



The Research Bureau

Benchmarking Public Education in Worcester: 2010

Report 10-05
October 25, 2010

Dear Citizen,

This is the eighth annual report on the status of public education in Worcester prepared by The Research Bureau. Much of the discussion in this report examines student, school, and district performance in relation to the standards implemented under the Massachusetts Education Reform Act of 1993 and the Federal No Child Left Behind (NCLB) education reform legislation, which was signed into law in 2002 in an effort to close the achievement gap between minority and low-income students on the one hand and their more-advantaged counterparts on the other. NCLB requires states to implement statewide accountability systems covering all public schools and students to ensure that all students, including subgroups such as racial and ethnic minorities, students with limited English proficiency, and students with disabilities reach proficiency in English language arts and mathematics by 2014. (Although the Massachusetts Board of Elementary and Secondary Education recently approved national Common Core standards, the current Massachusetts accountability system remains in place unless and until a new system is adopted.)

*It is important to bear in mind that no single indicator should be considered in isolation. In other words, context is important, and the indicators discussed in this report are interrelated. For example, students with high rates of absenteeism (**Indicator 1**) may show lower levels of academic achievement as measured by MCAS tests (**Indicator 3**).*

We hope that this report will encourage widespread discussion about the future of public education in Worcester.

Sincerely,



Sandra Dunn, Chairman of the Board



Roberta R. Schaefer, Ph.D., President & CEO



Laura M. Swanson, Project Manager

OVERVIEW OF INPUTS

Table 1 highlights the five-year trend in the Worcester Public School District's (WPS) budget, staffing levels, and student enrollment, as well as enrollment in the two public charter schools located in Worcester. (FY06 through FY10 corresponds to the years for which performance data are available and are discussed in later sections of this report.)¹ On October 1, 2009, the District's 44 schools serving grades pre-K through 12 enrolled 23,263 students, while Worcester's two charter schools enrolled an additional 2,100 students. (As discussed further under **Indicator 5**, these charter schools are state-funded public schools that are not operated by the Worcester Public Schools District or governed by the Worcester School Committee.)

As in other urban districts, students in the WPS are demographically diverse. Over one-third (37%) of the students enrolled in 2009-10 were Hispanic, 13.8% were African American, 8.1% were Asian, 37.5% were Caucasian, .3% were Native American and 3% were multi-race. More than 40% of students spoke a first language other than English, and about 27% of all students could not perform ordinary classroom work in English (limited English proficient). Almost three-quarters (72%) of WPS students are from low-income families, and 20% of students have an Individualized Education Program (IEP), qualifying them for special-

education services.^{2,3}

From FY06 to FY10, the WPS budget increased by 15.6%, or almost \$36 million, from \$230.5 million in FY06 to \$266.4 million in FY10. When adjusting for inflation over this period, however, the budget increased by 6%. In FY10, the WPS budget represented over 50% of expenditures for the city of Worcester. The City's annual funding contribution to the WPS rose by 16% from FY06 to FY10, from \$80 million to \$92.7 million. When adjusted for inflation, the City's contribution increased by 6.4% over that period. Although enrollment has slightly declined from FY06-10 (3.2%), there are almost 400 more students currently enrolled than 2 years ago. When adjusted for inflation, per pupil spending actually rose by more than 9% during that period, from \$10,448 to \$11,453.

While overall staffing levels during the FY06-FY10 period increased by a slight 1.4%, the budget allocation for employee salaries and benefits grew by almost \$23 million, or about 12%. According to data from the Massachusetts Department of Elementary and Secondary Education (MA DESE), the average salary for teachers in Worcester has increased by more than 28% from FY04 to FY08, from \$54,528 to \$70,106. (When adjusted for inflation, the increase was 13%.) Among select urban districts in the state, only

Boston (\$76,108) and New Bedford (\$71,638) had average teacher salaries that were higher than Worcester's in FY08. However, over the past three years, as a result of negotiated increases in the employee contribution, the proportion of the WPS budget allocated to health insurance costs has decreased, from 18% in FY07 (\$42.6 million) to 14% in FY10 (\$37.8 million).

Enrollment in Worcester's two public charter schools increased by 14% from FY06 to FY10.⁴ The 3% decline in students enrolled in the WPS (as noted above) can be partially explained by students transferring to these charter schools. Like the Worcester Public Schools, the two charter schools are ethnically diverse. Half of the students enrolled at the Seven Hills Charter School in 2009-10 were Hispanic, 32% were African-American, and 10% were Caucasian. Nearly 80% of the school's students were from low-income families, about 20% were students

whose first language was not English, and 10.5% of the school's students qualified for special education services. At Abby Kelley Foster Charter School, about 30% of the students were African-American, about 26% were Hispanic, and 36% were Caucasian. About 45% of the school's students were from low-income families, about 2% did not speak English well enough to perform ordinary classroom work in English, and almost 10% of students qualified for special education services.

Payments made by the state to charter schools enrolling students whose home district is the WPS increased by more than 38% from FY06 to FY10, or about 27% when adjusted for inflation. The WPS district is partially reimbursed by the State for students attending charter schools instead of district schools. (See <http://www.doe.mass.edu/charter/> for additional information about charter school funding regulations.)

Table 1: Input Indicators for the Worcester Public Schools and Abby Kelley Foster Regional and Seven Hills Charter Schools

	FY06	FY07	FY08	FY09	FY10	% Change FY06-FY10
Student Enrollment						
WPS October 1 Enrollment	24,023	23,603	22,876	23,109	23,263	-3.16%
Approved Budget						
WPS Budget (Approved)	\$230,478,935	\$237,047,827	\$248,210,740	\$256,626,552	\$266,429,360	15.60%
WPS Budget (Inflation Adjusted)	\$250,989,331	\$251,635,198	\$254,073,063	\$259,137,809	\$266,429,360	6.15%
Salaries	\$147,654,076	\$146,955,036	\$157,610,541	\$166,179,943	\$168,092,809	13.84%
Salaries as % of Budget	64%	62%	63%	65%	63%	-1.52%
Administrators	\$9,053,645	\$9,115,955	\$10,115,832	\$10,398,689	\$10,520,074	16.20%
Teachers	\$113,679,358	\$112,871,032	\$120,232,811	\$124,595,896	\$129,265,433	13.71%
Average Salary (All Positions)	\$54,185	\$54,998	\$59,996	\$61,639	\$60,815	12.24%
Health Insurance Costs	\$37,442,442	\$42,555,528	\$39,797,167	\$36,235,209	\$37,829,113	1.03%
Health Insurance as % of Budget	16%	18%	16%	14%	14%	-12.60%
Retirement	\$9,893,271	\$10,292,369	\$10,304,470	\$10,230,553	\$11,923,048	20.52%
Total Salaries and Benefits	\$194,989,789	\$199,802,933	\$207,712,178	\$212,645,705	\$217,844,970	11.72%
Total Salaries and Benefits as % of Budget	85%	84%	84%	83%	82%	-3.35%
Tuition (Special Education Placements)*	\$12,234,722	\$12,234,722	\$13,109,355	\$14,133,404	\$15,900,327	29.96%
Staffing						
Total Staff (FTE)	2,725	2,672	2,627	2,696	2,764	1.43%
School and District Administrators	96.25	94.25	97.00	96.00	97.00	0.78%
Teachers	1,876	1,864	1,822	1,844	1,874	-0.11%
Other	753	714	708	756	793	5.35%
Funding/Reimbursement						
Chapter 70 State Aid (Actual)	\$161,059,359	\$167,480,913	\$174,025,314	\$180,493,947	\$176,884,068	9.83%
Chapter 70 State Aid (Inflation Adjusted)	\$175,392,084	\$177,787,298	\$178,135,501	\$182,260,197	\$176,884,068	0.85%
City Contribution (Actual)	\$80,015,430	\$79,337,953	\$89,097,892	\$93,686,137	\$92,738,479	15.90%
City Contribution (Inflation Adjusted)	\$87,136,029	\$84,220,226	\$91,202,235	\$94,602,917	\$92,738,479	6.43%
Charter Schools						
AKFCS Enrollment, October 1	1,175	1,176	1,426	1,425	1,426	21.36%
Seven Hills Enrollment, October 1	661	686	678	680	673	1.82%
Total Charter Enrollment (Worcester), October 1	1,836	1,862	2,104	2,105	2,099	14.32%
Charter School Payments (Actual)**	\$15,682,993	\$16,173,909	\$18,812,670	\$20,989,623	\$21,756,434	38.73%
Charter School Payments (Inflation Adjusted)**	\$17,078,628	\$17,169,214	\$19,256,994	\$21,195,020	\$21,756,434	27.39%

Data Sources: (1) October 1 Enrollment Data: MA DESE Enrollment By Grade Reports for the years 2005-06 through 2009-10, available at <http://www.doe.mass.edu>

(2) Budget Data, Staffing, and Funding: Worcester Public Schools Annual Budgets

Salaries line does not include grant-funded positions.

* In FY10, Special Education Tuition was paid with State Fiscal Stabilization Funds (Federal stimulus). In previous years it was a General Fund expenditure.

**In FY07, charter school payments made to the City were moved from the Worcester Public Schools budget to the City of Worcester budget.

INDICATOR 1: ATTENDANCE RATES AND DROPOUT RATES

Why are they important?

While teacher effectiveness, quality of school buildings, and the availability of textbooks and computers are important elements that contribute to student academic achievement, students must consistently attend classes in order to receive maximum benefit from these resources. Students who are frequently absent from school are at higher risk for poor academic performance, repeating a grade, and dropping out of school.

Students who drop out of high school can expect lower lifetime earnings and fewer opportunities in today's labor market. According to the Bureau of Labor Statistics, during 2009, among full-time workers age 25 and over nationwide, median weekly earnings for high school graduates (no college) were 38% higher than those of high school

dropouts (\$626 per week versus \$454).⁵

What are the trends in Worcester?

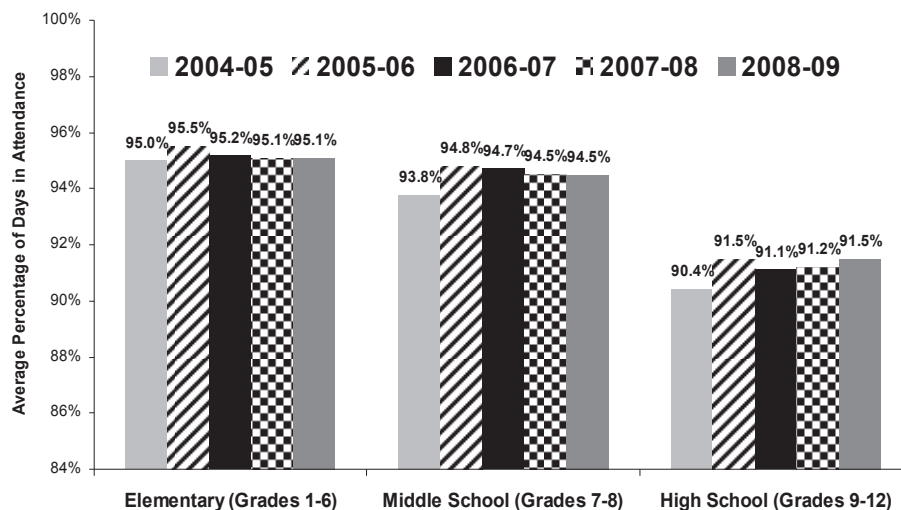
As shown in **Chart 1.1**, during the 2008-09 school year, on average, WPS elementary students attended school 95.1% of the days they were enrolled, WPS middle school students attended slightly less often (on average, 94.5% of the days enrolled), and high school students had the poorest attendance rate (91.5%).^{6,7} Attendance rates at the elementary and middle school level were the same as the previous year, while the high school level saw a slight improvement. **Appendix B** (pp. 35-36) shows attendance rates and average number of days absent per pupil for each school in the WPS District. During the 2008-09 school year, the average number of days absent per pupil varied

substantially, from 5 days at the Heard Street School to 17.4 days at South High Community School. The district-wide average during this period was 10 days.

Dropout Rate

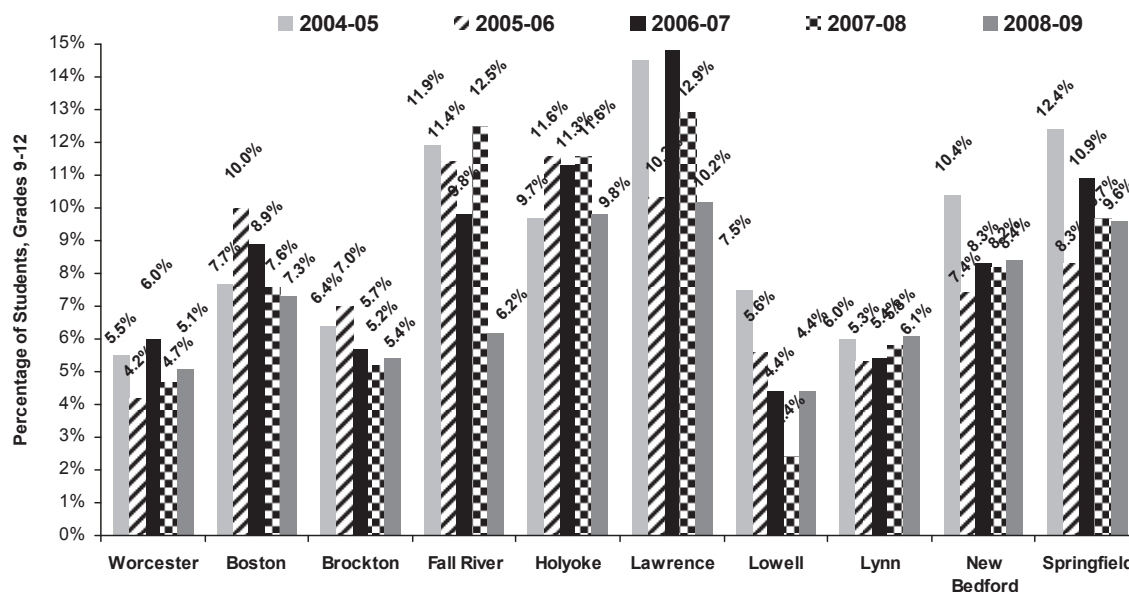
The dropout rate reflects the percentage of students in grades

Chart 1.1: WPS Attendance Rates



Source: MA Department of Elementary and Secondary Education

Chart 1.2: High School Dropouts, 2004-05 to 2008-09



Source: MA Department of Elementary and Secondary Education.

9-12 who dropped out of school between July 1 and June 30 prior to the listed year and did not return to school or transfer to another school by the following October 1.⁸ During the 2008-09 school year the WPS dropout rate was 5.1% (representing about 350 students), a slight increase from the 2007-08 school year when the rate was 4.7%, but lower than the 2006-07 rate of 6%. While Worcester’s rate was higher than the statewide average of 2.9% in 2008-09, it was below those of the Commissioner’s Districts, except Lowell’s.⁹ Chart 1.2 shows dropout trend data for these districts. Statewide,

the dropout rate decreased from 2007-08 to 2008-09 (from 3.4% to 2.9%).

As shown in Table 1.1, in 2008-09, University Park Campus School had the lowest dropout rate among Worcester schools at .7% (1 student), the same amount as the 2004-05 and 2005-06 school years. The school had no dropouts in 2006-07, and 2 during the 2007-08 year. Worcester Technical High School had 1% of its students drop out during the 2008-09 school year, or 13 students, the lowest rate the school had over the past five years. South High experienced an increase in its dropout

Table 1.1: High School Dropouts, WPS

School	2004-05		2005-06		2006-07		2007-08		2008-09	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
University Park Campus School	1	0.7%	1	0.7%	0	0.0%	2	1.4%	1	0.7%
Worcester Technical High School*	35	3.4%	19	1.8%	25	2.1%	16	1.3%	13	1.0%
Claremont Academy**	5	2.4%	2	1.0%	8	3.9%	7	3.2%	5	2.3%
Doherty Memorial High School	64	4.2%	67	4.3%	76	4.9%	44	2.9%	62	4.2%
North High School	97	7.6%	61	4.9%	84	7.0%	70	6.1%	68	6.1%
Burncoat Senior High School	79	5.6%	71	5.0%	100	7.3%	102	8.0%	86	7.1%
South High Community School	103	6.8%	82	5.3%	117	8.2%	76	5.4%	109	7.9%
District Total	392	5.5%	303	4.2%	424	6.0%	327	4.7%	350	5.1%

* Formerly known as Worcester Vocational High School ** Formerly known as Accelerated Learning Lab
Source: MA Department of Elementary and Secondary Education.

rate from 2007-08 to 2008-09 (from 5.4% to 7.9%), and had the

highest dropout rate in the district in 2008-09. However, dropout rates at Claremont Academy and Burncoat Senior High School declined from 2007-08 to 2008-09. The dropout rate at North High remained the same as the previous year, while Doherty High experienced an increase over the past year, from 2.9% in 2007-08 to 4.2% in 2008-09.

What does this mean for Worcester?

Research has documented that regular attendance is an important factor in student academic performance. The WPS district has shown the greatest improvement at the high school level over the past five years, where attendance rates have increased by 1.1 percentage points. However, attendance rates remain the lowest among students at Worcester's four comprehensive high schools (Burncoat, Doherty, North, and South High Schools) with the average number of absences per pupil at these schools ranging from 13.7 to 17.4 days in 2008-09. In other words, students in these schools missed an average of about three weeks of school per year. According to the WPS, improved school attendance is largely due to the district's use of Connect-ED™ to improve school-to-home communication. Connect-ED enables administrators to record, schedule, send, and track personalized voice messages to thousands of parents in minutes, including messages to

inform parents that their child is absent from school on a given day.

In the past three years, more than 1,100 WPS students have dropped out of grades 9-12. While the dropout rate has remained fairly steady in the district over the past several years, there is room for improvement. Some of these dropouts may have re-enrolled in schools outside of Massachusetts or the US, and some will ultimately earn a high school degree and may even pursue further education. However, those who do not complete high school face diminished job prospects and earnings potential in today's knowledge-based economy.

Worcester's Comprehensive Skills Center has proved to be a successful model for attracting former dropouts back into the public school system. It provides high school dropouts an opportunity to return to school and earn their high school diploma; it also assists students who are currently enrolled in one of the comprehensive high schools but have been identified as being "at risk" of dropping out of school. During the 2009-10 school year, the program provided services for almost 300 students, and 156 dropouts served by the program graduated with a regular diploma.

INDICATOR 2: STUDENT MOBILITY AND STABILITY RATES

Why are they important?

Student mobility (also referred to as student turnover or transience) refers to the practice of students changing schools during the school year or between school years.¹⁰ While there are many and varied causes of student mobility, one researcher has found that high student mobility can have significant adverse effects on student achievement among both the mobile students and their non-mobile peers.¹¹ A student who transfers from one school to another during the academic year may be exposed to different curricula, textbooks, and instructional styles, and may also experience difficulty adjusting to a new peer group. Non-mobile students in high-turnover settings may also lose out if their teachers are forced to repeat lessons or take time away from instruction to familiarize new students with the classroom routine. Schools facing high turnover may experience low teacher morale, a slower instructional pace, and added administrative burdens.

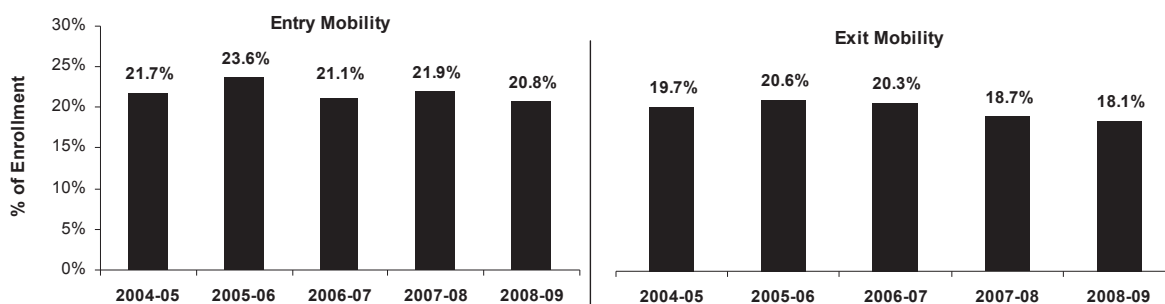
Stability rates describe the percentage of students who remain in a classroom from the beginning to the end of a school year. It is possible for a school with a high mobility rate (many students entering and exiting) to also have a high proportion of students who have stable enrollment throughout the year. Additionally, two schools with similar stability rates may have dissimilar mobility rates if one experiences a higher rate of students entering and/or leaving the school over the course of a year than the other.

What are the trends in Worcester?

Mobility

As calculated by the WPS, a school's mobility rate reflects the number of student transfers into or out of (entries and exits) the school or district during a 12-month period (October 1 of the initial year to October 1 of the following year), expressed as a percentage of total school enrollment on October 1 of the initial year. Because some students may experience multiple moves during a

Chart 2.1: WPS Student Mobility Rates



Source: Worcester Public Schools

*Includes transfers within the district as well as in-and-out of the district

school year, mobility rates do not necessarily provide an unduplicated count of students transferring during a year. Mobility calculations include both transfers occurring within the district and transfers into or out of the district. As shown in **Chart 2.1**, from October 1, 2008 to October 1, 2009, the district-wide entry mobility rate (enrollments into the district or school) was 20.8%, while the exit mobility rate (withdrawals from the district or school) was 18.1%.

Charts 2.2 and 2.3 show average entry and exit mobility rates for WPS elementary, middle, and high schools, as well as the district-wide averages for the past five years.^{12,13} (Mobility rates for individual schools are listed in **Appendix B**.) During the 2008-09 period, 633 transfers among Worcester’s four comprehensive high schools involved students moving within the district (from one WPS to another). Additionally, 606 entries into

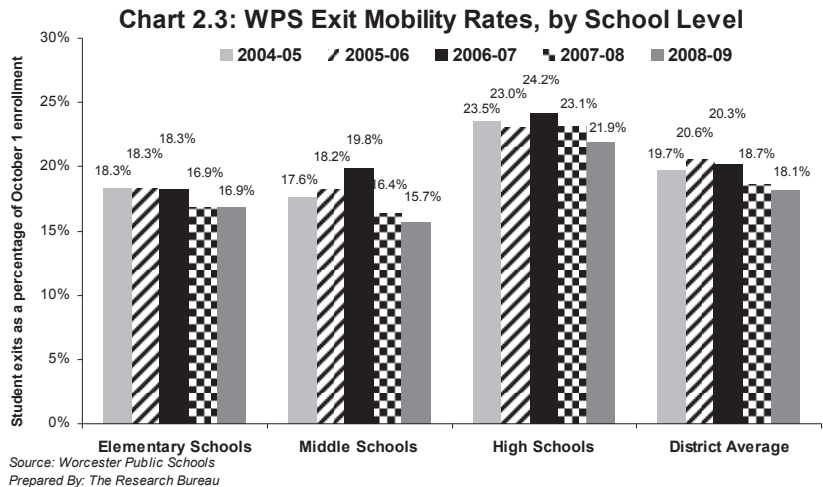
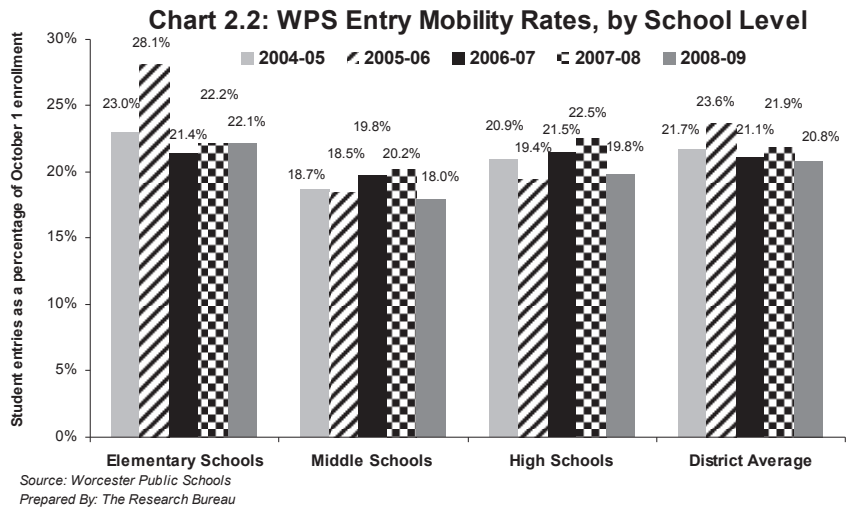
these high schools involved a student arriving from outside the district. Although students who arrive at a school after October 1 are required to participate in MCAS testing, their scores are not included in most school-level MCAS and accountability reports. However, their performance

is included in district-level adequate yearly progress (AYP) determinations and performance summaries.¹⁴

The district-wide average combined mobility rate during the 2008-09 school year was 39%, the lowest it has been since 2001-02 (35.7%), and a continued decrease since 2005-06 (44.2%). During the past two years the combined mobility rate had been about 41%.

Stability

As calculated by the WPS, the stability rate reflects the number of students who were enrolled in a school for 175 or



more days during a school year (180 days), divided by total enrollments.¹⁵ Stability shows consistent enrollment, whereas mobility tracks the rate of movement in and out of a school.

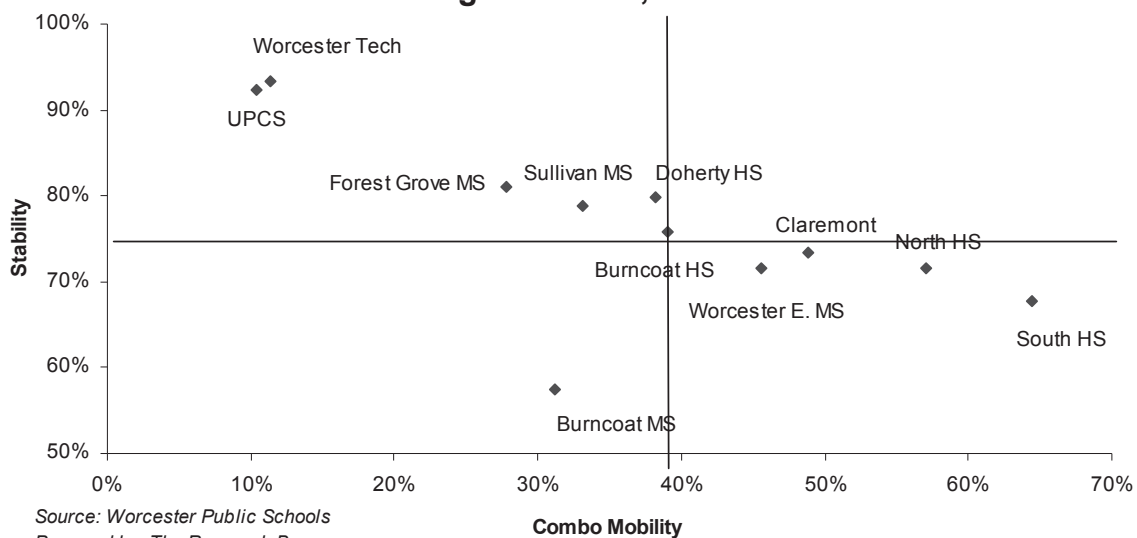
As calculated by the WPS, during the 2008-09 school year, slightly more than three-quarters of students (76.4%) in the district enrolled at one school remained in that same school through the end of the year. This is slightly lower than the rate for the 2007-08 school year, (77.5%) but similar to the two prior years (2006-07 at 76.8% and 2005-06 at 76.3%).

School-level mobility and stability rates, included in **Appendix B**, reveal that schools with higher stability rates tend to have lower mobility rates, and vice versa. Among Worcester’s middle and high schools, University Park Campus School had the lowest mobility rate (10%) and the second highest stability rate (92%), while Worcester Technical High School had the second lowest

mobility rate (11%) and the highest stability rate (93%): see **Chart 2.4**.¹⁶ At the elementary level, Flagg Street, Jacob Hiatt, and Worcester Arts Magnet had high stability rates and low mobility. At the other extreme, Belmont Street experienced the lowest stability in the district (just over half, 58%, of students enrolled at the beginning of the year remained there through the end of the school year) and the second highest mobility (84%) while Lincoln St had the highest mobility (87%), and the second-lowest stability (59%).

MA DESE started to calculate mobility rates in the 2007-08 school year. Three different measures were created to capture the concept: intake rate (transfers in after the beginning of the school year), churn rate (transfers into and out throughout the school year) and stability rate (students remaining throughout the school year).¹⁷ The methods for calculating these rates

Chart 2.4: Stability and Mobility in Worcester's Middle and High Schools, 2008-09



differ from the methods used by the Worcester Public Schools as reported above. **Chart 2.5** shows these measures of mobility for the Commissioner’s Districts in the state to compare with Worcester.

Chart 2.5: Student Mobility Rates in MA Urban Districts, 2008-09			
District	Churn Rate (%)	Intake Rate (%)	Stability Rate (%)
Boston	25.3	20.0	80.3
Brockton	17.0	9.4	92.1
Fall River	22.9	14.5	84.0
Holyoke	27.6	18.8	79.4
Lawrence	22.2	14.3	87.0
Lowell	16.0	7.8	90.0
Lynn	15.4	9.1	90.4
New Bedford	19.2	10.8	88.8
Springfield	23.1	12.2	85.9
Worcester	17.3	10.0	89.9

Source: MA DESE

What does this mean for Worcester?

Student mobility and student stability are important factors to consider when, under No Child Left Behind (NCLB), districts are held accountable for the performance of all students, regardless of their enrollment history. While the performance of students entering a school after October 1 in a given year is not factored into that school’s AYP calculation, these students’ performance does count when determining the district’s accountability status. Since districts are being held accountable for the performance of students who may

have received much of their education elsewhere, it would be desirable to determine how these mobile students are performing, particularly as measured by MCAS and graduation rates. Doing so would require in-depth analysis of mobility and its relationship to student academic achievement as measured by the MCAS.

While **Appendix B** shows that a number of schools with high mobility also have poor MCAS results, this is not uniformly the case. Generally, schools with high mobility rates and low stability rates also have higher percentages of minority students, students with limited English proficiency, students eligible for free/ reduced-price lunch, and special-education students, all of which have been shown to correlate with lower performance.¹⁸ Where schools with high mobility show low MCAS performance, we do not know which students – mobile or non-mobile – are among the poor performers. Additionally, there ought to be further analysis of those students moving within the district compared to those who enter from another district. (The WPS has adopted a district-wide curriculum under which students transferring from one school to another within the district should find their new classroom at approximately the same instructional point as the classroom they left.)

INDICATOR 3: MCAS SCORES: SCHOOL AND DISTRICT ACCOUNTABILITY

Why is it important?

The Massachusetts Comprehensive Assessment System (MCAS) was established following passage of the Massachusetts Education Reform Act of 1993 (MERA) to measure student performance based on the Massachusetts Curriculum Frameworks learning standards. The subject-matter MCAS tests, which have been administered statewide since 1998, serve as the primary means by which schools and districts in Massachusetts are held accountable for student performance, as required by both MERA and NCLB of 2001. Schools and districts in which student performance does not improve sufficiently, as determined by specific state performance standards, are subject to review and possible oversight by the MA DESE. Finally, in addition to meeting local graduation requirements, students must pass both the grade 10 English Language Arts (ELA) test and grade 10 Mathematics test to earn a high school diploma.¹⁹

Since NCLB requires that all students meet state-established proficiency standards in English Language Arts and mathematics by 2014, this indicator describes the proportion of students whose performance was at the “Advanced” or “Proficient” level on the ELA and math MCAS tests.

MCAS Performance Level Definitions

As defined by the Massachusetts DESE, students scoring at the “Advanced” level demonstrate a comprehensive and in-depth understanding of rigorous subject matter, and provide sophisticated solutions to complex problems. Students scoring at the “Proficient” level demonstrate a solid understanding of challenging subject matter and solve a wide variety of problems. Students whose scores are at the “Needs Improvement” level demonstrate a partial understanding of subject matter and solve simple problems, while those performing at the “Warning/Failing” level demonstrate only a minimal understanding of the subject matter and cannot solve even simple problems.

What is the trend in Worcester?

As shown in **Chart 3.1**, in each year during the five-year period from 2006 to 2010, the proportion of WPS fourth-graders scoring at or above proficiency on both the ELA and math MCAS exams has been well below the statewide averages. In 2010, 37% of WPS fourth graders scored at or above proficiency on the ELA exam compared to 54% of students statewide. For both the WPS and the state, these results represent an increase from 2009 (31% for Worcester, 53% for the state). (In 2008, the lowest proportion of fourth-graders

during the five-year period scored at or above proficiency on the ELA exam.) In 2010, about 33% of Worcester fourth-graders scored in the proficient or advanced category in math, compared to 48% statewide. This is a slight increase from 2009, when 31% of Worcester fourth-graders were proficient; the proportion proficient statewide remained the same.

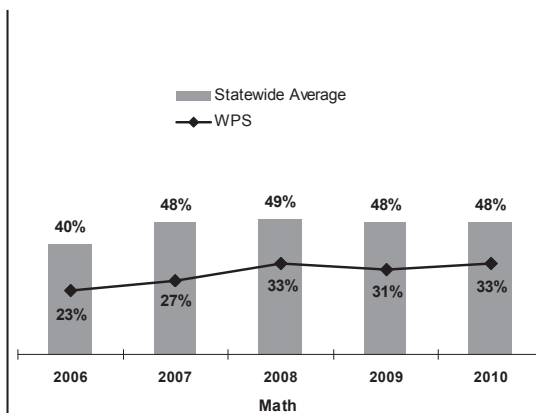
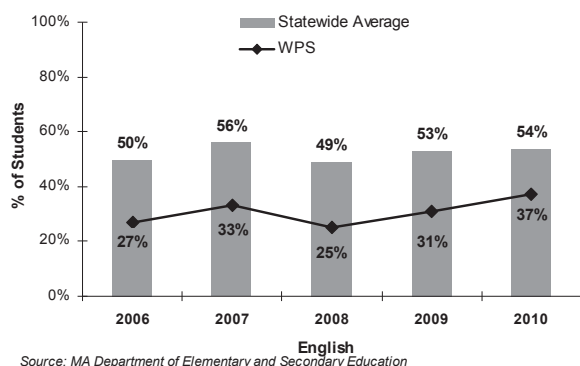
In 2010, students at Clark Street Community, Columbus Park, Flag Street, Heard Street, Jacob Hiatt, and Nelson Place elementary schools scored at or above the statewide average on both the grade 4 ELA and math tests. Proficiency rates on the 2010 ELA and math MCAS test are provided for individual schools in **Appendix B**.

While the above discussion highlights Worcester’s performance relative to that of all students statewide, the charts in **Appendix A** (pp. 32-34) show WPS student performance in comparison to the 23 other urban districts.²⁰ On the 2010 fourth-grade ELA exam, 1 of the 24

urban districts reported student proficiency rates at or above the statewide average of 54% (see **Appendix A, Chart A.1**). Overall, 34% of urban fourth-grade students achieved proficiency on the 2010 ELA exam (in Worcester, the proportion was 37%). This urban average represents a slight increase from 2008, when 30% of urban fourth-graders achieved proficiency on the ELA exam, the same proportion as in 2009. (However, 36% scored proficient in the 2007 exam.) About 33% of urban fourth-graders statewide scored at the proficient or better level on the 2010 math MCAS exam (the same proportion as 2009 and similar to 2008 when 34% achieved proficiency); this proportion was also 33% for the WPS. (See **Appendix A, Chart A.2**).

To comply with NCLB requirements, in 2006 for the first time Massachusetts tested all students in grades 3-8 in both English Language Arts/Reading and math.²¹ New ELA tests were added in grades 5, 6 and 8, and new math tests

Chart 3.1: 4th Graders Scoring At or Above Proficient on MCAS, 2006-2010



Grade and Subject	Proficiency		Needs Improvement		Warning/Failing	
	District	State	District	State	District	State
Grade 3- Reading	45%	63%	41%	30%	15%	8%
Grade 3- Math	48%	65%	32%	24%	21%	11%
Grade 4- English Language Arts	37%	54%	40%	35%	23%	12%
Grade 4- Math	33%	48%	44%	41%	22%	11%
Grade 5- English Language Arts	44%	63%	36%	28%	20%	10%
Grade 5- Math	40%	55%	32%	28%	29%	17%
Grade 6- English Language Arts	57%	69%	27%	21%	16%	9%
Grade 6- Math	47%	59%	25%	25%	28%	16%
Grade 7- English Language Arts	53%	72%	31%	21%	15%	7%
Grade 7- Math	36%	53%	27%	27%	37%	19%
Grade 8- English Language Arts	61%	78%	26%	16%	13%	7%
Grade 8- Math	36%	51%	27%	28%	37%	21%
Grade 10- English Language Arts	63%	78%	30%	18%	8%	4%
Grade 10- Math	57%	75%	28%	17%	15%	7%

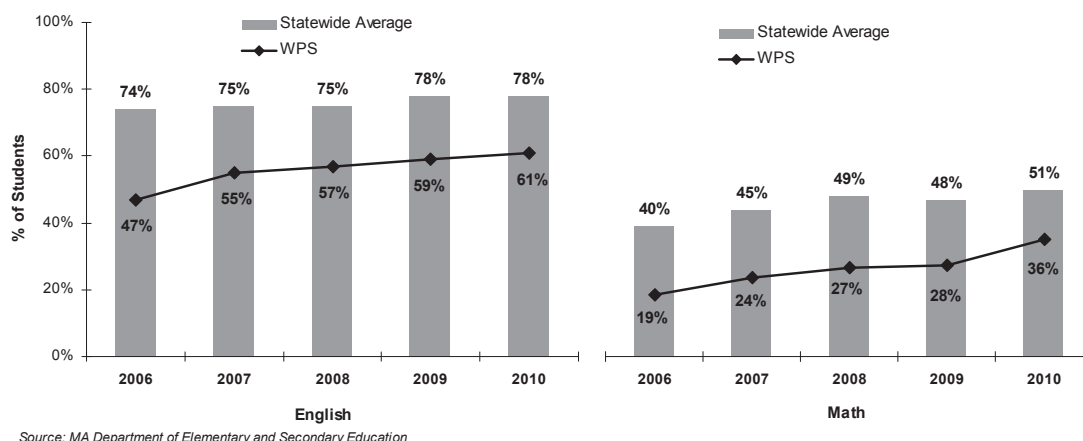
Source: MA DESE

were added in grades 3, 5 and 7. **Table 3.1** shows the percentages of Worcester students in 2010 who achieved proficiency in these subjects for each of these grades.

Chart 3.2 shows the proportion of Worcester’s middle-school students scoring at the proficient or advanced levels on the ELA and math MCAS tests as well as the statewide average. In 2010, 61% of WPS eighth-graders scored in the proficient or advanced categories on the ELA portion of the MCAS, a proportion that has been steadily

increasing over the past five years - only 47% were proficient in 2006. (The statewide proficiency average for the 8th grade ELA exam has increased from 74% in 2006 to 78% in 2010.) Thirty-six percent of WPS eighth-graders scored in the advanced or proficient categories on the 2010 math test compared to 51% statewide (in 2009, these proportions were 28% and 48%, respectively). Additionally, on both the ELA and the math tests, the proportion of WPS students performing at the proficient or advanced levels was substantially below the statewide average: 17 percentage

Chart 3.2: 8th Graders Scoring At or Above Proficient on MCAS, 2006-2010



points lower in English, and 15 percentage points lower in math.

WPS students in grades 4-8 and 10 performed better on the ELA exam than on the math exam, with the greatest disparity in scores occurring at the middle-school level. The proportion of eighth-graders performing at the proficient or advanced level on the 2010 ELA test – 61% – was 25 percentage points higher than the proportion that scored the same on the 2010 math exam.

2010 middle school ELA and math MCAS scores for the state’s 24 urban districts are shown in **Appendix A, Charts A.3 and A.4** (p. 33). Sixty-one percent of eighth-graders in these urban districts achieved proficiency on the ELA MCAS exam, while a substantially lower percentage – 34% – achieved proficiency on the eighth-grade math exam. Worcester was equal to the urban average in ELA and slightly above it in math at 36%. The 2010 urban average for ELA is a slight drop-off from 2009, when 63% of urban students were

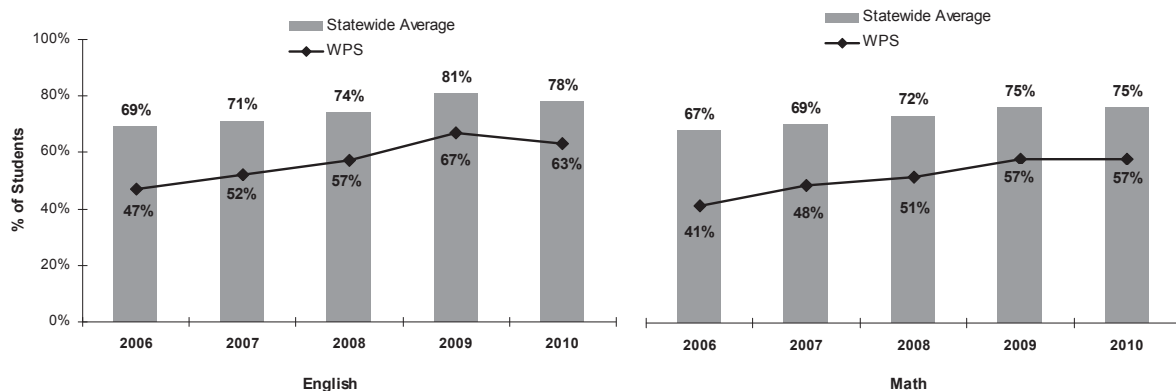
proficient. In math the average increased by five percentage points from 2009 (29%).

Among middle schools within the WPS District, Forest Grove Middle School, Burncoat Middle School, and University Park Campus School (middle grades) either outperformed or had an average equal to the urban-district averages in each of the subject areas.

Chart 3.3 shows that the percentage of WPS tenth-graders scoring proficient or better on the ELA exam decreased from 67% in 2009 to 63% in 2010, after a 10 percentage-point increase from 2008 to 2009. The statewide rate of tenth-graders scoring proficient or better on the ELA exam also decreased slightly from 2009 to 2010, from 81% to 78%. Student performance on the 2010 math exam remained the same as in 2009 at both the district (57% proficient) and state (75% proficient) levels.

Appendix A, Charts A.5 and A.6 show tenth-grade performance on the 2010 ELA and math MCAS exams for the

Chart 3.3: 10th Graders Scoring At or Above Proficient on MCAS, 2006-2010



Source: MA Department of Elementary and Secondary Education

WPS and 23 other urban districts in the Commonwealth. Sixty-two percent of urban-district tenth-graders scored in the proficient or advanced categories on the ELA exam, while Worcester scored slightly higher at 63% proficiency. In 2009, the urban average on the 10th grade ELA exam was 65% proficient.

On the tenth-grade math exam, the 24-district average was 58%, an increase from 56% in 2009. As noted above, the rate for Worcester was 57%. As is the case at each grade level for each subject area (ELA and math), the range in the proportion of students achieving proficiency among the 24 urban districts is substantial. In Lawrence, only 35% of tenth-graders scored proficient or better on the math exam, while in Framingham, four out of five (81%) did so.

Sub-Group Performance

The goal of NCLB is explicit: every child must achieve proficiency in ELA and mathematics by 2014. In seeking to ensure that all students meet this goal, every state monitors the progress being

made by its students in the aggregate as well as by student subgroups, at both the school and district level. Subgroups include the following: students with disabilities, students with limited English proficiency, economically disadvantaged students, and African American/Black, Hispanic, Asian, White, and Native American students.²²

Table 3.2 shows the proportion of WPS students in each subgroup who performed at or above proficiency on the grades 4, 8, and 10 ELA and Math tests.

Adequate Yearly Progress (AYP)

Under NCLB, districts, schools, and student subgroups must demonstrate that they are making *adequate yearly progress* (AYP) that puts them “on target” for all students to reach proficiency by 2014. AYP determinations are based on a combination of student attendance and MCAS participation, performance, and improvement over time. A school or district that fails to make AYP for two or more consecutive years in the same

Table 3.2: 2010 Worcester Public Schools MCAS Results by Subgroup

Subgroup	Proportion of Students Tested Scoring at the Advanced or Proficient Level (%)					
	Grade 4		Grade 8		Grade 10	
	ELA	Math	ELA	Math	ELA	Math
Special Education	7	7	20	6	20	20
LEP/FLEP	25	28	28	13	23	23
Low-Income	27	25	54	27	56	51
African-American/Black	35	26	52	27	58	49
Asian	48	56	81	63	76	74
Hispanic	23	23	49	19	51	43
White	48	41	71	49	71	68
WPS Average	37	33	61	36	63	57

* Performance level percentages are not calculated if student group is less than 10.
Source: MA DESE

Accountability Status (Total Schools: 43*)	Subject Area Identified					
	ELA Only		Math Only		Both ELA & Math	
	#	%	#	%	#	%
Identified for Improvement	1	2%	8	19%	3	7%
Corrective Action	3	7%	1	2%	1	2%
Restructuring	7	16%	2	5%	18	42%
<i>Subtotal (Accountability Status)</i>	11	26%	11	26%	22	51%
No Status	3	7%	3	7%	7	16%

*AYP results for the Goddard School are not available at this time
 Prepared By: The Research Bureau
 Source: MA DESE

subject area, for students in the aggregate or subgroups, is identified for improvement, corrective action, or restructuring status. Schools or districts that make AYP in a subject for all student groups for two or more consecutive years are assigned to the “No Status” category. Schools in need of improvement, corrective action, or restructuring face specific consequences that grow in severity each year that they do not make AYP.

In 2010, 36 Worcester schools (84% of district schools) enrolling 84% of the district’s students were identified for improvement, corrective action, or restructuring in math, ELA, or both, either in the aggregate or for subgroup performance (see **Table 3.3**). Twenty-seven schools in Worcester are implementing restructuring plans that were approved by the MA BESE, including all four of Worcester’s middle schools and all four comprehensive high schools. The district as a whole was identified for corrective action for subgroup performance in both ELA and math for the fourth year in a row.

AYP Accountability Status Definitions

As defined by the Massachusetts Department of Elementary and Secondary Education, a school or district that has not made AYP for two consecutive years in ELA or math, in the aggregate or in any subgroup, is labeled as *Identified for Improvement – Year 1*. If the same school or district does not make AYP in the same subject (ELA or math; aggregate or subgroup) in the following year its status will become *Identified for Improvement - Year 2*. Responsibilities for schools that are identified for improvement include: notifying parents/guardians of their children’s school’s status, revising the school’s improvement plan, and receiving technical assistance from the district. Additionally, schools receiving Title I funding (Title I is a federal program that distributes funds to schools and districts that have a large proportion of low-income students) must provide their students with the option of attending another school, a portion of the Title I funds must be put towards professional development, and supplemental educational services must be offered to low-income students in the school.

If AYP is not met again in the subsequent year, the school or district will move into the *Corrective Action* category. Along with the responsibilities stated above, the district must take at least one corrective action, such as extending the length of the school day or year or replacing certain school staff. Another year of failure to make AYP will result in the school moving into *Restructuring* status. The district must develop and implement a plan for fundamental reforms at the school while in restructuring. Reforms include major changes in the school's governance, structure and staffing. A *No Status* school or district is one that has made AYP for at least two consecutive years in all subjects in all grades and subgroups.

In September, 2010, the state released a list of Massachusetts "Commendation Schools," or 187 schools that were recognized for their academic growth, closing the achievement gap, or exiting out of their accountability status. Eight of these schools are in Worcester: Clark Street, Elm Park, Heard Street, Jacob Hiatt Magnet, Nelson Place, Roosevelt, Tatnuck, and Burncoat Middle School.²³

Measures of Academic Progress

Regulations promulgated by the Massachusetts DESE for schools and districts in need of improvement require that school improvement plans include ten specific elements. Two of these required elements entail implementing a

program of interim formative assessments (given several times during the academic year) of student performance related to the school curriculum and State frameworks and using the results to "inform curriculum, instruction, and individual interventions." In the fall of 2005, the WPS adopted the Measures of Academic Progress (MAP) as an interim formative assessment program in reading, language arts, and math for students in grades two through ten. The assessments measure individual students' progress in reading, language usage, and mathematics. In the MAP system, the difficulty of the test is adjusted to the student's performance. The goal is a more precise and timely identification of students' abilities so that targeted remedial help (i.e., additional instruction during the day, after-school, and in the summer) can be given to students who need it. The final score is an estimate of the student's optimal instructional level, and this information is used by teachers to determine how to format their lesson plans and where they may need to differentiate instruction so that all students are learning at an appropriate level.

When MAP is administered at regular intervals over time (in Worcester, students may be tested three times a year), schools can determine the rate of progress of an individual student or an entire class or grade level in basic

Table 3.4: Percentage of Students Meeting MAP Growth Targets

Grade	Reading					Math				
	2005-06	2006-07	2007-08	2008-09	2009-10	2005-06	2006-07	2007-08	2008-09	2009-10
2	na	41.7%	49.0%	46.0%	49.5%	na	43.7%	48.9%	43.5%	49.1%
3	na	49.4%	53.8%	50.4%	50.3%	na	54.0%	59.0%	59.2%	64.4%
4	54.4%	48.6%	50.3%	52.6%	53.3%	51.1%	60.7%	66.6%	63.6%	62.8%
5	51.5%	52.3%	51.1%	52.2%	53.1%	59.5%	50.4%	64.5%	61.0%	61.7%
6	49.9%	48.4%	52.6%	54.2%	51.7%	52.2%	57.3%	69.4%	64.9%	64.2%
7	48.6%	49.2%	45.9%	42.9%	47.6%	49.7%	46.3%	48.2%	43.0%	46.8%
8	45.9%	53.0%	48.7%	44.1%	50.0%	42.7%	51.6%	56.0%	56.4%	57.8%
9	46.5%	51.6%	49.8%	43.9%	46.0%	48.9%	50.0%	56.9%	48.5%	49.0%
10	47.2%	53.8%	47.8%	49.9%	46.9%	52.6%	56.6%	61.3%	53.8%	55.9%

Source: Worcester Public Schools Prepared by: The Research Bureau

skills. In addition to identifying a student’s current instructional level, the test also produces a target growth score for each student based on the typical growth experienced by students nationwide who were at the same grade level with the same starting score.

According to the WPS, the desired goal for each grade was that 50% or more of the students tested in the fall of 2009 would meet or exceed their individual growth targets by the spring of 2010. Baseline student data for this period show that in math, students in grades 3, 4, 5, 6, 8, and 10 met the 50% benchmark, while students in grades 2, 7, and 9 did not do so. (The same results were attained the prior year.) In reading, only at grades 3, 4, 5, 6 and 8 were growth targets met by 50% or more of the students tested; students in grades 2, 7, 9, and 10 failed to meet their growth targets. **Table 3.4** also shows the percentage of students who met their growth targets the previous four years.²⁴

There are several benefits of having MAP administered in the schools. Test results are available within days and provide teachers with “real-time” assessments of the specific skills that a

child knows and those that the child needs to learn. Also, the ability to test students at several points during the year allows teachers to gauge a student’s progress toward meeting his or her goals, and to adjust strategies as needed. Schools can use data to group students with their academic peers; this could entail grouping students into instructional settings for particular subjects within or across grade levels. MAP assessments can be administered when a new student transfers into a classroom, providing an immediate assessment of the student’s knowledge and skills. Since the tests are aligned with the Massachusetts Curriculum Frameworks, they provide WPS students, teachers, and administrators with an interim measure of progress toward meeting the state’s proficiency standards. Finally, schools and the district can use the MAP assessment information to analyze the effectiveness of the curriculum, instructional programs, and resources.

What does this mean for Worcester?

While WPS MCAS scores have shown some improvement, the district is still lagging far behind the state. Statewide,

MCAS scores have also been improving, meaning that the gap between WPS scores and the state has not been narrowing. When comparing Worcester to the other 24 urban districts in the state, Worcester is either at the average proficiency rate, or slightly below or slightly above.

As noted above, while thirty-six of the district's 44 schools students have an AYP accountability status of improvement, corrective action, or restructuring in math, ELA, or both, two elementary schools have been identified by the state as Level 4 schools (Chandler Community and Union Hill), with unacceptable performance that must show substantial improvement within three years.²⁵ This identification is based on four-year trends in absolute achievement, student growth, and improvement trends as measured by MCAS.²⁶ Each of these schools has now developed a required turnaround plan under the guidance of the superintendent, school committee, local teachers' union, administrators, teachers, community representatives, and parents.²⁷ They are also expected to receive additional funds of \$500,000 per school from the Federal government for each of the next three years. In order for a Level 4 school to exit this status, it must improve student achievement and provide evidence that conditions are in place at both the school and district level to sustain that improvement.

In January, 2010, Massachusetts passed new education reform legislation. This legislation establishes strategies that give the lowest-performing districts and schools greater flexibility in removing and assigning teachers and more autonomy over finances and other matters. The bill also expands the cap on charter schools in some of these districts and allows for the creation of Innovation Schools - in-district public schools that can operate more autonomously than traditional public schools. This particular legislation helped the state qualify for \$250 million over four years in "Race to the Top" funds, which it won in August 2010. To qualify, Massachusetts had to adopt a new set of national standards which will be accompanied by a new set of exams that are still in the developmental stage. There is controversy regarding the quality of the new standards compared to the current Massachusetts ones, which have been repeatedly rated number one in the nation. The new ones will require changes in the curriculum frameworks and the MCAS exams, which have helped Massachusetts students to rank number one in the nation on the NAEP (National Assessment for Educational Progress) exam, also known as the "Nation's Report Card." Adopting the new regime may require different professional development for teachers and the purchase of millions of dollars of new books and other materials for students.

INDICATOR 4: GRADUATION RATE, POST-GRADUATE PLACEMENT, AND ADVANCED PLACEMENT

Why are they important?

High school graduation rates are a significant indicator of overall school performance. As required by NCLB, schools, districts, and states must now report their graduation rates, or the percentage of students who earn a high school diploma in four years (the standard period for completion).²⁸ High schools are held accountable for their students graduating on time as part of AYP determination.

Specialized training and education beyond high school graduation have also become increasingly important in ensuring an individual's economic success. According to the Bureau of Labor Statistics, during the second quarter of 2010, median weekly earnings for college graduates with at least a bachelor's degree were about 81% higher than those of individuals who had only a high school diploma (\$1,138 per week versus \$629, for adults 25 years or older).²⁹ In turn, over their lifetime, high school graduates stand to earn more than \$500,000 more than high school dropouts; 67 percent of employed workers with college degrees have health insurance, as compared to 48 percent of high school graduates and just 36 percent of dropouts.³⁰

Additionally, because Massachusetts has a higher-than-average concentration of high-tech, finance, and health-care

firms compared to the US as a whole, a greater proportion of available and projected jobs in Massachusetts are professional or technical jobs requiring more highly educated workers.³¹ In fact, fourteen of the 20 fastest-growing occupations in Massachusetts require an associate's degree or higher.

Nationwide, the following occupations will be experiencing high rates of job growth in the future: computer software engineers, health care professionals and paraprofessionals, and preschool and post-secondary teachers, all of which typically require advanced training or a post-secondary degree.³²

One way to improve the preparation of high school students for college is through enrollment in Advanced Placement (AP) courses - rigorous, college-level classes available in many different subject areas - through which students can earn college credit by passing the end-of-year AP exam. According to studies by the College Board, students who took AP classes and AP tests in high school experience long-term benefits in college, including higher GPAs and higher four-year graduation rates.³³

What is the trend in Worcester?

Graduation Rates

Reported by the Massachusetts DESE for the first time for the class of 2006, the

graduation rate indicates the percentage of students starting high school in the ninth grade who graduate within the standard four years and receive a high school diploma.³⁴ Students are not counted as “on-time” graduates if they have either dropped out, have not passed the MCAS exam, are still enrolled in school, have been expelled, or obtained a GED instead of a regular diploma. Graduation rates are calculated on a different basis from dropout rates because the graduation rate represents a particular cohort that starts in ninth grade and completes twelfth grade, while the dropout rate is calculated for a particular school year.

Statewide, 81.5% of students in the class of 2009 who entered ninth grade in the fall of 2005 graduated from high school in four years. This rate has risen slightly

since it was first reported: 79.9% in 2006, 80.9% in 2007, and 81.2% in 2008.

Among urban districts, 66% of this cohort graduated in four years. **Chart 4.1** shows four-year graduation rates for the 24 urban districts in Massachusetts, and indicates that Worcester’s rate was above the average.

About 70% of WPS students in the class of 2009 graduated in four years, while 8% are still enrolled in school; 14.5% dropped out; 5% earned a GED; 2% either completed their course work but did not pass the MCAS exam, or were special-education students who had reached the maximum age for remaining in school; .4% were expelled. In 2008, about 69% of students graduated in four years, in 2007 about 70% graduated in four years, while 67% graduated in this same timeframe in

Chart 4.1: Graduation Rates of Urban Districts, 2009

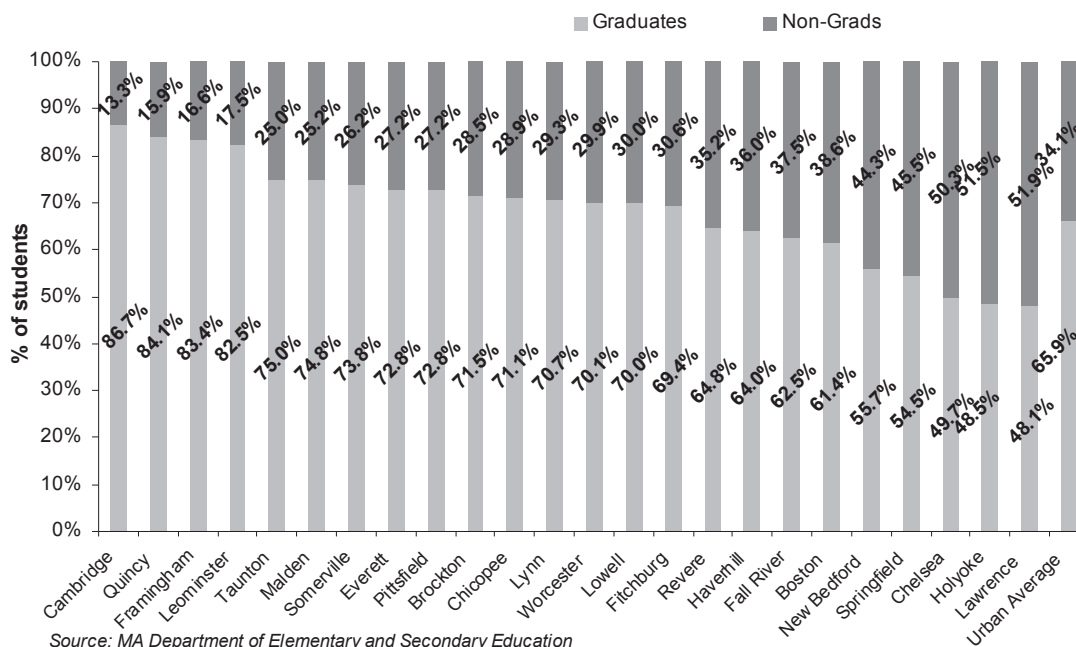
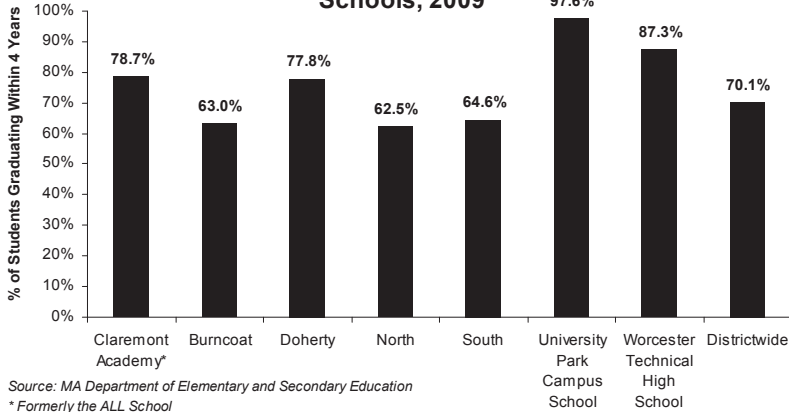


Chart 4.2: Graduation Rates of the Worcester Public Schools, 2009



of their intentions, they do not always reflect what students ultimately do after graduating from high school. Currently, there is no mechanism to allow the district to track whether students actually enroll in a college, whether a student completes a degree program, and the time that it takes him to do so.

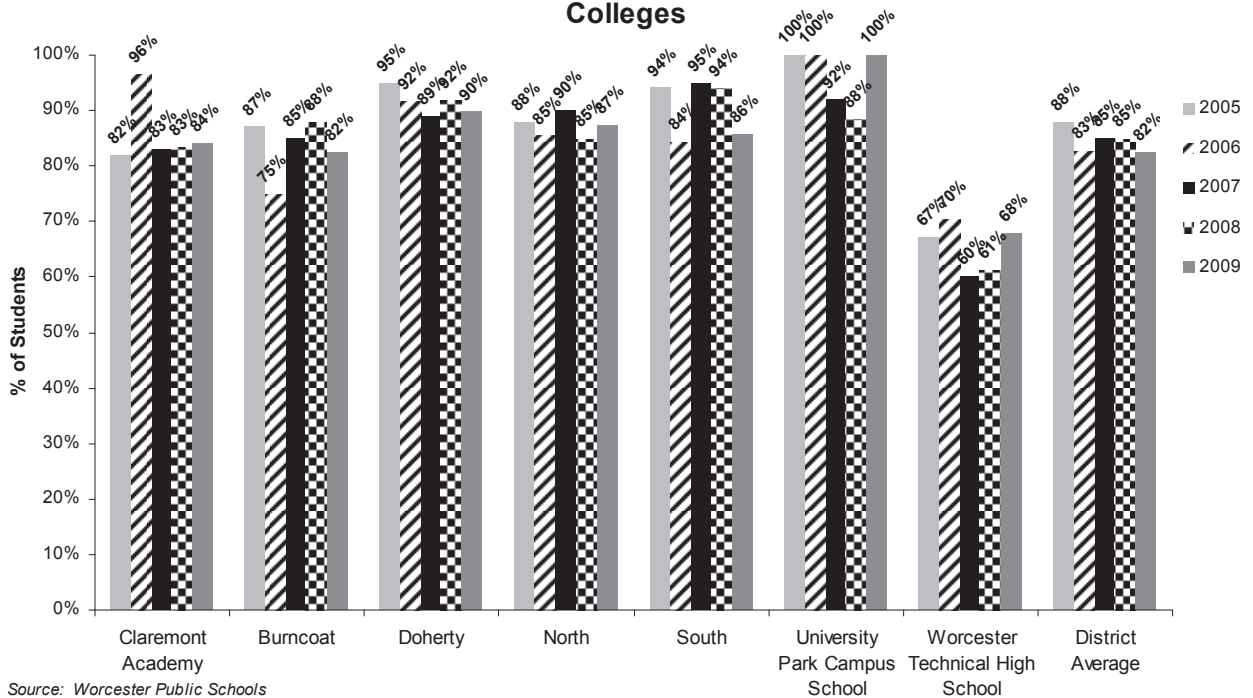
2006. **Chart 4.2** shows the graduation rates for each of Worcester’s schools which had a graduating class in 2009.

Post-Graduation Placement

The Massachusetts DESE collects data annually from public high schools regarding the plans of their graduates.³⁵ Since these data are self-reported by students and provide only an indication

In 2009, 82.4% of WPS graduates indicated that they planned to attend a 2- or 4-year college or pursue other post-secondary education, as shown in **Chart 4.3**. About 37% of WPS students graduating in 2009 intended to enroll in a public or private four-year college or university, while 43% planned to enroll in a two-year school. (An additional 3% of students had plans for other post-

Chart 4.3: High School Graduates Planning to Attend 2- or 4-year Colleges



secondary education.)

In 2009, 100% of University Park Campus School graduates planned to attend post-secondary schools and ninety percent of Doherty High School graduates planned to do the same. South High Community School, which in 2007 and 2008 had the highest proportion of students planning to attend post-secondary schools, had 86% of its graduates planning further education. Worcester Technical High School had the highest proportion of students planning to enter the workforce upon graduation (28%) since their training enables them to enter the workforce immediately.

**Advanced Placement:
Participation and Performance**

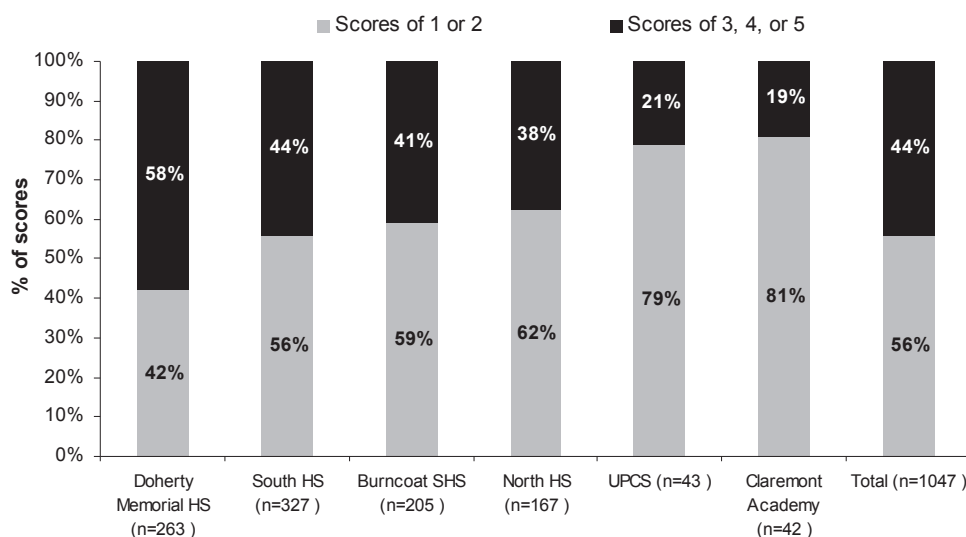
During the 2008-09 school year, students in the Worcester Public Schools were enrolled in 34 Advanced Placement courses, ranging in subject area from the

sciences to foreign languages, social sciences and fine arts.³⁶ In 2009, 623 WPS students who completed one or more AP courses took a total of 1,047 AP exams, an increase of almost fifty percent from 2005, when about 700 tests were administered.³⁷ Ninety-five percent of WPS students enrolled in AP courses took the AP exam at the completion of the course (35 students did not take 41 exams in 2009).

Exam grades are reported on the following five-point scale: (5) extremely well qualified to receive college credit or advanced placement, (4) well qualified, (3) qualified, (2) possibly qualified, and (1) no recommendation to receive college credit or advanced placement. According to the College Board, which administers the tests, exam grades of 3 or above are considered equivalent to a college course grade of “middle C” or above. In 2009, fewer than half of Worcester’s AP scores (44%) were 3’s,

4’s, or 5’s; the remaining 56% of scores were 1 or 2. In 2008, 40% of scores were at a 3 or above; in 2007, 47% of scores were at this level. **Chart 4.4** shows the distribution of AP exam scores by school for 2009. Doherty Memorial High School had the

Chart 4.4: AP Exam Scores by School: WPS, 2009



Source: Worcester Public Schools

greatest percentage of exam scores of 3 or above (58%).

What does this mean for Worcester?

The MA DESE has established a target graduation rate of 60% for 2008. Although Worcester performed well compared to other urban districts in the state, exceeding the urban-district average and the MA DESE target, a significant number - almost thirty percent of Worcester students who entered the ninth grade in the fall of 2005 - failed to graduate four years later.

While WPS seniors stated their intention to attend college at a slightly higher rate than students statewide, there is currently no comprehensive system in place to track post-secondary enrollment and/or students' performance once they get to college. A longitudinal report that followed Boston Public Schools class of 2000 graduates for seven years found that of those who enrolled in college at some point during these 7 years, 35% completed a degree as of the summer of 2007.³⁸ Recent reports and news articles have also highlighted the increase in the number of college freshmen required to take remedial courses. In February 2008, the School-to-College report, released by the MA DESE, showed that among Worcester Public School students of the class of 2005 who enrolled in a Massachusetts public postsecondary institution, 55% enrolled in one or more

remedial courses in the fall of 2005.

One program that strives to get more students to attend college is AVID, or Advancement Via Individual Determination. This is a national program adopted in Worcester in 2001 and designed for youths who fall "in the middle" academically. The Hanover Insurance Group Foundation awarded \$500,000 in 2009 to strengthen and expand the program in the City.³⁹ AVID is offered as an elective to students in grades 7-12 and helps them develop skills such as note-taking, studying, critical thinking, writing, reading, and organization. Students, who are taught by specially-trained teachers and local college students, are also encouraged to visit local college campuses.

While obtaining a college degree is important, there are numerous well-compensated occupations and skills that do not necessarily require such a degree. For occupations such as welding, having on-the-job training and experience is what matters. Even in an economy approaching 10% unemployment, these types of jobs may be hard to fill.⁴⁰ The success of Worcester Technical High School in graduating students with both academic and technical training coupled with the availability of jobs requiring technical skills indicates that there is still an important career path for students interested in obtaining occupational skills and training.

Over the past several years, the WPS has seen increases in both the number of AP course offerings (from fifteen in 2001 to 34 in 2009) as well as a significant increase in the number of AP exams administered (which more than doubled). However, during this period, performance has been relatively flat. **Table 4.1** compares Worcester students' final grades with their AP exam scores for selected AP courses. What is surprising about the AP scores is the number of students who received A's and high B's for the course but were unable to score at least a 3 on the AP exam. Were these students not well prepared for the test? Another issue that requires further examination is the number of students who received C- or below for these AP courses. Should these students have enrolled in the AP

course in the first instance? While we want to encourage students to aim high, we should not set them up for failure.

This comparison of course grades and AP exam grades should be tracked over time and include variables such as additional AP subject training for teachers, employing different teachers for the same courses, and prior student preparation for the AP course in which he is enrolled. In its *5th Annual Advanced Placement Report to the Nation*, the College Board urges educators to track the quality of learning in AP courses as their AP programs expand and to ensure that students take the curriculum that will adequately prepare them, from middle school on, to succeed in these classes.⁴¹

Table 4.1: 2009 AP Exam Scores and Final Course Grades					
Biology			U. S. History		
Final Course Grade	# of students	Percentage that scored 3 or above on AP Exam	Final Course Grade	# of students	Percentage that scored 3 or above on AP Exam
93-100	2	100.0%	93-100	32	68.8%
85-92	17	64.7%	85-92	45	48.9%
75-84	26	17.6%	75-84	32	21.9%
66-74	37	11.1%	66-74	10	10.0%
65 and below	6	0.0%	65 and below	20	5.0%
Calculus AB			Spanish		
Final Course Grade	# of students	Percentage that scored 3 or above on AP Exam	Final Course Grade	# of students	Percentage that scored 3 or above on AP Exam
93-100	17	94.1%	93-100	14	71.4%
85-92	24	79.2%	85-92	26	57.7%
75-84	33	39.4%	75-84	17	64.7%
66-74	8	12.5%	66-74	12	33.3%
65 and below	5	0.0%	65 and below	4	25.0%
English - Language			English - Literature		
Final Course Grade	# of students	Percentage that scored 3 or above on AP Exam	Final Course Grade	# of students	Percentage that scored 3 or above on AP Exam
93-100	21	61.9%	93-100	29	72.4%
85-92	46	69.6%	85-92	60	55.0%
75-84	46	41.3%	75-84	38	36.8%
66-74	26	7.7%	66-74	17	23.5%
65 and below	3	0.0%	65 and below	7	14.3%
Source: Worcester Public Schools					
Prepared by: The Research Bureau					

INDICATOR 5: CHARTER SCHOOLS

Why are they important?

A charter school is a public school that is governed by a board of trustees and operates independently of the local school committee. Charter schools have the freedom to establish their own mission, governance and leadership structure, to control their own budgets, and to hire and fire staff. However, they are accountable to the MA BESE for results in each of the following areas: academic success, organizational viability, and faithfulness to the terms of the charter. Many of Massachusetts' charter schools have successfully met performance expectations.⁴² Since 1994 the MA BESE has granted 76 charters, and has revoked or not renewed only four of these due to poor performance. (Ten never opened and surrendered their charters.)

There are two types of charter schools in Massachusetts: Commonwealth and Horace Mann. Commonwealth charter schools are completely independent of their local school district, while a Horace Mann charter school must have its charter approved by the local school committee and teachers' union as well as by the MA BESE.⁴³ In FY10, 62 charter schools operating throughout Massachusetts enrolled more than 26,000 students. Charter schools must admit students by lottery; they may not require an entrance examination nor may they establish other selection criteria. Students may transfer back to

the regular public schools at any time.

Charter Schools in Worcester

Two Commonwealth charter schools operate in the City of Worcester: Abby Kelley Foster Regional Charter School (AKFCS) and Seven Hills Charter School (SHCS). Demographic and performance data for these schools are included in **Appendix B**.

Abby Kelley Foster Regional Charter School (AKFCS)

Founded in 1998, AKFCS enrolls students in grades K-12, and as specified in its charter gives preference to applicants from Worcester and eight surrounding towns. AKFCS enrolled 1,426 students during the 2009-10 school year, and had a waitlist of 1,067 students. About 85% of students are from Worcester. AKFCS emphasizes academic achievement and character development through a classical liberal arts education which is "grounded in the great works of Western civilization." The school has both an extended school year - 190 days compared to the WPS District's 180 days - and an extended school day (7:45 am to 3:00 pm, more than one hour longer than that of the district schools).

The attendance rate at AKFCS during the 2008-09 school year was 96%, meaning that, on average, students attended school 96% of the days they

were enrolled. About twenty-five students withdrew from the school during 2008-09. All members of the class of 2009, AKFCS's fourth graduating class, were accepted to at least one postsecondary institution. One student in the class of 2009 dropped out, while the remaining students graduated in the standard four years.

As shown in **Table 5.1**, the proportion of AKFCS fourth graders scoring in the advanced or proficient categories on the 2010 MCAS English test – 47% - reflects an improvement from the previous year, when 40% of fourth graders achieved proficiency or better. However, the figure is still lower than 2007 when 52% were proficient. By comparison, about 37% of WPS students scored proficient or better on this exam. Forty-two percent of AKFCS fourth-graders scored at the proficient or better level on the math test (an improvement over 38% the previous year), compared to 33% of WPS students in 2010.

Eighty-six percent of AKFCS's eighth graders scored at or above proficiency on the 2010 MCAS English test, an improvement from 2009 when 80% were proficient. Almost half (48%) of eighth graders scored at the advanced or

proficient level on the math portion of the exam, compared to 47% in 2009. A smaller proportion of WPS students in these grades scored proficient or better: 61% on the 8th-grade English exam and 36% on the 8th-grade math exam. Almost three-quarters of tenth-graders (74%) scored in the advanced or proficient categories on the 2010 MCAS English exam, while 72% achieved this score on the math portion of the test. A drop in scores occurred on the ELA exam; 89% were proficient in 2009. WPS 10-graders scored 63% proficient and 57% proficient on the English and math exams, respectively.

Under NCLB, schools and student subgroups must demonstrate that they are making AYP that puts them “on target” for all students to reach proficiency by 2014. In 2010, AKFCS was identified for corrective action (subgroups) in ELA and restructuring (subgroups) in math.⁴⁴ This was the fourth year the school was identified for math and the third year for ELA. Since the school did not make AYP, some changes that are being implemented in the school include a new math curriculum, a new school administrator, and new classroom instructional methods.

Table 5.1: Abby Kelley Foster Charter School K-12

Indicator	2005-06		2006-07		2007-08		2008-09		2009-10	
	AKFCS	WPS	AKFCS	WPS	AKFCS	WPS	AKFCS	WPS	AKFCS	WPS
Attendance Rate	95.5%	94.3%	95.4%	94.0%	95.9%	93.9%	96.0%	94.1%	na	na
Dropout Rate	0.0%	4.2%	0.0%	6.0%	0.0%	4.7%	0.9%	5.1%	na	na
Graduation Rate	100.0%	67.2%	100.0%	69.8%	100.0%	69.2%	95.2%	70.1%	na	na
% Students Advanced/Proficient ELA 4th Grade	41.0%	27.0%	52.0%	33.0%	23.0%	25.0%	40.0%	31.0%	47.0%	37.0%
% Students Advanced/Proficient Math 4th Grade	29.0%	23.0%	35.0%	27.0%	26.0%	33.0%	38.0%	31.0%	42.0%	33.0%
% Students Advanced/Proficient ELA 8th Grade	68.0%	47.0%	82.0%	55.0%	69.0%	57.0%	80.0%	59.0%	86.0%	61.0%
% Students Advanced/Proficient Math 8th Grade	33.0%	19.0%	37.0%	24.0%	35.0%	27.0%	47.0%	28.0%	48.0%	36.0%
% Students Advanced/Proficient ELA 10th Grade*	64.0%	47.0%	83.0%	52.0%	82.0%	57.0%	89.0%	67.0%	74.0%	63.0%
% Students Advanced/Proficient Math 10th Grade*	52.0%	41.0%	80.0%	48.0%	67.0%	51.0%	70.0%	57.0%	72.0%	57.0%

Source: MA Department of Elementary and Secondary Education, AKFCS
 * 2006 was the first graduating class at AKFCS

One of the school’s final goals as outlined in its charter is it become accredited to start an International Baccalaureate (IB) program in the 2010-11 academic year. IB-level courses will be offered in history, physics, environmental systems and societies, math, English, Spanish, Latin, the visual arts, and music, to students in their junior year at AKFCS who qualify to be a part of the program. Students in the full IB program also have requirements beyond academics including community service projects and seminars. Students are assessed by standardized IB tests in their subject areas and are also required to complete an extended essay or a college-level research paper. In 2010, 25 AKFCS students were enrolled in the program, with the goal of 50% of students completing at least one IB class prior to graduation.

Seven Hills Charter Public School (SHCS)

Seven Hills Charter Public School was founded in 1996 with a mission of “preparing a diverse cross-section of Worcester children for success as students, workers, and citizens.” In the fall of 2009, SHCS enrolled 673 students from the City of Worcester in grades K-8, and had almost 400 students on the

waitlist. Its school year is 190 days, and its school day is 30 to 45 minutes longer than that of almost all in-district schools. Fifteen students left the school during the 2008-09 school year. Of these 15 students, 4 moved out of the city and 11 enrolled in another public or private school in Worcester. During the 2008-09 school year, SHCS had an average attendance rate of 95.4%.⁴⁵

As shown in **Table 5.2**, the proportions of SHCS fourth graders scoring in the advanced or proficient categories on the 2010 English and math MCAS tests were 13% and 15%, respectively. Scores in 2008 and 2009 represented a significant decline from 2007, when 29% and 31% scored proficient. These proportions are below those of the WPS, whose fourth-graders had an average proficiency of 37% and 33% on the ELA and math exams, respectively, in 2010.

Seventy-three percent of SHCS eighth-graders scored in the advanced or proficient category on the 2010 English MCAS exam, a similar proportion to the last few years. The WPS middle-school average for the 8th grade English exam was 61%. In the 8th grade math exam, 29% of SHCS eighth-graders scored proficient, compared to 37% in 2009. Thirty-six percent of WPS eighth

Table 5.2: Seven Hills Charter School K-8

Indicator	2005-06		2006-07		2007-08		2008-09		2009-10	
	SHCS	WPS	SHCS	WPS	SHCS	WPS	SHCS	WPS	SHCS	WPS
Attendance Rate	95.4%	94.3%	95.6%	94.0%	95.9%	93.9%	95.4%	94.1%	na	na
% Students Advanced/Proficient ELA 4th Grade	29.0%	27.0%	29.0%	33.0%	13.0%	25.0%	19.0%	31.0%	13.0%	37.0%
% Students Advanced/Proficient Math 4th Grade	22.0%	23.0%	31.0%	27.0%	18.0%	33.0%	14.0%	31.0%	15.0%	33.0%
% Students Advanced/Proficient ELA 8th Grade	78.0%	47.0%	73.0%	55.0%	72.0%	57.0%	75.0%	59.0%	73.0%	61.0%
% Students Advanced/Proficient Math 8th Grade	20.0%	19.0%	27.0%	24.0%	32.0%	27.0%	37.0%	28.0%	29.0%	36.0%

Source: MA Department of Elementary and Secondary Education

graders scored proficient on the 2010 math exam. SHCS did not make AYP in 2010, and has been identified for restructuring in mathematics and English.

Seven Hills Charter School's restructuring plan includes the following elements:

- Teachers and key personnel have been removed from positions where they were underperforming.
- Administrative and leadership roles were developed to enhance collaboration and professional development and support were developed.
- A partnership was formed with Community Partners Initiative (CPI) to help with benchmarking and intervention planning.
- Core curricula at the primary and elementary academy levels were updated.
- Grades four and five were departmentalized; tutorial and enrichment blocks during the school day were enhanced; the use of integrated technology was broadened.
- Protocols were established to strengthen collaboration between classroom teachers and learning specialists (special education and English language learning staff).

- Learning time was extended to provide opportunities for students in need of MCAS remediation.
- Families qualifying for supplemental educational services (SES) through Title I will be informed of additional opportunities available to their children.

What does this mean for Worcester?

Both charter schools in Worcester are at full enrollment and maintain waiting lists, which indicate a demand for such alternatives. If it is possible to obtain all the same data for the charter schools that the WPS is currently tracking, such as student mobility and stability rates, better comparisons can be made between the two different types of schools.

In September, 2010, a third charter school opened its doors in Worcester. The Spirit of Knowledge Charter School currently enrolls 156 students in grades 7-9 and will expand by one grade each year to grades 7-12 with an enrollment of 275.^{46,47} The school stresses academics in the areas of math, science, and technology and will focus on environmentalism and "green" technology.

¹ The fiscal year begins July 1st and ends June 30th.

² See M.G.L. Chapter 71B Section 3.

³ For a breakdown of these demographics by school, please see Appendix B, p. 35-36.

⁴ Abby Kelley Foster Charter School's first high school graduating class was in 2006.

⁵ <http://www.bls.gov>

⁶ The Massachusetts Department of Elementary and Secondary Education calculates attendance rates for students in grades 1 – 12 only. Therefore, attendance rates at the elementary school level do not include pre-K or kindergarten students.

⁷ Because Claremont Academy and University Park Campus School include grade spans beyond the traditional categories of elementary, middle, and high school, they are not included in **Chart 1.1**.

⁸ The Massachusetts Department of Elementary and Secondary Education requires districts to count a student as a dropout if the district is unable to determine that the student re-enrolled in another district.

⁹ Commissioner's Districts, or a 10-district cohort in Massachusetts, share the following characteristics: 10,000 or more students (except Holyoke), highest poverty and subgroup enrollment in state, 3 or more schools in Corrective Action or Restructuring, district in Corrective Action.

¹⁰ Mobility rates exclude "normal promotions" or when students are promoted from elementary to middle or middle to high school.

¹¹ David Kerbow, "Patterns of Urban Student Mobility and Local School Reform." *Journal of Education for Students Placed at Risk* 1(2) (1996): 147-169.

¹² Middle School and High School mobility rates in **Charts 2.2** and **2.3** do not include Claremont Academy and University Park Campus School, as these schools enroll students in both the middle and high school grades (7-12).

¹³ The average elementary school entry mobility rate for the October 1, 2005 to October 1, 2006 period included students who were forced to transfer to other schools following the closure of four elementary schools in June, 2006.

¹⁴ See <http://www.doe.mass.edu/sda/ayp/> for more information on student performance and accountability in Massachusetts, as well as **Indicator 3: MCAS Scores and School and District Accountability**.

¹⁵ Since a student could enroll, leave, and return within one year (2 enrollments), the number of enrollments does not necessarily represent unique students.

¹⁶ The lines on **Chart 2.4** represent the district average for each measure plotted.

¹⁷ "Student Mobility Rates in Massachusetts Public Schools, 2007-08 and 2008-09."

<http://www.doe.mass.edu/infoservices/reports/mobility/>

¹⁸ Based on data available from the MA Department of Education. Other factors that are not measured, such as neighborhood characteristics, housing availability and affordability, employment opportunities and parental educational attainment and income may also contribute to mobility.

¹⁹ Starting with the class of 2010, students need to score at the *Proficient* level or above on both the English Language Arts and Mathematics MCAS grade 10 tests to meet the State graduation requirement. Students that score at the *Needs Improvement* level must also fulfill the requirements of an Educational Proficiency Plan. Passing one of the **Science and Technology/Engineering** MCAS exams is now required as well.

²⁰ These 24 districts, enrolling 29% of students statewide, represent the state's most demographically disadvantaged urban communities; they enroll higher percentages of low-income and limited-English-proficient students than their suburban and rural counterparts.

²¹ Third graders are tested in reading while the remaining grades are tested in ELA.

²² Students belonging to multiple subgroups are counted in each subgroup to which they belong (one student can be represented in multiple groups).

²³ Burncoat Senior High School was cited by the state for one of the largest combined increases in the percent of students scoring Proficient and Advanced on the MCAS in 2010.

²⁴ Achieving a student's growth target should not be confused with the student demonstrating grade-level proficiency in subject-matter content (as determined by the MA DESE and measured by the MCAS). The level of growth a student achieves to meet his or her MAP growth target may not move that child far enough along the continuum of learning to reach proficiency on the MCAS exam. However, meeting the MAP growth target does show that the child is making academic progress.

²⁵ As of June 2010, there were 35 schools in Massachusetts that have been identified as Level 4.

²⁶ http://www.doe.mass.edu/sda/framework/level4/Info_Parents.pdf

²⁷ Ibid.

²⁸ In Massachusetts, students must pass the grade 10 ELA and Math MCAS tests and meet all local graduation requirements to be awarded a diploma.

²⁹ <http://www.bls.gov>

³⁰ Andrew Sum, et al., “An Assessment of the Labor Market, Income, Health, Social, Civic and Fiscal Consequences of Dropping out of High School: Findings for Massachusetts Adults in the 21st Century.” Prepared for the Boston Youth Transition Funders Group, January 2007.

³¹ Massachusetts Department of Workforce Development, “Commonwealth of Massachusetts Employment Projections 2006-2016,” <http://www.detma.org>.

³² Bureau of Labor Statistics, “Table 5. The 30 Occupations with the Largest Employment Growth, 2006-2016,” <http://www.bls.gov>.

³³ College Board, “Advanced Placement Report to the Nation 2007.” <http://www.collegeboard.com>.

³⁴ For federal accountability purposes under No Child Left Behind, all states are required to produce data describing the percentage of students who graduate with a diploma “within the standard number of years.” See <http://www.doe.mass.edu> for further description of the methodology adopted by the Mass DOE to calculate graduation rates.

³⁵ In 2001-02, Massachusetts changed its collection system and began collecting student-level data through the Student Information Management System (SIMS). Any observed changes in trend data before and after this point in time may not fully represent actual changes in the plans of high school graduates from previous years, but rather may be representative of changes in data collection and in reporting requirements.

³⁶ 2007- 2009 courses include VHS (Virtual High School) courses, or courses offered online.

³⁷ Course offering, enrollment, and AP exam data were obtained from *Worcester Public Schools: Report on Advanced Placement Trends: 1996-2009*. Of the AP exams administered to WPS students in 2009, the largest percentage (28%) were English Language and Composition or English Literature and Composition, 13% were US History, 7% were Spanish Language, and 9% were Calculus.

³⁸ “Getting to the Finish Line: College Enrollment and Graduation, A Seven Year Longitudinal Study of the Boston Public Schools Class of 2000,” November 2008, <http://www.bostonpublicschools.org>.

³⁹ “The Kids in the Middle,” *Telegram & Gazette*, Sunday June 28th, 2009.

⁴⁰ Louis Uchitelle, “Now hiring, and desperately seeking, specially skilled workers.” *New York Times*, Wednesday, June 24th, 2009.

⁴¹ College Board, “The 5th Annual Advanced Placement Report to the Nation,” <http://www.apcentral.collegeboard.com>.

⁴² See *Massachusetts Charter School Common School Performance Criteria* (October 2006) at <http://www.doe.mass.edu/charter/acct.html> for a detailed outline and discussion of charter school accountability measures.

⁴³ For more information about charter schools in Massachusetts, see www.doe.mass.edu/charter/.

⁴⁴ See **Indicator 3: MCAS Scores** for further discussion of NCLB and accountability measures.

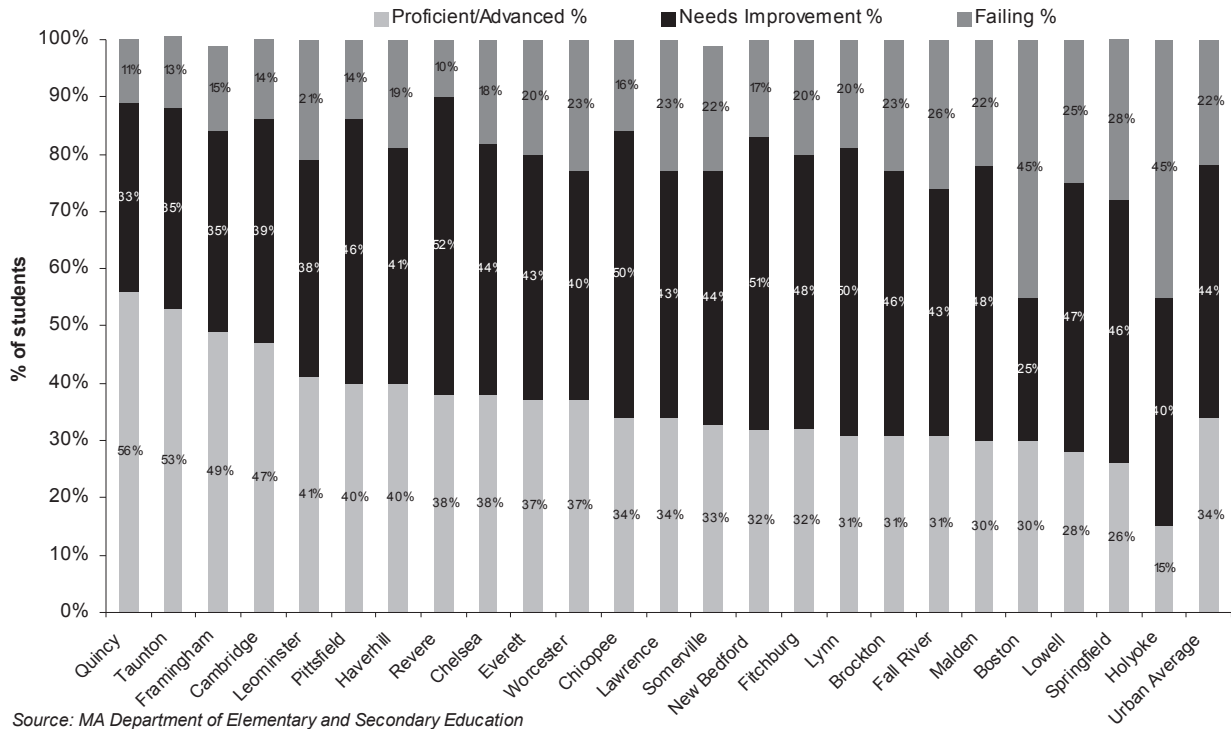
⁴⁵ Because SHCS enrolls only students in grades K-8, dropout rates, graduation rates, and post high school plans are not available.

⁴⁶ Jacqueline Reis, “Class Action.” *Telegram & Gazette*, September 1, 2010.

⁴⁷ Spirit of Knowledge Charter School. http://sokacs.org/web_documents/sok_charter_school_1-page_flyer.pdf.

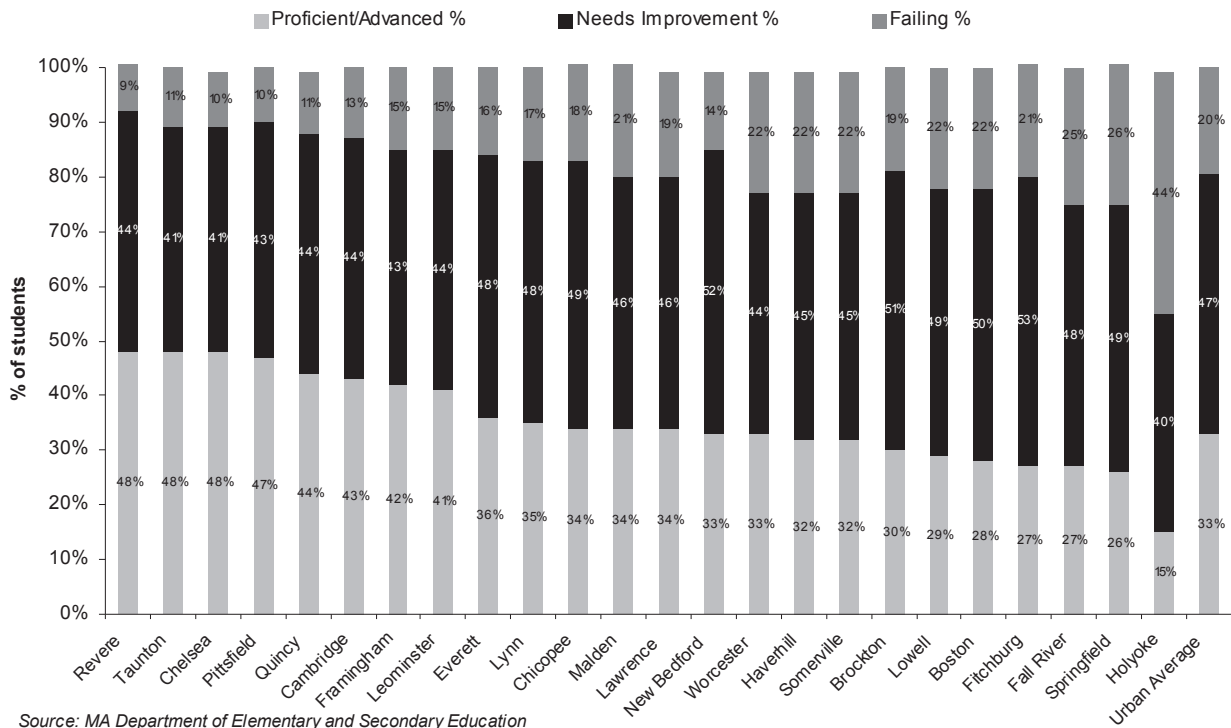
APPENDIX A: URBAN MCAS 2010

Chart A.1: 4th Grade ELA MCAS 2010: Urban Districts



Source: MA Department of Elementary and Secondary Education

Chart A.2: 4th Grade Math MCAS 2010: Urban Districts



Source: MA Department of Elementary and Secondary Education

Chart A.3: 8th Grade ELA MCAS 2010: Urban Districts

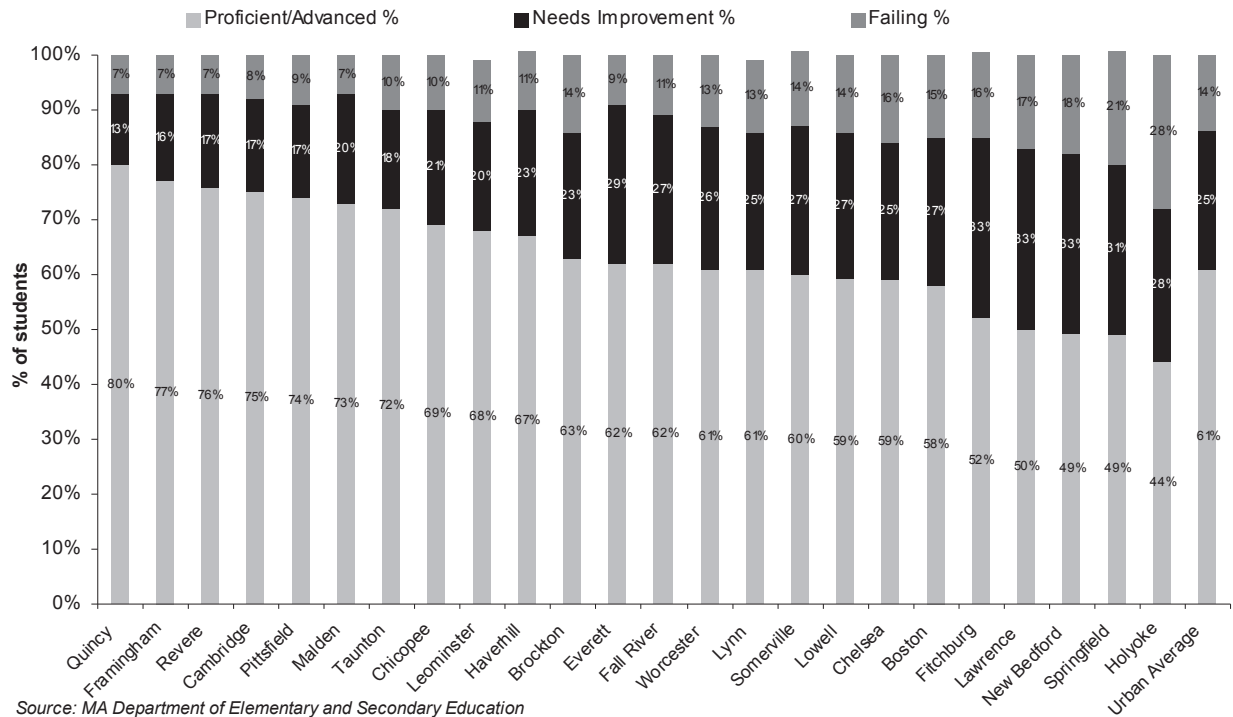


Chart A.4: 8th Grade Math MCAS 2010: Urban Districts

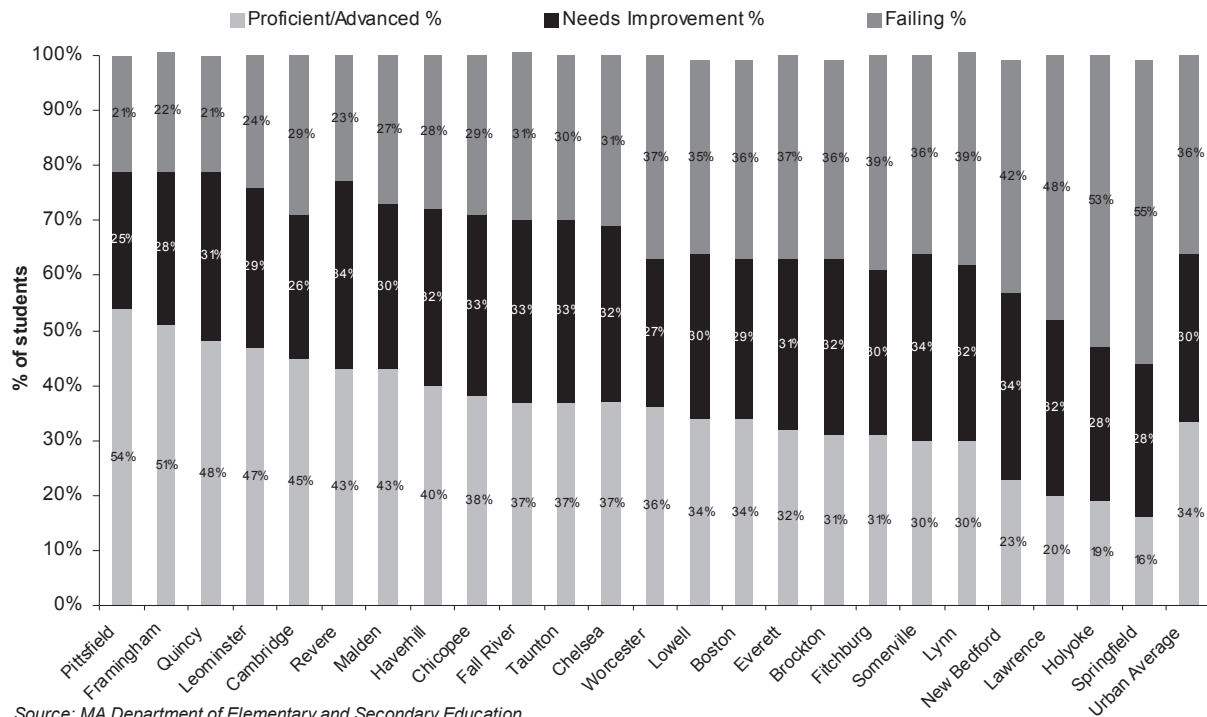
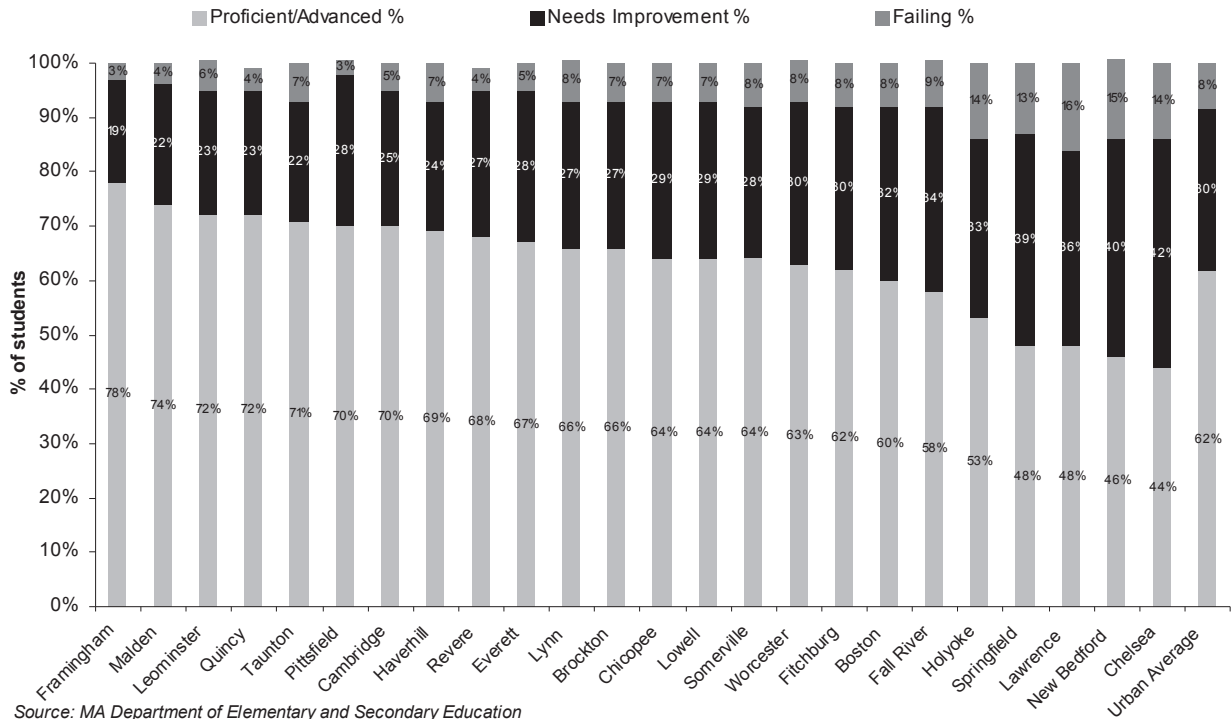
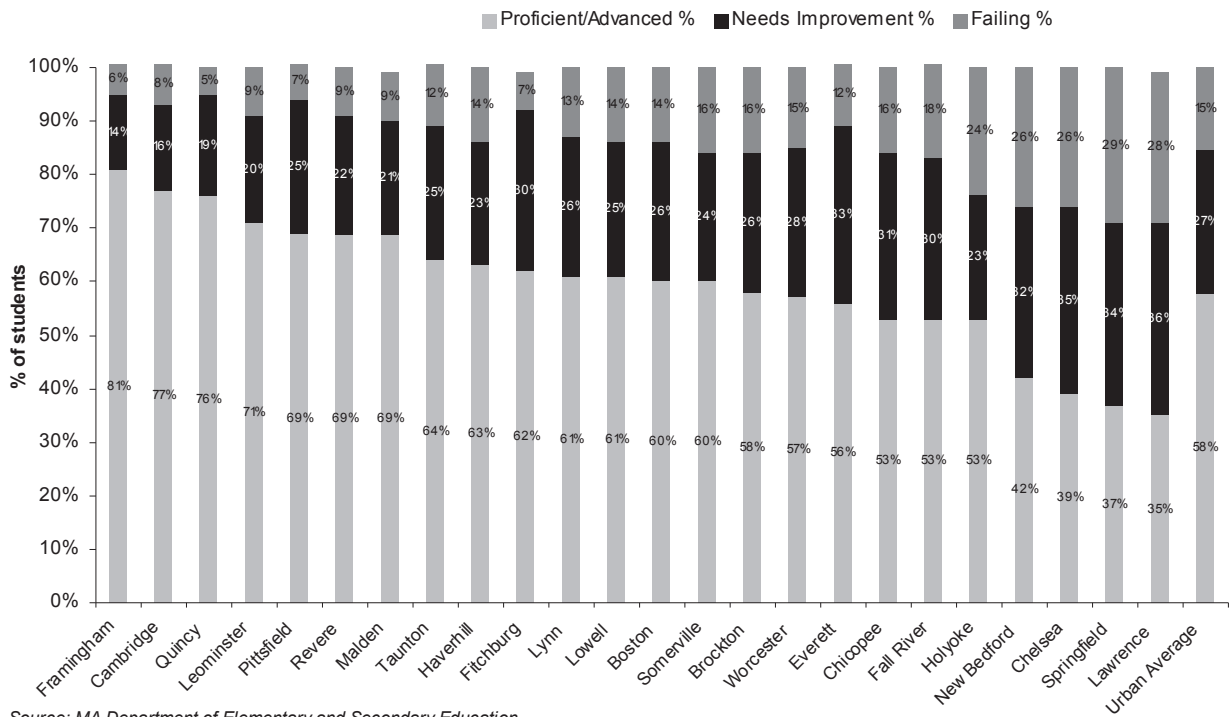


Chart A.5: 10th Grade ELA MCAS 2010: Urban Districts



Source: MA Department of Elementary and Secondary Education

Chart A.6: 10th Grade Math MCAS 2010: Urban Districts



Source: MA Department of Elementary and Secondary Education

Appendix B – Worcester Public Schools and Charter Schools

School Name	2009-10		Spring 2010				Minority Student Population (%)	Low Income (%)
	Grades Offered	Student Enrollment	Students Proficient/Advanced in English MCAS (%)	NCLB Accountability Status* ELA	Students Proficient/Advanced in Math MCAS (%)	NCLB Accountability Status* Math		
Belmont Street Community	Pre-K - 6	481	24%	R	28%	NI	81.3%	89.0%
Burncoat Elem	K - 6	216	38%	R	52%	NI	78.7%	94.0%
Canterbury Street Magnet	Pre-K - 6	360	11%	R	16%	R	82.5%	94.7%
Chandler Community	Pre-K - 6	347	14%	R	13%	R	91.1%	98.8%
Chandler Magnet	Pre-K - 6	375	10%	R	22%	R	75.2%	87.7%
City View	Pre-K - 6	625	24%	R	22%	R	72.0%	93.9%
Clark Street Community	Pre-K - 6	403	78%	NS	78%	NS	57.3%	62.3%
Columbus Park	Pre-K - 6	362	68%	CA	56%	CA	76.8%	90.6%
Elm Park Community	Pre-K - 6	519	17%	R	19%	R	76.9%	97.9%
Flagg Street	K - 6	455	70%	NS	52%	NS	24.0%	17.1%
Gates Lane	Pre-K - 6	694	37%	R	33%	NI	58.2%	64.0%
Goddard School/Science Tech	Pre-K - 6	582	na	na	na	na	85.6%	98.6%
Grafton Street	Pre-K - 6	384	38%	R	30%	NI	70.6%	85.9%
Heard Street	K - 6	283	58%	NS	60%	NS	48.4%	54.8%
Jacob Hiatt Magnet	Pre-K - 6	456	58%	R	50%	NS	77.2%	71.1%
Lake View	K - 6	299	46%	NI	24%	NI	41.5%	61.9%
Lincoln Street	Pre-K - 6	243	10%	R	10%	NS	79.4%	91.8%
May Street	K - 6	301	52%	NI	45%	NS	43.2%	51.2%
McGrath	Pre-K - 6	190	11%	NI	15%	NI	58.9%	76.8%
Midland Street	K - 6	233	31%	NI	38%	NI	24.9%	39.5%
Nelson Place	Pre-K - 6	434	75%	NS	70%	NS	31.8%	32.7%
Norrback Avenue	Pre-K - 6	616	34%	R	32%	R	50.2%	55.8%
Quinsigamond	Pre-K - 6	691	29%	R	24%	R	66.3%	85.2%
Rice Square	Pre-K - 6	497	29%	R	26%	R	55.1%	68.2%
Roosevelt	Pre-K - 6	685	53%	R	36%	R	52.6%	59.9%
Tatnuck Magnet	K - 6	427	53%	NS	58%	CA	49.2%	51.1%
Thorndyke Road	Pre-K - 6	340	47%	CA	41%	NI	41.5%	46.5%
Union Hill	Pre-K - 6	311	10%	CA	11%	R	82.0%	97.4%
Vernon Hill	Pre-K - 6	357	19%	R	24%	NI	66.1%	89.9%
Wawecus Road	K - 6	146	25%	CA	37%	NI	52.1%	75.3%
West Tatnuck	Pre-K - 6	321	59%	NS	41%	NS	33.3%	31.2%
Worcester Arts Magnet	Pre-K - 6	348	70%	NS	40%	NS	43.4%	37.9%
Burncoat Middle	7 - 8	596	71%	R	42%	R	58.6%	66.9%
Forest Grove Middle	7 - 8	880	69%	NS	48%	R	49.7%	57.0%
Sullivan Middle	7 - 8	787	55%	R	27%	R	69.9%	82.2%
Worcester East Middle	7 - 8	573	58%	R	32%	R	69.5%	89.7%
Burncoat High	9 - 12	1,106	67%	R	60%	R	59.4%	61.7%
Doherty Memorial High	9 - 12	1,398	71%	R	67%	R	52.6%	52.8%
North High	9 - 12	1,120	58%	R	52%	R	70.6%	80.3%
South High Community	9 - 12	1,327	58%	R	47%	R	72.6%	76.5%
Worcester Technical High	9 - 12	1,396	70%	NS	70%	NS	49.5%	65.4%
Woodland Academy**	Pre-K - 6	454	19%	R	30%	R	88.8%	96.5%
Claremont Academy** — MS	7 - 12	156	67%	R	14%	R	79.7%	89.4%
Claremont Academy** — HS		258	57%		45%			
University Park — MS	7 - 12	85	69%	NS	62%	NI	68.4%	79.2%
University Park — HS		146	85%		87%			
Abby Kelley Foster RCS — ES	K - 12	868	47%	CA	42%	R	64.0%	45.4%
Abby Kelley Foster RCS — MS		248	86%		48%			
Abby Kelley Foster RCS — HS		310	74%		72%			
Seven Hills CS — ES	K - 8	537	13%	R	15%	R	90.0%	79.2%
Seven Hills CS — MS		136	73%		29%			

2009-2010				2008 – 09		October 1, 2008 – October 1, 2009			2008 – 09
Limited English Proficiency (%)	Students Qualifying for Special Education Services (%)	% of Teachers Licensed in Teaching Assignment	% of Core Academic Classes Taught by Teachers Who are Highly Qualified	Attendance Rate (%)	Average number of days absent	Combined Mobility Rate (Entry and Exit)	Entry Mobility Rate	Exit Mobility Rate	Stability Rate
40.1%	16.2%	100.0%	100.0%	94.5%	8.7	83.9%	51.3%	32.6%	57.5%
45.8%	26.9%	95.1%	100.0%	93.2%	11.7	50.0%	27.1%	22.9%	69.9%
45.0%	24.4%	100.0%	100.0%	94.8%	8.5	50.0%	30.5%	19.5%	68.2%
57.1%	17.9%	94.8%	100.0%	93.7%	10.3	67.1%	40.1%	27.0%	61.3%
65.6%	16.0%	100.0%	100.0%	94.9%	8.5	44.4%	29.4%	15.0%	73.6%
39.2%	19.2%	100.0%	100.0%	94.6%	9.1	42.0%	26.8%	15.2%	74.8%
25.8%	14.6%	100.0%	100.0%	95.9%	7	41.9%	29.6%	12.3%	77.1%
46.7%	23.5%	100.0%	100.0%	94.5%	9.3	44.4%	25.9%	18.5%	70.1%
50.1%	23.9%	100.0%	100.0%	93.9%	10	61.9%	37.6%	24.3%	64.2%
14.5%	6.4%	100.0%	100.0%	96.5%	6.2	12.3%	3.6%	8.8%	94.7%
26.7%	30.1%	100.0%	100.0%	94.6%	9.3	20.8%	12.0%	8.8%	81.3%
60.0%	16.2%	97.9%	100.0%	94.7%	8.8	42.7%	23.3%	19.4%	68.0%
37.5%	16.1%	100.0%	100.0%	93.7%	10.6	54.9%	31.6%	23.4%	66.0%
25.4%	13.8%	100.0%	100.0%	97.1%	5	27.0%	15.8%	11.2%	84.1%
30.0%	14.9%	100.0%	100.0%	95.7%	7.5	10.1%	4.6%	5.5%	90.8%
35.1%	10.0%	100.0%	100.0%	96.0%	6.7	29.8%	15.3%	14.6%	76.3%
44.0%	18.5%	100.0%	100.0%	94.0%	9.4	87.1%	36.7%	50.4%	58.6%
28.9%	11.0%	100.0%	100.0%	96.8%	5.6	26.2%	17.3%	8.8%	89.7%
25.8%	14.2%	100.0%	100.0%	95.7%	7.1	55.9%	23.0%	32.8%	68.8%
21.0%	11.2%	100.0%	100.0%	97.1%	5.2	20.3%	17.3%	3.1%	89.3%
16.8%	16.8%	100.0%	100.0%	96.2%	6.6	13.9%	7.9%	6.0%	87.0%
28.4%	20.1%	100.0%	100.0%	95.4%	7.9	32.0%	16.2%	15.8%	78.2%
37.8%	20.1%	100.0%	100.0%	94.8%	8.8	34.6%	19.8%	14.8%	77.7%
31.2%	13.5%	100.0%	100.0%	94.9%	8.2	48.3%	25.1%	23.2%	71.4%
32.0%	21.3%	100.0%	100.0%	95.4%	7.8	23.1%	12.5%	10.6%	84.4%
25.3%	12.6%	100.0%	100.0%	96.1%	6.8	29.6%	14.6%	15.0%	81.8%
19.4%	15.0%	100.0%	100.0%	95.9%	7.1	28.1%	12.9%	15.1%	81.7%
38.9%	19.9%	100.0%	100.0%	93.6%	10.4	66.9%	41.6%	25.3%	58.7%
40.6%	14.0%	100.0%	100.0%	95.6%	7.4	54.0%	32.1%	22.0%	69.7%
28.8%	24.7%	100.0%	100.0%	94.8%	8.9	40.2%	25.6%	14.6%	78.7%
13.1%	23.1%	100.0%	100.0%	94.8%	9.1	20.4%	12.2%	8.3%	88.3%
17.8%	16.7%	100.0%	100.0%	96.3%	6.5	12.8%	6.4%	6.4%	89.7%
18.1%	18.5%	98.0%	96.0%	94.9%	8.7	31.2%	14.2%	17.0%	79.2%
14.8%	24.1%	100.0%	100.0%	94.8%	8.9	27.8%	15.9%	11.9%	81.0%
22.1%	23.8%	98.5%	96.2%	93.9%	10.3	33.1%	18.2%	14.9%	78.9%
25.5%	27.1%	100.0%	100.0%	94.4%	9.4	45.6%	24.5%	21.1%	71.6%
15.6%	24.4%	98.8%	89.6%	91.7%	13.7	39.1%	17.7%	21.4%	75.9%
12.9%	15.5%	98.1%	95.3%	91.9%	13.7	38.2%	19.2%	19.0%	79.9%
20.8%	24.5%	100.0%	100.0%	90.1%	16	57.1%	28.1%	29.0%	71.5%
20.5%	23.1%	98.1%	100.0%	89.1%	17.4	64.4%	30.5%	33.9%	67.8%
5.4%	20.8%	99.2%	100.0%	94.7%	9.4	11.4%	4.2%	7.1%	93.4%
62.8%	13.2%	100.0%	100.0%	94.9%	8.5	58.4%	33.3%	25.1%	62.5%
22.2%	28.3%	100.0%	99.4%	92.9%	12	48.9%	27.3%	21.6%	73.3%
10.0%	8.7%	100.0%	100.0%	95.3%	8.3	10.4%	5.6%	4.8%	92.4%
2.0%	9.7%	74.1%	100.0%	96.0%	7.2	na	na	na	na
16.3%	10.5%	78.3%	88.8%	95.4%	8.6	na	na	na	na

R = Restructuring

NS = No Status

** Formerly the ALL School

Mission Statement:

The Research Bureau serves the public interest of the Greater Worcester region by conducting independent, non-partisan research and analysis of public policy issues to promote informed public debate and decision-making.



The Research Bureau

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