot Schools:

- Have among the highest daily student attendance of all BPS schools
- Have among the highest total number of students on waiting lists to enroll in the school
- Have among the fewest transfers out of school
- Have among the fewest percentage of students suspended
- Are among the top performing schools in Boston on the MCAS
- Are among the top performing schools in Boston on the SAT9
- Graduate a high percentage of their students
- Send a high percentage of their graduates to college

[2] The views, findings, and opinions of the authors in this article do not necessarily reflect those held by the City of Boston or Boston Public Schools.

It is our premise that Pilot Schools perform so well because they are small and they have the autonomy to create conditions which research has found to improve student learning (Cotton, 1995).

> *When you have a small school, the problems are still there, but the power of the community of a small school can help where the kids can be swept into a world that is not just their peers ...Kids can join a grownup culture because the size is such that an adult intellectual culture can be built. (Pilot School director, New England Small Schools Network forum, 2000)*

Pilot Schools are able to (1) personalize students' learning environment and (2) provide teachers with sufficient, flexible blocks of time to collaborate and plan together. As documented in another recent Center for Collaborative Education study on the use of Pilot Schools' freedom over budget, staffing, and scheduling to meet student needs, specific practices of the Pilot Schools that contribute to their success include:

- Pilot Schools are all small schools, serving less than 500 students
- Although Pilot Schools are small, many still create even smaller learning communities within the schools so that the students and adults form close, personalized, multi-year relationships
- Pilot Schools have student advisories, another means by which relationships can form among small groups of students and between students and adults
- Class sizes are smaller than those in most BPS schools
- Student to teacher ratios are lower than in most BPS schools
- Pilot Schools have longer instructional periods and total instructional time than most BPS schools
- Pilot faculty have significantly greater collaborative planning time to improve teaching and learning than most BPS schools

> *Young people experience the world through relationships. If schools develop the relationships, we can take kids that much further in their learning. (Pilot School director, New England Small Schools Network forum, 2000)*

> *[In my Pilot School], the principal is in your face all the time. In my old school of 1300 students, I saw a picture of my principal and knew his name, but in my two years there, I never met him. Here, I see my principal every day. (Pilot School student, New England Small Schools Network forum, 2000)*

The Boston Pilot Schools have begun to demonstrate that when urban public schools are provided increased autonomy and flexibility to adopt innovative practices, and are held accountable for their results, student outcomes across a range of indicators improve.

STUDENT DEMOGRAPHICS

Finding: Pilot Schools enroll a K-12 student population that is generally representative of the Boston Public Schools' student enrollment, although the percentage of low-income students and bilingual students is lower than the BPS district average and the percentage of White students is higher than the BPS average, mostly the result of two Pilot elementary schools.

There are currently eleven Pilot Schools in the Network:

	Grades served
High Schools	
Boston Arts Academy	9-12
Boston Evening Academy	9-12
Fenway High School	9-12
Greater Egleston Community High School	9-12
Health Careers Academy	9-12
New Mission High School	9-12
Middle Schools	
Harbor School	6-8
Quincy Upper School	6-8 (adding one grade per year to grade 12)
Elementary Schools	
Lyndon School	K-8
Mission Hill School	K-8
Young Achievers Science and Math School	K-8

As Pilot Schools are a special subset of schools within a larger urban district, it is important to study the enrollment patterns of the Pilot Schools. With a goal of equity, the Pilot Schools want to serve a population that is representative of the entire district.

Student assignment/choice in elementary and middle schools is the same for Pilot Schools as for all Boston Public Schools. Most schools serve students in their geographic zone, of which there are three in Boston. A few elementary and middle schools serve students citywide, across all three zones. Parents/students may list their first, second, and third choice schools based on their residence zone or based on preference of citywide schools. Citywide schools reserve a percentage of slots for neighborhood children and then open up the remaining the slots for the citywide lottery. Two Pilot Schools are citywide schools: Mission Hill School and Young Achievers Science and Math School, both serving grades K-8.

All Boston high schools serve students citywide. Pilot high school admissions are determined by an application, and in some cases, by interviews. However, whereas BPS examination high schools base their admissions on entrance exam scores and grade point averages, Pilot high schools do not use their admissions process to screen students out based on prior academic achievement, but rather to ensure fit and commitment to the school's philosophy.

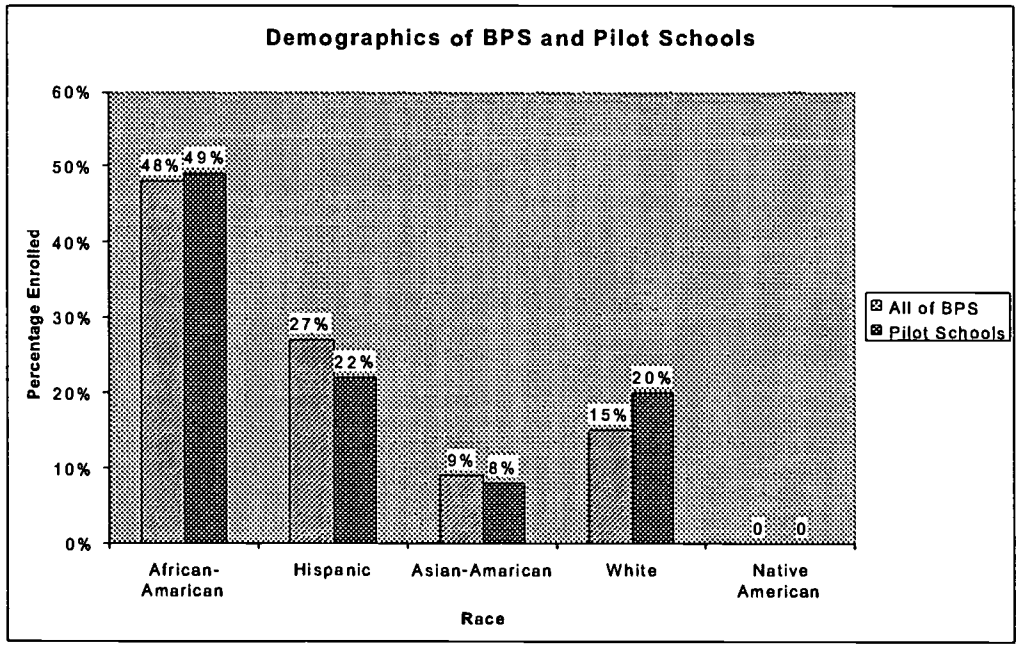
The Boston Public Schools serve approximately 64,000 students in 130 K-12 schools, with approximately 48% Black, 27% Latino, 9% Asian, and 15% White students. Eighteen percent of the district's students are designated as special needs, and 21% are students whose first language is not English. As a whole, Pilot Schools serve approximately 4% of the BPS population (approximately 2600 students). *It should be noted that there are so few Pilot Schools compared to the district that any one school may alter the racial, ethnic, or low-income composition across the Pilot Schools.*

Racial Demographics

Finding: The Boston Pilot Schools K-12 student population is generally representative of the larger BPS student population, with some variation by school level[3]. While serving a similar percentage of African American and Asian American students, Pilot Schools serve a slightly higher percentage of White students and a smaller percentage of Hispanic students than the BPS district average.

Pilot elementary schools serve a significantly greater percentage of White students than the district average, and a lower percentage of African American and Asian American students. Pilot middle schools serve a similar percentage of African American and White students, while serving a significantly higher percentage of Asian American students and lower percentage of Hispanic students. Pilot high schools serve a significantly greater percentage of African American students than non-Pilot BPS high schools, while serving a lower percentage of White and Asian American students.

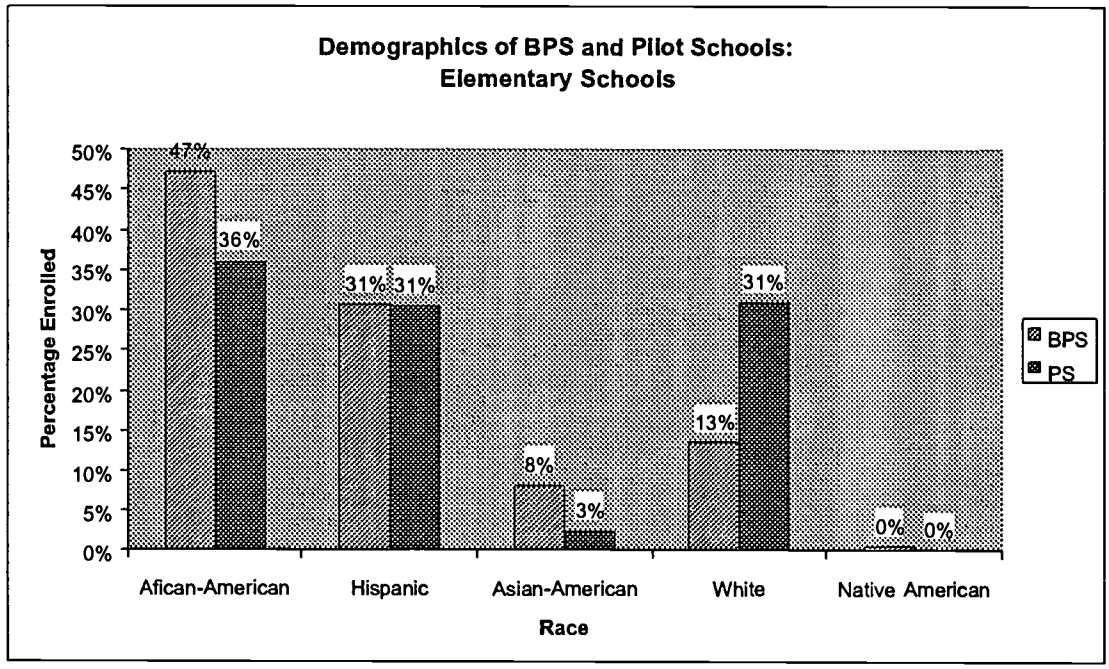
Figure 1. Racial breakdown of BPS and Pilot Schools



[3] Throughout this paper, when we compare Pilot Schools to BPS schools, we include all schools listed in Appendix A. At the high school level, exam schools are included in all analyses.

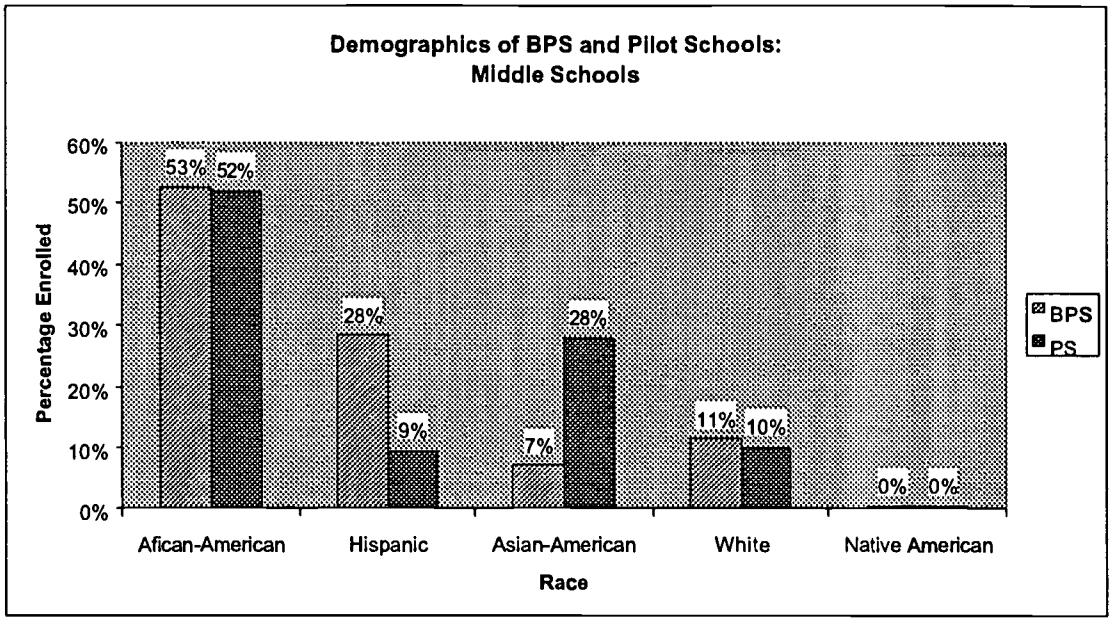
In examining the racial breakdown of Pilot Schools by level (in Figures 2-4), Pilot elementary schools enroll a significantly greater percentage of White students, and consequently a smaller percentage of African American students, than the district. However, enrollment patterns differ considerably at the middle and high school levels. Pilot middle schools enroll a higher percentage of Asian students due to the presence of Josiah Quincy Upper School, and a smaller percentage of Hispanic students, while Pilot high schools enroll a significantly higher percentage of African-American students and a smaller percentage of White and Asian students, as compared to the district.

Figure 2. Racial breakdown of BPS and Pilot Schools: Elementary schools



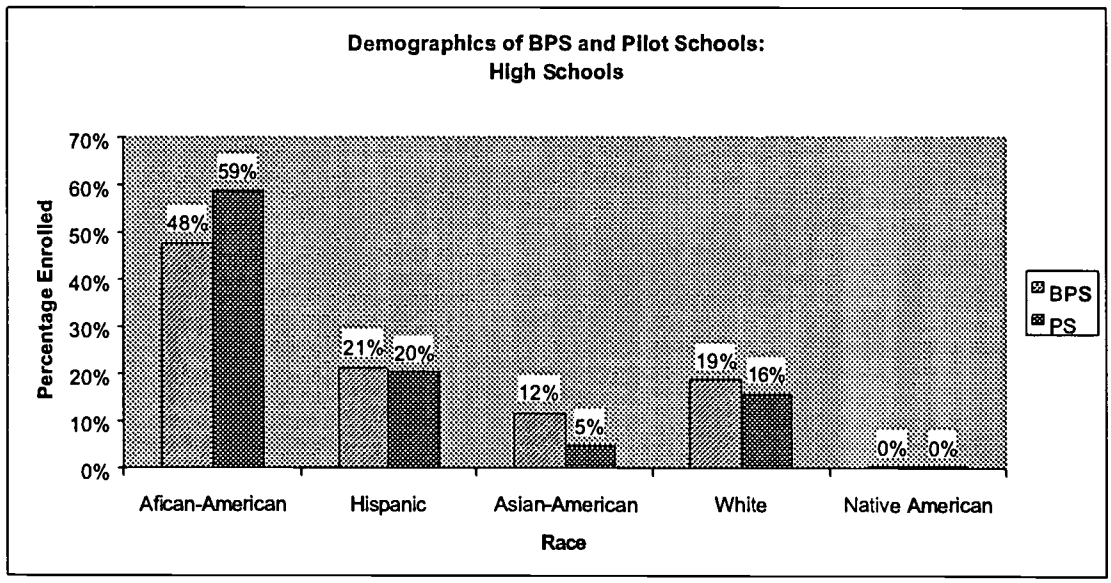
This data is drawn from the three K-8 Pilot Schools. Their percentages of White students are as follows: Young Achievers 15%, Mission Hill 26%, and Lyndon 42%. The fact that Pilot elementary schools serve a significantly higher percentage of White students and lower percentage of African-American students may be due to several factors. One Pilot School, the Lyndon School, is located in a predominantly White neighborhood, and draws heavily from this neighborhood. The other two elementary schools are citywide schools. When a school draws from a citywide pool of applicants, while that school may be located in a racially diverse neighborhood, it may draw families from other neighborhoods for reasons such as curricular philosophy or reputation of leaders. A preliminary study of the pool of accepted applicants from Mission Hill School, with 26% White students, showed that many non-neighborhood families came from predominantly White areas of the city.

Figure 3. Racial breakdown of BPS and Pilot Schools: Middle schools



Pilot middle schools serve comparable percentages of African American and White students, while they differ considerably from BPS schools in the numbers of Hispanic and Asian students. Quincy Upper School is a Zone school located in Chinatown, and serves high numbers of Asian students.

Figure 4. Racial breakdown of BPS and Pilot Schools: High schools



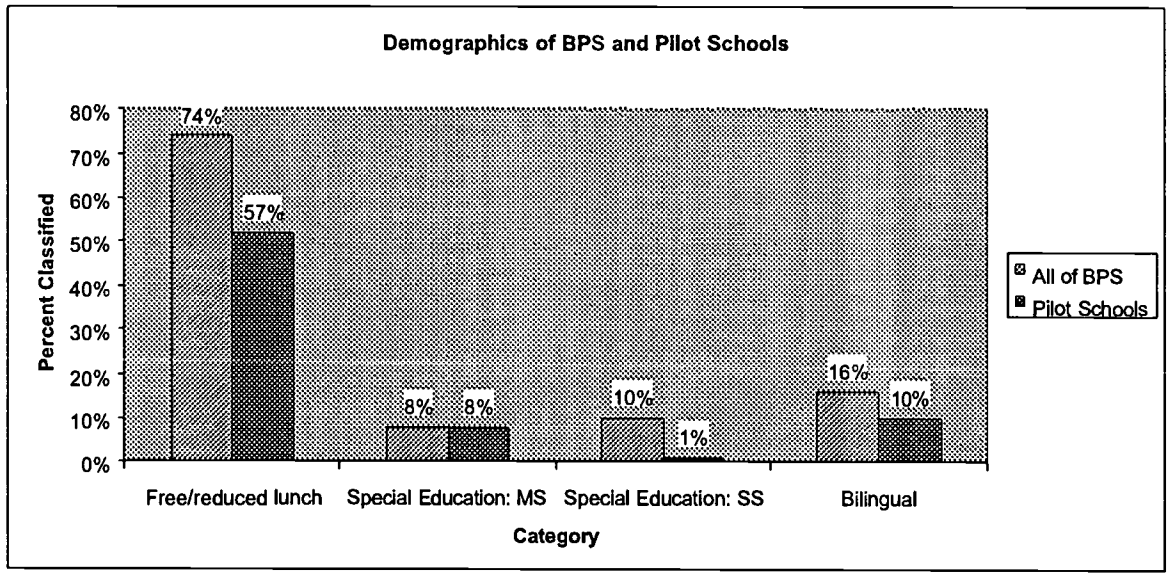
Pilot high schools serve significantly more African American students and less Asian American and White students than the district.

Other demographic information

Finding: Pilot middle and high schools serve a percentage of low-income students that is similar to the district average, while Pilot elementary schools serve a significantly lower percentage of schools than the district average. Pilot Schools serve similar percentages of special education mainstream students, and a somewhat lower percentage of bilingual students.

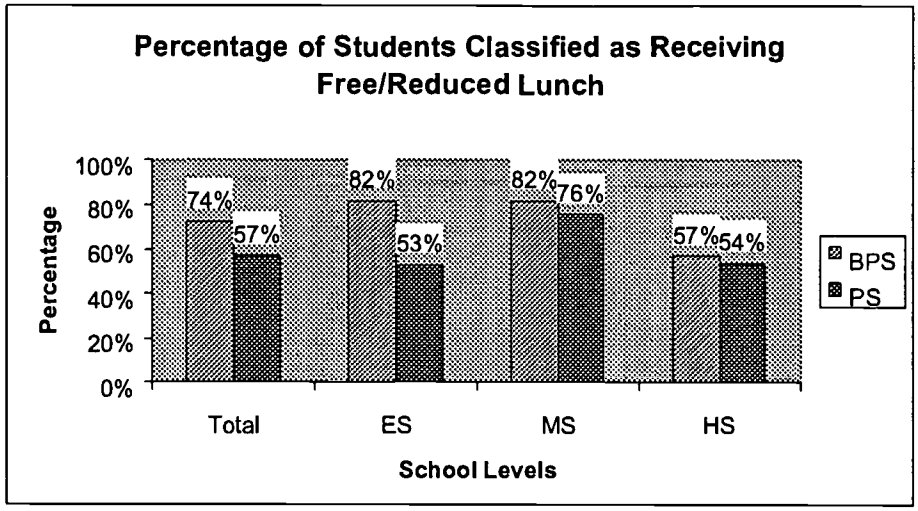
Figure 5 shows other demographic breakdowns of Pilot Schools enrollments, including percentage of students receiving free/reduced lunch (a measure of socio-economic status), percentage of students classified as special education mainstream (Special education MS) or substantially separate (Special education SS), and percentage of students who are enrolled in bilingual programs.

Figure 5. Percent of students by status in Pilot Schools and BPS



Pilot Schools enroll a smaller percentage of students receiving free/reduced lunch than does the district. When the data is broken out by grade levels served, Pilot elementary schools serve significantly less than the district average of free/reduced lunch status students, while Pilot middle and high schools serve similar or slightly lower percentages of free/reduced lunch status students.

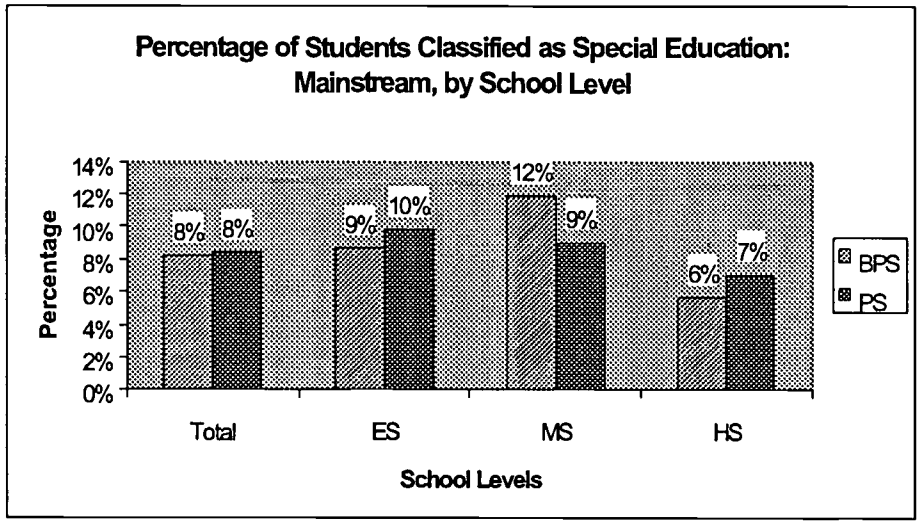
Figure 6. Percentage of students classified as receiving free/reduced lunch, by school level



Pilot Schools enroll an equal percentage of students classified as special education mainstream as does the district. Figure 7 separates the percentages of students classified as special education mainstream by school level. It does not include percentages of students classified as special education substantially separate. As shown in Figure 7, Pilot elementary and high schools serve slightly higher percentages of these mainstreamed students, while the middle schools serve slightly lower percentages. Regarding substantially separate students, Pilot Schools are designed to serve students with moderate substantially separate needs in an inclusive setting, and are not expected to serve students with severe substantially separate needs, and so enroll very few such students.

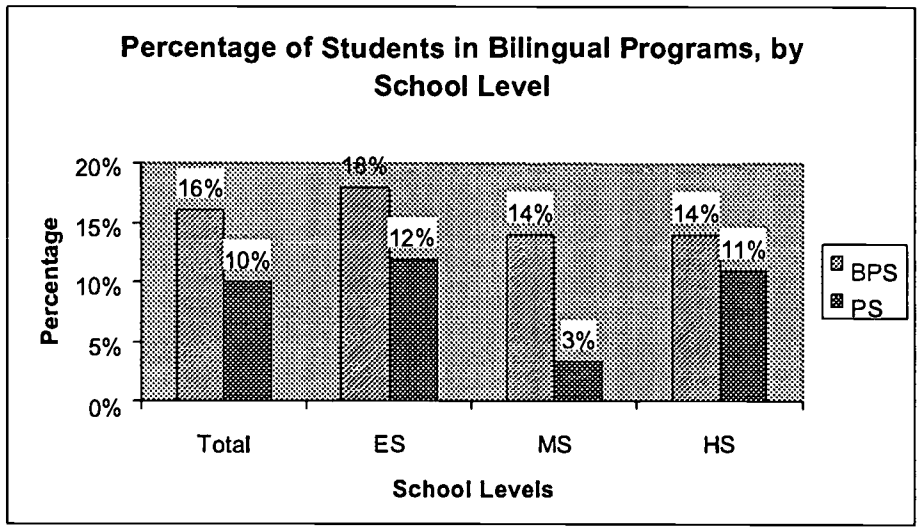
> Pilot Schools believe that the very nature of their smallness - which includes lower class size, teachers knowing their students well, multi-year student-teacher relationships (looping, multi-age classrooms), multiple adults in the classroom, individual learning plans, and multiple assessments - is an integral aspect in providing students with a continuum of services. These aspects of small schools represent conditions that are often provided solely to special education students. This preventive model of schooling minimizes the over-identification of students with special needs. (Pilot Schools Network Special Education Principles, 2000)

Figure 7. Breakdown of students classified as special education mainstream by school level



Finally, Pilot Schools enroll a smaller percentage of students who are bilingual than does the district, with the greatest gap at the middle school level and the narrowest gap at the high school level. Only two Pilot Schools have bilingual programs.

Figure 8. Percentage of students in bilingual programs, by school level



In summary, Pilot Schools serve a student population that is generally representative of the larger BPS student population. The most significant differences in Pilot Schools and BPS demographics are in the elementary schools, where Pilot Schools enroll higher percentages of White students and lower percentages of students with free/reduced lunch status. The difference in enrollment of bilingual students may be accounted for by the fact that only two Pilot Schools have bilingual programs, one of which enrolled less than 20 students last year because it only had two grade levels (Quincy Upper School).

STUDENT ENGAGEMENT

One way to measure school success is to examine how 'engaged' students are with school. Engagement can take many forms in school, such as high attendance, low numbers of discipline problems, and high interest in attending a school. Engaged students are more likely to learn, as they are more likely to be in school, and, when in school, more likely to be in the classroom than the principal's office. This section presents information on the following student engagement indicators:

- Average daily attendance
- Number of students on waiting list
- Number of students who transfer out of a school within district
- Number of students suspended

Student Attendance

Finding: Pilot Schools rank among the BPS schools with the highest student attendance rates, reflecting high levels of student engagement.

High attendance in school is important because students who are not in school are not as able to learn and take advantage of the opportunities their school offers. Research on small schools has demonstrated that students in small schools have higher attendance than students in large schools (Cotton, 1996). High attendance has been positively correlated with higher student achievement. In examining student attendance data across all BPS schools from 1997-2001, we found that eight of the eleven Pilot Schools have among the highest attendance rates of all schools in the district.

Attendance in Pilot high schools[4]

Boston Pilot high schools have consistently had among the highest student attendance of all Boston high schools, including exam schools. In 1997, Fenway and New Mission High Schools ranked first and second among non-exam schools in attendance. From 1998-2000, Fenway, New Mission, Health Careers Academy, and Boston Arts Academy have been among the top five non-exam schools in attendance, and New Mission has had the highest overall attendance of all schools in the city the past two years. Table 1 shows the student attendance percentage at each school for each of the last four years (in descending order left to right), as well as the corresponding rank for that year. We list schools according to rank in 2000-01 school year and highlight the Pilot Schools. Note that both Greater Egleston Community High School and Boston Evening Academy both serve populations of students that have previously had unsuccessful experiences in other BPS schools and enroll in these schools with patterns of low attendance and academic achievement. Therefore, they would be expected to have lower attendance rates than regular high schools.

[4] See Appendix A for a list of comparison schools for all levels.

Table 1. Student attendance rates in BPS high schools, 1997-2001

School Name	2000-2001		1999-2000		1998-1999		1997-1998	
	Rank	%	Rank	%	Rank	%	Rank	%
New Mission	1	98.6%	1	97.7%	11	86.2%	5	89.9%
*Boston Latin	2	94.8%	2	94.9%	2	94.4%	1	94.2%
*Latin Academy	3	94.2%	5	93.6%	4	93.7%	3	93.2%
Fenway	4	93.0%	8	90.6%	6	90.6%	4	90.5%
*O'Bryant	5	92.8%	4	94.0%	1	95.0%	2	93.6%
Health Careers Academy	6	92.4%	3	94.4%	7	90.5%		
Boston Arts Academy	7	89.3%	6	91.4%	3	94.3%		
ACC	8	89.1%	7	90.9%	5	91.8%	6	88.6%
Snowden International	9	88.3%	10	88.4%	8	89.1%	9	85.2%
Burke High	10	87.7%	9	88.8%	10	87.4%	8	85.3%
East Boston High	11	86.6%	11	86.1%	17	81.0%	11	82.4%
West Roxbury High	12	85.9%	14	84.9%	9	87.5%	7	85.5%
Boston High	13	84.6%	18	81.7%	20	78.9%	17	78.8%
Madison Park High	14	84.5%	13	84.9%	15	84.2%	14	80.5%
English High	15	84.3%	12	85.1%	13	85.5%	10	85.1%
Brighton High	16	84.1%	15	83.3%	12	85.7%	12	82.2%
Boston Adult Academy	17	83.0%						
Hyde Park High	18	81.8%	16	82.7%	16	81.4%	15	80.0%
Dorchester High	19	80.2%	20	80.1%	19	80.1%	19	75.8%
Charlestown High	20	80.0%	17	82.6%	14	84.2%	13	80.8%
South Boston High	21	79.4%	19	80.2%	18	80.3%	16	79.1%
Egleston Community	22	59.1%	2	60.2%	21	65.6%	20	71.0%
Boston Evening Academy[5]							18	76.3%

* Examination School

Attendance in Pilot middle schools

The range of overall average attendance rates for BPS regular middle schools from1997-2001 was 88.5%-94.0%. Of the twenty Boston middle schools that have been open since 1997[6], the Harbor School ranks third in overall average attendance during that time at 93.3%, and in the last four years has never had overall attendance drop below 92.3%. Josiah Quincy Upper School, which opened in 1999, has had the highest attendance in the city both years, averaging 97.7%. Table 2 shows the student attendance percentage at each school for each of the last four years, as well as the corresponding rank for that year. Again, schools are listed in order of rank in 2000-01 (in descending order left to right), and Pilot middle schools are highlighted.

[5] As a Horace Mann School, BEA chose not to submit attendance data.
[6] Josiah Quincy Upper School opened in 1999.

Table 2. Student attendance rates and rank in BPS middle schools, 1997-2001

School Name	2000-2001		1999-2000		1998-1999		1997-1998	
	Rank	%	Rank	%	Rank	%	Rank	%
Quincy Upper School	1	97.5%	1	97.8%				
Timilty Middle	2	94.9%	3	94.1%	2	94.1%	4	92.9%
Harbor School	3	94.0%	5	93.7%	8	92.3%	2	93.2%
Lewenberg Middle	4	93.6%	7	93.0%	6	92.5%	10	91.2%
Rogers Middle	5	93.5%	4	93.9%	3	93.9%	3	93.2%
Wilson Middle	6	93.4%	9	92.5%	9	92.1%	7	92.1%
Irving Middle	7	93.1%	6	93.3%	5	92.8%	5	92.6%
Thompson Middle	8	93.0%	17	90.6%	16	91.2%	14	90.4%
Dearborn Middle	9	92.1%	8	92.5%	4	93.6%	1	93.6%
M Curley Middle	10	91.9%	10	92.2%	1	94.8%	6	92.2%
Edison Middle	11	91.4%	12	91.3%	13	91.6%	12	90.9%
McCormack Middle	12	91.4%	13	91.3%	18	90.6%	16	89.6%
Taft Middle	13	91.4%	11	92.0%	7	92.5%	9	91.3%
R.G. Shaw Middle	14	90.8%	14	91.3%	14	91.6%	11	91.2%
Umana/Barnes Middle	15	90.7%	15	91.2%	11	91.9%	13	90.6%
Edwards Middle	16	90.5%	16	90.7%	12	91.8%	8	91.4%
Wheatley Middle	17	90.2%	2	94.5%	10	92.0%	18	89.0%
King Middle	18	90.0%	18	90.2%	20	88.1%	20	86.7%
Lewis Middle	19	89.9%	19	89.9%	15	91.2%	15	89.9%
Cleveland Middle	20	89.4%	21	87.3%	19	89.8%	19	87.4%
Gavin Middle	21	89.1%	20	89.0%	17	90.8%	17	89.0%

Attendance in Pilot elementary schools

Two of the three Pilot elementary schools have consistently had among the highest attendance rates in the city from 1997 until today. Over these four years, the three Pilot elementary schools have had an average attendance of 94.5%, 95.4%, and 95.8%. Of the 79 elementary schools that have been open the last four years, Pilot Schools ranked 9th, 14th, and 42nd, respectively, in highest attendance. The average overall attendance in elementary schools during this period has ranged from 92.7%–97.2%.

Student Wait List

Finding: Pilot Schools have among the longest student wait lists of any BPS schools. This desirability has remained stable or increased over time, signaling the attraction of Boston families and students to small, personalized schools.

Examining the number of students on a school's wait list is an indication of interest by families in that school. High interest could result from the school's location, programming, academic reputation, or other reasons raising "popularity." Pilot Schools' elementary and middle schools participate in the regular lottery system of controlled choice for schools. Families may list their first, second, and third choices of schools. Pilot Schools are small, so the number of slots open each year is quite low.

This section looks at school waiting list data from 1997-2001 for middle and elementary schools. Because Pilot high schools do not have their waiting list compiled by the school district, we do not compare the waiting list numbers for high schools. We find that:

- Both Pilot middle schools are among the top five of the 21 middle schools requested by Boston families, based on total numbers of students on the waiting list
- All three Pilot elementary schools are among the top ten most requested of the 79 Boston elementary schools in total numbers of students on the waiting list
- Young Achievers Elementary School has had the highest total number of students on the waiting list of any elementary school in three of the last four years, and had the second highest in 1998.

Because Pilot Schools also demonstrate high levels of engagement and achievement outcomes, we argue that long wait lists result from the quality academic reputations of Pilot Schools. This was confirmed by the Center for Collaborative Education in a recent review of student applications to Pilot high schools, which found that the two most prominent reasons for students choosing to apply to Pilot high schools were their challenging academic reputations and a culture of personalization (smallness, being known well by adults, and safety) (CCE, 2001). High wait list numbers suggest that additional Pilot Schools would be embraced by families in Boston.

Pilot middle school wait lists

Boston Pilot middle schools have had among the longest waiting lists of any middle school in Boston, equal to or greater than their actual enrollments. Table 3 shows, for the Harbor and the Josiah Quincy Upper Schools[7], the overall enrollment at the school each year, the number of students on the waiting list, and the percentage of students on the wait list as compared to the overall enrollment at the school.

[7] Note that both the Harbor School and Quincy Upper 'rolled out' one grade at a time. Harbor opened with a 6th grade in 1997, added a 7th grade in 1998, and a 8th grade in 1999. Quincy Upper opened with a 6th grade in 1999 and added a 7th grade in 2000.

Table 3. Number of students on waiting list in Boston Pilot middle schools from 1997-2001

School year	Total students enrolled	Number of students on wait list	Students on wait list as a percentage of total enrollment
Harbor School			
1997-98	58	187	322%
1998-99	90	132	147%
1999-00	208	178	86%
2000-01	255	105	41%
Josiah Quincy Upper School			
1999-00	95	2	2%
2000-01	200	89	45%

The Pilot middle schools have ranked at the top of all Boston middle schools for both the total number of students on the waiting list and the number of students on the waiting list as a percentage of the school's size. Table 4 shows the rankings of the Pilot middle schools when compared to all BPS middle schools for these categories for each school year since 1997 (in descending order left to right).

Wait list data indicate that Pilot Schools are desirable among families, and that their desirability remains stable over time.

Table 4. Wait list figures for Pilot middle schools: Rank by total numbers and as a percentage of enrollment

School	2000-01		1999-2000		1998-99		1997-98	
	Total number rank	% of students rank	Total number rank	% of students rank	Total number rank	% of students rank	Total number rank	% of students rank
Harbor School	5	3	4	2	4	2	3	1
Josiah Quincy Upper School	6	2	20	19	N/a	N/a	N/a	N/a

Pilot elementary school wait lists

Like the Pilot middle schools, Pilot elementary schools are also highly sought after by parents. The Young Achievers School, for example, has had the top three highest numbers of students on the waiting list in the last four years for all elementary schools, with 983, 814, and 688 students waiting to enroll in the school—the school only has a total enrollment of approximately 230-275 students per year. We note that both Young Achievers and Mission Hill School, as citywide schools, draw from a larger pool of applicants than do zone schools.

The Pilot elementary schools have ranked at the top of all Boston elementary schools for both the total number of students on the waiting list and the number of students on the waiting list as a

percentage of the school's size. Table 5 shows the rankings of the Pilot elementary schools when compared to all BPS elementary schools for these categories for each school year since 1997.

Table 5. Wait list figures for Pilot elementary schools: Rank by total numbers and as a percentage of enrollment

School	2000-01		1999-2000		1998-99		1997-98	
	Total number rank	% of students rank	Total number rank	% of students rank	Total number rank	% of students rank	Total number rank	% of students rank
Lyndon Elementary	4	8	5	5	26	15	26	12
Mission Hill Elementary	5	2	6	3	8	4	79	79
Young Achievers	1	1	1	1	2	1	1	1

Elementary school wait list numbers show that Pilot Schools are popular among families, and that they have become more sought after since their establishment.

Student Mobility

Finding: Pilot middle and high schools have significantly lower students transfer out of school than does the BPS district average, signaling higher "holding power" than regular BPS schools.

Student mobility greatly affects educational performance. A school's level of student mobility includes both transfers in and transfers out of school. Transfers out of a school to another school in the district may indicate that a school is not meeting the needs of a child or that the child/family is dissatisfied with the school. Generally, students who remain in one school through promotion or graduation have a greater chance of achieving at high levels because of continuity of curriculum and instruction than students who move from one school to another.

This section examines data from the 2000-2001 school year for students who transferred from one BPS school to another BPS school. A low percentage of students who transfer out of a school to another BPS school suggests that students are highly satisfied with the school. For Pilot Schools:

- Five of the six Pilot high schools had among the eight lowest rates of students transferring to another Boston school during 2000-2001
- The Pilot middle schools had the two lowest rates for students transferring to another Boston school during 2000-2001
- The Pilot elementary schools were in the middle third of all elementary schools for students transferring to another Boston school during 2000-2001

Pilot high school transfers within district

Within district transfer rates ranged from 1-19% of student enrollment in 2000-01. Five of the six Boston Pilot high schools have the lowest rates of students transferring within the district; all five have rates of 4% or less. The median rate for all non-Pilot Boston high schools is 7%. Schools are listed by rank and Pilot Schools are highlighted.

Table 6. Within-district transfers for BPS high schools, by rank and percentage of student body transferring out

School Name	1999-2000	
	Rank	%
Egleston Community High	1	0%
Boston Evening Academy	2	1%
*Boston Latin	3	2%
ACC	4	3%
Boston Arts Academy	4	3%
Health Careers Academy	4	3%
Fenway	7	4%
Snowden International	7	4%
*O'Bryant	9	6%
*Latin Academy	9	6%
Madison Park High	11	7%
Burke High	11	7%
Hyde Park High	11	7%
English High	14	8%
Boston Adult Academy	15	9%
New Mission	15	9%
Dorchester High	15	9%
West Roxbury High	18	10%
Brighton High	19	11%
South Boston High	19	11%
Boston High	21	19%
Charlestown High	22	26%
East Boston High	23	34%

* Examination school

Pilot middle school transfers within district

The Boston Pilot middle schools had the lowest percentages of students transferring within the district in the 2000-01 school year, with rates of 2% and 4%. The median rate for all non-Pilot Boston middle schools is 9%.

Table 7. Within-district transfers for BPS middle schools, by rank and percentage of student body transferring out

School Name	1999-2000	
	Rank	%
Quincy Upper School	1	2%
Harbor School	2	4%
Dearborn Middle	3	6%
Taft Middle	4	7%
M Curley Middle	4	7%
McCormack Middle	6	8%
Irving Middle	6	8%
Wilson Middle	6	8%
Timilty Middle	6	8%
Lewenberg Middle	6	8%
Edison Middle	11	9%
Gavin Middle	11	9%
Thompson Middle	11	9%
Rogers Middle	14	11%
R.G. Shaw Middle	15	12%
Lewis Middle	16	13%
Edwards Middle	17	14%
King Middle	17	14%
Umana/Barnes Middle	19	15%
Cleveland Middle	21	16%
Wheatley Middle	22	18%

Pilot elementary school transfers within district

Of the 79 Boston elementary schools, the three Boston Pilot elementary schools rank in the middle third by the percentage of students' transferring out of the Pilot School but within the district. The median rate for non-Pilot Boston elementary schools is 9%; the Pilot Schools have transfer rates of 9%, 9%, and 11%.

Student Discipline

Finding: Pilot Schools have among the lowest suspension rates of all BPS schools, indicating that they are safe and personalized cultures.

Students who are engaged in academics are less likely to have discipline problems, and not surprisingly, students who have behavior problems are less likely to learn. Student suspension rate is one indicator of student discipline in schools. This section presents data from 1997-2001 and includes the findings that:

- Pilot high schools have among the lowest student suspension rates for all schools within the district
- Both Pilot middle schools have had among the lowest student suspension rates of all BPS middle schools
- Two of the three Pilot elementary schools have had among the lowest student suspension rates of all BPS elementary schools

The suspensions we report include only out of school suspensions. The percentage calculations were based on the number of students suspended and the May enrollment figures for each school year in order to control for the size of the school. They do not take into account the number of suspension occurrences (students with multiple suspensions) or the fact that enrollments change throughout the school year.

Pilot high school suspensions

Since 1997, the Pilot high schools have had among the lowest percentage of students suspended of all Boston high schools. In fact, in the last four years, BEA and Egleston have had no suspensions; in three of the last four years, Fenway and New Mission have had no suspensions; and in two of the three years that BAA has been open and that HCA has been a separate school, they have had no students suspended. Except for ACC, all other Boston high schools have had students suspended in at least three of the last four years. All schools with no suspensions are small schools.

Table 8 shows where all 22 Boston high schools ranked in the percentage of students suspended, and provides that percentage. Schools are listed by rank in 2000-2001, with Pilot Schools highlighted (descending by year from left to right).

Table 8. Student suspensions: Percentage of students suspended and rank among BPS high schools, by year

School Name	2000-01		1999-2000		1998-99		1997-98	
	Rank	%	Rank	%	Rank	%	Rank	%
ACC	1	0%	10	1%	15	7%	1	0%
Boston Evening Academy	1	0%	1	0%	1	0%	1	0%
Egleston Community High	1	0%	1	0%	1	0%	1	0%
Fenway	1	0%	1	0%	12	4%	1	0%
*O'Bryant	1	0%	1	0%	6	1%	7	1%
New Mission	6	1%	1	0%	1	0%	1	0%
*Latin Academy	6	1%	1	0%	6	1%	7	1%
Boston Arts Academy	8	2%	1	0%	1	0%		
*Boston Latin	8	2%	10	1%	6	1%	10	2%
Health Careers Academy	8	2%	1	0%	1	0%		
South Boston High	11	3%	12	2%	6	1%	12	3%
West Roxbury High	11	3%	12	2%	6	1%	7	1%
East Boston High	11	3%	12	2%	11	3%	13	6%
English High	11	3%	21	20%	20	17%	14	8%
Dorchester High	15	8%	17	8%	17	10%	10	2%
Charlestown High	16	11%	1	0%	19	15%	17	13%
Snowden International	17	15%	18	11%	16	8%	16	9%
Brighton High	18	17%	20	16%	21	22%	18	14%
Hyde Park High	19	18%	19	13%	18	11%	14	8%
Boston High	20	19%	16	4%	13	5%	1	0%
Madison Park High	21	20%	12	2%	13	5%	19	18%
Burke High	22	23%	22	27%	22	29%	20	25%

Pilot middle school suspensions

Boston Pilot middle schools have also had among the lowest percentage of students suspended among all middle schools, although Harbor School had an increase in 2000-01. From the 1997-1998 through the 1999-2000 school year, Harbor Middle School did not suspend a single student. In 2000-2001, Harbor School ranked 13th among all Boston Middle schools, with a suspension rate of 6%. Josiah Quincy Upper School ranked 10th and 2nd with suspension rates of 3% and 2%, respectively, since its opening in 1999. Table 9 lists percentage of students suspended and school rank (descending by year from left to right).

Table 9. Student suspensions: Percentage of students suspended and rank among BPS middle schools, by year

School Name	2000-2001		1999-2000		1998-99		1997-98	
	Rank	%	Rank	%	Rank	%	Rank	%
Gavin Middle	1	1%	18	10%	15	11%	15	7%
Edwards Middle	2	2%	10	3%	12	5%	14	6%
Lewis Middle	2	2%	5	1%	6	3%	8	2%
M Curley Middle	2	2%	1	0%	4	1%	11	3%
McCormack Middle	2	2%	15	8%	15	11%	1	0%
Timilty Middle	2	2%	16	9%	6	3%	3	1%
Quincy Upper School	2	2%	10	3%				
Dearborn Middle	8	3%	5	1%	1	0%	3	1%
Lewenberg Middle	8	3%	5	1%	9	4%	3	1%
Thompson Middle	10	4%	1	0%	9	4%	3	1%
Irving Middle	11	5%	9	2%	5	2%	8	2%
Wilson Middle	11	5%	13	6%	6	3%	13	4%
Rogers Middle	13	6%	18	10%	12	5%	8	2%
Harbor School	13	6%	1	0%	1	0%	1	0%
King Middle	13	6%	21	14%	15	11%	19	16%
Taft Middle	16	7%	18	10%	18	14%	17	11%
Umana/Barnes Middle	16	7%	12	4%	9	4%	11	3%
Edison Middle	18	8%	14	7%	19	15%	17	11%
Cleveland Middle	19	10%	16	9%	14	10%	16	10%
R.G. Shaw Middle	20	19%	5	1%	20	24%	20	18%
Wheatley Middle	21	37%	1	0%	1	0%	3	1%

Pilot elementary school suspensions

In the last four school years, Mission Hill School and Young Achievers School have suspended only one student each. They join 12 regular BPS elementary schools that have not suspended any students or have suspended only one student during this time. The Lyndon School has suspended 0%, 2%, 5%, and 1% of its students in the past four years, ranking near the middle among elementary schools for number of students suspended.

STUDENT PERFORMANCE

While student engagement measures a school's holding power, or a school's ability to attract and engage students, a second way to measure student success is to measure student performance across a range of indicators. Student achievement may be measured in three ways: (1) outcome measures on standardized tests, (2) measures of school graduation rates, college attendance, and other quantitative indicators of achievement, and (3) outcome measures on performance assessments such as portfolios and exhibitions. This section presents information on the first two categories of student achievement:

- MCAS results from 1997-98 to 1999-00 school year[8]
- Stanford 9 results from 1997-98 to 1999-00 school year
- Outcomes of 2000-2001 graduates
- Percent of senior class that graduated from 2000-2001
- Grade retention rates

Comparison on BPS and Pilot Schools on MCAS Scores[9]

Finding: All Pilot Schools score comparably or better than the district average in the MCAS English Language Arts, Math, and Science tests. Mission Hill School's scores rank at the top of the district, while science scores have improved dramatically in all three elementary schools over the last few years. The Pilot middle school with MCAS scores (Harbor School) ranked near the top of the district in both English Language Arts and Math. Three of the four Pilot high schools had MCAS scores ranked in the top half of Boston high schools, placing just behind the exam schools in English Language Arts and Mathematics.

MCAS is a criterion referenced test administered by subject. We examined 4th, 8th, and 10th grade English/Language Arts and Math scores as a school aggregate. Scores are divided into four levels: 1) Failing (200-220), 2) Needs Improvement (221-240), 3) Proficient (241-260), and 4) Advanced (261-280). Students must score in level 2 or above in the 10th grade exam to be eligible to receive a high school diploma.

MCAS Comparison of Boston Pilot Schools and Other BPS Schools at Grade 10

This section compares four of the six Boston Pilot high schools [10] with all Boston high schools. Scores are compared across the last two years of MCAS (1998/99-1999/2000).

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[8] Data for this analysis is taken from the Massachusetts Department of Education, November, 2000 publication of MCAS results, available on their website at http://www.doe.mass.edu/mcas/results.html.

[9] We present MCAS data because MCAS is the assessment used by the state of Massachusetts to determine school probationary performance and student high school graduation. The Center for Collaborative Education affirms that the current MCAS is a test and not a comprehensive assessment system; that a single score on a test should never stand as the sole measure of a student's knowledge, understandings, performance, and intellectual habits; that the use of a single test for high stakes decisions is not educationally defensible; and that more appropriate accountability systems are possible. Although the MCAS is currently used as one way to assess and monitor each student's progress, we believe the MCAS has limitations as a research instrument, and should be used in conjunction with multiple measures of authentic assessment.

[10] Two Pilot high schools, Greater Egleston Community High School and Boston Evening Academy, were exempted from taking the MCAS by the Massachusetts Department of Education until the 2000-2001 school year, as they are un-graded schools enrolling over-age students.

MCAS 10th Grade English Language Arts

- Pilot Schools ranked 4th, 5th, 7th, and 13th among the 21 high schools in highest scaled scores, with three of the four high schools ranking directly after the examination schools
- Pilot high schools ranked 4th, 5th, 7th, and 13th (30%, 47%, 60%, and 78%) in the lowest percentage of students failing (of 21 schools)
- Two Pilot Schools, along with the three examination schools, were the only schools to score above the system average in total scale scores
- Boston Arts Academy and Health Careers Academy had the highest percentage of students in the advanced and proficient categories when compared to non-exam high schools (22% and 18% respectively).
- Three of the four Pilot Schools had gains in overall scaled score from the 1998-99 to 1999-2000 school year; two had less students in the failing category, and three had more students in the advanced and proficient category. Overall, Pilot high schools compared favorably with improvement in these categories

Table 10. MCAS English Language Arts Results for Pilot High Schools

	1999-2000 Scaled Score	Scaled score point gain or loss	Percent change in students scoring advanced or proficient	Percent change in students scoring in the failing category[11]
Boston Arts Academy	223	7	11	-17
Fenway HS	217	1	-7	3
Health Careers Academy	226	3	6	-10
New Mission HS	210	-1	5	9
Other BPS schools	217	0.6	3.7	0.1
BPS schools w/out exam schools	211	-0.2	2.9	0.7

MCAS 10th Grade Math

- Pilot Schools ranked 4th, 5th, 9th, and 16th among all schools in highest scaled scores, with two schools ranked directly after the examination schools
- Boston Arts Academy had the highest percentage of students in the advanced and proficient categories when compared to non-exam high schools (13%), and Fenway and HCA were tied for third (8%)
- All four Pilot high schools had gains in overall scaled score from the 1998-99 school year; three had less students in the failing category, and all four had more students in the advanced

[11] A negative score represents the decrease in the number of students scoring in the failing category. Thus, a score of -13% means that 13% fewer students scored in the failing category.

and proficient category. Overall, Pilot Schools compared favorably with the district averages in improvement in these categories

Table 11. MCAS Mathematics results for Pilot high schools

	1999-2000 Scaled Score	Scaled score point gain or loss	Percent change in students scoring advanced or proficient	Percent change in students scoring in the failing category[1]
Boston Arts Academy	213	5	9	-6
Fenway HS	209	1	7	0
Health Careers Academy	217	4	3	-8
New Mission HS	205	1	2	-4
Other BPS schools	216	5.0	7.1	-8.5
BPS schools w/out exam schools	208	3.4	3.2	-8.4

MCAS 10th Grade Science

The scores are low across all the Boston non-examination high schools. Seventeen of the 18 non-examination schools have between 0-4% of students in the advanced or proficient categories, and 17 of the 18 schools are failing over 70% of all students. Therefore, score gains and losses are less relevant. However, Pilot high schools did have less score gains, less percent increase in students in advanced or proficient levels, and less percent decrease in students in the failing level than did the district average.

Table 12. MCAS Science results for Pilot high schools

	2000 Scaled Score	Scaled score point gain or loss	Percent change in students scoring advanced or proficient	Percent change in students scoring in the failing category[1]
Boston Arts Academy	204	-5	1	8
Fenway HS	209	-3	-4	8
Health Careers Academy	216	0	-1	7
New Mission HS	208	-2	0	3
Other BPS schools	214	1.7	2.2	-4.9
BPS schools w/out exam schools	210	1.3	1.3	-3.8

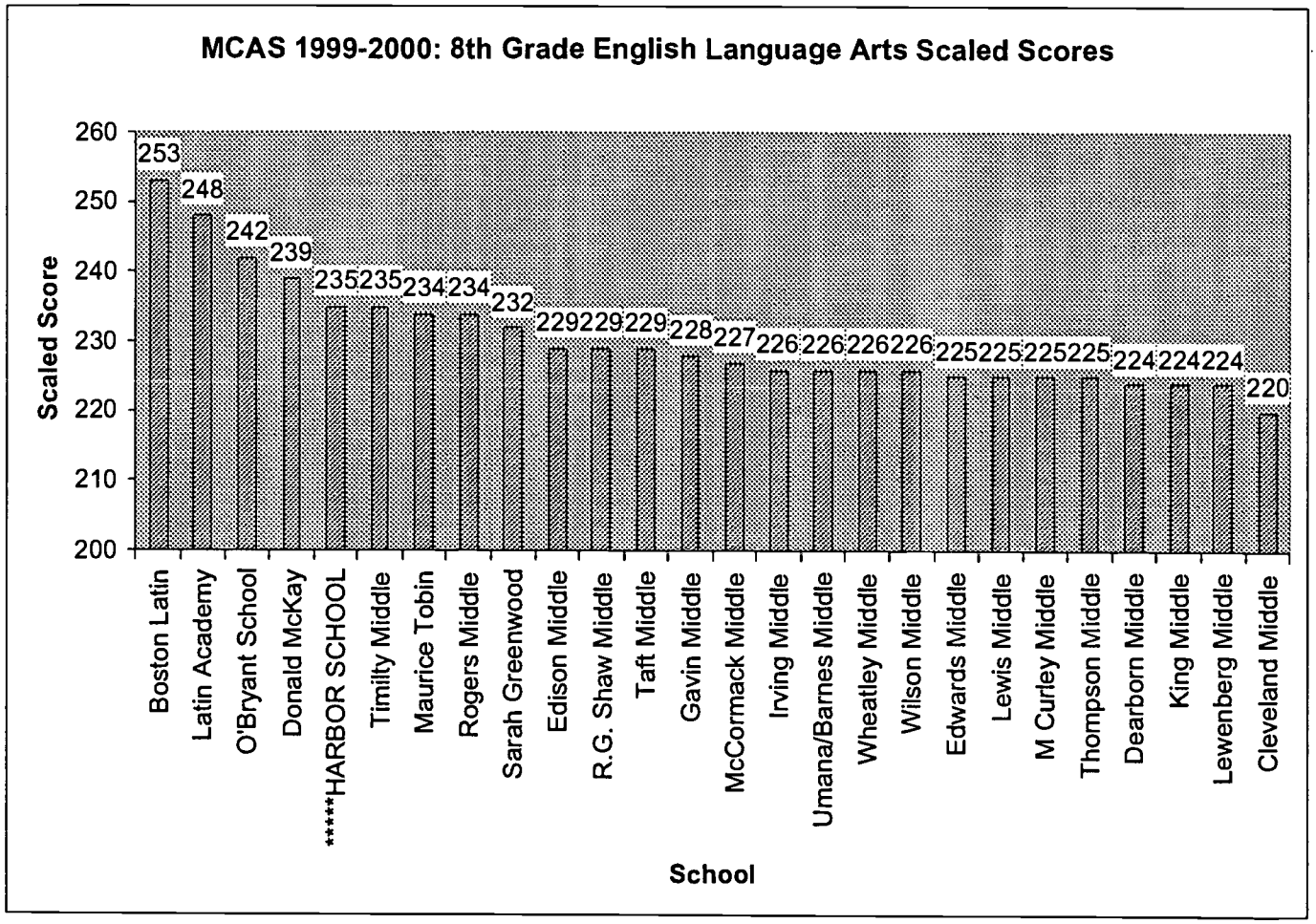
MCAS Comparison of Boston Pilot Schools and Other BPS Schools at Grade 8

Results of the 1999-2000 MCAS exam are compared, as this was the first year that the Harbor School had an 8th grade class. This comparison includes 23 middle schools. It does not include the Josiah Quincy Upper School (which did not have an 8th grade in school year 1999-2000). It does include scores from district K-8 schools (Sarah Greenwood, Donald McKay, and Maurice Tobin).

MCAS 8th Grade English

- Harbor School had the second highest scaled score of all non-exam middle schools
- Harbor had the 4th highest percentage of students performing in the advanced or proficient categories, when compared to non-exam schools
- Harbor had the 4th lowest percentage of students failing, when compared to non-exam schools
- Harbor students performed better than the district average on both those measures

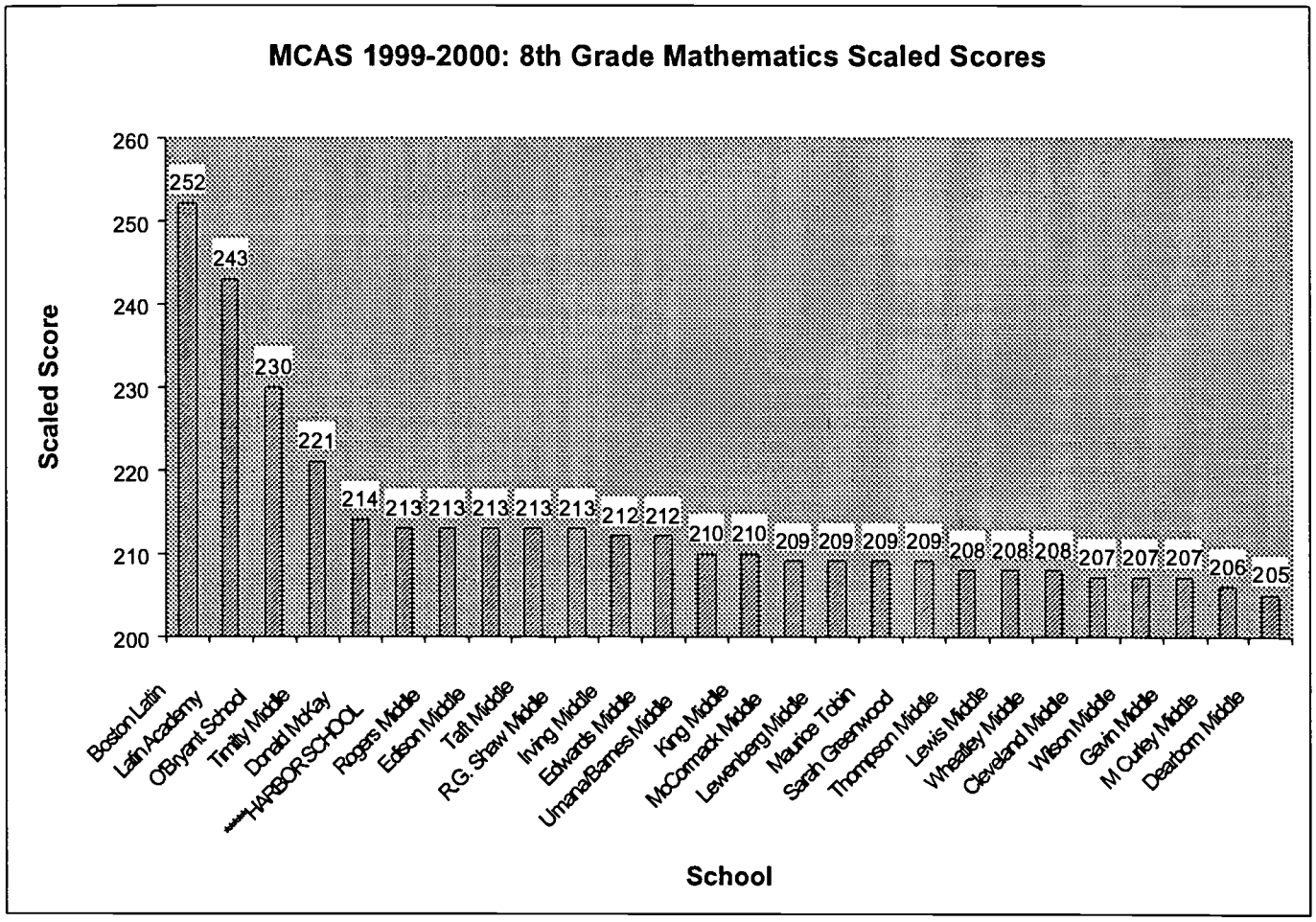
Figure 9. MCAS 8th Grade English Language Arts Scaled Scores by School



MCAS 8th Grade Mathematics

- Harbor had the 3rd highest scaled score of all non-exam middle schools
- Harbor had the 2nd lowest percentage of students failing, when compared to non-exam schools
- Harbor had the 13th highest percentage of students performing in the advanced or proficient categories

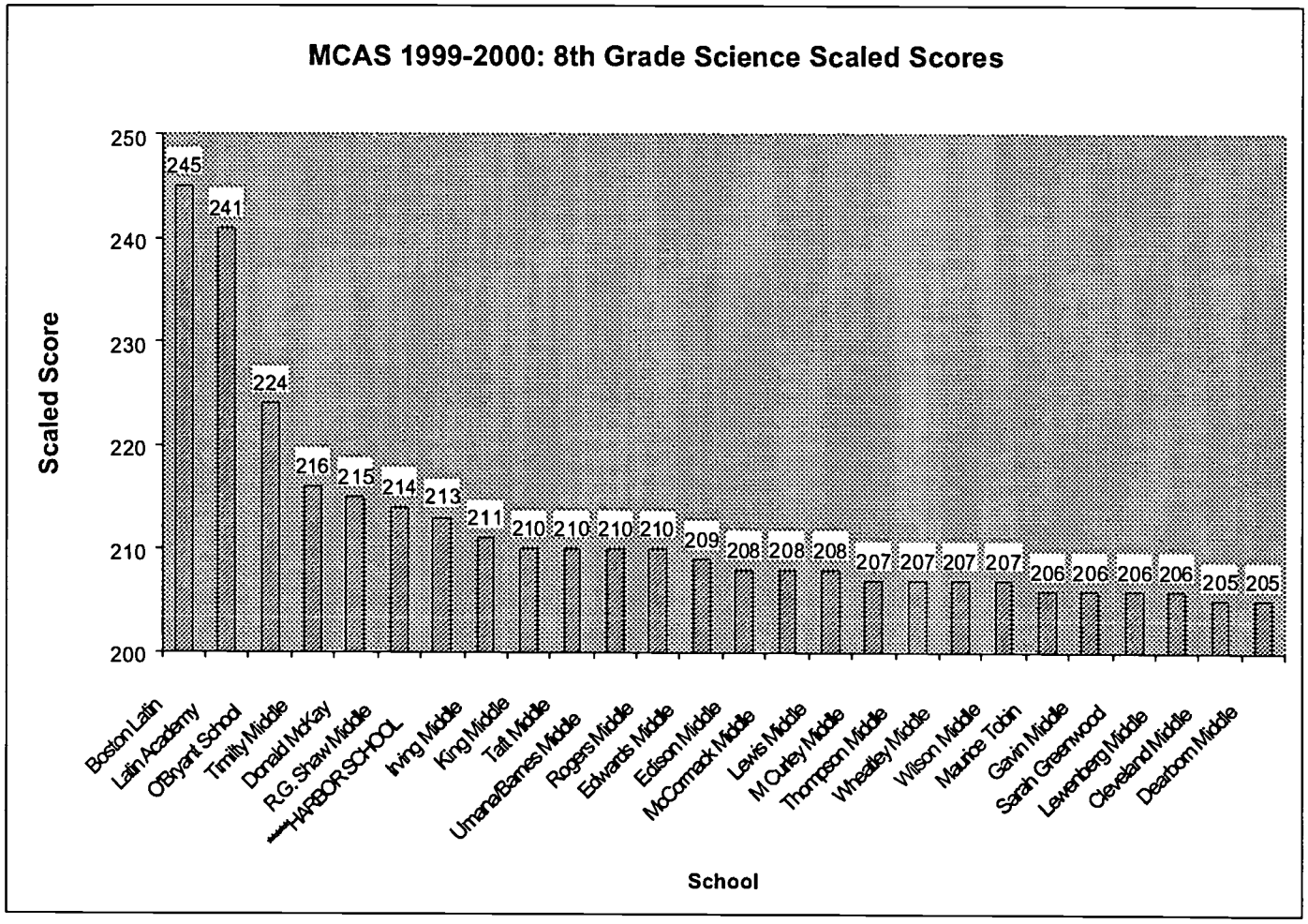
Figure 10. MCAS 8th Grade Mathematics Scaled Scores by School



MCAS 8th Grade Science

- Harbor School had the 4th highest scaled score of all non-exam middle schools
- Harbor had the 4th lowest percentage of students failing, when compared to non-exam schools
- Harbor had the 3rd highest percentage of students performing in the advanced or proficient categories, when compared to non-exam schools

Figure 11. MCAS 8th Grade Science Scaled Scores by School



MCAS Comparison of Pilot Elementary Schools and Other BPS Schools at Grade 4

Scores are compared across the three years of MCAS (1998-2000[12]). Tables 10-12 present Pilot elementary schools' scaled scores from the 1999-2000 school year, whether the school's scores improved, and how they changed by level. We calculated the percent changes by subtracting the 1997-98 scores from the 1999-2000 scores.

MCAS 4th Grade English Language Arts

- All three Pilot elementary schools have a greater percentage of students in the advanced and proficient categories than the Boston average (31%, 9%, and 7% versus an average of 6%)
- Two of the three Pilot elementary schools have more students in the advanced and proficient category now than three years ago
- Mission Hill had the highest percentage of students in the advanced and proficient categories in all of Boston (31%)
- Mission Hill had one of the lowest percentages of students failing the English portion in all of Boston (13%)
- The Pilot elementary schools ranked 8th, 24th, and 37th in scaled scores out of 79 Boston elementary schools.
- Despite their favorable ranking, Pilot elementary schools did, however, have less score gains, less percent increase in students in advanced or proficient levels, and less percent decrease in students in the failing level than did the district average

Table 13: MCAS 4th Grade English Language Arts

	1999-2000 Scaled Score	Scaled score gain or loss (in points)	Percent change in students in advanced or proficient levels	Percent change in students in failing level[13]
Lyndon Elementary	225	-3	-3	16
Mission Hill Elementary	230	-2	-14	0
Young Achievers	223	1	4	13
Pilot Schools	226	-1.3	-4.3	9.7
Other BPS schools	224 [14]	1.9	2.1	-6.4

[12] For Mission Hill, only data from the 1999-2000 and 2000-01 administration are used, as only nine students took the MCAS in 1998, and these results are not public.

[13] A negative score represents the decrease in the number of students scoring in the failing category. Thus, -13% means that 13% fewer students scored in the failing category.

[14] This figure represents the district-wide average based on each school's average. BPS does a similar analysis but calculates district average weighted by the number of students in each school.

MCAS 4th Grade Mathematics

- All three Pilot elementary schools have a greater percentage of students in the advanced and proficient categories compared with the Boston average (43%, 21%, and 20% versus district average of 14%)
- All three schools have a lower percentage of students failing than the district average (33%, 0%, and 43% compared to 46%)
- All three schools had less students failing in 2000 than in 1999
- Two of the three schools have more students in the advanced and proficient category this year than the last two years
- Only 26 out of 79 elementary schools had more than 20% of students in advanced and proficient categories, including all three Pilot Schools
- Mission Hill had the third highest percentage of students in the Advanced and Proficient category (43%) in all of Boston
- The Mission Hill School had 0% of students fail this portion of the test in 2000, one of only two BPS elementary schools to do so
- The Pilot elementary schools ranked 3rd, 21st, and 35th in scaled scores out of 79 Boston elementary schools.
- Pilot elementary schools ranked favorably with the district average in score gains, percent increase in students in advanced or proficient levels, and percent decrease in students in the failing level

Table 14: MCAS 4th Grade Mathematics

	1999-2000 Scaled Score	Scaled score gain or loss (in points)	Percent change in students in advanced or proficient levels	Percent change in students in failing level
Lyndon Elementary	227	-6	-9	4
Mission Hill Elementary	237	8	30	-13
Young Achievers	223	1	12	0
Pilot Schools		1.0	11.0	-3.0
Other BPS schools	223	3.7	5.9	-12.0

MCAS 4th Grade Science

- All three Pilot elementary schools had a greater percentage of students in the proficient and advanced category in 2000 than either of the previous two years and less students in the failing category than either of the last two years
- Two of the schools have an equal or greater percentage of students in the advanced and proficient categories when compared with the Boston average (55%, 40% and 17% versus district average of 22%)

- All three schools have a smaller or equal percentage of students failing than the district average (0%, 23%, and 30% compared to 30%)
- Two of the Pilot Schools were among the 19 schools which had more than 40% of students in the advanced or proficient category
- The Mission Hill School had 0% of students fail this portion of the test, one of only two elementary schools to do so
- Pilot elementary schools ranked favorably with the district average in score gains, percent increase in students in advanced or proficient levels, and percent decrease in students in the failing level

Table 15: MCAS 4th Grade Science

	1999-2000 Scaled Score	Scaled score gain or loss (in points)	Percent change in students in advanced or proficient levels	Percent change in students in failing level
Lyndon Elementary	232	1	9	-4
Mission Hill Elementary	239	16	30	-44
Young Achievers	227	3	6	-2
Pilot Schools		6.7	15.0	-16.7
Other BPS schools	222	5.8	13	-14.9

Comparison on BPS and Pilot Schools on Stanford 9 (SAT-9) Scores

Finding: Most Pilot Schools score better than the district average for both low percent of students in the failing category (Level 1) and high percent of students in the advanced and proficient categories (Levels 3 and 4). Pilot high schools rank in the top six non-exam schools by numbers of students in Levels 3 and 4 for Reading. Two of the four schools also perform well compared to the district in Math. At the middle school level, four of the five Pilot Schools score solidly in the top ten for numbers of students in Levels 3 and 4 in Reading, while three of five do so in Math. Two of the three Pilot elementary schools score well above the district average in the highest percent of students in Levels 3 and 4 in both Reading and Math.

The Stanford 9 is a norm referenced test administered in Boston most school years. Scores are leveled into four categories: Level 1 Below Basic, Level 2 Basic, Level 3 Proficient, and Level 4 Advanced. It is interesting to note that how a school scores on the MCAS and Stanford 9 do not necessarily correlate. The MCAS is criterion referenced and has open ended questions, so it could be considered effort-based. The Stanford 9 is norm referenced and its items are closed-ended.

Stanford 9 Comparison of Boston Pilot Schools and other BPS schools at Grades 9-11

Table 16. BPS high schools: Rankings on the School Year 1999-2000 Stanford 9 in Reading and Mathematics

School Name	Reading				Mathematics			
	Grade 9		Grade 11		Grade 9		Grade 11	
	L1	L3/4	L1	L3/4	L1	L3/4	L1	L3/4
Boston Latin	2	2	1	1	1	1	1	1
Boston Arts Academy	5	5	6	4	7	5	4	4
Boston High	19	18	11	11	15	14	15	16
Brighton High	10	8	11	9	5	4	14	7
Burke High	13	9	11	18	5	8	11	16
Charlestown High	7	6	9	9	9	8	6	5
Dorchester High	18	19	17	11	10	10	10	10
East Boston High	12	9	8	8	12	11	15	16
English High	16	16	14	11	16	14	12	10
Fenway High	4	4	5	6	8	7	8	6
Health Careers Academy	6	9	4	5	13	13	7	16
Hyde Park High	15	13	18	18	18	18	19	10
Latin Academy	1	1	2	2	2	2	2	2
Madison Park High	9	13	19	16	14	16	12	10
New Mission	14	7	15	7	19	19	17	7
O'Bryant	3	3	3	3	3	3	3	3
Snowden International	8	15	7	17	4	6	5	9
South Boston High	17	9	16	14	17	16	17	10
West Roxbury High	11	16	10	14	10	12	9	10

Stanford 9 Comparison of Boston Pilot Schools and other BPS schools at Grades 6-8

Only two Pilot Schools, the Harbor School and Mission Hill, have had a class take more than one SAT9 test because Pilot Schools are only recently enrolling 8th grade students. Consequently, this section will examine scores from the 1999-2000 school year administration of the test. Four of the five Pilot Schools rank near the top of the district in Reading, both in lowest percent of students in Level 1 and highest percent of students scoring at Levels 3 and 4. This is also true for three of the five Pilot Schools in Math. One school, the Harbor School, scored near the bottom of the district in both Reading and Math, which contrasts starkly with the school's high performance in both subjects on the MCAS.

It should be noted that Mission Hill showed a decline in performance at the 6th grade level from 1998-1999 to 1999-2000 in both reading and math, and the Harbor School's 1999-2000 scores showed a slight increase from the previous year in reading but were still lower than the 1997-1998 scores in both areas.

Table 17. BPS middle schools: Rankings on the 1999-2000 Stanford 9 in Reading and Mathematics

School Name	Reading						Mathematics					
	Grade 6		Grade 7		Grade 8		Grade 6		Grade 7		Grade 8	
	L1	3/4	L1	3/4	L1	3/4	L1	3/4	L1	3/4	L1	3/4
Boston Latin			1	1	1	1			1	1	1	1
Cleveland	18	21	20	23	26	18	20	24	21	16	26	22
Dearborn	21	25	9	20	25	24	14	12	11	13	27	24
Edison	6	3	20	9	10	16	5	3	9	10	6	7
Edwards	21	17	12	6	14	21	10	17	26	22	16	15
Gavin	12	23	11	11	9	10	12	13	13	12	14	17
Harbor	27	24	20	14	21	16	27	25	23	26	24	21
Irving	14	15	28	13	27	27	6	9	8	10	19	27
Hernandez	8	9	13	9	7	13	9	7	14	7	11	13
King	21	14	26	25	11	5	18	15	20	22	12	9
Latin Academy			2	2	1	2			2	2	1	2
Lewenberg	25	15	25	18	17	20	19	17	25	16	18	14
Lewis	11	19	18	21	19	11	22	23	19	22	25	23
Lyndon	1	1					1	1				
Curley	28	21	27	27	21	21	23	20	27	19	21	19
McCormack	10	2	14	11	13	6	11	8	6	5	5	4
McKay K-8	16	12	9	18	5	8	21	21	18	19	7	24
Mission Hill	2	7	4	8			25	27	17	15		
O'Bryant			3	3	3	3			3	3	3	3
Quincy Upper	7	4					2	1				
R.G. Shaw	8	19	5	5	11	13	14	15	5	9	8	6
Rogers	4	6	5	4	4	4	7	10	4	4	9	10
Greenwood K-8	14	27	19	21	15	25	23	22	23	28	22	15
Taft	12	10	17	15	16	13	7	11	22	16	16	8
Thompson	20	17	20	17	17	23	13	17	28	26	22	19
Timilty	5	8	8	7	6	8	3	5	11	7	4	5
Tobin K-8	26	28	7	28	7	12	26	27	7	22	9	24
Umana/Barnes	16	10	24	23	20	18	3	4	10	6	12	10
Wheatley	19	26	14	15	24	25	27	26	14	19	19	17
Wilson	21	13	14	26	23	6	14	13	14	13	14	10
Young Achievers	2	4					14	5				

Stanford 9 Comparison of Boston Pilot Schools and other BPS schools at Grades 3-5

Two of the three Boston Pilot elementary schools outscore the average Boston elementary schools for both numbers in advanced and proficient categories and fewer percentage of students in the failing category in most years of the SAT9 since 1996. As well, two of the three schools are improving at a rate faster than the district. The following tables present the results from the 1999-2000 school year SAT9, comparing Pilot Schools with BPS schools at grades three and five, the only grades that participated in the exam.

Stanford 9 Reading

Table 18. Percentage of Students Scoring at Each Level in Grade 3

	% Level 1	% Level 2	% Level 3	% Level 4
Lyndon	10	39	39	14
Mission Hill	N/a	N/a	N/a	N/a
Young Achievers	26	43	23	9
All BPS schools	18	42	34	7

Table 19. Percentage of Students Scoring at Each Level in Grade 5

	% Level 1	% Level 2	% Level 3	% Level 4
Lyndon	19	35	39	8
Mission Hill	0	39	46	15
Young Achievers	33	43	19	5
All BPS schools	15	54	27	4

Stanford 9 Math

Table 20. Percentage of Students Scoring at Each Level in Grade 3

	% Level 1	% Level 2	% Level 3	% Level 4
Lyndon	2	37	42	19
Mission Hill	N/a	N/a	N/a	N/a
Young Achievers	33	47	14	6
All BPS schools	19	43	29	9

Table 21. Percentage of Students Scoring at Each Level in Grade 5

	% Level 1	% Level 2	% Level 3	% Level 4
Lyndon	31	27	19	23
Mission Hill	8	39	46	8
Young Achievers	52	38	10	0
All BPS schools	28	40	24	8

Grade Retention

Finding: Pilot Schools have significantly low grade retention rates, a key predictor of dropping out of school. Pilot Schools' favorable scores on the MCAS and Stanford 9 suggest that these low retention rates are more due to students meeting the requirements for promotion to the next grade, rather than an indication of social promotion.

Grade retention, especially at the secondary grades, is strongly correlated to dropping out of school. Research has shown that students who are retained in grade once have a 20-40% greater chance of dropping out of school, and those who have been retained in grade twice have a 90% greater chance of dropping out of school (Hammack, 1986; Mann, 1986).

Across the Pilot Schools Network, schools reported school year 2000-01 retention rates ranging from zero to 6.6% of each school's total population, with the average at 2.8%. When broken down by school level, in the 2000-01 school year, Pilot elementary schools retained 3% of students, Pilot middle schools retained 2.2% of students, and Pilot high schools retained 2.8% of students. Because we were unable to obtain corresponding numbers from the Boston Public Schools for the district, we do not compare Pilot Schools' grade retention rates with BPS grade retention rates. However, initial BPS data suggests that, due to the tougher promotion policies in district high schools due to the high stakes nature of MCAS at the tenth grade, ninth grade retention rates have risen dramatically, and are far greater than the rates of Pilot high schools. Anecdotal evidence suggests that this may be the case in middle schools as well.

While some view low grade retention rates as signs of social promotion in schools, in Pilot Schools these numbers indicate that the vast majority of students are meeting the requirements for promotion to the next grade. The fact that Pilot Schools students perform as well or better than BPS students on MCAS and Stanford 9, the only measures common to both sets of students, suggests that students are in fact promoted because they meet high standards.

Graduates' Future Plans

Finding: Pilot high schools have both high rates of graduation and high rates of students planning to attend college. The rate of Pilot high school graduates planning to attend college, and in particular four-year colleges, is dramatically greater than the BPS district average.

Examining the plans of school graduates is another indicator of school success. The following information was collected from Pilot Schools about the future plans of their 2000-01 school year graduates of both 8th and 12th grade.

Middle School Graduates' Education Plans

The Harbor Middle School and the Mission Hill School had 8th grade graduate classes in 2000-01.

Table 22. High School Plans for Harbor and Mission Hill 2000-2001 8th graders

High School Plans	Harbor School	Mission Hill
# 8th graders in 2000-2001	80	12
# 8th promoted who went to exam schools	0	1 (3 accepted)
# 8th promoted who went to Pilot HS	12	6
# 8th promoted who went to non-pilot BPS HS	54	3
# 8th promoted who went to other schools	7	2

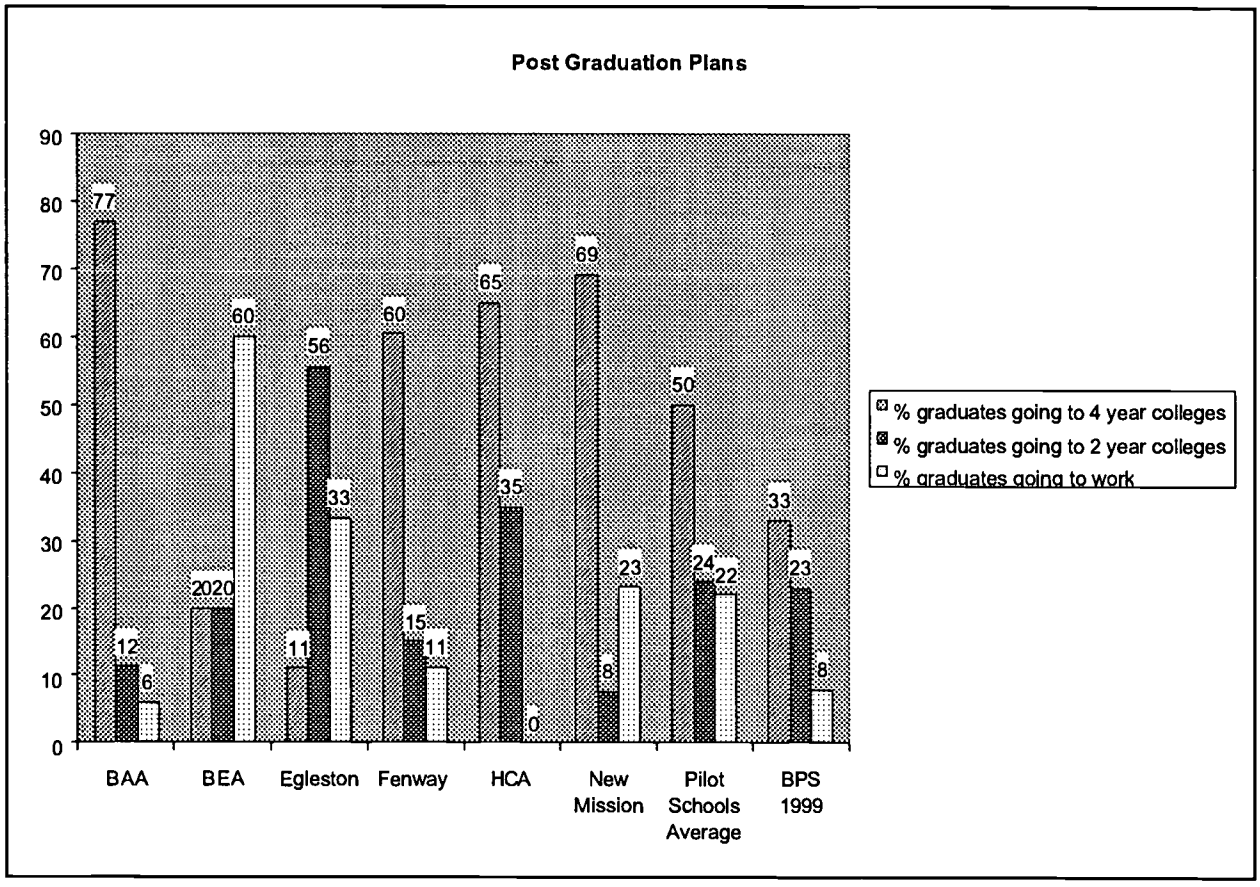
High School Graduates' Education Plans

All six Pilot high schools had graduating 12th graders in 2000-2001, including the first graduating class from the Boston Arts Academy. According to Pilot high schools, an average 90.7% of their 12th grade students in 2000-01 graduated. Graduation rates ranged from 81% to 100% of Pilot Schools 12th graders.

The plans of high school graduates for both Pilot and regular BPS high schools are self reported. System-wide data for 1999 was reported at the Massachusetts Department of Education web site (http://profiles.doe.mass.edu). Seventy-four percent of Pilot Schools graduates in 2001 planned to enroll in two- or four-year colleges, as compared with only 55% system-wide. Of these numbers, 50% of Pilot Schools graduates enrolled in four-year colleges, compared with 33% system-wide, and 24% of Pilot Schools graduates enrolled in two-year colleges, compared with 23% system-wide. Eighteen percent of Pilot Schools graduates reported going to work, compared with 8% system-wide. The high rates of Pilot Schools graduates planning to pursue post-secondary education suggests that Pilot Schools are preparing students well for college, and that Pilot School students have high academic aspirations for themselves.

Two of the Pilot high schools deserve special attention. Both BEA and Egleston serve a student population that is older, and one in which many students have previously dropped out of non-Pilot Schools. A significant percentage of the students work and/or have children. The fact that these two schools have graduation rates of 83% and 90%, respectively, indicates success, since many of these students would otherwise not have completed high school diplomas. While the percentages of graduates in these schools pursuing postsecondary education are lower than other Pilot Schools, a significant percentage do plan to go on to two or four year colleges.

Figure 12. Future Plans of high school graduates[15]



[15] Note that figures for each school in this chart may not add up to 100%, as the chart does not include data from students who reported other plans or no plans.

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APPENDIX A

* Signifies Pilot School
** Signifies Exam School

Elementary schools (79)

Adams Elementary	Grew Elementary	Mozart Elementary
Agassiz Elementary	Guild Elementary	Murphy Elementary
Alighieri Elementary	Hale Elementary	O'Donnell Elementary
Baldwin Elementary	Haley Elementary	O'Hearn Elementary
Bates Elementary	Hamilton Elementary	Ohrenberger Elementary
Beethoven Elementary	Harvard/Kent	Otis Elementary
Blackstone Elementary	Hennigan Elementary	Patrick Kennedy
Bradley Elementary	Hernandez Elementary	Pauline Shaw
Channing Elementary	Higginson Elementary	Perkins Elementary
Chittick Elementary	Holland Elementary	Perry Elementary
Clap Elementary	Holmes Elementary	Philbrick Elementary
Condon Elementary	Hurley Elementary	Quincy Elementary
Conley Elementary	Jackson/Mann	Roosevelt Elementary
James Curley	John F Kennedy	Russell Elementary
Dever Elementary	Kenny Elementary	Sarah Greenwood
Dickerman Elementary	Kilmer Elementary	Stone Elementary
Elihu Greenwood	Lee Elementary	Sumner Elementary
Eliot Elementary	*Lyndon Elementary	Taylor Elementary
Ellis Elementary	Lyon Elementary	Tobin Elementary
Emerson Elementary	Manning Elementary	Trotter Elementary
Endicott Elementary	Marshall Elementary	Tynan Elementary
Everett Elementary	Mason Elementary	Warren/Prescott
Farragut Elementary	Mather Elementary	Winship Elementary
Fifield Elementary	Mattahunt Elementary	Winthrop Elementary
Fuller Elementary	McKay Elementary	*Young Achievers ES
Gardner Elementary	Mendell Elementary	
Garfield Elementary	*Mission Hill Elementary	

Not included: McKinley Elementary

Middle schools (21)

Cleveland Middle	King Middle	Rogers Middle
Dearborn Middle	Lewenberg Middle	Taft Middle
Edison Middle	Lewis Middle	Thompson Middle
Edwards Middle	M Curley Middle	Timilty Middle
Gavin Middle	McCormack Middle	Umana/Barnes Middle
*Harbor School	*Quincy Upper School	Wheatley Middle
Irving Middle	R.G. Shaw Middle	Wilson Middle

In addition, the three examination schools, Boston Latin, Latin Academy, and O'Bryant, were included in comparisons of standardized achievement data (SAT9, MCAS). They were not

included in other middle school comparisons because we received school level, not grade level, school indicator data.

Not included: McKinley Middle

High schools (24)

Another Course to College	Charlestown High	Hyde Park High
Boston Adult Academy	Dorchester High	**Latin Academy
*Boston Arts Academy	East Boston High	Madison Park High
*Boston Evening Academy	*Egleston Community High	*New Mission
Boston High	English High	**O'Bryant
**Boston Latin	Explusion Alt Sch/Prog	Snowden International
Brighton High	*Fenway Middle College	South Boston High
Burke High	*Health Careers Academy	West Roxbury High

Not included: McKinley Technical, McKinley Vocational, Carter Center

The Boston Pilot Schools Network is supported by the Center for Collaborative Education, a non-profit organization supporting networks of progressive public schools. CCE's mission is 1) to improve student learning by promoting educational change that is focused on school and system-wide change and 2) to influence the larger public's view on education to better support change that fosters democratic and equitable schools.

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