The Research Bureau

Benchmarking Public Education in Worcester: 2007

April 2007

CCPM: 07-02

Center for Community Performance Measurement

Benchmarking Public Education in Worcester: 2007

Contents

The Research Bureau

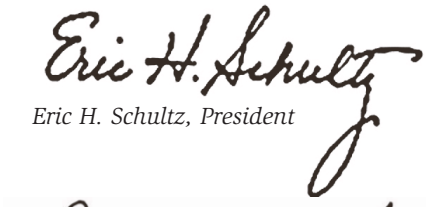
Dear Citizen,

This is the fifth annual report on the status of public education in Worcester prepared by The Research Bureau's Center for Community Performance Measurement (CCPM). 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 subgroups of students (e.g., racial and ethnic minorities, students with limited English proficiency, and students with disabilities). NCLB requires states to implement statewide accountability systems covering all public schools and students to ensure that all groups of students reach proficiency in English language arts and mathematics by 2014.

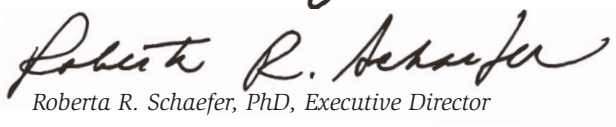
This report discusses five indicators related to student performance. It is important to bear in mind that no single indicator should be considered in isolation. In other words, context is important, and the indicators discussed in this report are interrelated. For example, students with high rates of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

We wish to thank the Alfred P. Sloan Foundation for its continued support of the CCPM as well as the George I. Alden Trust and the Albert W. Rice Charitable Foundation for their sponsorship of this report. *We hope that this report will encourage widespread discussion about the future of public education in Worcester.*

Sincerely,



Eric H. Schultz, President



Roberta R. Schaefer, PhD, Executive Director

Kimberly A. Hood, MPA, Manager, CCPM

Overview of Inputs

Table 1 highlights recent trends 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 for the five-year period from FY02 through FY06. (This period corresponds to the years for which performance data are available and discussed in later sections of this report.) On October 1, 2005, the District's 47 schools serving grades pre-K through 12 enrolled 24,023 students, and Worcester's two charter schools enrolled an additional 1,836 students. As discussed further in 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.

Similar to other urban districts, students enrolled in the WPS are demographically diverse. One-third of the students enrolled in 2005-06 were Hispanic, 44% were White, 12.5% were African American, and 8% were Asian. More than a third (36%) of the students spoke a first language other than English, and 15% of all students could not perform ordinary classroom work in English. Nearly two-thirds of WPS students are from low-income families, and 19% of students have an Individualized Education Program (IEP), qualifying them for special education services.

From FY02 to FY06, the WPS Approved Budget increased by 11.3%, or more than $23 million dollars. When adjusting for inflation over this period however, the budget declined by 0.3%. Although State Chapter 70 funding has increased annually since FY02, when adjusted for inflation, the State's contribution declined by 2.5%. The City's annual funding contribution to the WPS grew by nearly 19%, or $13 million, from FY02 to FY06 (from $67 to $80 million). When adjusted for inflation, the City's contribution increased by nearly 7%. At the same time, enrollment steadily declined, with 1,858 (7%) fewer students enrolled on October 1, 2005 compared to just four years earlier. Despite a 12% reduction in overall staffing levels (resulting in 376 fewer staff) during this same period, the proportion of the district's budget allocated to employee salaries and benefits grew from 83% ($172.6 million) to 85% ($194.9 million). Soaring health insurance costs have consumed an ever-greater proportion of the district's budget, nearly doubling from $19.1 million or 9% of the WPS budget in FY02 to $37.4 million or about 16% of the budget in FY06.

Enrollment in Worcester's two public charter schools increased by 26% from FY02 to FY06. Forty-five percent of the students enrolled at the Seven Hills Charter School in 2005-06 were Hispanic, 21% were White, and 26% were African American. Nearly 72% of the school's students were from low-income families, about 7% of the students were students whose first language was not English and who could not perform ordinary classroom work in English, and 9% of the school's students qualified for special education services. At Abby Kelley Foster, 49% of the students were White, 23% African American, and 20% were Hispanic. Almost half of the school's students were from low-income families, 1.3% did not speak English well enough to perform ordinary classroom work in English, and 9% of students qualified for special education services.

As previously noted, charter schools are state-funded public schools. Payments made by the state to Charter schools enrolling students whose home district is the WPS have nearly doubled since FY02, increasing from $7.9 to $15.6 million. 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 School District and Abby Kelley Foster Reginal and Seven Hills Charter Schools

	FY02	FY03	FY04	FY05	FY06	% Change FY02-FY06
Student Enrollment						
WPS October 1 Enrollment	25,871	25,712	25,055	24,538	24,023	-7.14%
Approved Budget						
WPS Budget (Approved)	$207,087,779	$212,775,225	$216,509,552	$222,868,164	$230,478,935	11.30%
WPS Budget (Inflation Adjusted)	$231,260,771	$232,501,698	$231,518,140	$231,355,427	$230,478,935	-0.34%
Salaries	$146,661,084	$148,081,689	$148,247,782	$148,342,903	$147,654,076	0.68%
Salaries as % of Budget	71%	70%	68%	67%	64%	
Average Salary (All Positions)	$47,280	$48,856	$52,645	$52,829	$54,165	14.56%
Health Insurance Costs	$19,140,964	$24,659,152	$30,128,161	$34,364,865	$37,442,442	95.61%
Health Insurance as % of Budget	9%	12%	14%	15%	16%	
Retirement	$6,820,169	$7,970,080	$8,463,564	$9,428,242	$9,893,271	45.06%
Total Salaries and Benefits	$172,622,217	$180,710,921	$186,839,507	$192,136,010	$194,989,789	12.96%
Total Salaries and Benefits as % of Budget	83%	85%	86%	86%	85%	
Tuition (Special Education Placements)	$7,206,250	$8,901,251	$9,593,249	$10,117,544	$12,234,722	69.78%
Staffing						
Total Staff (FTE)	3,102	3,031	2,816	2,808	2,726	-12.12%
School and District Administrators	107.00	102.00	94.25	95.25	96.25	-10.05%
Teachers	2,132	2,076	1,942	1,913	1,876	-12.01%
Other	863	853	780	800	754	-12.66%
Funding/Reimbursement						
Chapter 70 State Aid (Actual)	$147,939,972	$153,103,294	$154,518,307	$158,861,691	$161,059,359	8.87%
Chapter 70 State Aid (Inflation Adjusted)	$165,208,745	$167,297,559	$165,229,620	$164,911,460	$161,059,359	-2.51%
City Contribution (Actual)	$67,061,107	$71,350,738	$73,843,193	$75,954,193	$80,015,430	19.32%
City Contribution (Inflation Adjusted)	$74,889,032	$77,965,692	$78,962,053	$78,846,680	$80,015,430	6.85%
Charter Schools						
AKFCS Enrollment, October 1	797	858	889	1,087	1,175	47.43%
Seven Hills Enrollment, October 1	655	662	647	667	661	0.92%
Total Charter Enrollment (Worcester), October 1	1,452	1,520	1,536	1,754	1,836	26.45%
Charter School Payments (Actual)	$7,913,300	$11,678,807	$12,351,948	$13,689,279	$15,682,993	98.19%
Charter School Payments (Inflation Adjusted)	$8,837,006	$12,761,554	$13,208,193	$14,210,594	$15,682,993	77.47%

Data Sources:

1) October 1 Enrollment Data: MA Department of Education Enrollment By Grade Reports for the years 2001-02 through 2005-06, 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.

Attendance Rates and Dropout Rates

Why are they important?

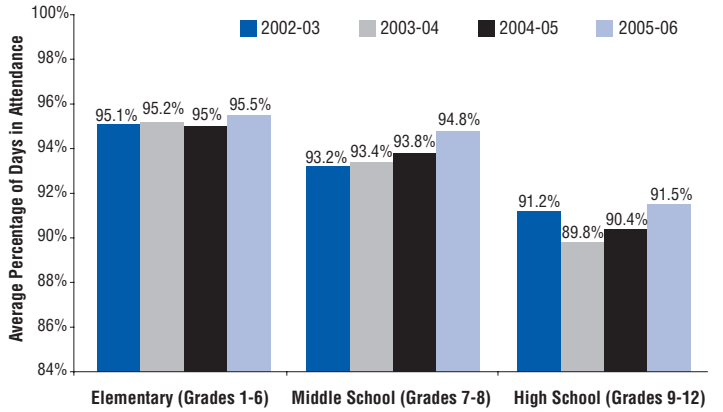
While teacher effectiveness, quality of school buildings, and the availability of textbooks and computers are important elements that contribute to student academic achievement, students must consistently attend classes in order to receive maximum benefit from these resources. Students who are frequently 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 the third quarter of 2006, among full-time workers age 25 and over, nationwide, median weekly earnings for high school graduates (no college) were 43% higher than those of high school dropouts ($602 per week versus $420).[1]

What are the trends in Worcester?

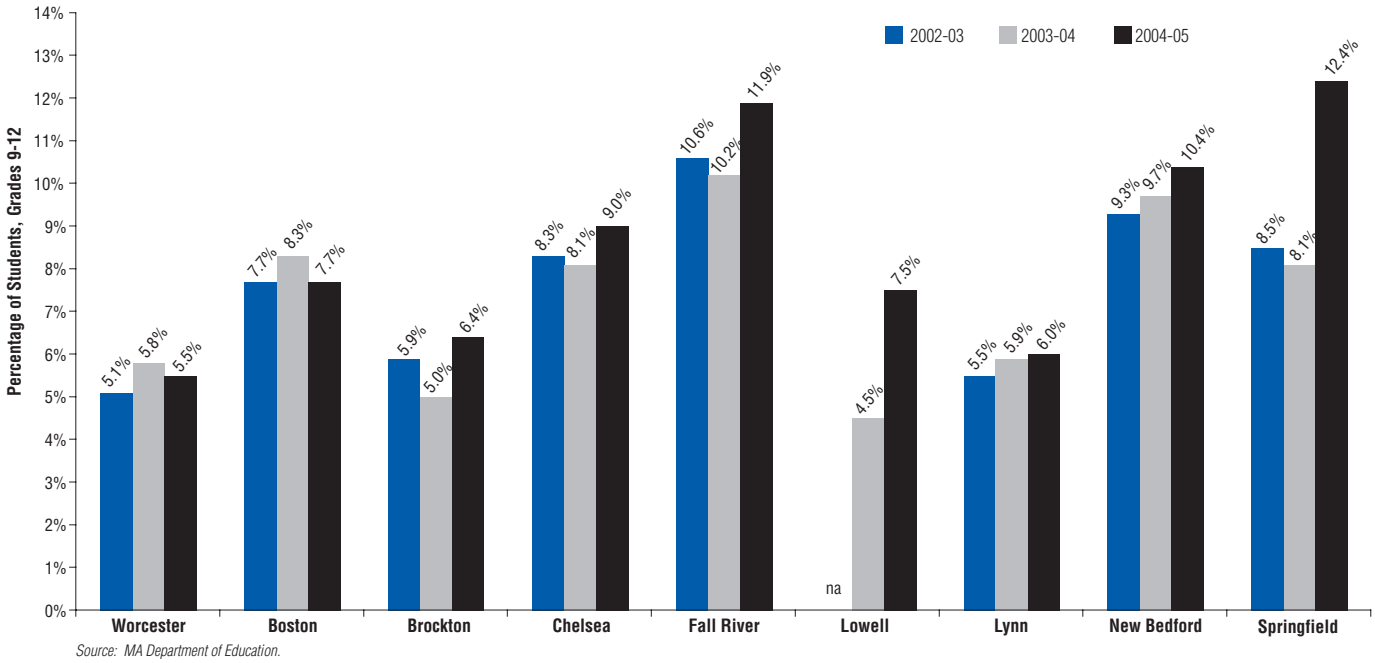
As shown in **Chart 1.1**, during the 2005-06 school year, on average, WPS elementary students attended school 95.5% of the days they were enrolled, WPS middle school students attended slightly less often (on average, 94.8% of the days enrolled), and high school students had the poorest attendance rate (91.5%).[2,3] Attendance rates at each of these levels improved compared to the previous year. **Appendix B** (pp. 24-25), shows attendance rates and average number of days absent per pupil for each school in the WPS District. During the 2005-06 school year, the average number of days absent per pupil varied substantially, from 4.8 days at the Midland Street School to 15.5 days at the South High Community School. The district-wide average during this period was 9.6 days.

***Chart 1.1**: WPS Attendance Rates*



Source: MA Department of Education.

***Chart 1.2**: High School Dropouts, 2002-03 to 2004-05*



Source: MA Department of Education.

[1] http://www.bls.gov

[2] The Massachusetts Department of 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.

[3] Because the Accelerated Learning Lab 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.** However, data presented in **Appendix B** show that attendance rates at both schools have been above the district average in each of the past four years.

Attendance Rates and Dropout Rates *(continued)*

Dropout Rate

The dropout rate reflects the percentage of students in grades 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.[4] The most current data available are for 2004-05, and show the WPS dropout rate at 5.5% (representing about 392 students), a slight decrease from the 2003-04 school year when the rate was 5.8%. While Worcester's rate was higher than the statewide average of 3.8% in 2004-05, it was below those of several other urban districts in Massachusetts. **Chart 1.2** shows dropout trend data for a number of such districts.[5]

Statewide, the dropout rate increased slightly from 2003-04 to 2004-05 (from 3.7% to 3.8%), prompting the state to look into programs and public campaigns aimed at increasing the number of high school graduates and also at preparing students to be more college- and work-ready.[6]

As shown in **Table 1.1**, in 2004-05, the University Park Campus School again had the lowest dropout rate among Worcester schools at .7% (1 student). Doherty Memorial High School and the Accelerated Learning Lab experienced slight increases in their dropout rates from 2003-04 to 2004-05 (.4% and .5%, respectively), while rates at Burncoat, North, South, and the Vocational High Schools all declined. Although North High School's dropout rate decreased by more than one percentage point from 2003-04 to 2004-05, it remained the highest in the District (7.6%).

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 middle school level, where attendance rates have shown a 1.6 percentage point increase over a four-year period.[7] Attendance rates are 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 14 to 15.5 days in 2005-06. In other words, students in these schools missed an average of almost three weeks of school per year. These data tell us how much school students miss on average, but they do not tell us why. Because there are likely to be numerous causes of absenteeism, it is important to consider the range of causes when developing and targeting strategies to improve high school attendance.

In the past three years, more than 1,100 WPS students have dropped out of grades 9-12. Some of them 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 economy. Worcester's Comprehensive Skills Center has proven 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, and 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. In 2006, approximately 80 dropouts served by the program graduated with a regular diploma.

***Table 1.1**: High School Dropouts, WPS*

	2002-03		2003-04		2004-05	
School	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
University Park Campus School	2	1.6%	2	1.5%	1	0.7%
Accelerated Learning Lab	7	4.4%	3	1.9%	5	2.4%
Worcester Vocational High School	38	3.8%	48	4.7%	35	3.4%
Doherty Memorial High School	56	3.9%	56	3.8%	64	4.2%
Burncoat Senior High School	70	5.5%	77	5.9%	79	5.6%
South High Community School	91	6.6%	100	7.0%	103	6.8%
North High School	71	6.0%	109	8.8%	97	7.6%
District Total	335	5.1%	395	5.8%	392	5.5%

Source: MA Department of Education.

[4] The Massachusetts Department of 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.

[5] The Chelsea and Lowell districts each have a single high school; all others districts listed in Chart 1.2 have multiple high schools.

[6] Massachusetts Department of Education, www.doe.ma.edu

[7] According to the WPS Superintendent, improved middle school attendance is largely due to the following two factors: 1) increased court intervention, and 2) 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.

Student Mobility Rates and Student Stability

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.[8] While there are many and varied causes of student mobility, researchers have found that high student mobility can have significant adverse effects on student achievement among both the mobile students and their non-mobile peers.[9] 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?

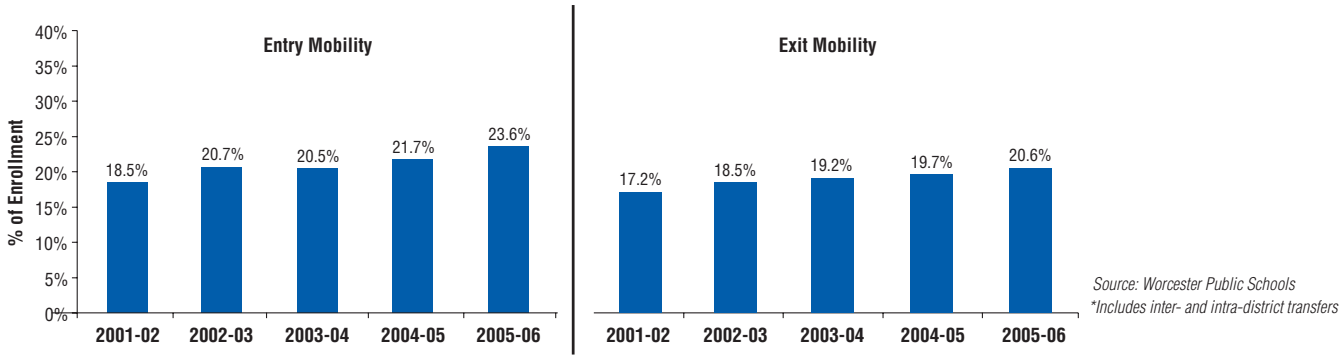
Mobility

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 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 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, 2005 to October 1, 2006, the district-wide entry mobility rate was 23.6% and the exit mobility rate was 20.6%.[10] **Chart 2.1** also shows that student turnover as a percentage of enrollment has steadily increased each year since 2001-02.

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. (Mobility rates for individual schools are listed in **Appendix B**.) 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.[11] During the 2005-06 period, 634 transfers across Worcester's four comprehensive high schools involved students moving within the district (from one WPS to another). Additionally, 603 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.[12]

District-wide average combined mobility rates (the number of times students enter and exit schools as a percentage of October 1 enrollment) have climbed over the past five years, from about 36% in 2001-02, to about 41% in 2005-06. In each of the past five years, the number of student transfers into and out of a school has increased, resulting in an overall increase of 11.7% (from 8,924 in 2001-02 to 9,966 in 2005-06).

Chart 2.1: WPS Student Mobility Rates



Source: Worcester Public Schools
**Includes inter- and intra-district transfers*

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

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

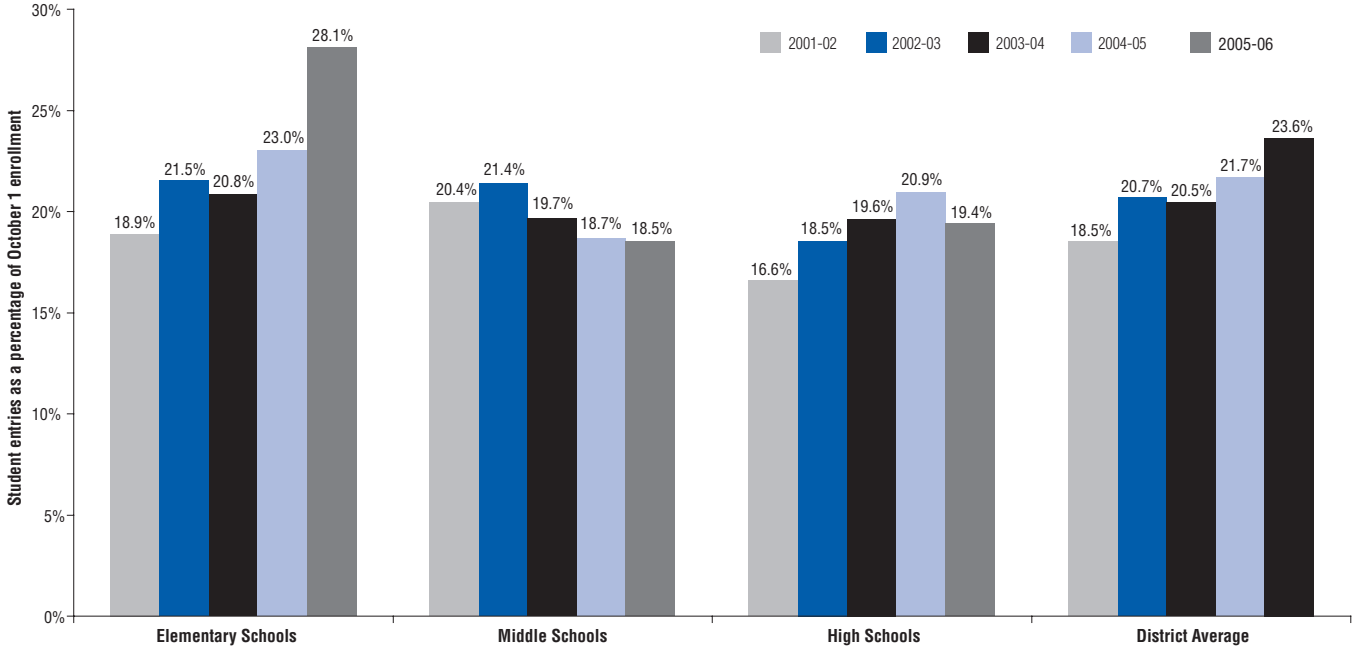
[10] During this 12-month period, the district's 43 schools reported a total of 5,323 student transfers in (entry); the mobility rate is calculated by dividing this number by the October 1, 2005 enrollment figure of 22,525 students. Similarly, the exit mobility rate reflects 4,643 transfers out of the 43 schools.

[11] At the end of the 2005-06 school year in June, Harlow Street, Mill Swan, Multiple Intelligences, and New Ludlow elementary schools were closed due to declining enrollments and budget constraints.

[12] See Indicator 3: MCAS Scores and School and District Accountability for further explanation of student performance and school and district accountability standards in Massachusetts.

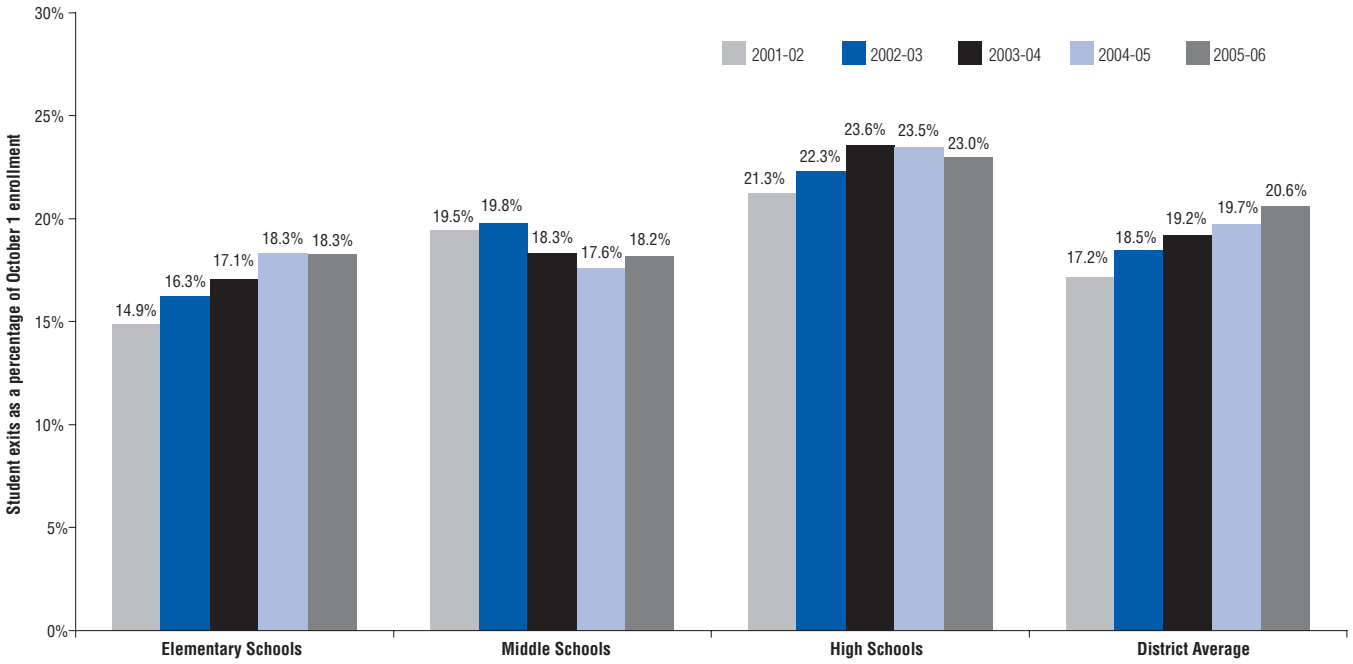
Student Mobility Rates and Student Stability *(continued)*

Chart 2.2: WPS Entry Mobility Rates, by School Level



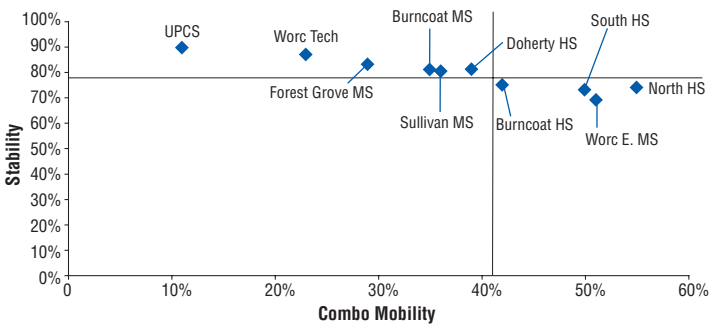
Source: Worcester Public Schools
Prepared By: The Research Bureau

Chart 2.3: WPS Exit Mobility Rates, by School Level



Source: Worcester Public Schools
Prepared By: The Research Bureau

Chart 2.4: Stability & Mobility in Worcester's Middle and High Schools, 2005-2006



Source: Worcester Public Schools
Prepared By: The Research Bureau

Stability

As calculated by the WPS, the stability rate reflects the number of students who were enrolled in a school for 176 or more days during a school year, divided by total student enrollment at the beginning of the year. Stability shows consistent enrollment, whereas mobility tracks the rate of movement in and out of a school. The reader is cautioned that mobility and stability rates are not the reverse of each other.

As calculated by the WPS, three-quarters of students (76.3%) in the district starting the 2005-06 school year in one school remained in that same school through the end of the year. 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. Flagg Street School had both the highest stability rate (94.6%) and the lowest mobility rate (9.9%). On the other hand, Chandler Elementary experienced low stability (just over half, 54%, of students starting the beginning of the school year at Chandler remained there through the end of the year) and high mobility (82%). **Chart 2.4** plots mobility rates against stability rates for each of the WPS middle and high schools.[13]

What does this mean for Worcester?

Student mobility and student stability are important factors to consider when, under NCLB, districts are held accountable for the performance of all students, regardless of their enrollment history or duration. 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 is important to understand how these mobile students are performing, particularly as measured by MCAS. The data presented here show the extent of turnover; however, it is important to examine the effect of mobility on two key accountability standards: MCAS and graduation rates. Doing so will require in-depth analysis of mobility and its relationship to student academic achievement as measured by the MCAS.[14]

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.[15] Further, 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.

Another challenge in understanding the nature and extent of student mobility is the lack of standardized collection and reporting of mobility data, since schools and districts are not currently required to report such data to the MA Department of Education. Therefore it is difficult to compare Worcester's rates relative to other large urban districts. The ability to do so could be particularly useful if districts were then able to use the data to identify and share strategies to address the problem. Finally, the mobility rates presented here reflect only a single year, and are likely to be much more daunting when viewed over time.

[13] The lines on Chart 2.4 represent the district average for each measure plotted.

[14] Currently, we are not tracking the performance of mobile students separately from their non-mobile peers.

[15] 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, parental educational attainment and income may also contribute to mobility.

MCAS Scores: School and District Accountability

Why is it important?

The Massachusetts Comprehensive Assessment System (MCAS) was established following passage of the Education Reform Act of 1993 to measure student performance based on the Massachusetts Curriculum Frameworks learning standards. The subject-matter MCAS tests, which have been administered statewide since 1998, also serve as the primary means by which schools and districts in Massachusetts are held accountable for student performance, as required by the Federal No Child Left Behind Act (NCLB) of 2001. Schools and districts in which student performance does not improve sufficiently, as determined by specific state performance standards, are subject to state review, and potentially State Department of Education oversight. 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.[16]

Since NCLB requires that all students meet state-established proficiency standards in English language arts and math 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.

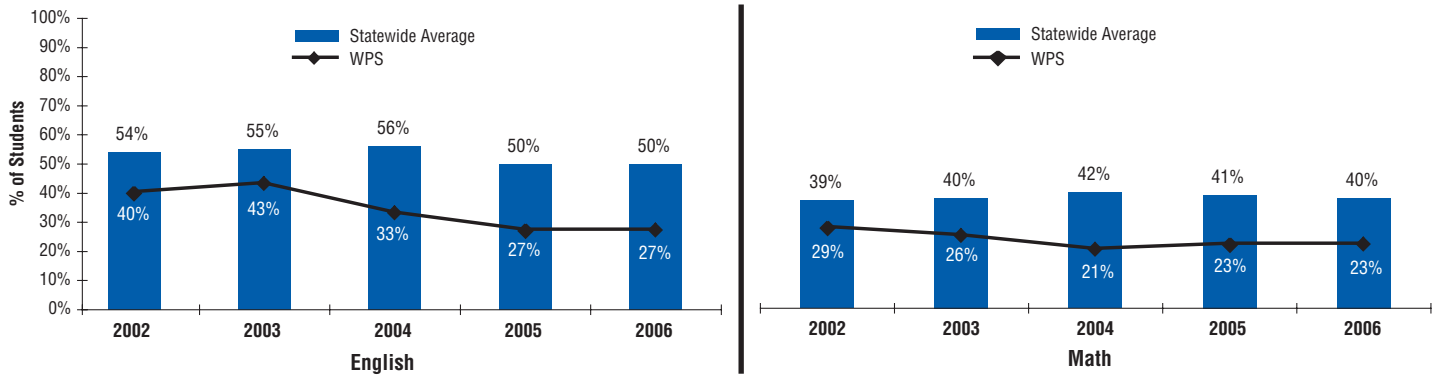
MCAS Performance Level Definitions

As defined by the Massachusetts Department of Education, 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 simple problems.

What is the trend in Worcester?

As shown in **Chart 3.1**, in each year during the five-year period from 2002 to 2006, the proportions 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 2006, 27% of WPS fourth graders scored at or above proficiency on the ELA exam compared to 50% of students statewide. (Both of these percentages were unchanged from the previous year.) Less than one in four Worcester fourth graders (23%) scored in the proficient or advanced category in math, compared to 40% statewide. While performance district-wide remained unchanged in both ELA and math from 2005 to 2006, one significant improvement in 2006 was that every Worcester elementary school had some students who achieved proficiency. (In 2005, no students from Chandler Community and Harlow Street Magnet schools scored in the proficient or advanced categories.)

Chart 3.1: 4th Graders Scoring At or Above Proficient on MCAS, 2002-2006



Source: MA Department of Education

[16] Currently, students need to score at the *Needs Improvement* level or above on both the English language arts and mathematics MCAS grade 10 tests to meet the State graduation requirement.

In 2006, students at McGrath, Clark Street Community, Lake View, Flagg Street, and Burncoat Street elementary schools scored at or above the statewide average on both the grade 4 ELA and math tests. Proficiency rates on the 2006 ELA and math MCAS test are provided for individual schools in **Appendix Table B**. **Table 3.1** lists schools (elementary, middle, and high) in which the percentage of students scoring at the proficient and advanced levels exceeded the *district* average for both the English language arts and math tests.

While the above discussion highlights Worcester's performance relative to that of *all* students statewide, the charts in **Appendix A** (pp. 21-23) show district-wide student performance for the WPS and 21 other urban districts.[17] On the 2006 fourth-grade ELA exam, only two of the 22 urban districts (Revere and Framingham) reported student proficiency rates at or above the statewide average of 50%, and in half of the urban districts, fewer than one-third of fourth-grades achieved proficiency on the exam (see **Appendix A, Chart A.1**). Overall, 31% of urban fourth-grade students achieved proficiency on the 2006 ELA exam (in Worcester, the proportion was 27%).

About one-in-four urban fourth graders statewide (26%) scored at the proficient or better level on the 2006 math MCAS exam; in Worcester, this proportion was 23%. (See **Appendix A, Chart A.2**).

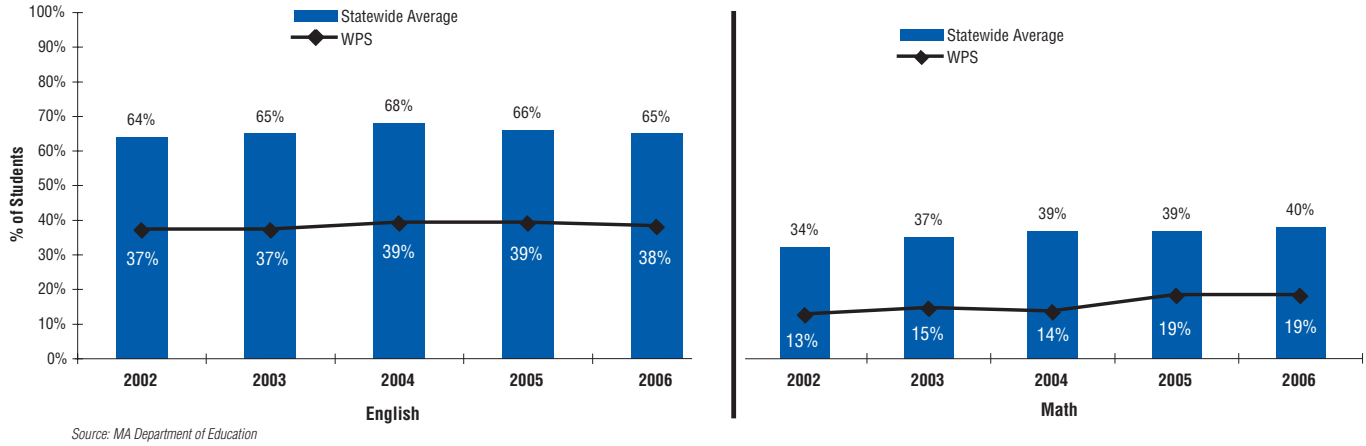
To comply with NCLB requirements, in 2006 for the first time Massachusetts tested all students in grades 3- 8 in both English language arts/Reading and math.[18] New ELA tests were added in grades 5, 6 and 8 and new math tests were added in grades 3, 5 and 7. **Table 3.2** shows the percentages of Worcester students who are achieving proficiency in these subjects for each of these grades. In future reports, we will be able to compare MCAS scores over time for these grade levels.

Table 3.1: Schools Scoring At or Above the WPS Average, 2005-06

	MCAS Proficiency/Advanced Rate	
	English	Math
Elementary School Level		
McGrath	74%	40%
Clark Street Community	64%	48%
Lake View	62%	45%
Jacob Hiatt Magnet	57%	30%
Flagg Street	54%	40%
Burncoat Prep	52%	67%
Worcester Arts Magnet	49%	46%
West Tatnuck	44%	37%
Thorndyke Road	43%	44%
Heard Street	39%	23%
May Street	39%	26%
Midland Street	37%	37%
Grafton Street	33%	36%
Columbus Park	32%	40%
District Average- Elementary School	27%	23%
Middle School Level		
University Park — MS Scores	69%	58%
Forest Grove Middle	55%	28%
Burncoat Middle	50%	20%
ALL School — MS Scores	48%	27%
District Average- Middle School	47%	19%
High School Level		
University Park — HS Scores	66%	66%
ALL School — HS Scores	66%	54%
Doherty High	56%	50%
North High	52%	45%
District Average- High School	47%	41%

Source: MA Department of Education.

Chart 3.2: 7th Graders (ELA) and 8th Graders (math) Scoring At or Above Proficient on MCAS, 2002–2006



Source: MA Department of Education

[17] These 22 districts, enrolling 28% 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.

[18] Third graders are tested in Reading.

Table 3.2: WPS MCAS Scores, 2006

	Proficiency		Warning/Failing	
Grade and Subject	**District**	**State**	**District**	**State**
Grade 3- Reading	34%	58%	66%	42%
Grade 3- math	30%	52%	70%	48%
Grade 4- English language arts	27%	50%	72%	51%
Grade 4- math	23%	40%	77%	60%
Grade 5- English language arts	36%	59%	64%	40%
Grade 5- math	29%	43%	71%	57%
Grade 6- English language arts	43%	64%	57%	36%
Grade 6- math	31%	46%	69%	54%
Grade 7- English language arts	38%	65%	61%	35%
Grade 7- math	20%	40%	79%	61%
Grade 8- English language arts	47%	74%	53%	26%
Grade 8- math	19%	40%	81%	60%
Grade 10- English language arts	47%	69%	53%	31%
Grade 10- math	41%	67%	58%	33%

Source: MA Department of Education.

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.[19] In 2006, 38% of WPS seventh graders-- fewer than four out of ten-- scored in the proficient or advanced categories on the ELA portion of the MCAS. Only 19% of WPS eighth graders scored in the advanced or proficient categories on the 2006 math test. 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: 27 percentage points lower in English, and 21 percentage points lower in math. In 2006, none of Worcester's in-district middle schools performed above the statewide average on either the English or math test. However, eighth-grade students at the University Park Campus School scored above the statewide average in math.

At each grade level tested (grades 3-8 and 10), students performed better on the English exam than 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 2006 ELA test—47%-- was more than double the 19% who scored at this level on the 2006 math test.

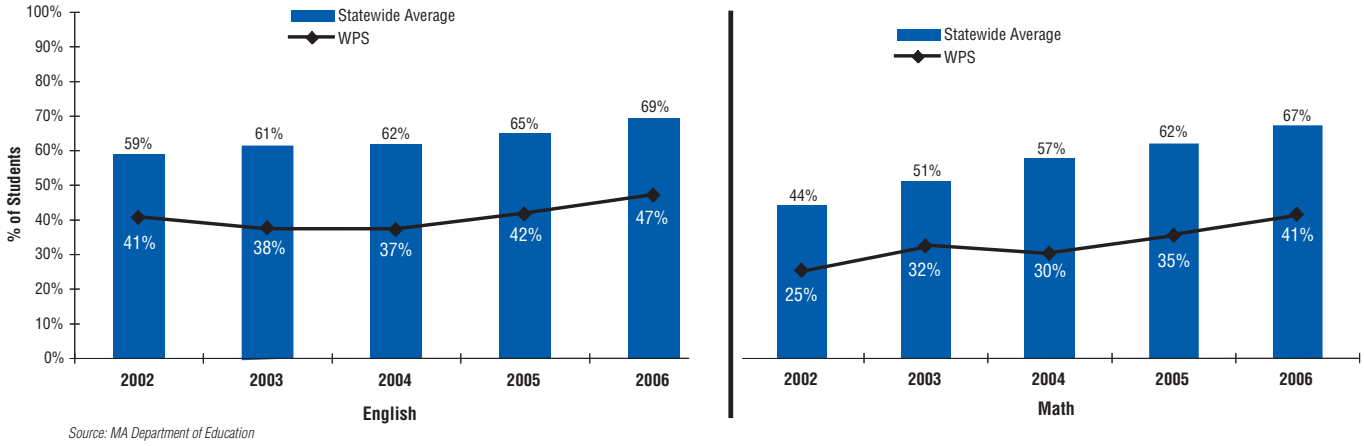
2006 middle school ELA and math MCAS scores for the state's 22 urban districts are shown in **Appendix A, Charts A.3** and **A.4** (p. 22). Fifty-three percent of eighth graders in these urban districts achieved proficiency on the ELA MCAS exam; while a substantially lower percentage—21%, or about one in five students—achieved proficiency of the eighth-grade math exam. Worcester was below both of these urban averages, at 47% and 19% proficiency, respectively. When looking at individual middle schools within the WPS District (a number of the districts included in **Appendix A** have only one middle school and/or a single high school, while the larger districts may have multiple middle and/or high schools), Forest Grove Middle School, where 55% and 28% of students were proficient on the ELA and math exams respectively, outperformed 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 increased from 42% in 2005 to 47% in 2006, although this remains well below the statewide rate of 69%. Student performance on the math exam improved as well, from 25% in 2001 to 41% in 2006; however, the district average was 26 percentage points below the statewide average in 2006.

Appendix A, Charts A.5 and **A.6** show tenth-grade performance on the 2006 ELA and math MCAS exams for the WPS and 21 other urban districts in the Commonwealth. Half of the urban tenth graders scored in the proficient or advanced categories on the ELA exam, with the individual district

[19] From 2002 to 2005, the middle school ELA test was administered only to grade 7 students; in 2006 students in grades 7 and 8 were tested in ELA. The middle school math MCAS test has consistently been administered in the eighth grade. Therefore, in order to present trend data, the ELA performance data reflect the scores of seventh graders while the math scores reflect the performance of eighth graders.

Chart 3.3: 10th Graders Scoring At or Above Proficient on MCAS, 2002 – 2006



Source: MA Department of Education

Table 3.3: 2006 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
Students with Disabilities	4	8	13	1	15	17
Limited English Proficient	13	14	21	7	25	34
Low Income	19	16	38	12	40	35
African American/Black	26	17	40	9	40	36
Asian or Pacific Islander	33	36	59	39	68	65
Hispanic	15	11	32	7	33	28
Native American	42	47	36	9	*	*
White	36	30	61	28	44	49
WPS Average	27	23	47	19	47	41

Source: Massachusetts Department of Education

proficiency rates ranging from 28% (Lawrence) to 76% (Framingham). As noted above, the rate for Worcester was 47%.

In only half (11) of the urban districts listed did 50% or more of tenth graders achieve proficiency of the math exam; the 22-district average was 47%. 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 22 urban districts is substantial. In Lawrence, about one-in-five tenth graders scored proficient or better on the math exam, while in Framingham, nearly four out of five (four times more) did so.

Sub-Group Performance

The goal of NCLB is explicit: **every** child must achieve proficiency in English language arts (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.[20] **Table 3.3** shows the proportion of students in each subgroup who performed at or above proficiency on the grades 4, 8, and 10 ELA and math tests.

[20] Students belonging to multiple subgroups are counted in each subgroup to which they belong (i.e., one student can be represented in multiple groups).

Table 3.4: School Accountability Status Summary, WPS 2006 (Total Schools: 43)

	Schools Identified for ELA Only		Schools Identified for Math Only		Schools Identified for Both ELA and Math	
	#	%	#	%	#	%
Identified for Improvement	9	21	5	12	6	14
Corrective Action	7	16	3	7	2	5
Restructuring	2	5	4	9	2	5
Subtotal (Accountability Status)	18	42	12	28	10	23
No Status	1	2	7	16	14	33

Prepared by: The Research Bureau *Source: Massachusetts Department of Education*

What does this mean for Worcester?

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 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 all face specific consequences that grow in severity each year that they do not make AYP.

In 2006, 29 Worcester schools (67%) enrolling more than three quarters of the district's students were identified for improvement, corrective action, or restructuring in either math, ELA, or both, either in the aggregate or for subgroup performance (see **Table 3.4**).[21] Eight schools in Worcester are implementing restructuring plans that were approved by the Massachusetts Board of Education, including all four of Worcester's middle schools (Burncoat, Forest Grove, Sullivan, and Worcester East Middle), which were identified for restructuring status in 2006.

Of the schools identified for improvement in 2006, seven were newly identified: Belmont Street Community, Columbus Park, Elm Park Community, Grafton Street, Nelson Place, Rice Square, and Tatnuck. Only one WPS school-- Francis McGrath Elementary—that was identified for improvement in 2005 was removed from the 2006 list of schools in need of improvement after making adequate yearly progress for two consecutive years (2005 and 2006). The district as a whole was identified for improvement for subgroup performance in ELA and for corrective action for subgroup performance in math.

Recent regulations promulgated by the Massachusetts Board of Education 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 relative 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. This diagnostic tool was developed by the Northwest Evaluation Association and the online tests are administered to more than one million students nationwide annually. The assessments measure an individual student's advancement in reading, language usage, and mathematics. Scores depend on two things: how many questions are answered correctly and the difficulty of each question. In the MAP system, the difficulty of the test is adjusted to the student's performance. As the student answers questions correctly, the questions become more difficult. If the questions are answered incorrectly, the questions become easier. The testing system determines the difficulty level at which an individual student can perform successfully, and collects enough information to identify a student's strengths and weaknesses relative to Massachusetts' curriculum standards. The goal is a more precise and timely identification of a student's 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.

[21] In 2006, 629 schools statewide (35% of those that received AYP determinations) were identified for either improvement, corrective action, or restructuring, compared to 420 schools in 2005.

MCAS Scores: School and District Accountability *(continued)*

When MAP is administered at regular intervals over time (in Worcester, students may be tested in the fall, winter, and spring), schools can determine the rate of progress of an individual student or an entire class or grade level in basic 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 2005 would meet or exceed their individual growth targets by the fall of 2006. Baseline student data for this period show that in math, students in grades 4, 5, 6, and 10 met the 50% benchmark, while students in grades 7, 8, 9 did not do so. In Reading, less than 50% of students in grades 6, 7, 8, 9, and 10 met their growth targets; only at grades 4 and 5 were growth targets met by 50% or more of the students tested. A student meeting his or her MAP growth target should not be confused with the student demonstrating grade-level proficiency in subject-matter content (as determined by the MA Department of Education 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.

The following highlight several important benefits of MAP:

- 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.
- Test data enable teachers to develop individual instructional strategies for each student, and place students in appropriate courses or instructional settings. The ability to test students at several points throughout the year allows teachers to gauge a student's progress toward meeting his or her goals, and to adjust strategies as needed.
- Schools could 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.
- Schools and the district can use the MAP assessment information to analyze the effectiveness of the curriculum, instructional programs, and resources.

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 No Child Left Behind, 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).[22] High schools are held accountable for their students graduating on time as part of the 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 2006, median weekly earnings for college graduates with at least a bachelor's degree were about 77% higher than those of individuals who had only a high school diploma ($1,047 per week versus $591).[23] 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.[24]

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 an associate's degree or higher.[25] Nationwide, the following occupations are experiencing the greatest rate of job growth: 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.

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.[26]

What is the trend in Worcester?

Graduation Rates

Reported by the Massachusetts Department of Education 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.[27] Students are not counted as "on-time" graduates if they have 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 differ 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.

The Massachusetts DOE released the first set of graduation rates for the class of 2006. Statewide, about 80% of students who entered ninth grade in the fall of 2002 graduated from high school in four years; among urban districts, about 62% of this cohort graduated in four years. **Chart 4.1** shows four-year graduation rates for 22 urban districts in Massachusetts, and reveals that Worcester's rate was above the urban average.

About two-thirds of students in the WPS (67.2%) graduated in four years, while 9% are still enrolled in school; 15.5% dropped out; 2.7% earned a GED; 5% either completed course work but did not pass the MCAS exam, or were special-education students who had reached the maximum age (non-grad completers); and less than one percent were expelled. **Chart 4.2** shows the graduation rates for each of Worcester's schools with a graduating class in 2006.

Post-Graduation Placement

The Massachusetts Department of Education collects data annually from public high schools regarding the plans of their graduates.[28] Since these data are self-reported by students and provide only an indication of their intentions following graduation, 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 may take him or her to do so.

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[22] In Massachusetts, students must pass the grade 10 ELA and math MCAS test and meet all local graduation requirements to be awarded a diploma.

[23] http://www.bls.gov

[24] 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.

[25] Massachusetts Department of Workforce Development, "Massachusetts Employment Projections Through 2014." http://www.detma.org

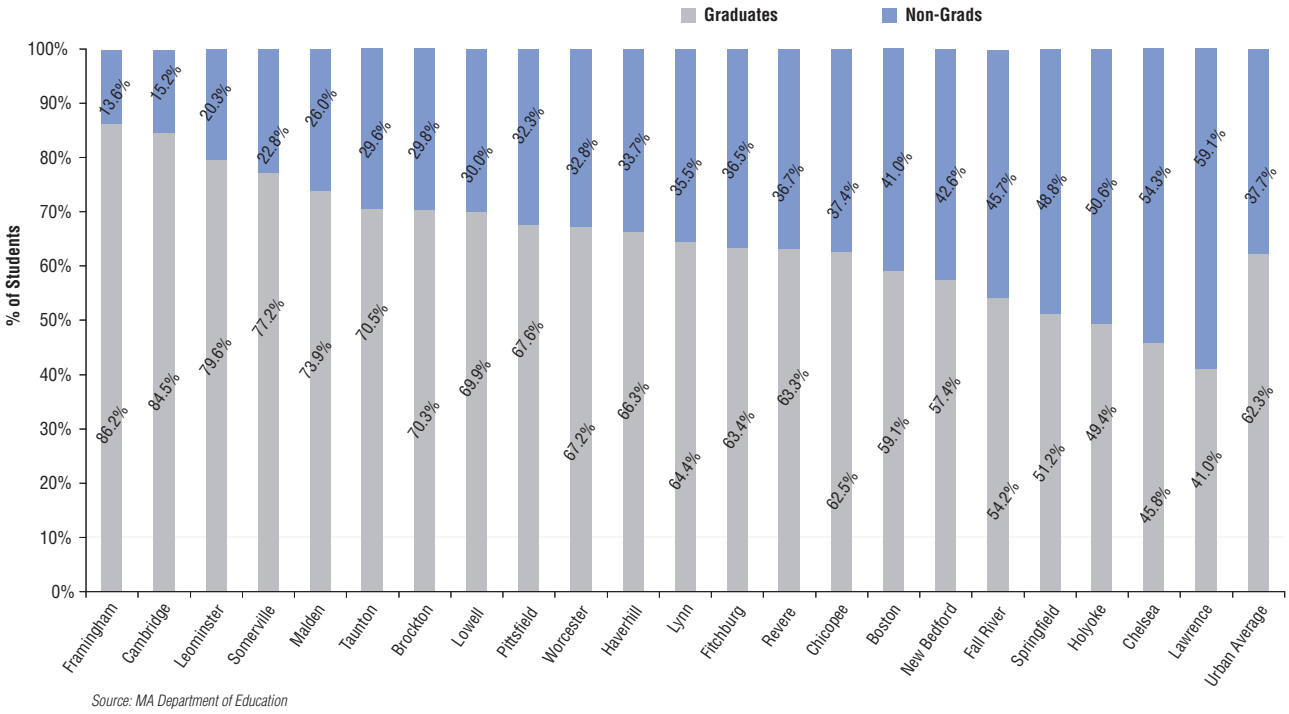
[26] College Board, "Advanced Placement Report to the Nation 2007." http://www.collegeboard.com

[27] 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.

[28] 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.

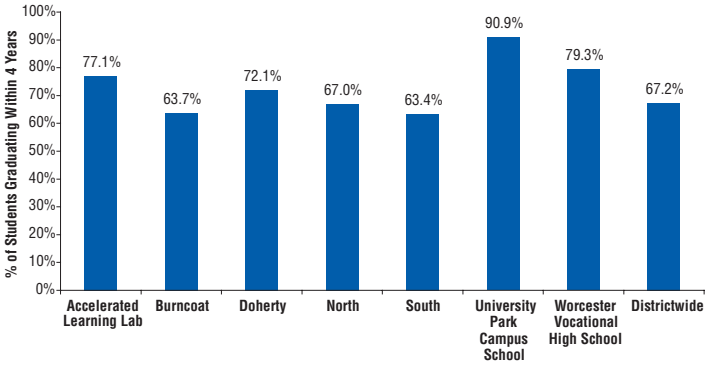
Graduation Rate, Post-Graduate Placement, and Advanced Placement *(continued)*

Chart 4.1: Graduation Rates of Urban Districts, 2006



Source: MA Department of Education

Chart 4.2: Graduation Rates of the Worcester Public Schools, 2006



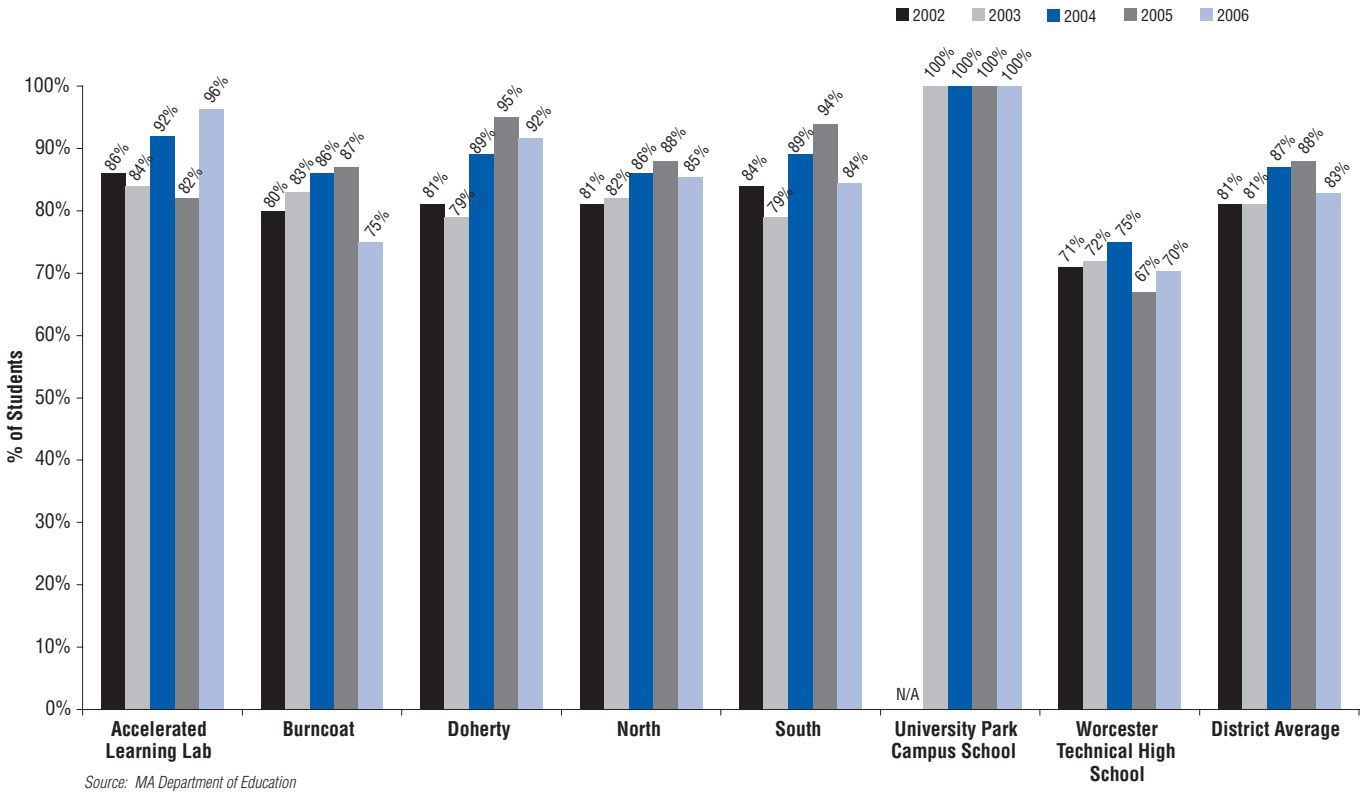
Source: MA Department of Education

In 2006, 83% 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**, between 2002 and 2005, the proportion of students planning to attend 2- or 4-year colleges rose from 81% in 2002 to 88% in 2005, but dropped to 83% in 2006 (possibly because more jobs were available as unemployment dropped). In 2006, for the fourth year in a row, the University Park Campus School had the highest proportion-100%- of students intending to enroll in college.

Chart 4.4 shows that in 2006, a slightly higher percentage of WPS graduates (83%) intended to enroll in college compared to graduates statewide (81%). Worcester's rate was higher than or equal to each of the other urban districts listed, ranging from 57% in Boston to 83% in Worcester and Chelsea.

Graduation Rate, Post-Graduate Placement, and Advanced Placement *(continued)*

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



Source: MA Department of Education

Advanced Placement: Participation and Performance

During the 2005-06 school year, students in the Worcester Public Schools were enrolled in 20 Advanced Placement courses, ranging in subject area from the sciences to foreign languages, social sciences and fine arts. In 2006, 588 WPS students who completed one or more AP courses took a total of 790 AP exams, an increase of about 89% from 2001, when slightly more than 400 tests were administered.[29] A large majority—94%-- of WPS students enrolled in AP courses take the AP exam at the completion of the course (31 students did not do so in 2006). 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 2006, about half of Worcester's AP scores (49%) were 3's, 4's, or 5's. **Chart 4.5** shows the distribution of AP exam scores by school for 2006. Doherty High School had the greatest percentage of exam scores of 3 or above (70%).

What does this mean for Worcester?

The Massachusetts Department of Education has established a target graduation rate of 55%. Although Worcester performed well compared to other urban districts in the state, exceeding the urban-district average and the new DOE target, a significant number- about one-third- of students who entered the ninth grade in the fall of 2002 failed to graduate four years later.

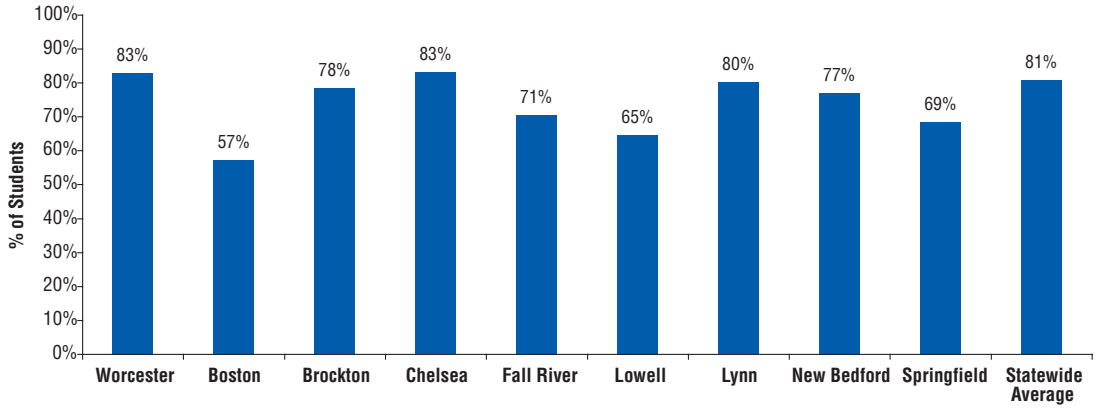
While WPS seniors stated their intention to attend college at a higher rate than students statewide, and at several comparison districts included in the analysis above, there is currently no comprehensive system in place to track post-secondary enrollment and/or students' performance once they get to college. A recently-released report on Boston's public school graduates found that one-third of the graduates tracked in the study who had entered community colleges did not complete their first year and 16% of those who enrolled in a four-year college did not complete their freshman year. Recent reports and news articles have also highlighted the increase in the number of college freshmen required to take remedial courses. In future reports we will seek to obtain similar data for WPS graduates.

[29] Course offering, enrollment, and AP exam data were obtained from *Worcester Public Schools: Report on Advanced Placement Trends: 1996-2006.* Of the AP exams administered to WPS students in 2006, the largest percentage (36%) were English Language and Composition or English Literature and Composition, 15% were US History, 12% were World History, about 9% were Spanish Language, and 8% were Calculus.

Graduation Rate, Post-Graduate Placement, and Advanced Placement *(continued)*

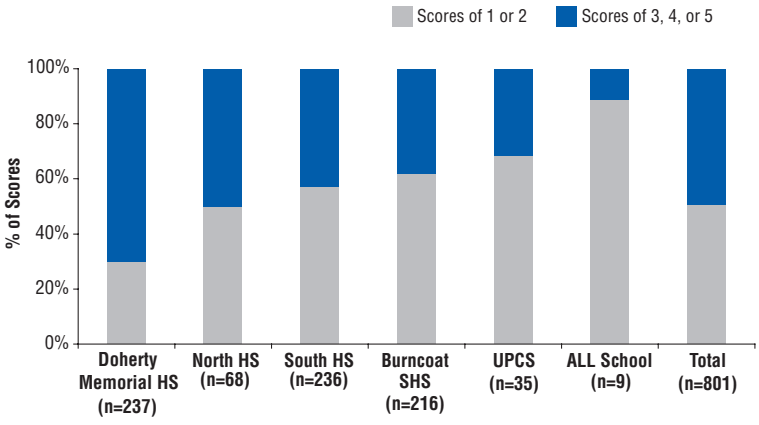
In the past decade, the WPS has seen growth in both the number of AP course offerings (from six in 1996 to 20 in 2006) as well as a significant (more than threefold) increase in the number of AP exams administered; however during this period, performance has been relatively flat. In its *2006 Advanced Placement Report to the Nation*, the College Board urges educators to track the quality of learning in AP courses as their AP programs expand.[30] The report states that "a 3 is the grade that research consistently and currently finds predictive of college success and graduation." While increased enrollment in AP courses may indicate WPS students' desire to increase their preparedness for college, the AP exam scores show that only about half of the time were students able to demonstrate success on an AP exam (i.e., earn a score of 3 or higher). Poor scores may indicate that AP teachers and students are not receiving adequate preparation for the rigors of an AP course. Adequate preparation in earlier grades is an important factor in ensuring the success of students who enroll in AP courses. Teachers must also have the qualifications, training, and support necessary to teach college-level courses.

Chart 4.4: Graduates Planning to Attend 2- or 4- Year Colleges, WPS and Other Urban Districts



Source: MA Department of Education

Chart 4.5: AP Exam Scores by School: WPS, 2006



Source: Worcester Public Schools

[30] College Board, "Advanced Placement Report to the Nation 2006." http://www.apcentral.collegeboard.com

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 school committee. Charter schools have the freedom to establish their own specific mission, governance and leadership structure, to control their own budgets, and to hire and fire staff. In exchange for these freedoms, they are accountable to the State Board of Education 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.[31] Since 1994 the state Board of Education has granted 71 charters, and has revoked or not renewed four of these due to poor performance.[32]

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 the Board of Education.[33] In FY06, 57 charter schools operating throughout Massachusetts enrolled more than 21,800 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. During the 2005-06 school year, AKFCS enrolled 1,176 students while maintaining a waiting list of 751 students. According to school administrators, about 83% of students enrolled were 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 its extended school day (7:45 am to 3:00 pm), is more than one hour longer than the district schools.

The attendance rate at AKFCS during the 2005-06 school year was 95.5%, meaning that, on average, students attended school 95.5% of the days they were enrolled. Sixty-eight students withdrew from the school during 2005-06; over half of those students relocated to another community.

MCAS Results

As shown in **Table 5.1**, the proportion of AKFCS fourth graders scoring in the advanced or proficient categories on the 2006 MCAS English test—41%-- reflects a substantial decline from the previous year, when 63% of fourth graders achieved proficiency or better. Fewer than one in three fourth graders (29%) scored at the proficient of better level on the math test, which also reflects a significant 27 percentage point drop from the previous year. While AKFCS fourth-grade performance on both the English and math tests exceeded the overall WPS district average in 2006, in nine of the district's elementary schools higher proportions of students scored in the proficient or advanced categories on the 2006 English MCAS compared to AKFCS, and thirteen in-district elementary schools outperformed AKFCS on the grade 4 math MCAS. (See **Appendix B** for school-level performance data).

Nearly 60% of AKFCS's seventh graders scored at or above proficiency on the 2006 MCAS English test, and one-third of eighth graders scored at the advanced or proficient level on the math portion of the exam. These percentages were similar to the previous year's scores, and among middle schools in the WPS district, only the University Park Campus School outperformed AKFCS on the 2006 MCAS tests.

Almost two-thirds of tenth graders (64%) scored in the advanced or proficient categories on the 2006 MCAS English exam, while slightly more than half (52%) achieved this score on the math portion of the test. From 2005 to 2006, English and math scores at AKFCS declined by seven and six percentage points, respectively. Despite these declines, higher proportions of AKFCS tenth graders achieved proficiency than students at each of Worcester's four comprehensive high schools.

All members of AKFCS's first graduating class (2006) successfully completed high school in four years, and three-quarters of the graduates intended to enter a 4-year college or university in the fall of 2006, while 25% intended to enroll in a 2-year college.[34] AKFCS has had no dropouts since the school began enrolling high school students in 2002.

Under NCLB, 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. In 2004 and 2005, AKFCS made AYP in all areas; in 2006 the school failed to make AYP in math based on subgroup performance. A second consecutive year of failing to make AYP will result in the school being identified as requiring improvement in math.[35]

[31] 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.

[32] Under Massachusetts state law, the Board of Education does not have the authority to similarly sanction underperforming non-charter public schools.

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

[34] AKFCS's *2005-2006 Annual Report* (available online at www.doe.mass.edu) also notes that 70% of the graduating class of 2006 was awarded merit scholarships totaling $638,000.

[35] See Indicator 3: MCAS Scores for further discussion of NCLB and accountability measures.

Charter Schools *(continued)*

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's children for success as students, workers, and citizens." In the fall of 2006, SHCS enrolled 661 students from the City of Worcester in grades K-8, and had approximately 200 students on a waiting list. Its school year is 190 days (compared to the district's 180-day year), and its school day is 30 to 45 minutes longer than that of most in-district schools. Fifty-five students left the school during the 2005-06 school year, and another 26 students who finished the year did not return for the 2006-07 school year. Of these 26 students, 4 relocated to another community and 22 enrolled in another public or private school in Worcester. During the 2005-06 school year, SHCS had an average attendance rate of 95.4%.[36]

As shown in **Table 5.1**, the proportions of SHCS fourth graders scoring in the advanced or proficient categories on the 2006 English and math MCAS tests were 29% and 22%, respectively. While these proportions were similar to the WPS district-wide elementary school averages in 2006, 16 WPS elementary schools outperformed SHCS (i.e., had higher proportions of students scoring at the proficient or advanced categories) on the English test, and 17 outperformed the charter school on the math test.

Sixty-two percent of SHCS seventh graders scored in the advanced or proficient category on the 2006 English MCAS exam compared to a WPS middle school average of 38%. From 2005 to 2006, eighth-grade performance on the math MCAS test declined dramatically. In 2006, only one in five, or 20% of the school's eighth graders scored in the advanced or proficient categories in mathematics, compared to 44% the year before. In 2006, similar proportions of SHCS and WPS middle school students achieved proficiency or better on the math portion of the MCAS exam.

SHCS did not make AYP in 2006, and has been identified for improvement in mathematics (subgroups) and for corrective action in English (subgroups).

What does this mean for Worcester?

Worcester's two public charter schools, whose combined enrollment exceeded 1,800 students in 2006, provide alternatives to public education in Worcester to a significant number of families. Both schools are at full enrollment and maintain waiting lists, which indicate a demand for such alternatives.

As charter schools, AKFCS and SHCS have the ability to hire and fire staff and they exercise their authority to do so: at the end of 2005-06, contracts for ten classroom teachers and three school administrators at AKFCS were not renewed. During the 2005-06 school year, SHCS had a total of 77 teachers and instruction aides, seven of whom left during the school year, and 3 whom did not return in the fall of 2006.

Table 5.1: Abby Kelley Foster Regional and Seven Hills Charter Schools

	2002-03			2003-04			2004-05			2005-06		
Indicator	**AKFCS**	**SHCS**	**WPS**	**AKFCS**	**SHCS**	**WPS**	**AKFCS**	**SHCS**	**WPS**	**AKFCS**	**SHCS**	**WPS**
Attendance Rate	92.9%	95.8%	93.9%	94.8%	94.9%	93.6%	95.3%	95.4%	93.5%	95.5%	95.4%	94.3%
Dropout Rate	0.0%	na	5.1%	0.0%	na	5.8%	0.0%	na	5.5%	0.0%	na	na
Graduation Rate*	na	na	na	na	na	na	na	na	na	100.0%	na	67.2%
% Attending 2- or 4-year colleges/universities**	na	na	80.4%	na	na	86.2%	na	na	87.8%	100.0%	na	82.8%
% Students Adv./Prof. ELA 4th Grade	46.0%	28.0%	43.0%	29.0%	35.0%	33.0%	63.0%	36.0%	27.0%	41.0%		27.0%
% Students Adv./Prof. math 4th Grade	31.0%	15.0%	27.0%	25.0%	12.0%	21.0%	56.0%	23.0%	23.0%	29.0%		23.0%
% Students Adv./Prof. ELA 7th Grade	42.0%	63.0%	37.0%	69.0%	67.0%	39.0%	58.0%	69.0%	39.0%	59.0%		38.0%
% Students Adv./Prof. math 8th Grade	39.0%	21.0%	15.0%	15.0%	22.0%	14.0%	34.0%	44.0%	19.0%	33.0%		19.0%
% Students Adv./Prof. ELA 10th Grade**	na	na	39.0%	64.0%	na	37.0%	71.0%	na	42.0%	64.0%	na	47.0%
% Students Adv./Prof. math 10th Grade**	na	na	32.0%	59.0%	na	31.0%	58.0%	na	35.0%	52.0%	na	41.0%

* Graduation rates were 1st reported for the class of 2006 ** 2006 was the first graduating class at AKFCS

Source: MA Department of Education

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

Chart A.1: 4th Grade ELA MCAS 2006: Urban Districts

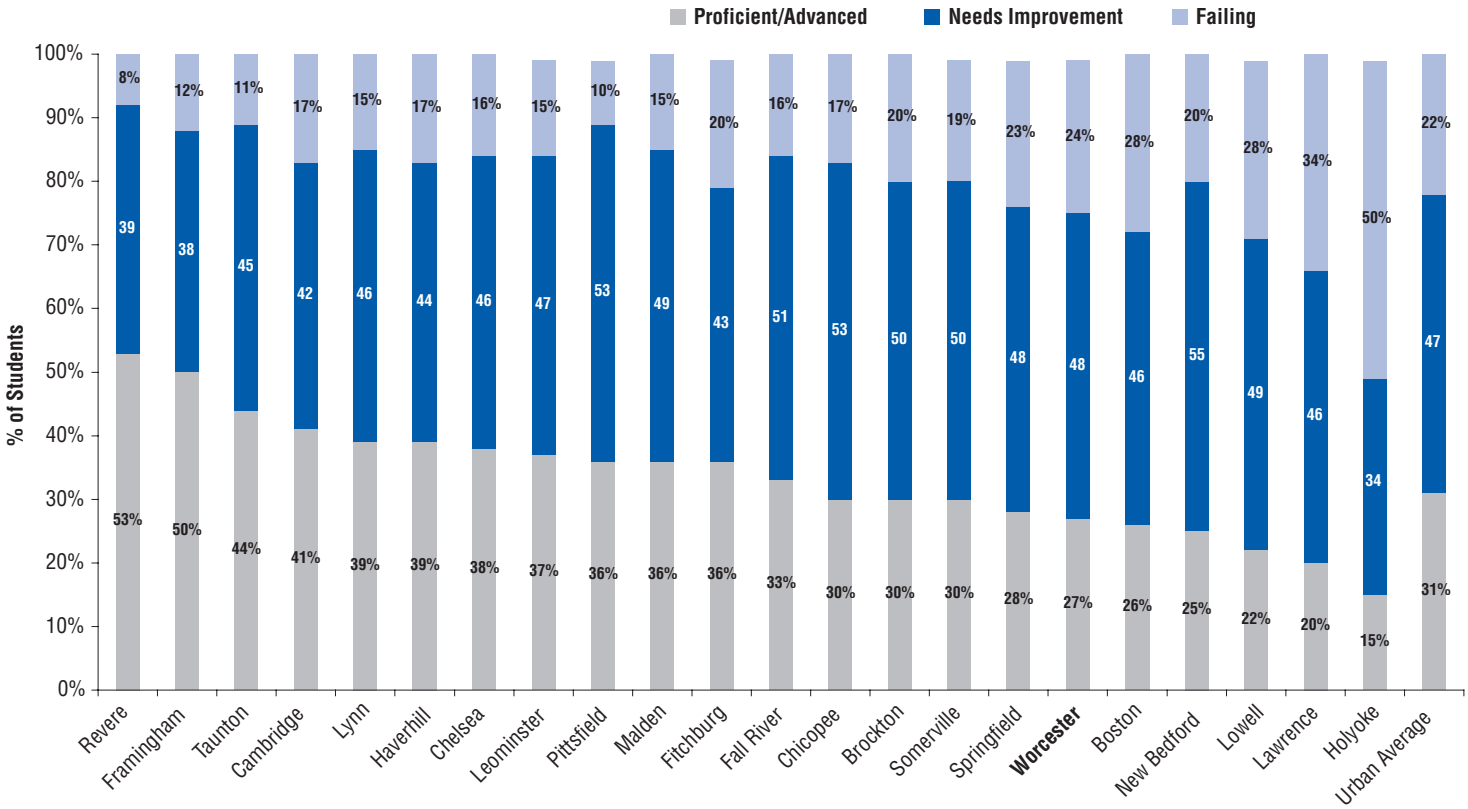


Chart A.2: 4th Grade Math MCAS: Urban Districts 2006

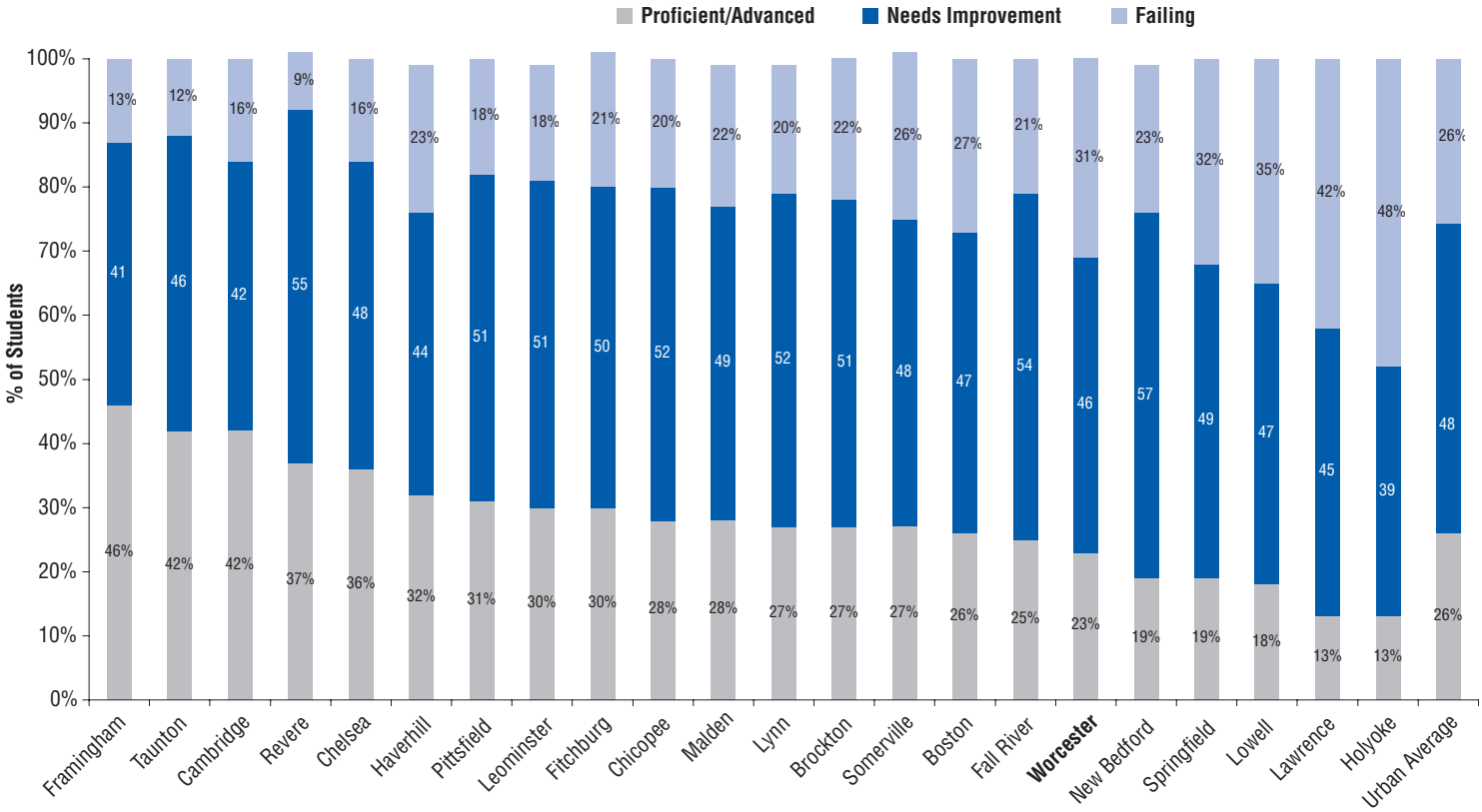


Chart A.3: 8th Grade ELA MCAS 2006: Urban Districts

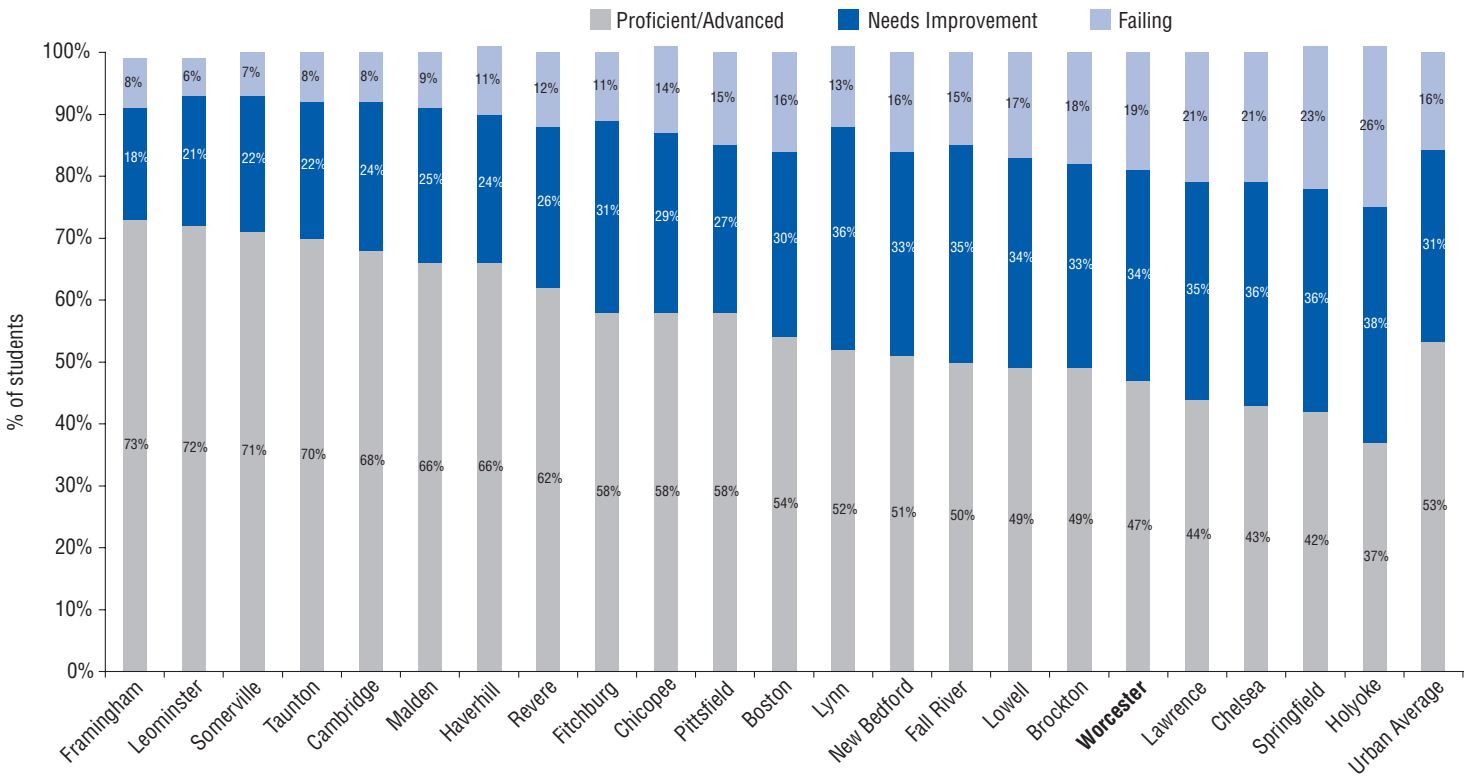


Chart A.4: 8th Grade Math MCAS 2006: Urban Districts

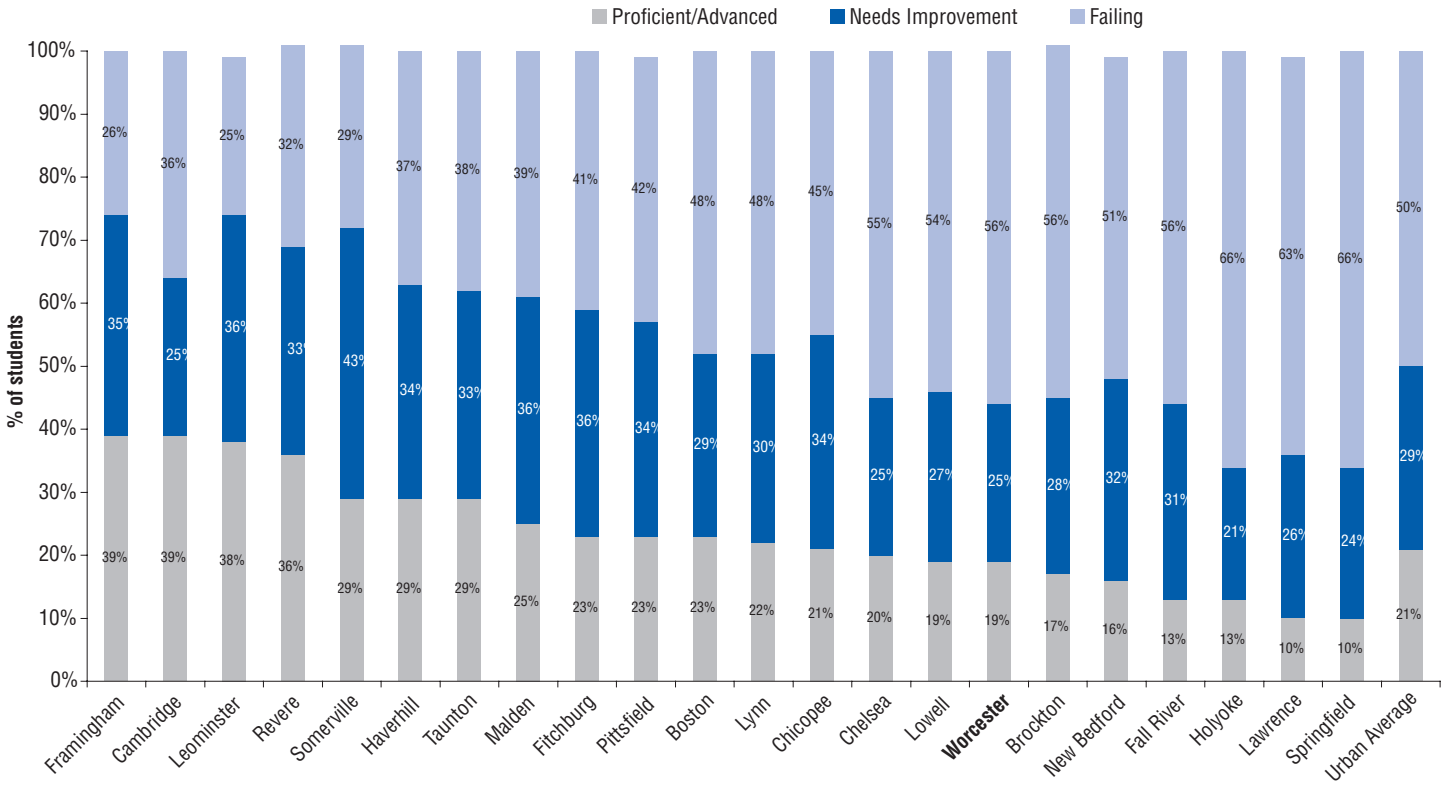


Chart A.5: 10th Grade ELA MCAS 2006: Urban Districts

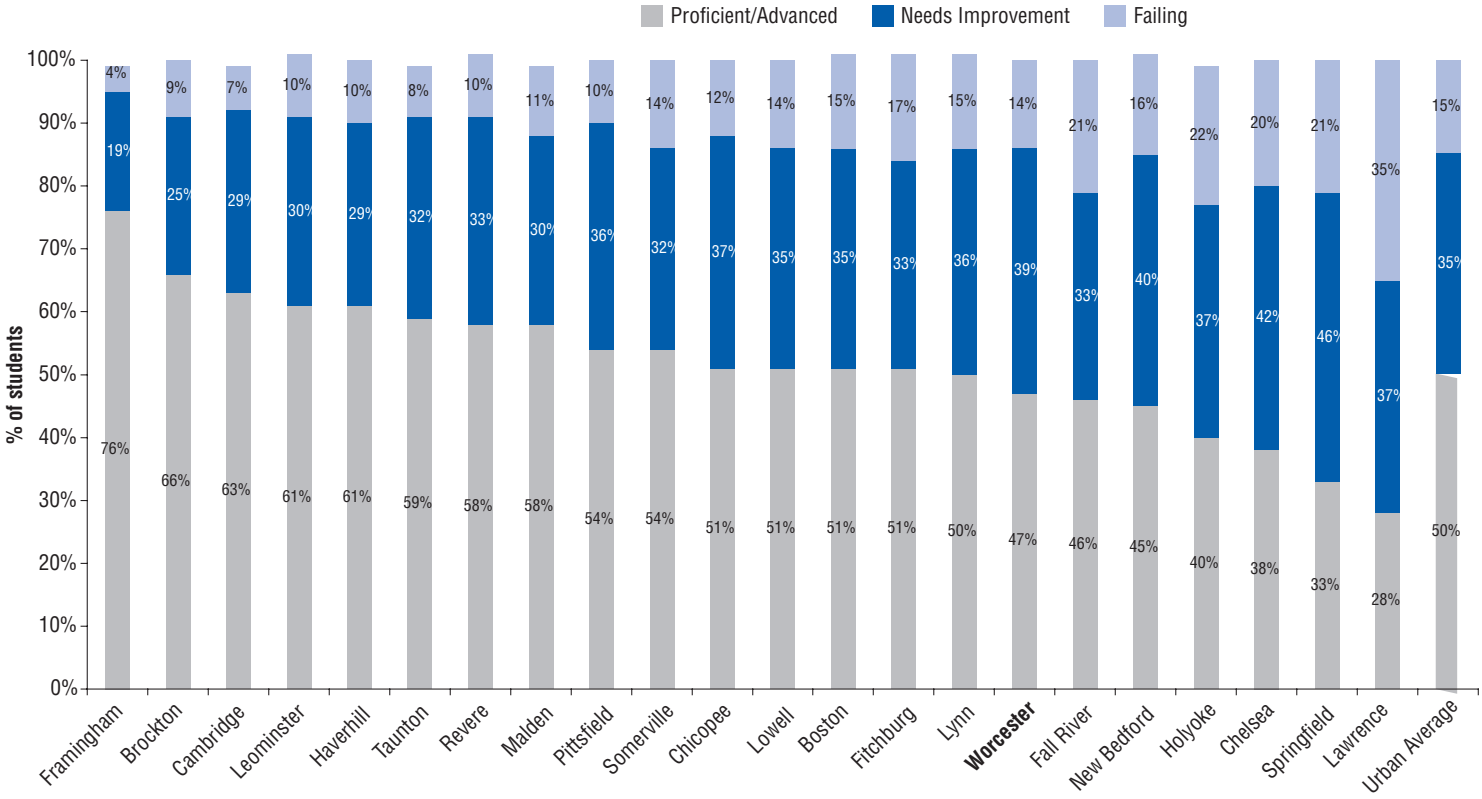
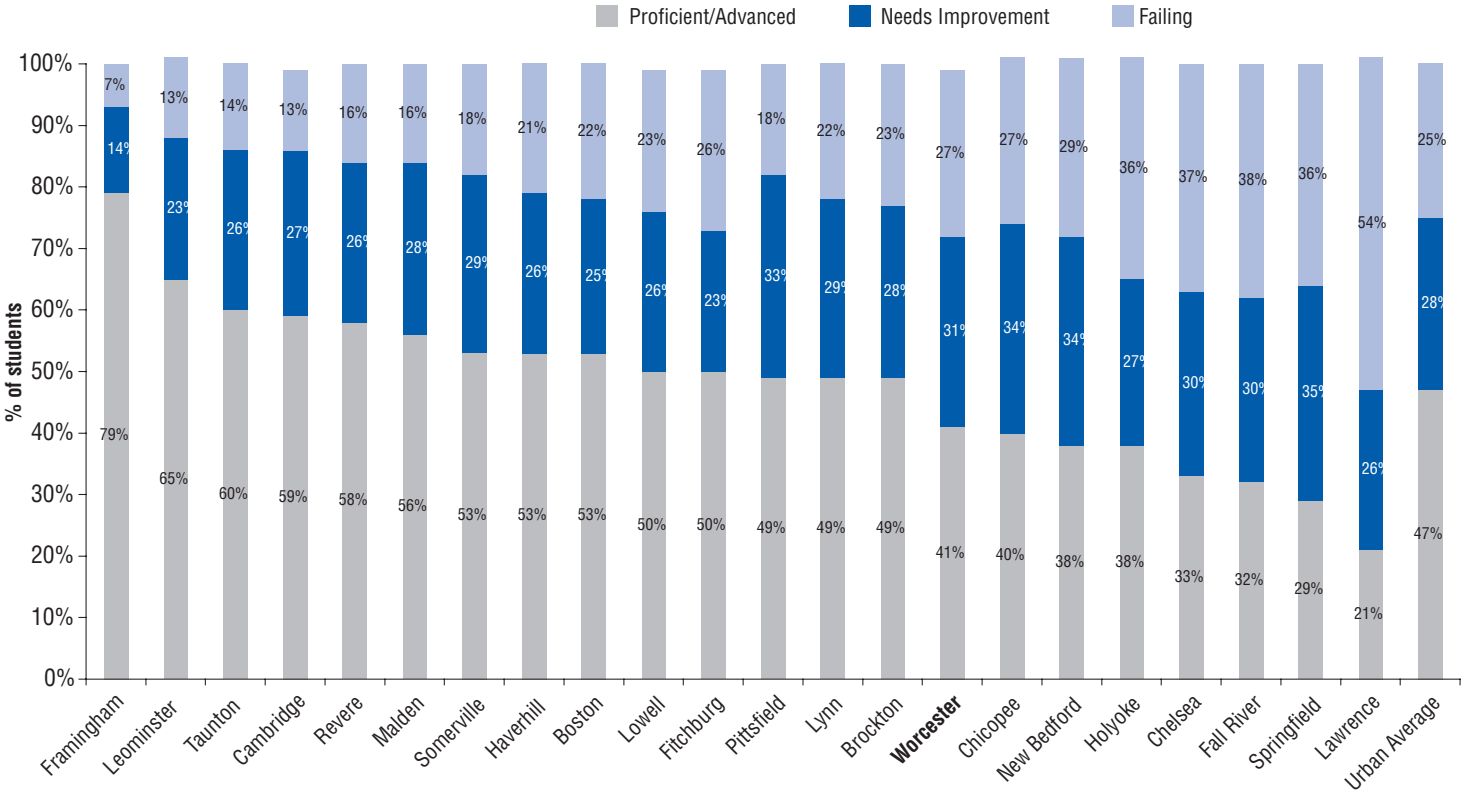


Chart A.6: 10th Grade Math MCAS 2006: Urban Districts



Appendix B – Worcester Public Schools and Charter Schools

School Name	2005-06 Grades Offered	2005-06 Student Enrollment	Spring 2006 Students Proficient/Advanced in English MCAS (%)	Spring 2006 NCLB Accountability Status*	Spring 2006 Students Proficient/Advanced in math MCAS (%)	Spring 2006 NCLB Accountability Status*	Minority Student Population (%)	Low Income (%)
Belmont Street Community	Pre-K - 6	386	21%	NI	8%	NS	77.0%	92.0%
Burncoat Prep	K - 6	204	52%	NI	67%	CA	70.1%	80.9%
Canterbury Street Magnet	Pre-K - 6	348	23%	NI	9%	NI	66.3%	89.1%
Chandler Community	Pre-K - 6	344	7%	CA	15%	R	77.9%	90.7%
Chandler Magnet	Pre-K - 6	385	12%	R	8%	CA	68.3%	84.4%
City View	Pre-K - 6	430	17%	NI	20%	CA	59.8%	82.1%
Clark Street Community	Pre-K - 6	307	64%	NS	48%	NS	50.5%	58.3%
Columbus Park	Pre-K - 6	351	32%	NI	40%	NS	75.2%	92.9%
Elm Park Community	Pre-K - 6	414	11%	NI	14%	NI	72.2%	85.7%
Flagg Street	K - 6	436	54%	NS	40%	NS	36.0%	17.4%
Gates Lane	Pre-K - 6	640	25%	NI	32%	NS	51.4%	53.3%
Goddard School/Science Tech	Pre-K - 6	576	12%	NI	14%	NI	76.5%	93.8%
Grafton Street	Pre-K - 6	356	33%	NI	36%	NS	65.2%	81.5%
Harlow Street Magnet**	K - 6	196	17%	na	17%	na	65.8%	92.3%
Heard Street	K - 6	207	39%	NS	23%	NS	42.0%	52.2%
Jacob Hiatt Magnet	Pre-K - 6	449	57%	NI	30%	NS	67.3%	60.1%
Lake View	K - 6	273	62%	NS	45%	NS	41.8%	39.6%
Lincoln Street	Pre-K - 6	249	13%	R	13%	NS	74.6%	88.8%
May Street	K - 6	244	39%	NS	26%	NS	41.4%	40.6%
McGrath	K - 6	208	74%	NS	40%	NS	52.4%	67.8%
Midland Street	K - 6	227	37%	NS	37%	NS	29.9%	39.2%
Mill Swan**	K - 6	182	19%	na	19%	na	64.2%	64.3%
Multiple Intelligences**	K - 6	204	21%	na	21%	na	53.5%	69.1%
Nelson Place	K - 6	379	30%	NI	15%	NS	39.3%	27.7%
New Ludlow**	K - 6	214	25%	na	15%	na	48.1%	54.7%
Norrback Avenue	Pre-K - 6	626	13%	CA	24%	NI	48.0%	53.2%
Quinsigamond	Pre-K - 6	708	23%	CA	11%	NI	56.2%	76.0%
Rice Square	Pre-K - 6	388	14%	NI	4%	NI	44.3%	59.3%
Roosevelt	Pre-K - 6	660	20%	CA	17%	NI	47.8%	52.6%
Tatnuck Magnet	K - 6	393	14%	NI	26%	NI	40.0%	35.4%
Thorndyke Road	Pre-K - 6	377	43%	NS	44%	NS	40.9%	43.5%
Union Hill	K - 6	257	22%	NS	15%	NS	68.9%	94.6%
Vernon Hill	K - 6	412	17%	CA	17%	NI	62.2%	85.9%
Wawecus Road	K - 6	175	31%	NS	21%	NS	42.3%	56.0%
West Tatnuck	Pre-K - 6	279	44%	NS	37%	NS	39.4%	19.0%
Worcester Arts Magnet	Pre-K - 6	341	49%	NS	46%	NS	42.1%	37.5%
Burncoat Middle	7 - 8	665	50%	CA	20%	R	54.4%	64.7%
Forest Grove Middle	7 - 8	979	55%	NI	28%	R	43.6%	49.1%
Sullivan Middle	7 - 8	973	47%	CA	14%	R	61.2%	71.2%
Worcester East Middle	7 - 8	701	43%	R	12%	R	61.8%	80.2%
Burncoat High	9 - 12	1421	48%	CA	40%	CA	52.0%	48.9%
Doherty High	9 - 12	1578	56%	NI	50%	NI	45.6%	36.4%
North High	9 - 12	1239	52%	NS	45%	NS	59.9%	64.5%
South High Community	9 - 12	1572	48%	CA	39%	CA	63.0%	64.4%
Worcester Vocational HS	9 - 12	1063	27%	NS	35%	NI	45.4%	61.5%
ALL School — ES	Pre-K - 12	438	17%	R	11%	R	73.8%	83.5%
ALL School — MS		135	48%	R	27%	R		
ALL School — HS		201	66%	R	54%	R		
University Park — MS	7 - 12	82	69%	NS	58%	NS	66.5%	70.0%
University Park — HS		148	66%	NS	66%	NS		
Abby Kelley Foster RCS — ES	K - 12	965	41%	NS	29%	NS	51.1%	48.0%
Abby Kelley Foster RCS — MS		125	68%	NS	33%	NS		
Abby Kelley Foster RCS — HS		85	64%	NS	52%	NS		
Seven Hills CS — ES	K - 8	541	29%	CA	22%	NI	78.2%	71.7%
Seven Hills CS — MS		120	78%	CA	20%	NI		

Source: MA Department of Education and Worcester Public Schools.

* NI = In Need of Improvement CA = Corrective Action R = Restructuring NS = No Status ** Schools that were closed at the end of the 2005-06 school year

2005-2006							October 1, 2005 – October 1, 2006		
Limited English Proficiency (%)	Students Qualifying for Special Education Services (%)	% of Teachers Licensed in Teaching Assignment	% of Core Academic Teachers Identified as Highly Qualified	% of Students Repeating a Grade	Attendance Rate (%)	Average number of days absent	Combined Mobility Rate (Entry and Exit)	Entry Mobility Rate	Exit Mobility Rate
22.3%	17.9%	99.7%	99.7%	5.8%	94.5%	9.1	65.9%	41.8%	24.2%
27.9%	17.6%	100.0%	100.0%	3.4%	94.4%	9.6	59.8%	39.7%	20.1%
26.4%	17.2%	96.4%	100.0%	1.1%	95.6%	7.3	66.4%	39.1%	27.3%
26.7%	14.0%	95.0%	95.5%	3.7%	93.7%	10.1	81.8%	39.7%	42.0%
50.6%	25.2%	97.5%	97.1%	1.3%	94.6%	8.8	53.6%	26.0%	27.7%
20.2%	20.9%	94.4%	95.8%	5.4%	94.5%	9.1	58.9%	36.2%	22.7%
15.0%	21.5%	95.1%	94.9%	3.7%	95.2%	8.4	27.7%	14.2%	13.5%
30.5%	23.4%	98.9%	100.0%	1.9%	93.8%	10.3	47.4%	26.0%	21.4%
31.6%	16.9%	96.0%	100.0%	2.9%	94.8%	8.1	74.4%	43.2%	31.2%
4.6%	8.7%	97.7%	100.0%	1.6%	96.7%	5.9	9.9%	5.0%	4.8%
12.7%	24.2%	95.7%	95.1%	5.1%	95.7%	7.4	35.2%	24.2%	11.0%
46.0%	19.1%	94.9%	94.6%	2.8%	95.3%	7.8	60.4%	39.9%	20.5%
16.6%	13.8%	100.0%	100.0%	2.6%	95.6%	7.4	57.4%	36.9%	20.5%
16.8%	13.3%	100.0%	100.0%	na	94.5%	8.9	na	na	na
12.6%	14.0%	100.0%	100.0%	2.9%	96.9%	5.3	66.7%	51.7%	15.0%
17.4%	13.4%	99.1%	100.0%	3.9%	96.6%	5.9	27.9%	14.3%	13.6%
18.7%	7.0%	95.7%	100.0%	1.3%	95.8%	7.2	42.5%	21.2%	21.2%
29.7%	13.3%	100.0%	100.0%	2.9%	94.7%	8.8	71.9%	37.1%	34.8%
14.3%	8.2%	100.0%	100.0%	0.5%	96.5%	5.9	40.3%	33.1%	7.3%
12.5%	10.6%	98.8%	100.0%	1.1%	95.8%	6.8	41.3%	21.6%	19.7%
12.3%	8.8%	93.8%	92.9%	1.6%	97.2%	4.8	27.8%	14.1%	13.7%
24.7%	31.9%	100.0%	100.0%	na	95.1%	7.7	na	na	na
19.6%	19.1%	93.5%	97.5%	na	95.5%	7.5	na	na	na
8.2%	9.8%	94.8%	100.0%	3.6%	96.9%	5.5	18.5%	10.8%	7.7%
13.1%	11.2%	100.0%	100.0%	na	97.2%	4.8	na	na	na
24.3%	16.0%	93.9%	94.6%	0.6%	95.4%	7.7	38.7%	21.1%	17.6%
20.5%	16.7%	97.6%	100.0%	1.6%	94.9%	8.6	37.8%	21.5%	16.3%
16.2%	13.9%	92.3%	100.0%	2.3%	95.3%	7.7	58.6%	39.5%	19.1%
22.1%	19.5%	96.0%	94.9%	2.4%	95.6%	7.3	40.2%	25.2%	15.0%
8.9%	13.2%	92.8%	92.5%	0.9%	96.7%	5.7	47.6%	35.1%	12.5%
14.3%	14.3%	100.0%	100.0%	1.0%	95.8%	7.2	26.7%	15.5%	11.2%
19.1%	17.1%	85.0%	93.3%	2.8%	94.7%	8.6	87.2%	57.6%	29.6%
21.1%	13.8%	100.0%	100.0%	2.0%	96.0%	6.6	50.2%	27.7%	22.6%
12.0%	20.6%	86.2%	100.0%	4.7%	96.0%	6.8	43.4%	30.3%	13.1%
11.5%	21.9%	99.0%	98.8%	0.6%	94.8%	8.9	26.0%	20.2%	5.8%
9.4%	15.0%	95.6%	95.2%	2.7%	95.6%	7.6	30.4%	17.3%	13.1%
12.9%	20.9%	90.3%	86.6%	2.7%	95.2%	8.3	34.7%	16.1%	18.6%
4.6%	18.6%	88.2%	86.4%	2.4%	95.5%	7.7	28.7%	13.5%	15.2%
11.5%	23.7%	89.2%	88.9%	3.1%	94.1%	10	35.7%	18.8%	16.9%
8.8%	22.5%	82.8%	82.1%	4.3%	94.2%	9.6	51.3%	27.4%	23.9%
9.1%	19.6%	81.4%	82.9%	11.8%	91.5%	14	41.7%	18.4%	23.2%
5.7%	13.9%	87.2%	87.4%	3.2%	91.6%	14.1	39.1%	18.1%	21.0%
5.0%	21.1%	94.5%	95.8%	9.3%	91.0%	14.9	54.9%	26.6%	28.3%
14.1%	20.2%	87.8%	94.9%	7.4%	90.3%	15.5	49.9%	23.0%	26.9%
2.0%	15.1%	88.1%	89.8%	4.6%	93.4%	11.6	22.6%	9.0%	13.5%
20.6%	19.3%	95.4%	96.1%	na	94.8%	8.6	72.9%	23.5%	49.5%
1.3%	5.2%	99.3%	100.0%	0.9%	95.4%	8.1	10.9%	5.2%	5.7%
1.3%	9.4%	73.2%	91.6%	1.8%	95.5%	7.9	na	na	na
6.8%	9.1%	85.9%	89.3%	4.3%	95.4%	8	na	na	na

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