



The Commonwealth of Massachusetts

# School District Reexamination Report:

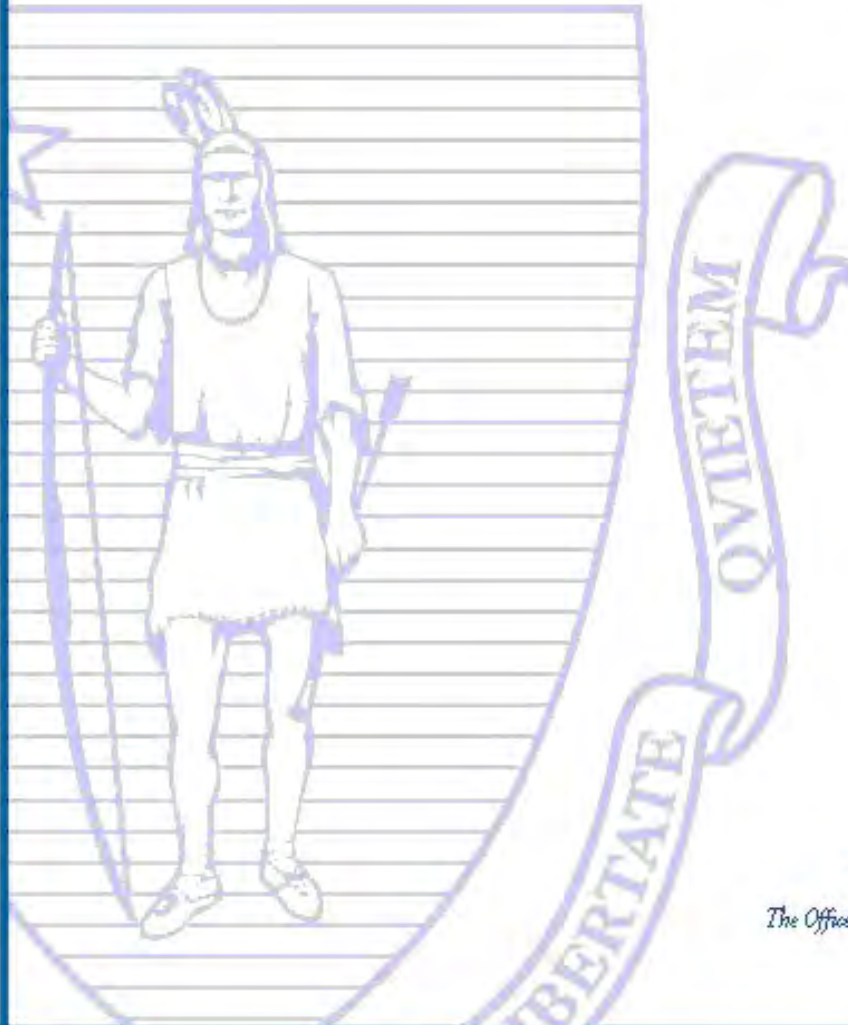
**Worcester  
Public Schools  
Technical Report**



*data driven*

*standards based*

*learner centered*



*The Education Management Audit Council  
The Office for Educational Quality and Accountability*

2005 - 2007

**The Commonwealth of Massachusetts**  
**Office of Educational Quality and Accountability**

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**Educational Management Audit Council**

Maryellen Donahue, Chairwoman  
Irwin Blumer  
Ethan d'Ablemont Burnes  
Joseph Esposito  
Alison Fraser

Joseph B. Rappa, Executive Director, Office of Educational Quality and Accountability

**Visiting Reexamination Team**

James Hearn, Coordinating Examiner  
John Kulevich, Senior Examiner  
William Contreras, Examiner  
Joanne Grenier, Examiner  
Thomas Johnson, Examiner  
Patricia McCusker, Examiner  
Joseph Nigro, Examiner  
Thomas Petray, Examiner  
Frank Sambuceti, Examiner  
Fred Savoie, Examiner  
John Sheehan, Examiner  
William Wassel, Examiner  
Patricia Williams, Examiner  
William Wolf, Examiner

**The Educational Management Audit Council accepted this report at its meeting of April 11, 2008, voted to remove the district from 'Watch' status, and issued a management letter to the district expressing commendations based on the findings contained herein.**

The Office of Educational Quality and Accountability would like to acknowledge the professional cooperation extended to the audit team by the Department of Education; the Superintendent of the Worcester Public Schools, James Caradonio; the school department staff of the Worcester Public Schools; and the town officials in Worcester.

## Table of Contents

Executive Summary .....	1
Analysis of MCAS Student Achievement Data.....	19
Reexamination Findings .....	64
I. Leadership, Governance, and Communication .....	64
II. Curriculum and Instruction .....	79
III. Assessment and Program Evaluation.....	109
IV. Human Resource Management and Professional Development.....	126
V. Access, Participation, and Student Academic Support.....	140
VI. Financial and Asset Management Effectiveness and Efficiency .....	161
Appendix A: Worcester Technical High School .....	176
Appendix B: Proficiency Index (PI) .....	190
Appendix C: Chapter 70 Trends, FY 1998 – FY 2007 .....	191

## **Executive Summary**

The Office of Educational Quality and Accountability (EQA) conducted a reexamination of the Worcester Public Schools in November 2007. With an English language arts proficiency index of 74 proficiency index (PI) points and a math proficiency index of 63 PI points based on the 2007 MCAS test results, the district is considered a ‘Low’ performing school system based on the Department of Education’s rating system (found in Appendix B of this report). On the 2004 MCAS tests, Worcester had an English language arts proficiency index of 69 PI points and a math proficiency index of 55 PI points. Furthermore, 37 percent of Worcester students scored at the ‘Proficient’ or ‘Advanced’ levels in ELA in 2004, while 24 percent had attained proficiency in math. On the 2007 MCAS tests, 46 percent of Worcester’s students scored at or above the proficiency standard in ELA and 35 percent did so in math. Between 2004 and 2007, about 10 percent more students were proficient in both subject areas.

## **District Overview**

The city of Worcester is located in Worcester County in central Massachusetts. It is the second largest city in New England after Boston, but maintains a residential character. The city has a strong industrial past from steel fabrication and wire drawing, envelope and textile loom manufacturing, and machine tooling. Worcester serves as a transportation center via railway, highway, and waterway. Currently, the biotechnology industry has gained prominence and the city is strengthened by the eight colleges and the state university medical school within its limits. The largest sources of employment within the community are educational, health, social services, and manufacturing. The city is governed by a Council-Manager/City Manager form of municipal government.

According to the Massachusetts Department of Revenue (DOR), Worcester had a median family income of \$42,988 in 1999, compared to the statewide median family income of \$63,706, ranking it 337 out of the 351 cities and towns in the commonwealth. According to the 2000 U.S. Census, the city had a total population of 172,648, with a population of 32,824 school-age children, or 19 percent of the total. Of the total households in Worcester, 32 percent were households with children under 18 years of age. Twenty-three percent of the population age 25 years or older held a bachelor’s degree or higher, compared to 33 percent statewide.

According to the Massachusetts Department of Education (DOE), in 2006-2007 the Worcester Public Schools had a total enrollment of 23,603. The demographic composition in the district was: 42.5 percent White, 34.3 percent Hispanic, 12.8 percent African-American, 7.8 percent Asian, 0.5 percent Native American, and 2.1 percent multi-race, non-Hispanic; 16.6 percent limited English proficient (LEP), 63.4 percent low income, and 19.3 percent special education. Eighty-nine percent of school-age children in Worcester attended public schools. The district does not participate in school choice. In 2006-2007, 1,987 Worcester students attended public schools outside the district, including 68 students who attended Berlin-Boylston Regional, 51 students who attended Wachusett Regional, 33 students who attended the Massachusetts Academy of Math and Science, and 1,675 students who attended charter schools.

The district has 44 schools serving grades pre-kindergarten through 12, including 33 elementary schools serving pre-kindergarten through grade 6, four middle schools serving grades 7 and 8, two alternative secondary schools serving grades 7 through 12, and five high schools serving grades 9 through 12. The administrative team includes a superintendent, a deputy superintendent for teaching/accountability and learning, two quadrant managers, a manager of governmental and community relations and elementary initiatives, a manager of secondary initiatives/technical high school, a manager of student and staff support services, and a manager of NCLB/curriculum and professional development. The district has a seven-member school committee.

In FY 2007, Worcester's per pupil expenditure (preliminary), based on appropriations from all funds, was \$12,377, compared to \$11,789 statewide, ranking it 92 out of the 302 of 328 school districts reporting data. The district exceeded the state net school spending requirement in each year of the review period. From FY 2005 to FY 2007, net school spending increased from \$229,399,376 to \$246,818,866; Chapter 70 aid increased from \$158,861,691 to \$167,480,913; the required local contribution increased from \$68,511,878 to \$77,309,187; and the foundation enrollment decreased from 26,650 to 25,950. Chapter 70 aid as a percentage of actual net school spending decreased from 69 to 68 percent over this period. From FY 2004 to FY 2006, total curriculum and instruction expenditures as a percentage of total net school spending decreased from 59 to 55 percent.

## **Context**

School districts examined by the Massachusetts Office of Educational Quality and Accountability (EQA) are placed in ‘Watch’ status if the EQA examination reveals several areas of poor or unsatisfactory performance. All ‘Watch’ districts are monitored by the EQA and its staff. For the next one to two years, an experienced and trained senior EQA examiner monitors a district in ‘Watch’ status. After a reexamination by the EQA, either the district is removed from ‘Watch’ status or an EQA report is forwarded to the Board of Education with a recommendation to declare the district underperforming. Underperforming districts receive additional support and services from the state to improve student achievement.

The EQA previously examined the Worcester Public Schools in November 2004 and February 2005, and the district was subsequently placed in ‘Watch’ status in June 2005. The district was monitored by an EQA examiner, Louis Perullo, and reexamined by a team of EQA examiners in November 2007. This reexamination report is the conclusion of the ‘Watch’ process, the purpose of which is to assess the progress the district has made since the prior examination.

Of the 44 total indicators that received a rating of ‘Poor’ or ‘Unsatisfactory’ in the 2005 EQA report which were reexamined in 2007, Worcester Public Schools improved on 39 and received a rating of ‘Satisfactory’ on 36. On the eight new 2007 indicators also included in the reexamination, the district received a rating of ‘Satisfactory’ on three and a rating of ‘Excellent’ on three. In addition, the EQA examined the district on all 13 indicators in the Financial and Asset Management Effectiveness and Efficiency standard, and rated the district as ‘Satisfactory’ on 11 and ‘Excellent’ on one. Although student achievement in Worcester remains at low levels despite having improved during the reexamination period, the district has developed a systems-based approach to implementing policies, programs, and practices that have likely laid the foundation for further improvement in student achievement.

During the course of the reexamination, the issue of “limited financial resources” was a concern of virtually all interviewees—from teachers to principals to school committee members. Most felt that budget restrictions and the subsequent loss of personnel and programs influenced the delivery of educational services in the district and was counter to the spirit of education reform.

Like many school districts in Massachusetts, the Worcester Public Schools balanced limited funds with the educational needs of students. Budget reductions and restrictions exacerbated the high levels of student and teacher transience in the district. To counter student and teacher transience, the district implemented consistent programs to mitigate the need for students and teachers to learn new programs if they move to a different section of Worcester or transfer to a new school.

The district exceeded its net school spending (NSS) requirement and the city has met its required minimum contribution every year since 2000, but the average amount of net school spending over the requirement during the reexamination period was less than one percent. During recent years, there had been a decrease of approximately 2,000 students in the district and a reduction in entitlement grant funds. The district has provided staff members and resources to secure competitive and private grants as well as to develop partnerships with business, community, and educational organizations. Budget reductions led the district to reduce its staff during the period of the period of reexamination. From 2005 to 2008, the number of teaching positions declined by 50 with an overall reduction of 306 teachers since 2002. In 2007, the district closed four elementary schools, which realized savings of approximately \$3 million. From 2001 to 2008, the percentage of the budget spent on direct instructional costs decreased from 64 to 51 percent, while the percentage of the budget spent on district fixed costs, such as health insurance, energy, and charter school reimbursements, increased from 22 to 36 percent, with other costs remaining level at approximately 13 percent.

## **The EQA Reexamination Process**

The Massachusetts Legislature created the Office of Educational Quality and Accountability in July 2000 to provide independent and objective programmatic and financial audits of the 350-plus school districts that serve the cities and towns of the commonwealth. The agency is the accountability component of the Education Reform Act of 1993, and was envisioned in that legislation. The EQA works under the direction of a five-person citizen council, appointed by the governor, known as the Educational Management Audit Council (EMAC).

From November 26-29, 2007, the EQA conducted an independent reexamination of the Worcester Public Schools for the period 2005-2007, with a primary focus on 2007. This

reexamination was based on the EQA's six major standards of inquiry that address the quality of educational management, which are: 1) Leadership, Governance, and Communication; 2) Curriculum and Instruction; 3) Assessment and Program Evaluation; 4) Human Resource Management and Professional Development; 5) Access, Participation, and Student Academic Support; and 6) Financial and Asset Management Effectiveness and Efficiency. The report is based on the source documents and correspondence sent to EQA prior to the on-site visit, interviews with the representatives from the school committee, the district leadership team, school administrators, teachers, union leaders, and school council members, as well as additional documents submitted during the reexamination. The report does not consider documents, revised data, or comments provided after the on-site visit.

For the period under reexamination, 2005-2007, Worcester Public Schools is considered to be a 'Low' performing school district, marked by student achievement that was 'Moderate' in English language arts (ELA) and 'Low' in math on the 2007 MCAS tests. Over the reexamination period, student performance improved by five PI points in ELA and six PI points in math, which narrowed the district's proficiency gaps by 15 percent both in ELA and in math.

The following provides a summary of the district's performance on the 2007 Massachusetts Comprehensive Assessment System (MCAS) tests and the findings of the EQA reexamination.

## **Summary of Analysis of MCAS Student Achievement Data**

### **Are all eligible students participating in required state assessments?**

On the 2007 MCAS tests in ELA, math, and STE, eligible students in Worcester participated at levels that met or exceeded the state's 95 percent requirement.

### **Are the district's students reaching proficiency levels on the MCAS examination?**

On average, less than half the students in Worcester Public Schools attained proficiency in English language arts (ELA) on the 2007 MCAS tests, slightly more than one-third of Worcester students attained proficiency in math, and slightly more than one-fifth attained proficiency in science and technology/engineering (STE). Ninety-two percent of the Class of 2007 attained a Competency Determination.



- Worcester's ELA proficiency index on the 2007 MCAS tests was 74 proficiency index (PI) points. This resulted in a proficiency gap, the difference between its proficiency index and the target of 100, of 26 PI points, 12 points wider than the state's average proficiency gap in ELA. This gap would require an average improvement in performance of nearly four PI points annually to achieve adequate yearly progress (AYP).
- In 2007, Worcester's math proficiency index on the MCAS tests was 63 PI points, resulting in a proficiency gap of 37 PI points, 13 points wider than the state's average proficiency gap in math. This gap would require an average improvement of more than five PI points per year to achieve AYP.
- Worcester's STE proficiency index in 2007 was 57 PI points, resulting in a proficiency gap of 43 PI points, 15 points wider than that statewide.

### **Has the district's MCAS test performance improved over time?**

Between 2004 and 2007, Worcester's MCAS performance showed improvement in English language arts, in math, and in science and technology/engineering.

- Over the three-year period 2004-2007, ELA performance in Worcester improved at an average of nearly two PI points annually. This resulted in an improvement rate, or a closing of the proficiency gap, of 17 percent, a rate lower than that required to achieve AYP. The percentage of students attaining proficiency in ELA increased from 37 percent in 2004 to 45 percent in 2007.
- Math performance in Worcester showed more improvement over this period, at an average of three PI points annually. This resulted in an improvement rate of 21 percent, also a rate lower than that required to achieve AYP. The percentage of students attaining proficiency in math rose from 24 percent in 2004 to 37 percent in 2007.
- Between 2004 and 2007, Worcester had an increase in STE performance of more than one PI point annually, resulting in an improvement rate of nine percent. The percentage of students attaining proficiency in STE increased from 21 percent in 2004 to 22 percent in 2007.

### **Do MCAS test results vary among subgroups of students?**

MCAS performance in 2007 varied considerably among subgroups of Worcester students. Of the nine measurable subgroups in Worcester, the gap in performance between the highest- and lowest-performing subgroups was 36 PI points in ELA (non low-income students, limited English proficient students, respectively) and 41 PI points in math (Asian students, students with disabilities, respectively).

- The proficiency gaps in Worcester in 2007 in both ELA and math were wider than the district average for students with disabilities, limited English proficient (LEP) students, Hispanic students, African-American students, and low-income students (those participating in the free or reduced-cost lunch program).
- The proficiency gaps in ELA and math were narrower than the district average for regular education students, White students, Asian students, and non low-income students.

### **Has the equity of MCAS test performance among the district's student subgroups improved over time?**

In Worcester, the performance gap between the highest- and lowest-performing subgroups in ELA widened from 31 PI points in 2004 to 40 PI points in 2007, and the performance gap between the highest- and lowest-performing subgroups in math widened from 31 to 43 PI points over this period.

- All student subgroups with the exception of LEP students had improved performance in ELA between 2004 and 2007. The most improved subgroup in ELA was Asian students.
- In math, the performance of all student subgroups in Worcester with the exception of LEP students improved between 2004 and 2007. The most improved subgroup in math also was Asian students.

### **Fidelity of Implementation**

A characteristic of effective educational organizations (schools and districts) is the strong alignment of goals, plans, processes, and actions—from the policymakers to the classroom. Therefore, the EQA has developed a protocol for assessing the alignment of these elements. The *fidelity of implementation* is an indicator of the consistency of execution of a district's

expectations: its stated goals, plans, curricula, and various processes, down to the level of instruction. When these various components are consistent and highly aligned, a high level of fidelity of implementation exists. When these are inconsistent and poorly aligned, a low or poor level of fidelity of implementation exists. The classroom observation protocol is designed to collect evidence of district and school goals, plans, and expectations in the instructional setting.

Since the last EQA review, Worcester Public Schools reviewed goals in its District Improvement Plan (DIP) and School Improvement Plans (SIPs) and implemented programs, policies, and practices that would likely lead to improved student achievement. Concomitantly, during the reexamination period, the district moved toward a systems approach to improving student achievement. As an example, the district began participating in the Public Education Leadership Project (PELP) Coherence Framework. The PELP, a joint initiative of the Harvard Graduate School of Education and the Harvard Business School, strives to identify effective leadership and management practices to support large-scale organizational change in urban school districts with the goal of improving teaching and learning for all students. District leaders used the PELP to identify and support district improvement strategies and create a systematic approach to improving student achievement.

Generally, fidelity of implementation was moderate across all levels in the district. Interviewees stated the district monitored fidelity of implementation of programs, policies, processes, and practices in a number of ways, most prominently through the analysis of student achievement data and by observing teachers in the classroom both formally and informally. Interviewees indicated that the district utilized a number of assessments to measure district, school, and student progress and monitor fidelity of goal and program implementation. The district used the MCAS tests and the Measures of Academic Progress (MAP) assessment as the principal sources of summative and formative student achievement data, respectively, to measure student progress and attainment of district and school goals. The district also used data from other formative assessments, such as the Developmental Reading Assessment (DRA) and the Dynamic Indicators of Basic Early Literacy Skills (DIBELS), and English language learner (ELL) and special education assessments.

During the site visit, to determine the depth of fidelity of implementation of district and school goals and programs, EQA examiners conducted 119 random classroom observations in 22 district schools as follows: 53 at the elementary schools, 32 at the middle schools, and 34 at the high schools. Examiners also interviewed 21 principals and 36 teachers. The observations and interview questions focused on the areas of classroom management; instructional practice; expectations; student activity, work, and behavior; and classroom climate for learning. Information gleaned from classroom observations and interviewees generally confirmed that since the last EQA review, the district focus on improving student achievement and implementing effective assessment systems and programs has initially been successful. This success can primarily be attributed to the creation of a systems approach to improving student achievement, most prominently through the implementation of the PELP Coherence Framework and a coordinated districtwide student assessment and data analysis system.

## **Standard Summaries**

### **Leadership, Governance, and Communication**

The Worcester Public Schools made sufficient progress during the reexamination period to improve its ratings on all six indicators in the standard of Leadership, Governance, and Communication that the EQA reexamined. Five indicator ratings improved from ‘Poor’ to ‘Satisfactory’ and one improved from ‘Unsatisfactory’ to ‘Satisfactory.’ In addition, two new indicators in this standard were rated ‘Excellent.’

The rating on the indicator regarding the evaluation of the superintendent increased the most significantly, from ‘Unsatisfactory’ to ‘Satisfactory.’ The superintendent received a written evaluation from school committee members each year during the reexamination period. The evaluation narratives addressed the goals and benchmarks in the District Improvement Plan (DIP) approved by the school committee. As part of the evaluation process, the superintendent provided reports on the attainment of the DIP goals and benchmarks to the school committee at both midyear and the end of the year.

During the reexamination period, Worcester utilized assessment results to design and implement new programs and services intended to improve student achievement. The district developed a local assessment battery to monitor and analyze student achievement. This battery supplemented

the state MCAS tests and included the Measures of Academic Progress (MAP), the Dynamic Indicators of Basic Early Literacy Skills (DIBELS), and the Developmental Reading Assessment (DRA). Decisions about implementing or changing initiatives typically resulted from an analysis of achievement data. In one such initiative, Worcester standardized programs by implementing the Houghton Mifflin English language arts (ELA) series and the Everyday Mathematics program at the elementary level and the Connected Mathematics Program (CMP) at the middle school level, providing consistency for students and teachers transferring from one district school to another. Worcester also increased instructional time in ELA and mathematics to address the needs of struggling middle school students with identified weaknesses on the MCAS tests and MAP assessment. In addition, the district expanded the job descriptions of department heads at the middle school level to include teacher coaching.

Teachers of the same course used a common syllabus in all Worcester high schools, and high school teachers were developing and piloting common final examinations for each course. Worcester introduced the Advancement Via Individual Determination (AVID) program at the middle and high school levels and increased the number of Advanced Placement (AP) courses. The district also implemented the eWalk system to monitor the fidelity of implementation of the curriculum.

Worcester received a rating of ‘Excellent’ for forming active partnerships with community agencies to assist at-risk students and families. Administrators served as liaisons with businesses, the consortium of institutions of higher learning, community hospitals and health agencies, and state agencies such as the Department of Social Services (DSS) and the Department of Youth Services (DYS). Worcester received a second ‘Excellent’ rating for school safety. The executive assistant to the superintendent for school safety and violence prevention was responsible for overseeing safety plans for the district and each school. Worcester developed a plan entitled Worcester Public Schools: A Collaborative-Proactive Approach to Provide a Safe Teaching Learning Environment, with an accompanying PowerPoint explanation. This plan included goals, protocols, interventions, strategies, initiatives, and a referral process. In addition, the district implemented the Connect-ED communication system, received a \$250,000 emergency management grant, and instituted a pandemic flu prevention campaign. The district gave each

teacher a copy of *The School-Centered Emergency Management and Response Guide for Schools in the City of Worcester*.

During the reexamination period, Worcester continued to modify its systems to improve student achievement, monitor the fidelity of implementation of the curriculum and programs, expand services to students, and provide a safe and secure environment for teaching and learning. Some of these modifications included the Public Education Leadership Project Coherence Framework, the MAP, data-driven decision-making, partnership and collaborative ventures, safety and security plans and audits, and improved teacher and administrator evaluation procedures.

### **Curriculum and Instruction**

The Worcester Public Schools made improvements in the area of curriculum and instruction during the reexamination period. Of the 12 indicators in this standard reexamined by the EQA, the district improved on nine and received a rating of ‘Satisfactory’ on eight.

Worcester ensured that its curriculum, programs, and textbooks addressed the required learning objectives in the state frameworks. The district established a documented process for a regularly scheduled annual review and revision of curriculum based on assessment results that involved teachers through their involvement in the Performance Improvement Mapping (PIM) process at the school level and through the establishment of teacher curriculum revision teams at the district level.

Worcester revised its ELA curriculum in 2005 and the mathematics and science curricula in 2006. The district scheduled regular reviews of the curricula for the following years, and full revisions of each curriculum approximately five years after each prior complete revision. Administrators and teachers began curriculum revision by determining that to address the high levels of both teacher and student mobility in the district, the district should adopt common programs or texts for all schools. After selecting common programs and texts, curriculum teams developed the written curricula by creating a crosswalk between the state learning objectives and the elements of the common programs selected by the district. This was followed by the establishment of a progression of learning activities in a scope and sequence.

At the elementary level, the district used the Houghton Mifflin series in ELA and the Everyday Mathematics program in math. At the middle school level, the district used the McDougal Littell text in ELA teachers and the Connected Mathematics Program (CMP) in math. At the high school level, teachers mapped the curricula of the courses they taught, and teachers who taught common courses used a common syllabus. At the time of the site visit, administrators indicated that the next step would be to design and implement common assessments at every level. Administrators and teachers were beginning to pilot common exams at the middle and high school levels.

The curriculum documents examined by the EQA included scope and sequence, syllabi, and lesson plans, all of which brought horizontal and vertical alignment to the content taught in the schools. Although curriculum modifications led to improved student achievement overall, particularly on the Measures of Academic Progress (MAP) assessment, the achievement of special education and limited English proficient (LEP) students remained low. The district provided coaches to assist with the implementation of the curriculum and trained principals in a classroom walk-through protocol so they could better determine the fidelity of implementation of the curriculum and other programs.

Worcester trained teachers to use the diagnostic information from the MAP assessment and also provided training in differentiated instruction. In addition, the district increased the instructional time for the tested content areas, but still did not meet Department of Education time on learning requirements at any level. Classroom observations conducted by the EQA team substantiated improvement in the quality of instruction in the Worcester schools since the last EQA examination.

### **Assessment and Program Evaluation**

During the reexamination period, the Worcester Public Schools improved its capacity for assessment and program evaluation. Of the nine indicators in this standard reexamined by the EQA, to the district improved on eight to a rating of ‘Satisfactory.’ This overall improvement reflected the district’s commitment to using a variety of student achievement data to inform decisions about program effectiveness, staff allocation, and resource acquisition.

In 2006, the district adopted the Measures of Academic Progress (MAP) for students in grades 2-10 and administered it three times a year as a value-added assessment. The district used the DesCartes Continuum component of the MAP assessment to determine students' understanding of skills and concepts and to diagnose weaknesses. The MAP results were monitored at all levels, and teachers used the data to plan instruction. Worcester also implemented individual student goal worksheets to track student progress.

Administrators used eWalk software to monitor teachers' use of MAP data to plan instruction and their implementation of districtwide programs in ELA and mathematics. Worcester also implemented consistent procedures and timelines for administering other approved assessments, such as the Developmental Reading Assessment (DRA) and the Dynamic Indicators of Early Literacy Skills (DIBELS). During the reexamination period, the district implemented a standard template for the development of its School Improvement Plans (SIPs) that aligned with the District Improvement and focused primarily on raising student achievement. Each school developed its respective SIP based on student achievement data, and classroom teachers at each grade level collaborated and developed SIP student achievement goals in ELA and mathematics. Teachers and administrators annually reviewed assessment data to determine student progress, and made decisions about the effectiveness of programs and resources. In addition, Worcester worked with a researcher, P. David Pearson, to evaluate the effectiveness of its early literacy programs. The two-year study was expected to be completed in January 2008.

Although Worcester's subgroup populations districtwide did not make AYP in mathematics and ELA from 2004 to 2007, achievement scores for subgroups increased at some schools and grade levels during the reexamination period.

### **Human Resource Management and Professional Development**

The Worcester Public Schools made a number of improvements in the area of human resource management and professional development during the reexamination period. Of the nine indicators in this standard reexamined by the EQA, the district improved on eight and received a rating of 'Satisfactory' on seven. In addition, on the one new 2007 indicator reviewed, which pertained to training in school safety measures, the district received a rating of 'Excellent.'



The district aligned administrator evaluation practices with the Department of Education's Principles of Effective Administrative Leadership, and developed a new instrument that promoted professional growth and effectiveness. Evaluations were informative, instructive, and contained references to the district's fidelity of implementation of its goals and initiatives. Evaluations encouraged the use of data in decision-making, and they made specific references to MCAS test scores and both student and teacher attendance data. The district held administrators accountable for student achievement results in a variety of ways. For example, the principals' evaluation instrument focused them on improving student performance through implementing guidelines for assessment and accountability, collaborating with teachers to collect and use data, and monitoring implementation of their respective School Improvement Plans. Principals' contracts contained evidence that the performance of the principal and the students were considerations in renewal.

Also during the reexamination period, the district aligned the teacher evaluation process with the DOE's Principles of Effective Teaching, which were included them in the teachers' contract. The district strengthened formative classroom observation techniques, although reductions in teaching positions beyond those attributable to attrition and reduced enrollment affected the delivery of services to students. Two-thirds of the teacher positions eliminated resulted from insufficient funding rather than reduced student enrollment. In addition, budget restrictions weakened support programs for students as well as support for instruction.

The district averaged \$7.1 million annually in professional development expenditures during the reexamination period, with 25 percent of the funding coming from the district's budget and 75 percent from both public and private grant funding sources. However, a decrease of over \$1.2 million in expenditures from 2006 to 2007 due to budget restrictions limited professional development offerings. Worcester developed three professional development brochures annually, including offerings in content and pedagogy. The district also offered its own two-tier professional development system to prepare teachers for administrative licensure and, subsequently, National Institute of School Leadership (NISL) training.

Worcester conducted an annual evaluation of its professional development program through a variety of means, including an analysis of student achievement data from the MCAS, MAP,

PSAT, and AP tests. Additional components of the evaluation of the professional development program included SIP reviews, principal requests, evaluations of professional development workshops, professional development surveys, and external evaluations.

The percentage of teachers certified during the reexamination period increased from 88.0 to 97.5 percent, and the district applied for and received DOE waivers for all uncertified teachers. All administrators were appropriately certified for positions they held. Ninety-four percent of the teachers whose personnel files the EQA reviewed were appropriately certified for their positions. Ninety-nine percent of district paraprofessionals met the federal definition of ‘highly qualified.’

Teacher recruitment consisted primarily of an annual job fair, advertising, and networking at area colleges to identify candidates. A major constraint was that the district did not become aware of its Chapter 70 funding until late in the fiscal year. This, coupled with the required application of contractual transfer language in the teachers’ contract, often resulted in delayed hiring of new teachers.

The district provided a variety of mandatory professional development trainings on dealing with crises and emergencies in concert with the district’s safety officer. It also conducted district-level safety audits in the form of a team walk-through of the school sites. The district reviewed and updated safety and crisis training schedules and manuals annually. Among other provisions for safety, Worcester had an emergency response guide, crises prevention institute training, a video on physical restraint training procedures, national weather alert receivers, school safety parent brochures, and emergency management training materials. The district provided all teachers with a flip-chart emergency guide detailing emergency procedures for numerous scenarios. School crisis response teams were responsible for conducting fire, bomb threat evacuation and lockdown drills, weather alert detection trainings, and reviewing the school’s emergency guide. The district provided classroom management training to all teachers in order to diffuse crises and school safety incidents including fights, threats, and tragedies. In addition, Worcester implemented positive behavior interventions and supports strategies in some of its elementary and middle schools to improve school climate.

## **Access, Participation, and Student Academic Support**

Worcester Public Schools improved in the area of access, participation, and student academic support since the last EQA examination. Of the eight indicators in this standard reexamined by the EQA, the district improved on all eight and received a rating of ‘Satisfactory’ on seven. In addition, Worcester also received ‘Satisfactory’ ratings on the three new indicators in this standard that were included in the reexamination.

The EQA team reviewed data, policies, and practices relevant to student participation and the attendance of students and staff members in the Worcester Public Schools for the period of 2005 to 2007. The district had fair and equitable policies and procedures for student attendance, discipline, promotion, and retention. MCAS test participation of the aggregate student population averaged from 99 to 100 percent during the reexamination period, with no subgroup averaging less than 97 percent. Average attendance rates for students increased slightly during this period, from 93.7 percent in 2005 to 94.0 percent in 2007, compared to the 2007 state average of 94.6 percent. The chronic absenteeism rate dropped by almost three percentage points, although it still remained high.

Staff absences due to short-term illness averaged approximately 11.5 days during the 2006-2007 school year. District and school staff members endeavored to maintain instructional continuity for students when teachers were absent through proper planning, the use of quality substitute teachers, and consistent application of ELA and mathematics curricula.

Although the average percentage of Worcester students suspended remained relatively high, no student subgroups had disproportionately high rates of suspension. The district discontinued student expulsion and provided alternative educational settings for students at risk of expulsion. Worcester also operated many programs to prevent, minimize, and recover dropouts, such as the Gerald Creamer Center, the School Age Mothers program, the Woodward Day School, the Worcester Alternative School, and the Goddard Learning Center. The district’s dropout rate declined from 5.5 percent in 2005 to 4.2 percent in 2006, compared to the 2006 state average of 3.3 percent.

Worcester provided a number of academic support programs that promoted success and addressed the needs of students. The Measures of Academic Progress (MAP) and other

assessments identified students performing below grade level, and the district used this information to assign students to various interventions, including small group reading and mathematics classes, additional reading and math periods, and extended day and summer school programs. Although achievement gaps existed for some subgroups, the aggregate percentage of students scoring ‘Proficient’ or higher on the MCAS tests increased by eight percentage points in both ELA and math between 2005 and 2007. Worcester used an Advanced Placement (AP) action plan to increase the number of nontraditional students in accelerated classes in grades 5-12. The Advancement Via Individual Determination (AVID) program contributed to these increases by enrolling upper elementary and middle school students in these accelerated classes. The number of African-American, Asian, Hispanic, and low-income students enrolled in Advanced Placement (AP) classes increased during the reexamination period.

### **Financial and Asset Management Effectiveness and Efficiency**

Rather than reexamine the district only on those 2005 indicators on which the district was rated ‘Poor’ or ‘Unsatisfactory,’ the EQA conducted a full examination of the district on Standard VI covering the period 2005-2007. The EQA examiners gave the Worcester Public Schools an overall rating of ‘Satisfactory’ on this standard. They rated the district as ‘Excellent’ on one, ‘Satisfactory’ on 11, and ‘Needs Improvement’ on one of the 13 performance indicators in this standard.

The district’s budget was prepared in two formats, a line item budget and a program budget containing 74 separate programs with a budget and description for each program including goals and expected outcomes. The resulting documents were comprehensive, complete, and understandable. Explanatory data, charts, graphs, and PowerPoint presentations supported the budget. The budget document contained historical and forecasted data. The district had a published timeline with benchmarks for the budget development process that included meetings with all stakeholders and public listening sessions for presentation of the budget. This timeline included all budget events from the beginning of the process in late fall to final approval the following summer when the district became aware of the amount of revenue it would receive from the state.

The district exceeded its net school spending (NSS) requirement and the city met its required minimum contribution every year since 2000, but the average amount of net school spending over the requirement during the reexamination period was less than one percent. During recent years, district enrollment decreased by approximately 2,000 students and the district experienced a reduction in entitlement grants. The district provided staff members and resources to secure competitive and private grants and to develop partnerships with business, community, and educational organizations.

The district reduced staff members over recent years due to budget restrictions. From 2005 to 2008, the number of teaching positions declined by 50. From 2002 to 2008, the district had a reduction of 306 teaching positions. The total number of all district positions reduced from 2005 to 2008 was 177. Worcester closed four elementary schools during the reexamination period, realizing a savings of approximately \$3 million. The district provided evidence that from 2001 to 2008 the percentage of its budget spent on direct instructional costs decreased from 64 to 51 percent, and the percentage spent on fixed costs increased from 22 to 36 percent. Increases in health insurance, energy, charter school tuition, and special education costs were the major causes of the increase in fixed costs.

The district employed licensed maintenance personnel to address routine maintenance and had a long-term capital plan that was part of the city's capital plan. School district and city administrators reviewed the plan annually. The Massachusetts School Building Authority (MSBA) inspected 46 district schools in 2005 and reported that four buildings were in poor condition, possibly needing replacement, and 17 buildings were approaching poor condition, with some building systems that may need attention. Although some schools visited by the EQA examiners showed signs of wear, they were clean and well maintained.

The school buildings were secure with main entrances locked and monitored. Many schools had buzzer activated entry systems, security cameras, and alarms, and some schools had security personnel located within or outside the building. The schools had sign-in procedures, and the district required visitors and staff members to wear identification badges.

# Analysis of MCAS Student Achievement Data

The EQA's analysis of student achievement data focuses on the MCAS test results for 2004-2007, with primary attention paid to the 2007 MCAS tests. This analysis is framed by the following five essential questions:

- 1. Achievement: Are the district's students reaching proficiency levels on the MCAS examination?**
- 2. Equity of Achievement: Do MCAS test results vary among subgroups of students?**
- 3. Improvement: Has the district's MCAS test performance improved over time?**
- 4. Equity of Improvement: Has the equity of MCAS test performance among the district's student subgroups improved over time?**
- 5. Participation: Are all eligible students participating in required state assessments?**

In order to respond accurately to these questions, the EQA subjected the most current state and district MCAS test results to a series of analyses to determine whether there were differences between the mean results of district students and those of students statewide or among student subgroups within the district. Descriptive analyses of the 2007 MCAS test results revealed differences between the achievement of students in Worcester and the average scores of students in Massachusetts.

To highlight those differences, the data were then summarized in several ways: a performance-level based summary of student achievement in Worcester; and comparative analyses of district wide, subject-area, grade, school, and subgroup achievement in relation to that of students statewide, in relation to the district averages, and in relation to other subject areas, grades, and subgroups.

The EQA then subjected the data to gap analysis, a statistical method that describes the relationship between student aggregate and subgroup performance and the state standard or target of 100 percent proficiency on the MCAS tests. Gap analysis also describes the relative achievement of different entities at a specific point in time, as well as how those relationships change over time. Gap analysis consists of several separate indicators, each of which builds on the others, and can be applied to a district, school, or subgroup of students.

The basis for gap analysis is the *proficiency index*, which is a measure of student performance that shows whether students have attained or are making progress toward proficiency, or meeting the state standard. The unit of measure is proficiency index (PI) points, and a score of 100 indicates that all students in the aggregate or in a subgroup are proficient. It can be calculated for overall achievement as well as achievement in an individual subject. Please see Appendix B for more detailed information about the proficiency index

The *proficiency gap* is a measure of the number of proficiency index points by which student achievement must improve to meet the goal of proficiency for all students. It is the gap or difference between the current level of proficiency as measured by the proficiency index and the target of 100. A gap of zero indicates that all students in the aggregate or in a subgroup are proficient.

The *performance gap* is a measure of the range of, or variance in, achievement among different student subgroups within a district or school at a specific point in time. It measures the differences between the proficiency index of the highest-performing subgroup and those of the other subgroups. It also measures the difference in performance between any two subgroups.

## **Achievement**

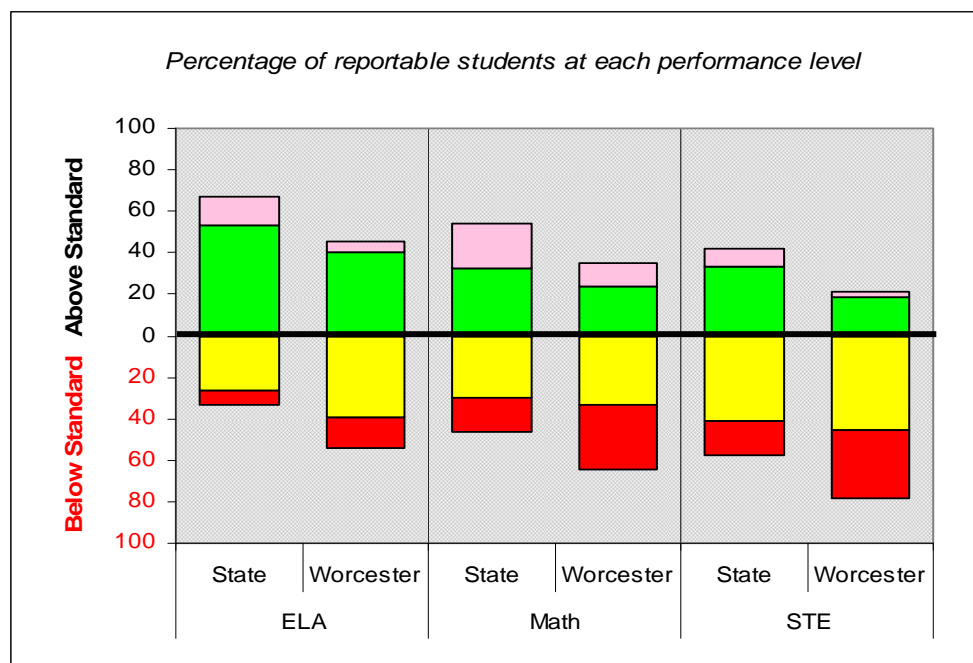
### **Are the district's students reaching proficiency levels on the MCAS examination?**

#### **Findings:**

- On average, less than half the students in Worcester Public Schools attained proficiency in English language arts (ELA) on the 2007 MCAS tests, slightly more than one-third of Worcester students attained proficiency in math, and slightly more than one-fifth attained proficiency in science and technology/engineering (STE). Ninety-two percent of the Class of 2007 attained a Competency Determination.
- Worcester's ELA proficiency index on the 2007 MCAS tests was 74 proficiency index (PI) points. This resulted in a proficiency gap, the difference between its proficiency index and the target of 100, of 26 PI points, 12 points wider than the state's average proficiency gap in ELA. This gap would require an average improvement in performance of nearly four PI points annually to achieve adequate yearly progress (AYP).
- In 2007, Worcester's math proficiency index on the MCAS tests was 63 PI points, resulting in a proficiency gap of 37 PI points, 13 points wider than the state's average proficiency gap in math. This gap would require an average improvement of more than five PI points per year to achieve AYP.
- Worcester's STE proficiency index in 2007 was 57 PI points, resulting in a proficiency gap of 43 PI points, 15 points wider than that statewide.



**Figure/Table 1: MCAS Test Performance by Subject, 2007**



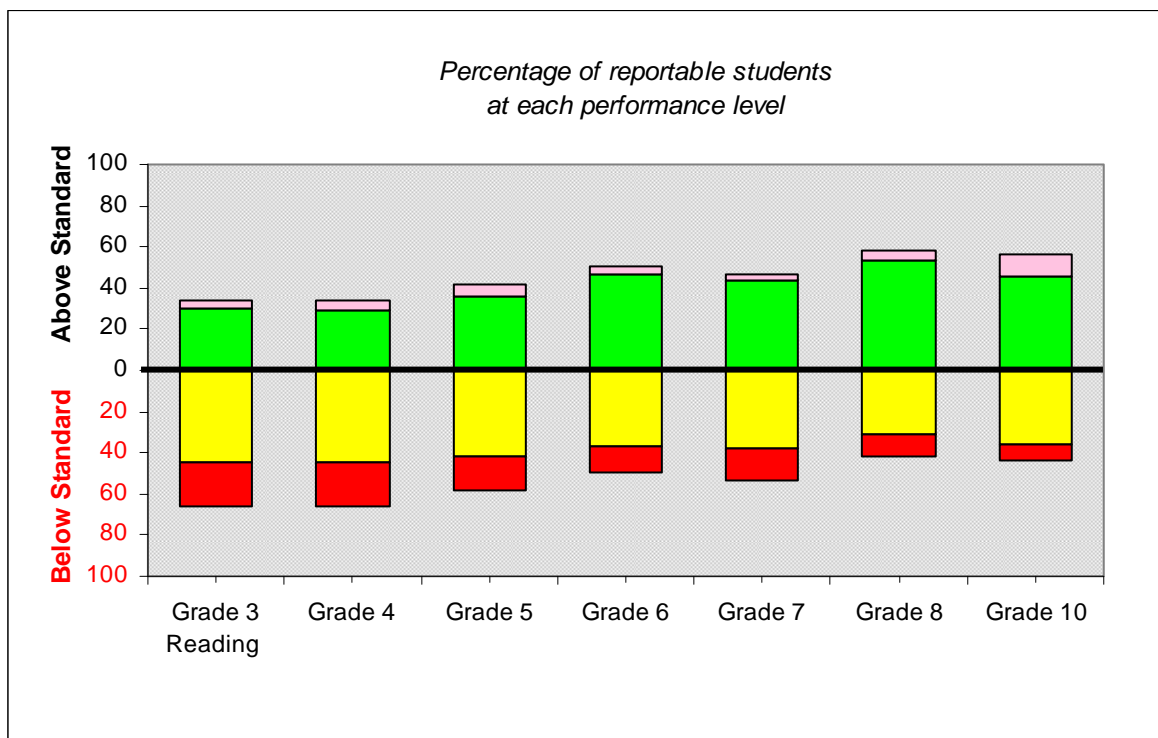
		ELA		Math		STE	
		State	Worcester	State	Worcester	State	Worcester
	Advanced	13	5	22	11	9	3
	Proficient	53	41	32	24	34	19
	Needs Improvement	27	39	30	33	41	46
	Warning/Failing	7	15	17	32	17	33
Percent Attaining Proficiency		66	46	54	35	43	22
Proficiency Index (PI)		85.7	74.3	76.1	62.6	72.1	57.2

In 2007, achievement in English language arts (ELA), math, and science and technology/engineering (STE) was lower in Worcester than statewide. In Worcester, 46 percent of students attained proficiency in ELA, compared to 66 percent statewide; 35 percent attained proficiency in math, compared to 54 percent statewide; and 22 percent attained proficiency in STE, compared to 43 percent statewide.

The 2007 proficiency index for Worcester students in ELA was 74 PI points, compared to 86 PI points statewide; in math, it was 63 PI points, compared to 76 points statewide; and in STE, it was 57 PI points, compared to 72 points statewide.

The ELA proficiency gap for Worcester students in 2007 was 26 PI points, compared to 14 PI points statewide, and would require an average improvement of nearly four PI points annually to make AYP. Worcester's math proficiency gap in 2007 was 37 PI points, compared to 24 PI points statewide, and would require an average improvement of more than five PI points per year to make AYP. Worcester's STE proficiency gap was 43 PI points, compared to 28 PI points statewide.

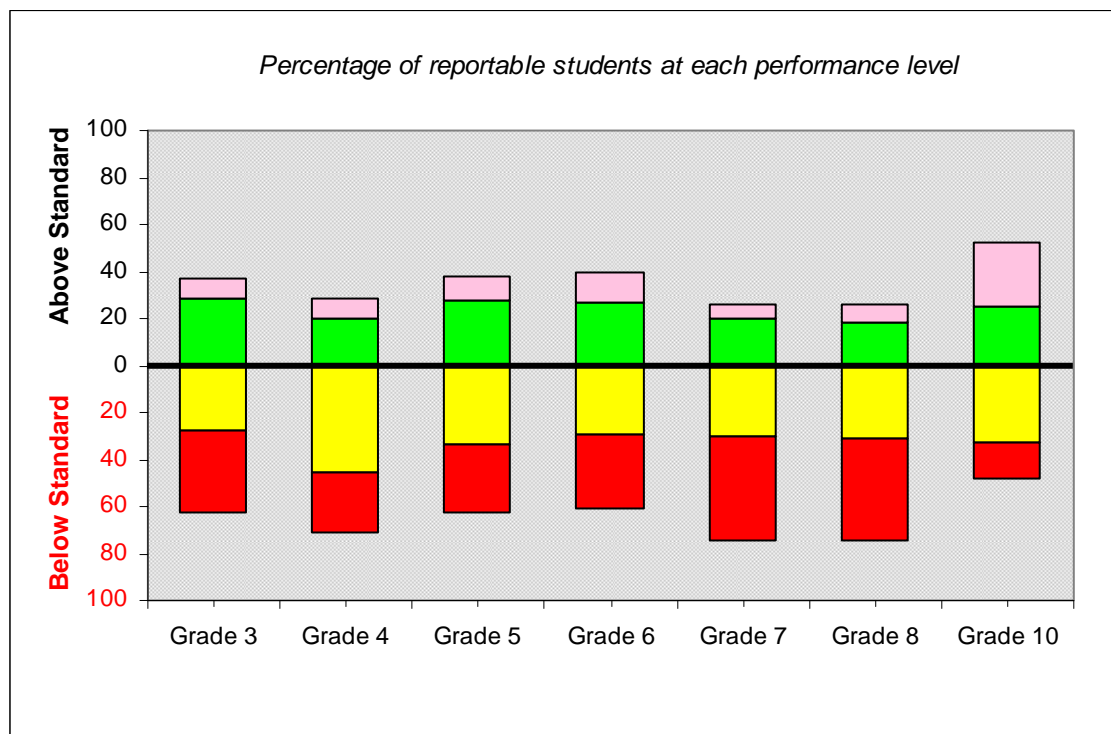
**Figure/Table 2: MCAS English Language Arts (ELA) Test Performance by Grade, 2007**



		Grade 3 Reading	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 10
	Advanced	4	4	6	3	3	5	11
	Proficient	30	30	36	47	44	54	45
	Needs Improvement	45	45	42	37	38	31	36
	Warning/Failing	21	21	17	12	15	11	8
	Percent Attaining Proficiency	34	34	42	50	47	59	56

The percentage of Worcester students attaining proficiency in ELA in 2007 varied by grade level, ranging from a low of 34 percent at grades 3 and 4 to a high of 59 percent at grade 8.

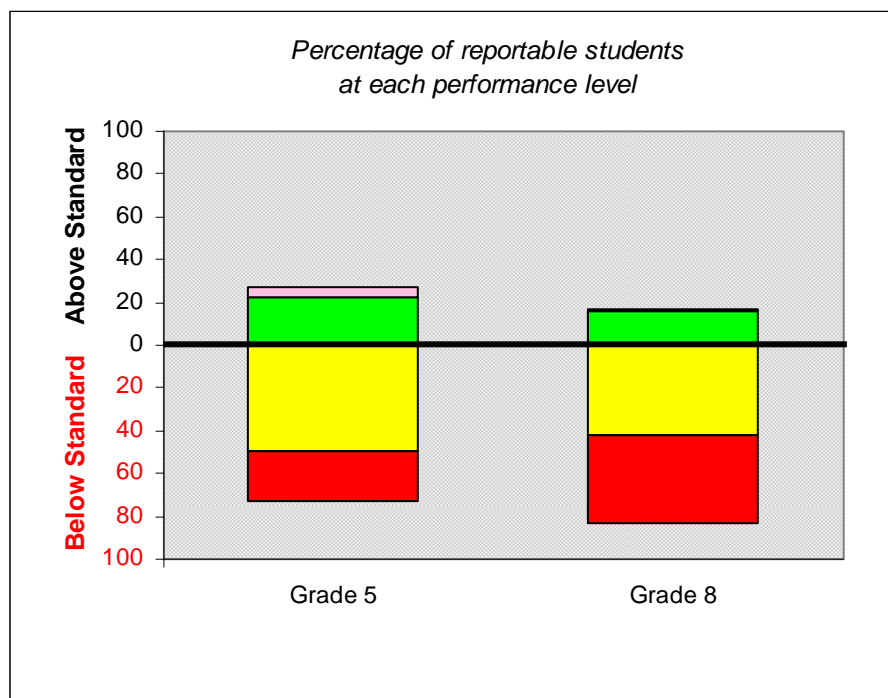
**Figure/Table 3: MCAS Math Test Performance by Grade, 2007**



		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 10
	Advanced	8	9	10	12	6	8	27
	Proficient	29	20	27	27	20	18	25
	Needs Improvement	27	45	34	29	30	31	33
	Warning/Failing	36	26	28	31	44	43	15
	Percent Attaining Proficiency	37	29	37	39	26	26	52

The percentage of Worcester students attaining proficiency in math in 2007 also varied by grade level, ranging from a low of 26 percent at grades 7 and 8 to a high of 52 percent at grade 10.

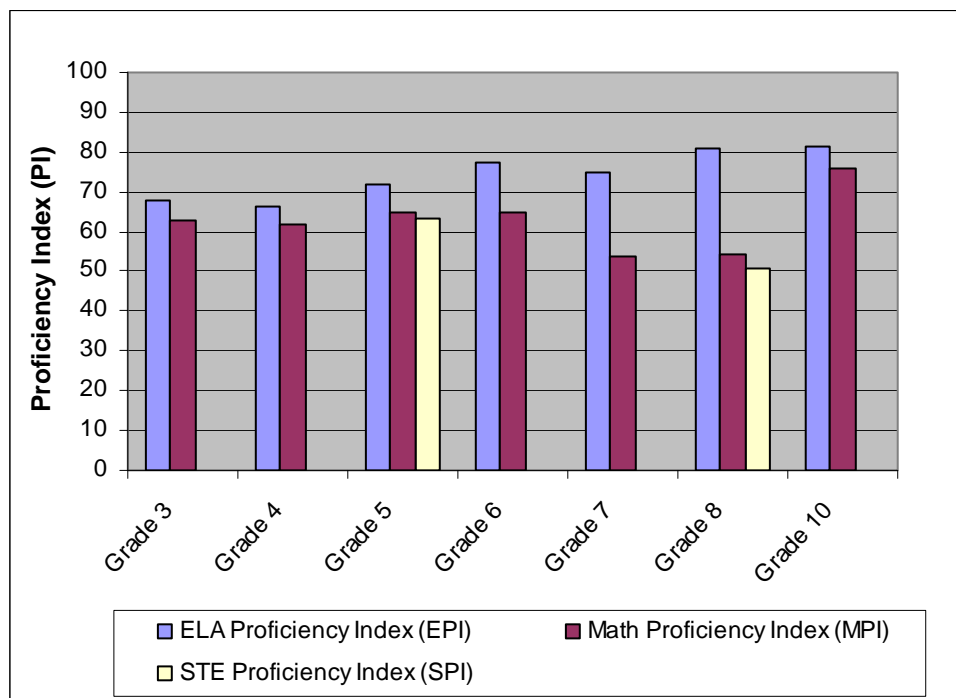
**Figure/Table 4: MCAS Science and Technology/Engineering (STE) Test Performance by Grade, 2007**



		Grade 5	Grade 8
	Advanced	5	1
	Proficient	22	15
	Needs Improvement	50	42
	Warning/Failing	24	42
	Percent Attaining Proficiency	27	16

In Worcester in 2007, 27 percent of grade 5 students attained proficiency in STE, and 16 percent of grade 8 students did so.

**Figure/Table 5: MCAS Proficiency Indices by Grade and Subject, 2007**

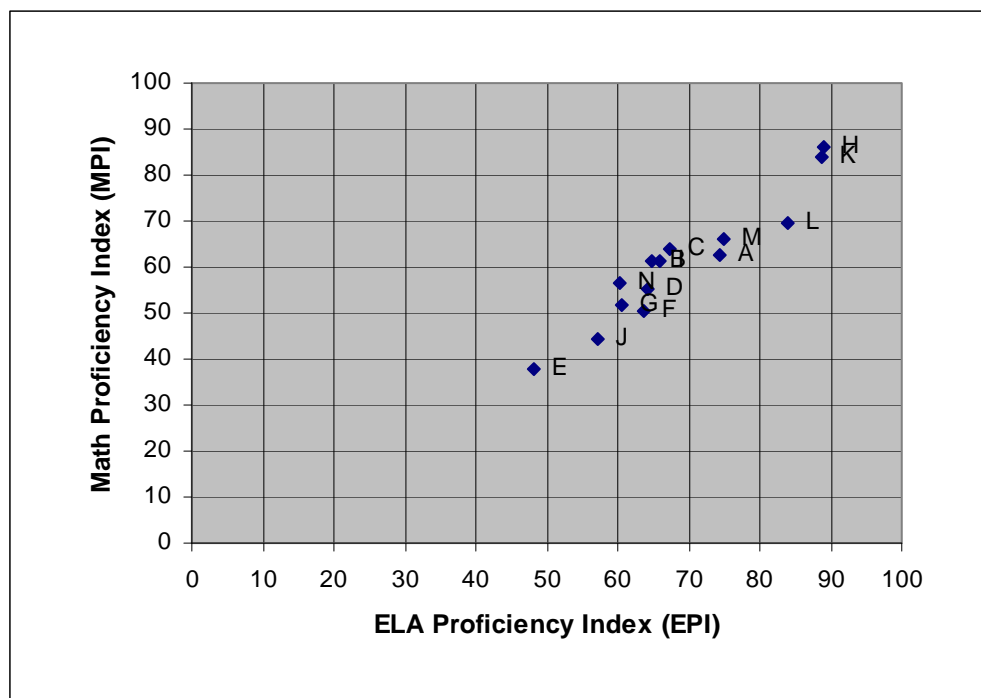


	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 10
ELA Proficiency Index (EPI)	67.7	66.5	72.1	77.4	74.7	80.7	81.2
Math Proficiency Index (MPI)	62.9	61.9	65.0	64.6	53.6	54.2	75.7
STE Proficiency Index (SPI)			63.4			51.0	

At every grade level, the performance of Worcester students on the 2007 MCAS tests was strongest in ELA. Worcester's ELA proficiency gap in 2007 ranged from a low of 19 PI points at grade 10 to a high of 34 PI points at grade 4. Worcester's math proficiency gap ranged from a low of 24 PI points at grade 10 to a high of 46 PI points at grades 7 and 8. Worcester's STE proficiency gap was 37 PI points at grade 5 and 49 PI points at grade 8.

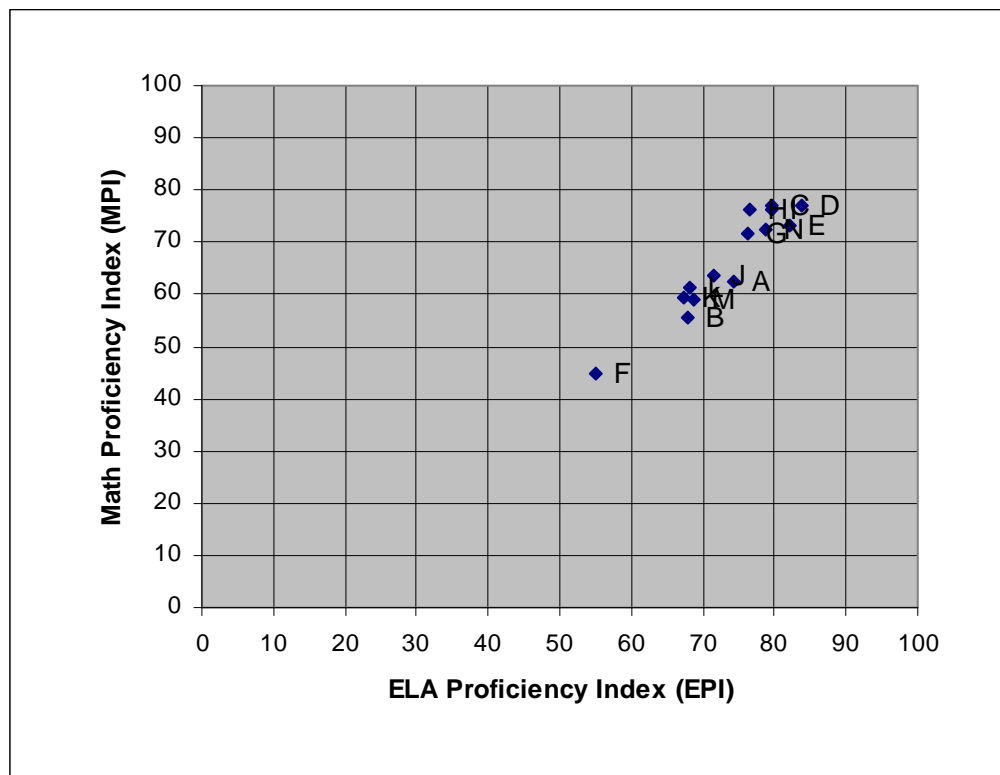
**Figures 6 A-D/Table 6: MCAS ELA Proficiency Index (EPI) vs. Math Proficiency Index (MPI) by School, 2007**

**A. Elementary Schools**



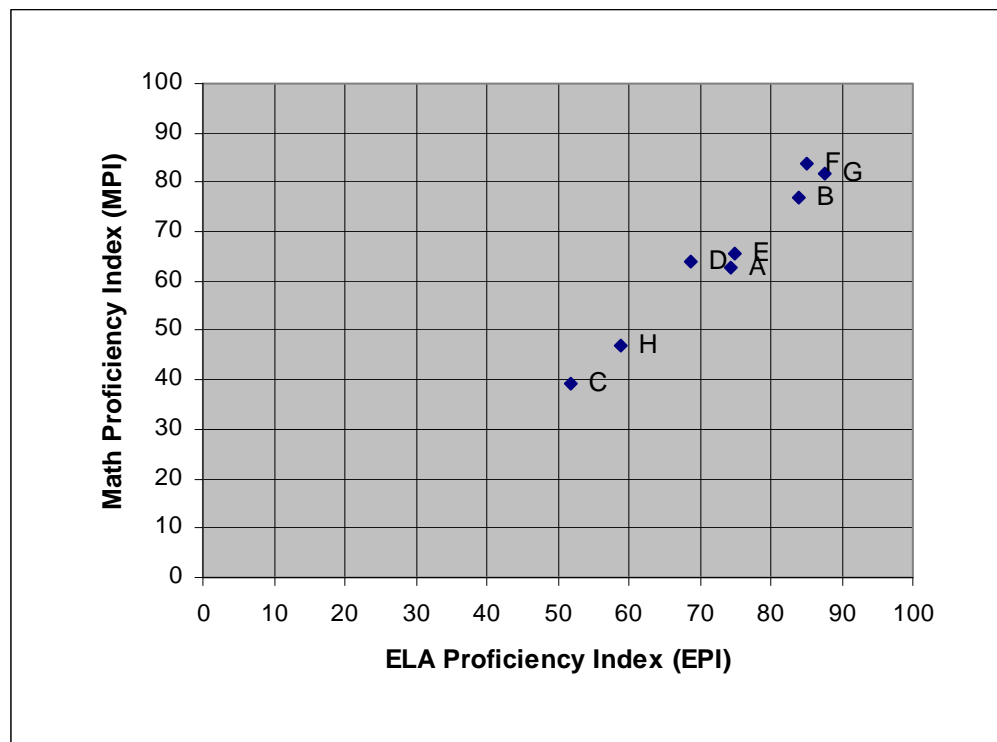
		ELA PI	Math PI	Number of Tests
A	WORCESTER DISTRICT AVERAGE	74.3	62.6	22,052
B	BELMONT STREET	64.9	61.1	405
C	BURNCOAT STREET PREP	67.3	63.8	260
D	CANTERBURY STREET	64.2	55.3	329
E	CHANDLER STREET	48.2	38.0	275
F	CHANDLER MAGNET	63.7	50.3	338
G	CITY VIEW	60.5	51.8	509
H	CLARK STREET	89.0	86.3	259
I	COLUMBUS PARK	65.8	61.5	324
J	ELM PARK COMMUNITY	57.1	44.4	449
K	FLAGG STREET	88.8	84.0	490
L	FRANCIS J MCGRATH ELEM	84.0	69.7	206
M	GATES LANE	74.8	65.9	599
N	GODDARD	60.2	56.4	666

## B. Elementary Schools, continued



		ELA PI	Math PI	Number of Tests
A	WORCESTER DISTRICT AVERAGE	74.3	62.6	22,052
B	GRAFTON STREET	67.8	55.6	366
C	HEARD STREET	79.7	77.1	338
D	JACOB HIATT MAGNET	83.9	77.0	433
E	LAKE VIEW	82.0	73.3	300
F	LINCOLN STREET	54.9	44.7	216
G	MAY STREET	76.2	71.8	339
H	MIDLAND STREET	76.5	76.3	238
I	NELSON PLACE	79.5	76.4	436
J	NORRBACK AVENUE	71.6	63.6	546
K	QUINSIGAMOND	67.3	59.5	685
L	RICE SQUARE	68.2	61.2	457
M	ROOSEVELT	68.6	59.0	661
N	TATNUCK MAGNET	78.9	72.4	521

### C. Elementary Schools, continued

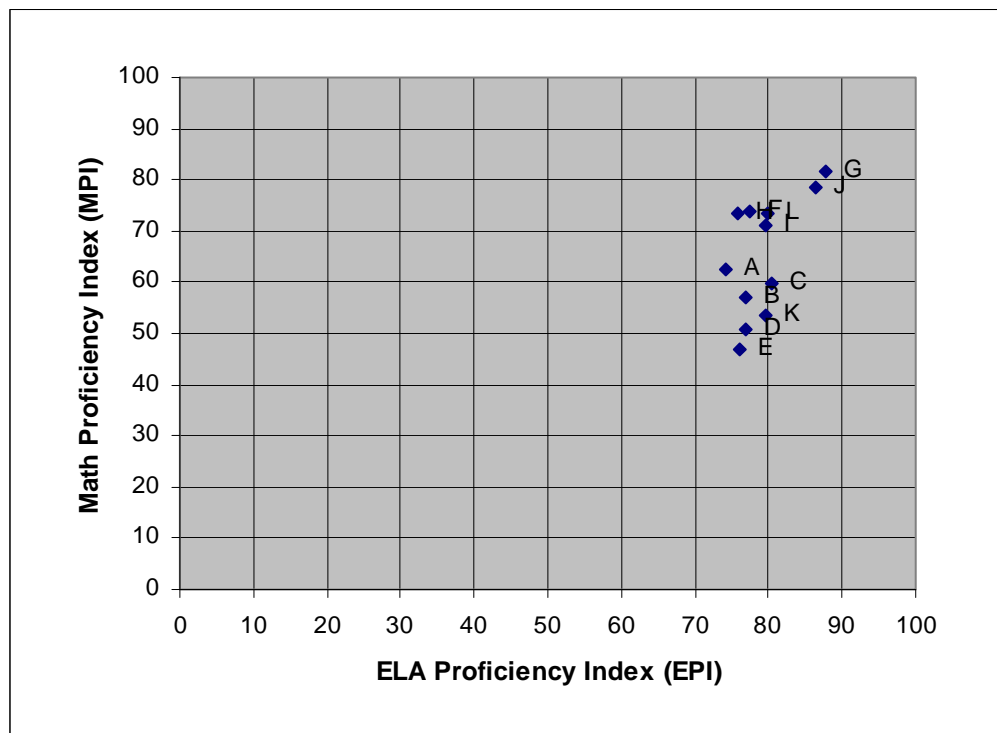


		ELA PI	Math PI	Number of Tests
A	WORCESTER DISTRICT AVERAGE	74.3	62.6	22,052
B	THORNDYKE ROAD	84.0	76.9	377
C	UNION HILL	51.8	39.3	332
D	VERNON HILL	68.8	64.0	389
E	WAWECUS ROAD	75.0	65.7	172
F	WEST TATNUCK	85.1	83.7	229
G	WORCESTER ARTS MAGNET	87.7	81.8	303
H	WOODLAND ACADEMY	59.0	47.1	390

Among Worcester's elementary schools, the ELA proficiency gap in 2007 ranged from a low of 11 PI points at Clark Street and Flagg Street to a high of 52 PI points at Chandler Street. Worcester's math proficiency gap ranged from a low of 14 PI points at Clark Street to a high of 62 PI points at Chandler Street.



## D. Middle and High Schools



		ELA PI	Math PI	Number of Tests
A	WORCESTER DISTRICT AVERAGE	74.3	62.6	22,052
B	BURNCOAT MIDDLE	77.0	56.9	1,191
C	FOREST GROVE MIDDLE	80.3	59.6	1,686
D	SULLIVAN MIDDLE	76.9	50.6	1,631
E	WORCESTER EAST MIDDLE	76.0	46.8	1,183
F	BURNCOAT SENIOR HIGH	77.4	73.8	543
G	DOHERTY HIGH	87.8	81.6	718
H	NORTH HIGH	75.7	73.3	489
I	SOUTH HIGH	79.5	70.9	577
J	UNIVERSITY PARK	86.5	78.5	260
K	CLAREMONT ACADEMY	79.5	53.7	341
L	TECHNICAL HIGH	79.9	73.5	596

Among Worcester's middle and high schools, the ELA proficiency gap in 2007 ranged from a low of 12 PI points at Doherty High to a high of 24 PI points at Worcester East Middle and North High. Worcester's math proficiency gap ranged from a low of 18 PI points at Doherty High to a high of 53 PI points at Worcester East Middle.

## **Equity of Achievement**

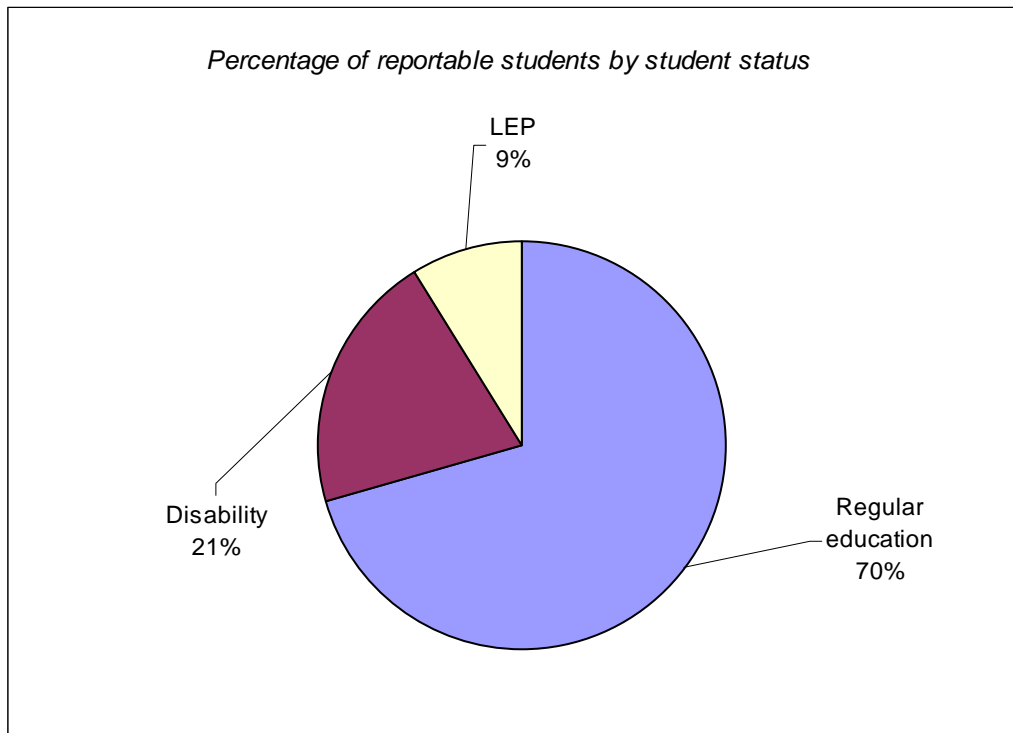
### **Do MCAS test results vary among subgroups of students?**

#### **Findings:**

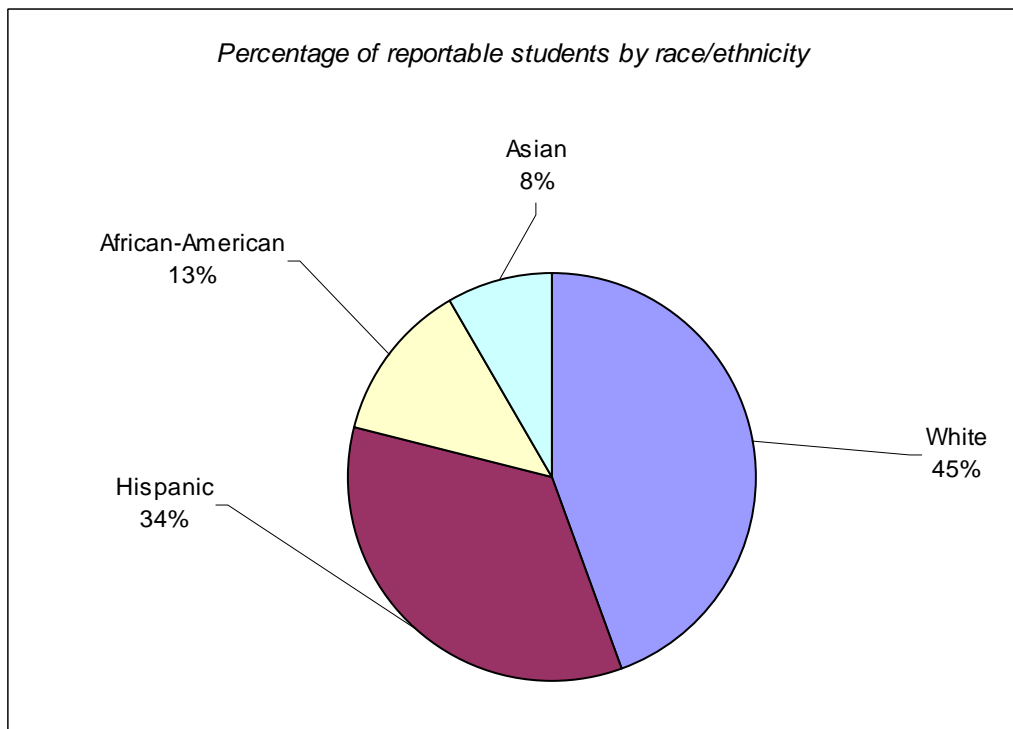
- MCAS performance in 2007 varied considerably among subgroups of Worcester students. Of the nine measurable subgroups in Worcester, the gap in performance between the highest- and lowest-performing subgroups was 36 PI points in ELA (non low-income students, limited English proficient students, respectively) and 41 PI points in math (Asian students, students with disabilities, respectively).
- The proficiency gaps in Worcester in 2007 in both ELA and math were wider than the district average for students with disabilities, limited English proficient (LEP) students, Hispanic students, African-American students, and low-income students (those participating in the free or reduced-cost lunch program).
- The proficiency gaps in ELA and math were narrower than the district average for regular education students, White students, Asian students, and non low-income students.

**Figures 7 A-C/Table 7: Student Population by Reportable Subgroups, 2007**

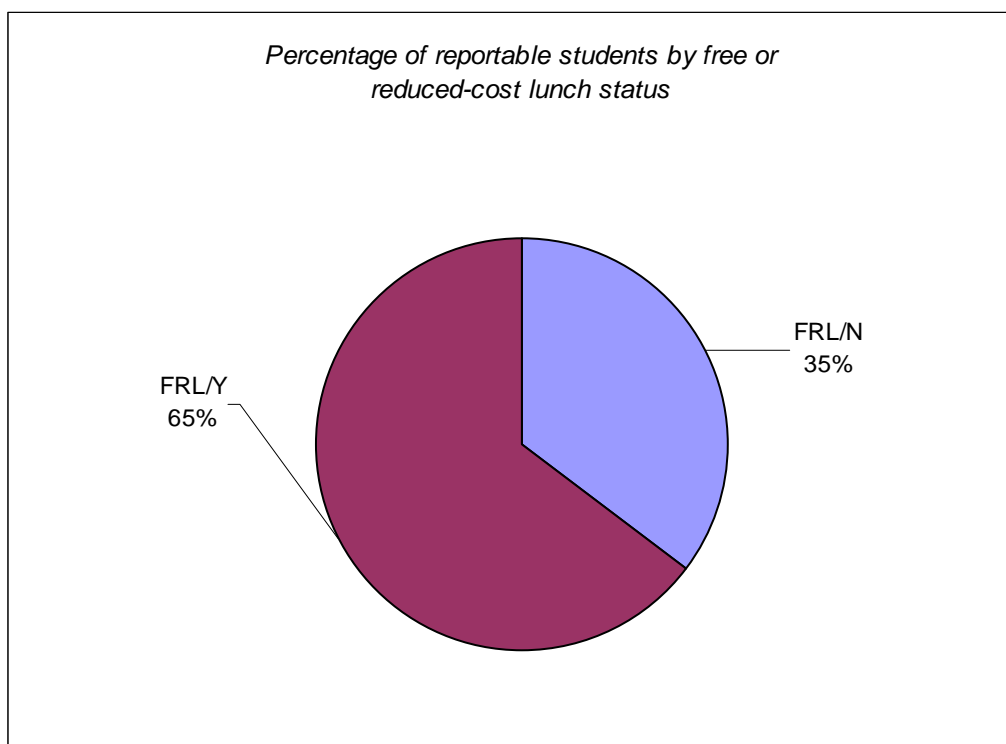
**A.**



**B.**



C.

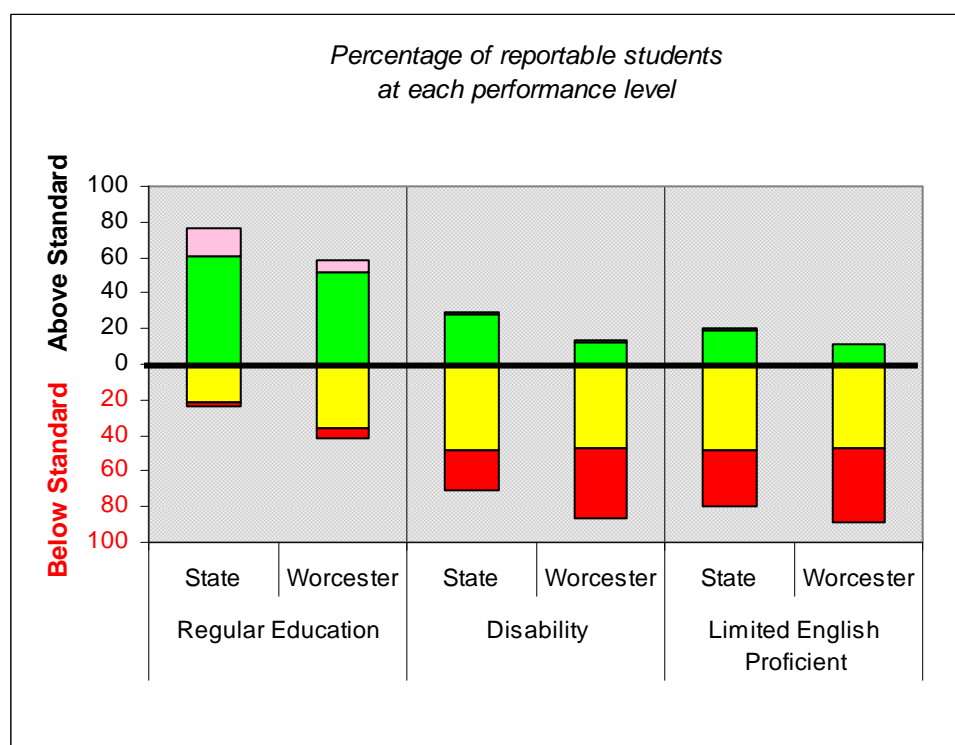


	Subgroup	Number of Students
Student status	Regular education	7,942
	Disability	2,312
	LEP	993
Race/ethnicity	White	4,898
	Hispanic	3,786
	African-American	1,389
	Asian	916
Free or reduced-cost lunch status	FRL/N	3,976
	FRL/Y	7,271

Note: Data include students in tested grades levels only.

In Worcester in 2007, 21 percent of the students tested were students with disabilities and nine percent were limited English proficient (LEP) students. The majority of the students tested were non-White, including 34 percent Hispanic, 13 percent African-American, and eight percent Asian. Sixty-five percent of the tested students participated in the free or reduced-cost lunch program.

**Figure/Table 8: MCAS English Language Arts (ELA) Test Performance by Student Status Subgroup, 2007**

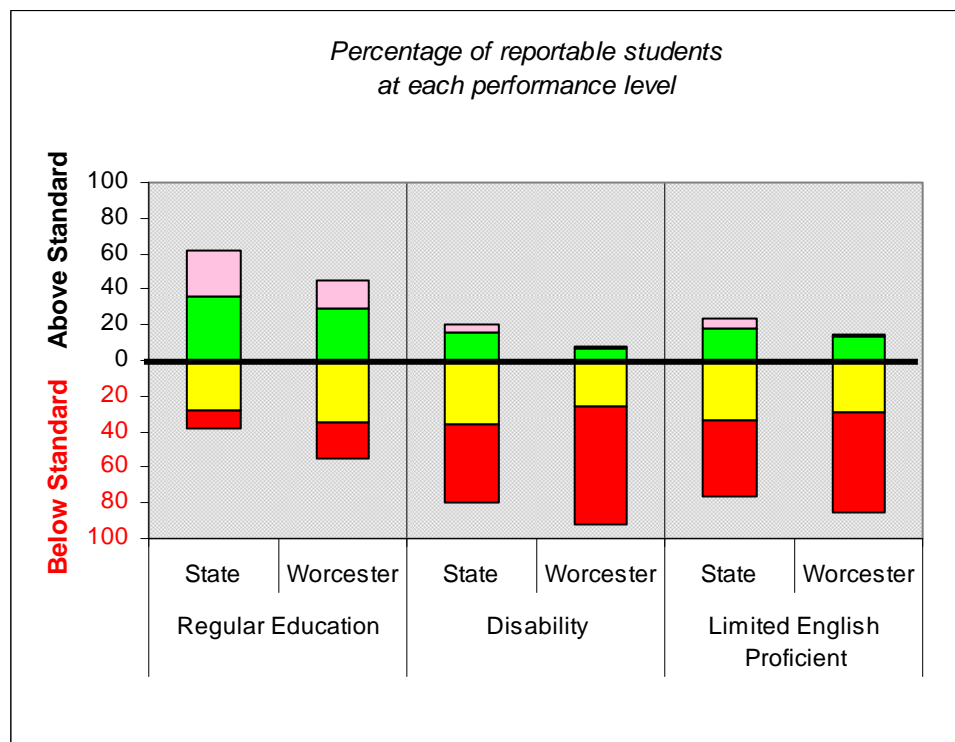


		Regular Education		Disability		Limited English Proficient	
		State	Worcester	State	Worcester	State	Worcester
	Advanced	16	7	2	1	1	1
	Proficient	60	52	28	13	19	11
	Needs Improvement	21	36	48	47	48	48
	Warning/Failing	2	5	22	40	31	41
Percent Attaining Proficiency		76	59	30	14	20	12
Proficiency Index (EPI)		91.3	83.6	64.8	50.8	57.3	48.9

In Worcester in 2007, the proficiency rate in ELA of regular education students was four times greater than that of students with disabilities and five times greater than that of limited English proficient students. Fifty-nine percent of regular education students, 14 percent of students with disabilities, and 12 percent of LEP students attained proficiency in ELA on the 2007 MCAS tests.

Worcester's ELA proficiency gap in 2007 was 16 PI points for regular education students, compared to nine PI points statewide; 49 PI points for students with disabilities, compared to 35 PI points statewide; and 51 PI points for LEP students, compared to 43 PI points statewide. The performance gap in ELA between Worcester's regular education students and students with disabilities was 33 PI points, and between regular education students and LEP students it was 35 PI points.

**Figure/Table 9: MCAS Math Test Performance by Student Status Subgroup, 2007**

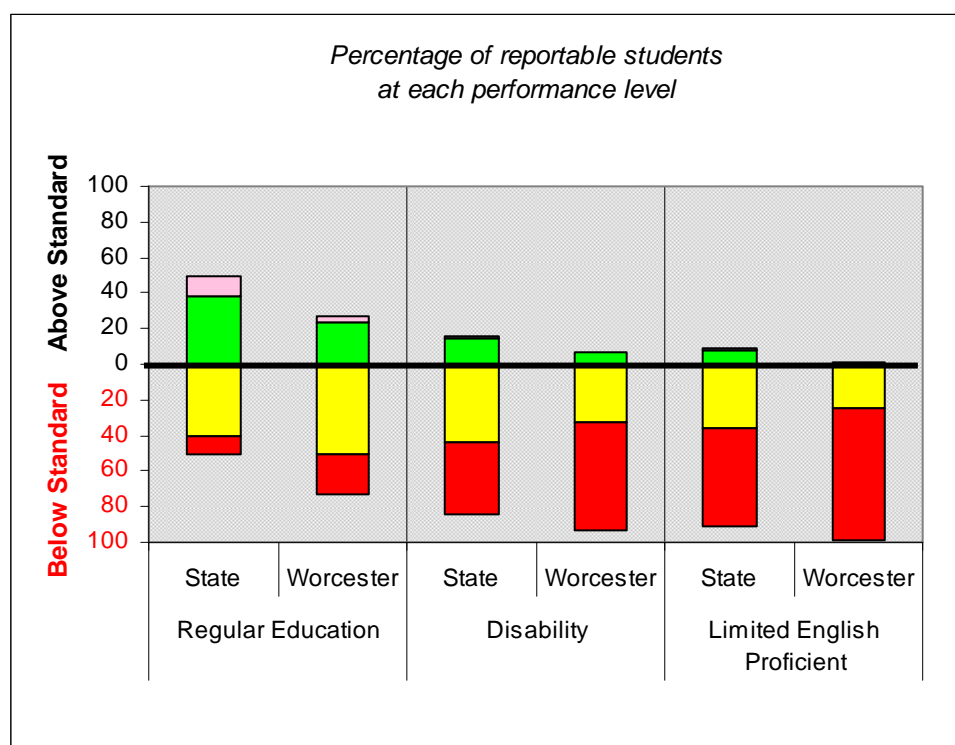


		Regular Education		Disability		Limited English Proficient	
		State	Worcester	State	Worcester	State	Worcester
	Advanced	26	15	4	1	6	2
	Proficient	36	29	16	7	18	13
	Needs Improvement	28	35	36	26	34	29
	Warning/Failing	10	20	44	66	43	56
Percent Attaining Proficiency		62	44	20	8	24	15
Proficiency Index (MPI)		82.2	71.5	51.0	37.1	53.0	44.6

In Worcester in 2007, the proficiency rate in math of regular education students was five and one-half times greater than that of students with disabilities and three times greater than that of limited English proficient students. Forty-four percent of regular education students, eight percent of students with disabilities, and 15 percent of LEP students attained proficiency in math on the MCAS tests in 2007.

Worcester's math proficiency gap in 2007 was 29 PI points for regular education students, compared to 18 PI points statewide; 63 PI points for students with disabilities, compared to 49 PI points statewide; and 55 PI points for LEP students, compared to 47 PI points statewide. The performance gap in math between Worcester's regular education students and students with disabilities was 34 PI points, and between regular education students and LEP students it was 27 PI points.

**Figure/Table 10: MCAS Science and Technology/Engineering (STE) Test Performance by Student Status Subgroup, 2007**

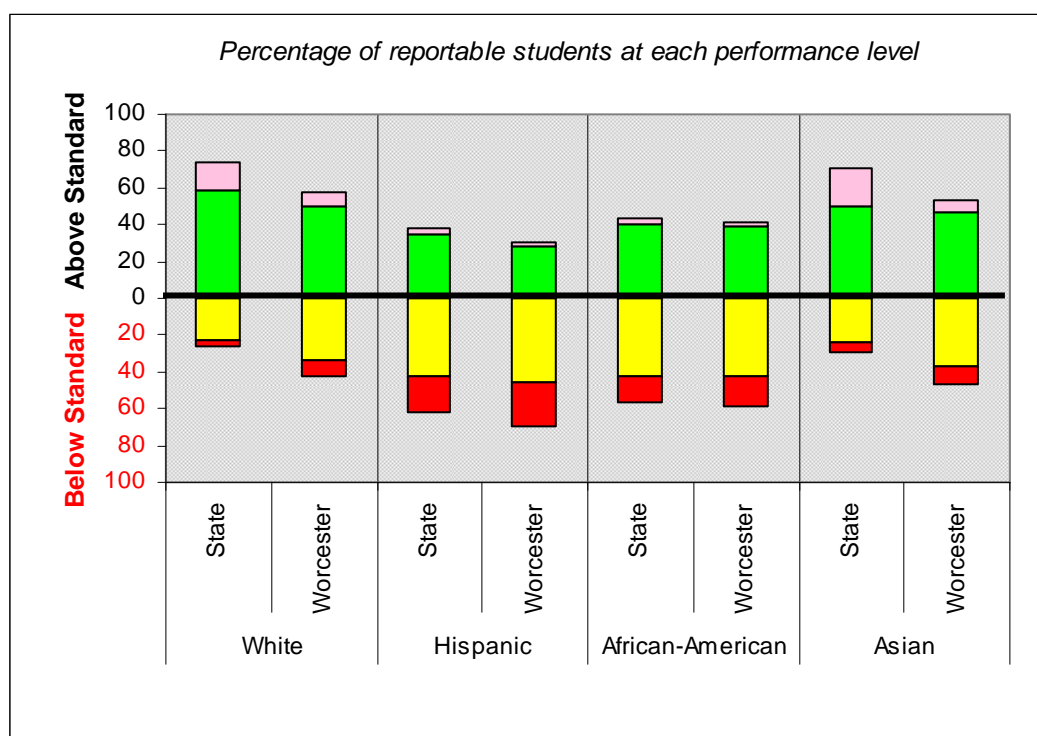


		Regular Education		Disability		Limited English Proficient	
		State	Worcester	State	Worcester	State	Worcester
	Advanced	10	4	2	1	1	1
	Proficient	39	23	14	6	8	0
	Needs Improvement	41	51	44	33	36	25
	Warning/Failing	10	22	40	60	55	75
Percent Attaining Proficiency		49	27	16	7	9	1
Proficiency Index (SPI)		77.5	63.7	51.8	39.8	42.2	31.4

In Worcester in 2007, the proficiency rate in science and technology/engineering of regular education students was four times greater than that of students with disabilities and twenty-seven times greater than that of LEP students. Twenty-seven percent of regular education students, seven percent of students with disabilities, and one percent of LEP students attained proficiency in STE on the 2007 MCAS tests.

Worcester's STE proficiency gap in 2007 was 36 PI points for regular education students, compared to 23 PI points statewide; 60 PI points for students with disabilities, compared to 48 PI points statewide; and 69 PI points for LEP students, compared to 58 PI points statewide. The performance gap in STE between Worcester's regular education students and students with disabilities was 24 PI points, and between regular education students and LEP students it was 32 PI points.

**Figure/Table 11: MCAS English Language Arts (ELA) Test Performance by Race/Ethnicity Subgroup, 2007**



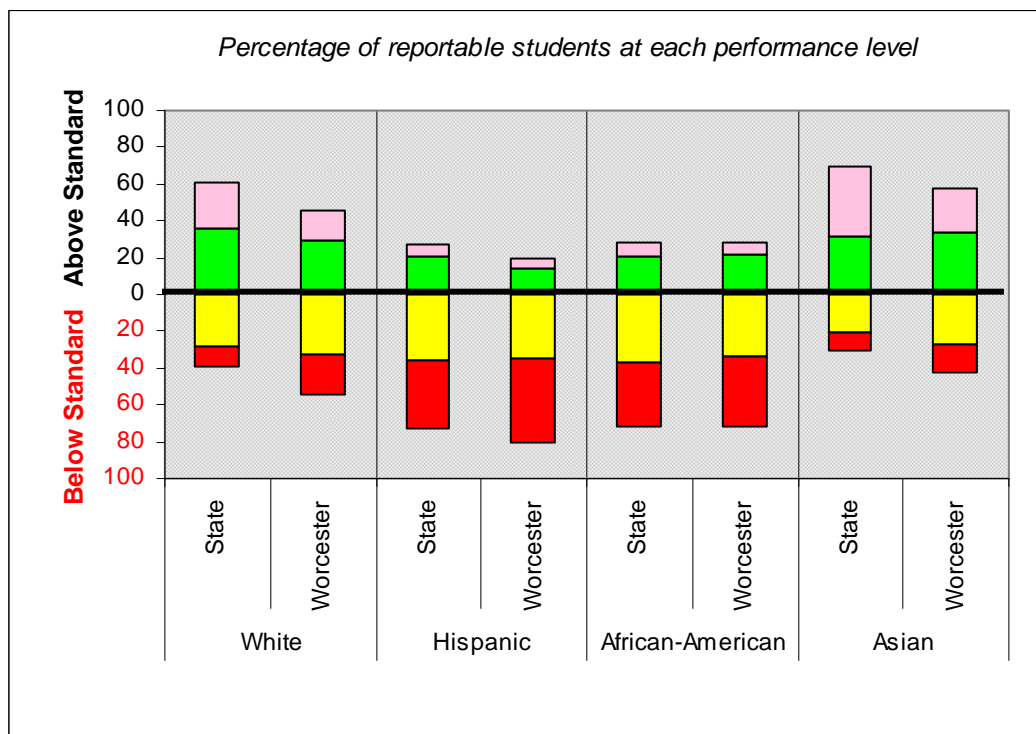
		White		Hispanic		African-American		Asian	
		State	Worcester	State	Worcester	State	Worcester	State	Worcester
	Advanced	16	8	3	2	4	2	21	7
	Proficient	58	50	35	28	40	39	50	47
	Needs Improvement	22	34	43	45	42	42	23	37
	Warning/Failing	4	9	19	25	14	17	5	9
Percent Attaining Proficiency		74	58	38	30	44	41	71	54
Proficiency Index (EPI)		89.8	81.7	69.8	64.1	73.9	71.8	87.7	80.3

In Worcester in 2007, performance on the MCAS ELA tests varied widely by race/ethnicity, as 58 percent of White students, 54 percent of Asian students, 41 percent of African-American students, and 30 percent of Hispanic students attained proficiency in ELA on the 2007 MCAS tests.

Worcester's ELA proficiency gap in 2007 was 18 PI points for White students, compared to 10 PI points statewide; 20 PI points for Asian students, compared to 12 PI points statewide; 28 PI points for African-American students, compared to 26 PI points statewide; and 36 PI points for Hispanic students, compared to 30 PI points statewide. The performance gap in ELA between Worcester's White and Asian students was two PI points, between White and African-American students it was 10 PI points, and between White and Hispanic students it was 18 PI points.



**Figure/Table 12: MCAS Math Test Performance by Race/Ethnicity Subgroup, 2007**

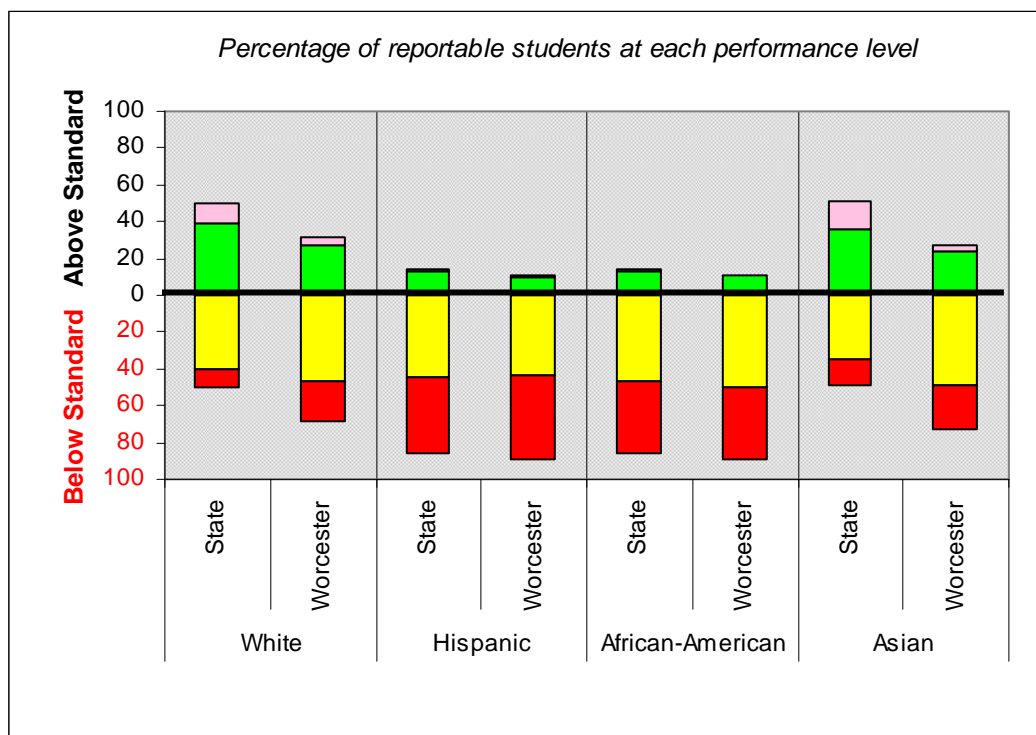


		White		Hispanic		African-American		Asian	
		State	Worcester	State	Worcester	State	Worcester	State	Worcester
	Advanced	25	16	7	5	7	6	39	23
	Proficient	35	29	20	15	21	22	31	34
	Needs Improvement	28	33	35	35	37	34	21	27
	Warning/Failing	11	22	37	46	35	38	9	15
Percent Attaining Proficiency		60	45	27	20	28	28	70	57
Proficiency Index (MPI)		80.9	70.5	56.9	50.4	58.4	57.1	85.4	78.4

In Worcester in 2007, performance on the MCAS math tests also varied widely by race/ethnicity, as 57 percent of Asian students, 45 percent of White students, 28 percent of African-American students, and 20 percent of Hispanic students attained proficiency in math on the MCAS tests in 2007.

Worcester's math proficiency gap in 2007 was 22 PI points for Asian students, compared to 15 PI points statewide; 30 PI points for White students, compared to 19 PI points statewide; 43 PI points for African-American students, compared to 42 PI points statewide; and 50 PI points for Hispanic students, compared to 43 PI points statewide. The performance gap in math between Worcester's Asian and White students was eight PI points, between Asian and African-American students it was 21 PI points, and between Asian and Hispanic students it was 28 PI points.

**Figure/Table 13: MCAS Science and Technology/Engineering (STE) Test Performance by Race/Ethnicity Subgroup, 2007**

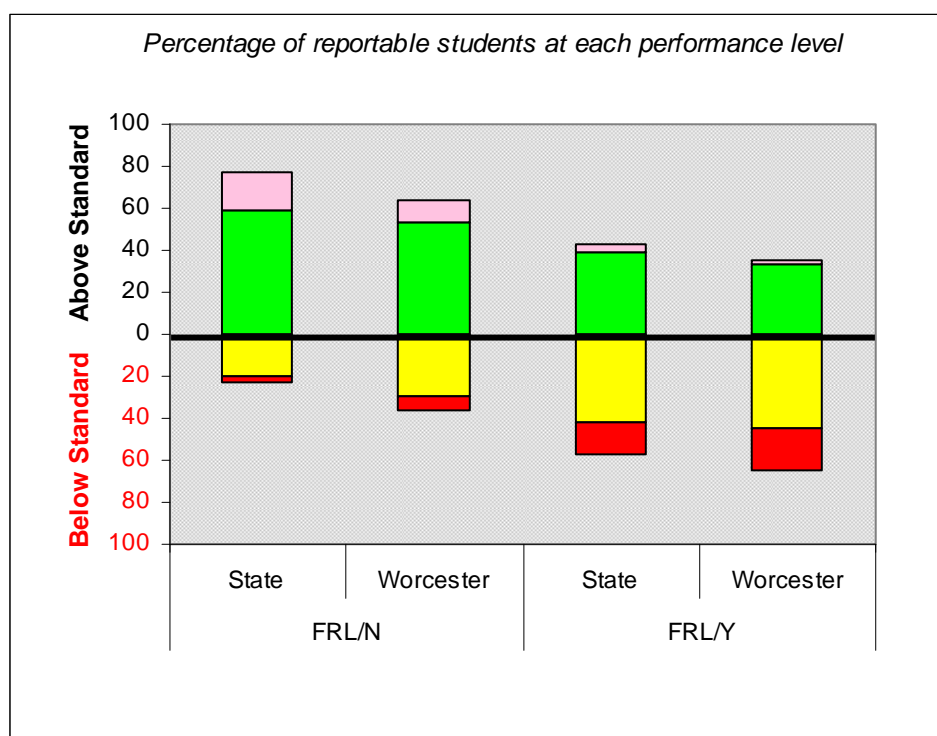


		White		Hispanic		African-American		Asian	
		State	Worcester	State	Worcester	State	Worcester	State	Worcester
	Advanced	10	5	2	1	1	1	15	3
	Proficient	39	27	13	10	13	11	36	24
	Needs Improvement	40	46	44	43	47	50	35	49
	Warning/Failing	10	22	41	47	39	39	14	24
Percent Attaining Proficiency		49	32	15	11	14	12	51	27
Proficiency Index (SPI)		78.0	65.6	50.6	46.9	51.3	50.4	76.8	63.4

In Worcester in 2007, performance on the MCAS STE tests likewise varied widely by race/ethnicity, as 32 percent of White students, 27 percent of Asian students, 12 percent of African-American students, and 11 percent of Hispanic students attained proficiency in STE on the 2007 MCAS tests.

Worcester's STE proficiency gap in 2007 was 34 PI points for White students, compared to 22 PI points statewide; 37 PI points for Asian students, compared to 23 PI points statewide; 50 PI points for African-American students, compared to 49 PI points statewide; and 53 PI points for Hispanic students, compared to 49 PI points statewide. The performance gap in STE between Worcester's White and Asian students was three PI points, between White and African-American students it was 16 PI points, and between White and Hispanic students it was 19 PI points.

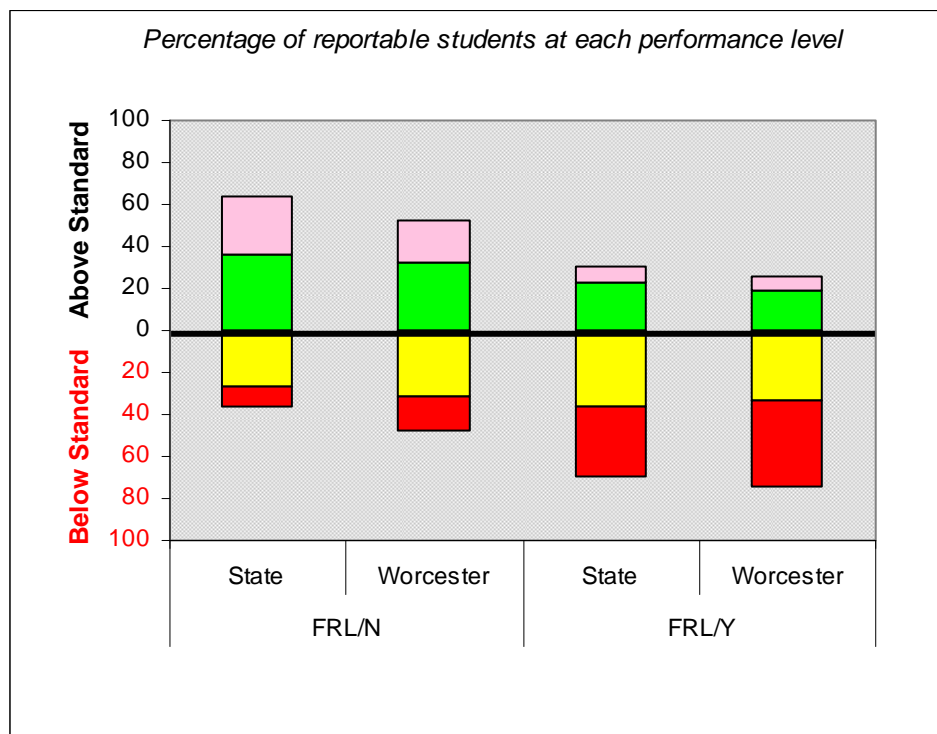
**Figure/Table 14: MCAS English Language Arts (ELA) Test Performance by Socioeconomic Status Subgroup, 2007**



		FRL/N		FRL/Y	
		State	Worcester	State	Worcester
	Advanced	17	10	4	2
	Proficient	59	54	39	33
	Needs Improvement	20	30	42	44
	Warning/Failing	3	6	15	20
Percent Attaining Proficiency		76	64	43	35
Proficiency Index (EPI)		91.0	85.0	73.4	68.4

In Worcester in 2007, 35 percent of low-income (FRL/Y) students attained proficiency in ELA on the MCAS tests, compared to 64 percent of non low-income (FRL/N) students. The ELA proficiency gap was 32 PI points for low-income students, compared to 27 PI points statewide; and 15 PI points for non low-income students, compared to nine PI points statewide. Worcester's performance gap in ELA between the two subgroups was 17 PI points.

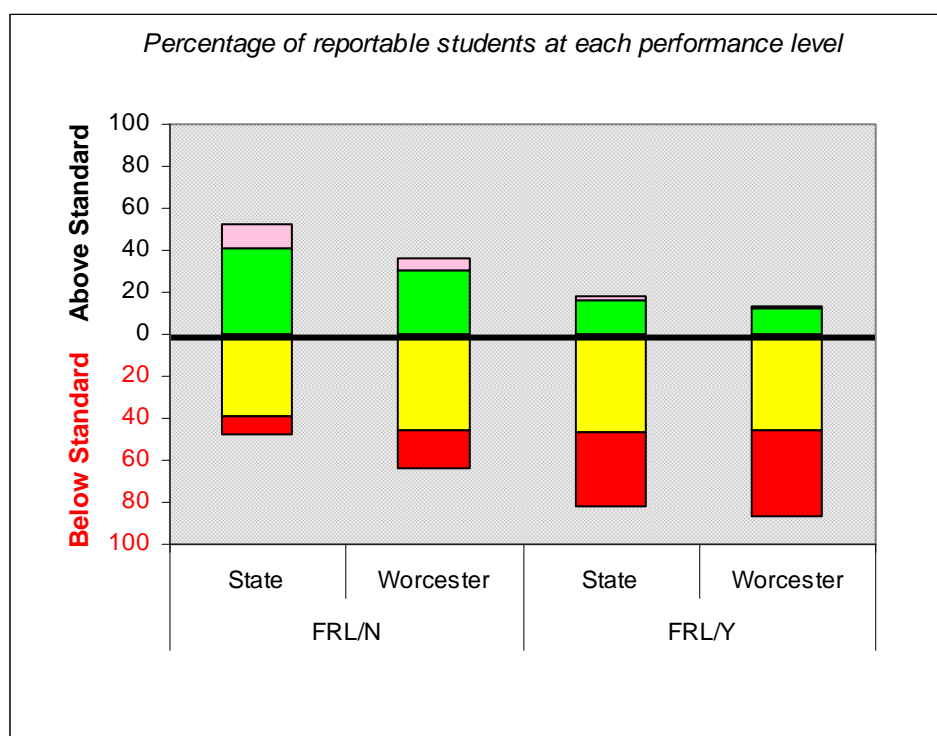
**Figure/Table 15: MCAS Math Test Performance by Socioeconomic Status Subgroup, 2007**



		FRL/N		FRL/Y	
		State	Worcester	State	Worcester
	Advanced	27	20	8	7
	Proficient	36	32	23	19
	Needs Improvement	27	32	37	34
	Warning/Failing	10	16	33	40
Percent Attaining Proficiency		63	52	31	26
Proficiency Index (MPI)		82.7	75.5	60.3	55.4

In Worcester in 2007, 26 percent of low-income (FRL/Y) students attained proficiency in math on the MCAS tests, compared to 52 percent of non low-income (FRL/N) students. The proficiency gap in math was 45 PI points for low-income students, compared to 40 PI points statewide; and 25 PI points for non low-income students, compared to 17 PI points statewide. The performance gap in math between the two subgroups in Worcester was 20 PI points.

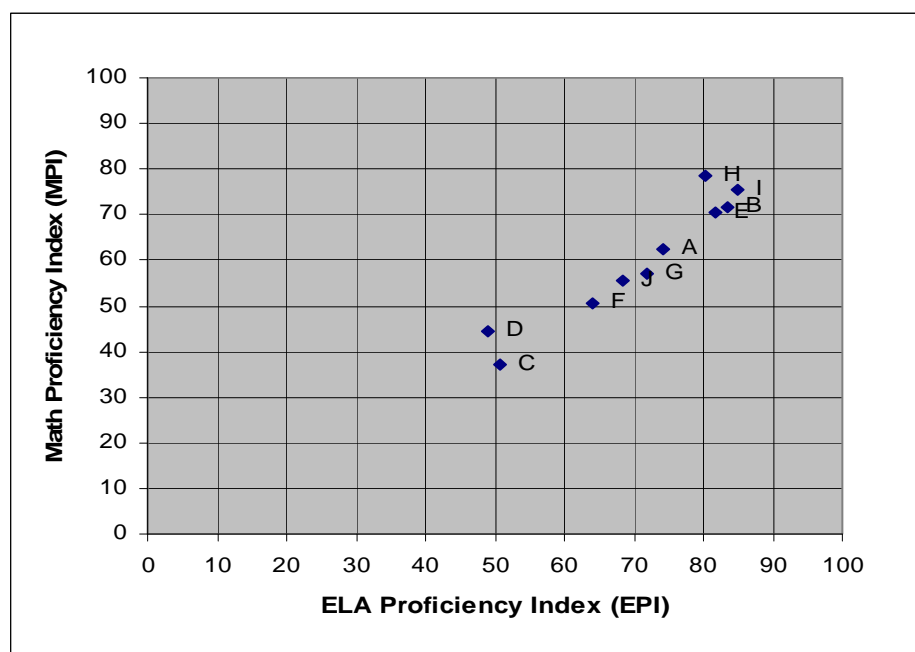
**Figure/Table 16: MCAS Science and Technology/Engineering (STE) Test Performance by Socioeconomic Status Subgroup, 2007**



		FRL/N		FRL/Y	
		State	Worcester	State	Worcester
	Advanced	11	6	2	1
	Proficient	41	30	17	12
	Needs Improvement	39	46	47	46
	Warning/Failing	9	18	34	41
Percent Attaining Proficiency		52	36	19	13
Proficiency Index (SPI)		79.4	69.3	55.2	50.7

In Worcester in 2007, 13 percent of low-income (FRL/Y) students attained proficiency in STE on the MCAS tests, compared to 36 percent of non low-income (FRL/N) students. The proficiency gap in STE was 49 PI points for low-income students, compared to 45 PI points statewide; and 31 PI points for non low-income students, compared to 21 PI points statewide. Worcester's performance gap in STE between the two subgroups was 18 PI points.

**Figure/Table 17: MCAS ELA Proficiency Index vs. Math Proficiency Index by Subgroup, 2007**



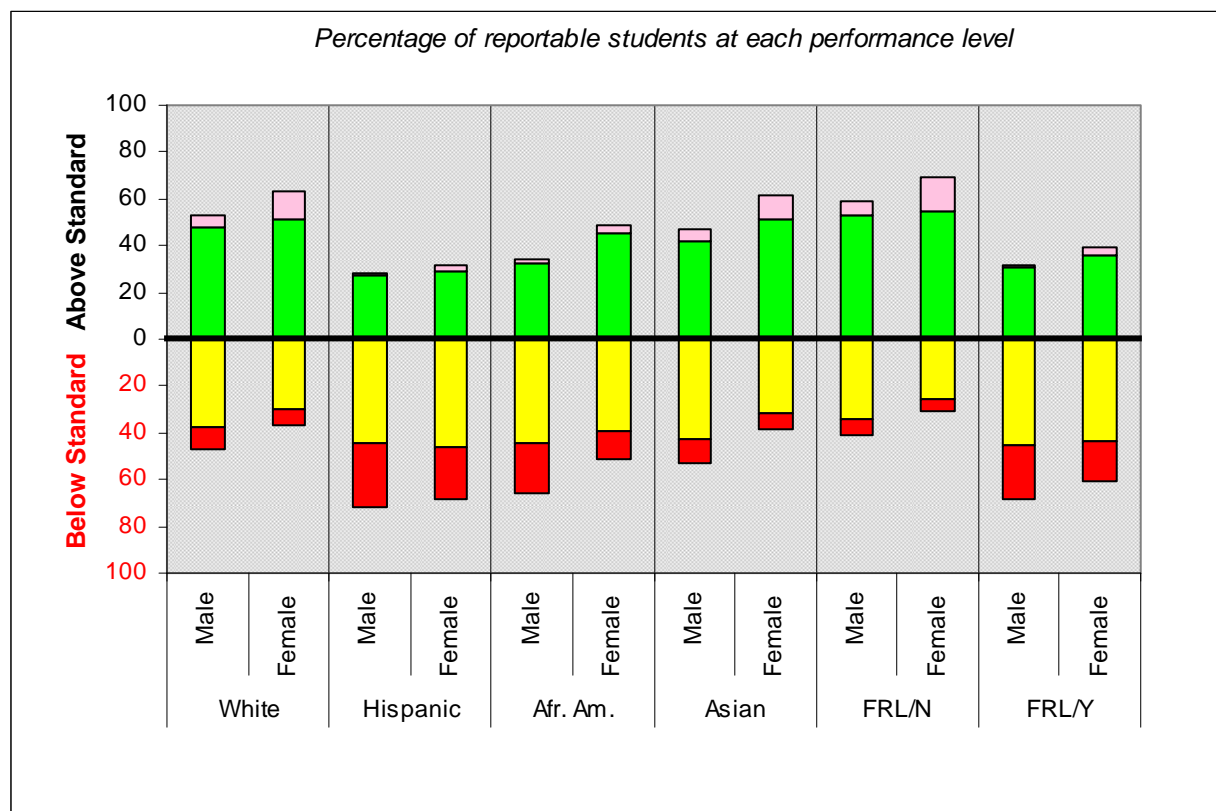
		ELA PI	Math PI	Number of Tests
A	Worcester	74.3	62.6	22,052
B	Regular Education	83.6	71.5	15,884
C	Disability	50.8	37.1	4,173
D	LEP	48.9	44.6	1,995
E	White	81.7	70.5	9,607
F	Hispanic	64.1	50.4	7,379
G	African-American	71.8	57.1	2,737
H	Asian	80.3	78.4	1,824
I	FRL/N	85.0	75.5	7,834
J	FRL/Y	68.4	55.4	14,214

The gap in performance between the highest- and lowest-performing subgroups in Worcester in 2007 was 36 PI points in ELA (non low-income students, LEP students, respectively) and 41 PI points in math (Asian students, students with disabilities, respectively).

Regular education students, White students, Asian students, and non low-income students in Worcester performed above the district average in both ELA and math in 2007, while students with disabilities, LEP students, Hispanic students, African-American students, and low-income students performed below the district average in both subjects.

Each subgroup in Worcester had stronger performance in ELA than in math on the 2007 MCAS tests. While the gap between performance in ELA and math for most subgroups in Worcester was nine or more PI points, this gap was only four PI points for LEP students and two PI points for Asian students.

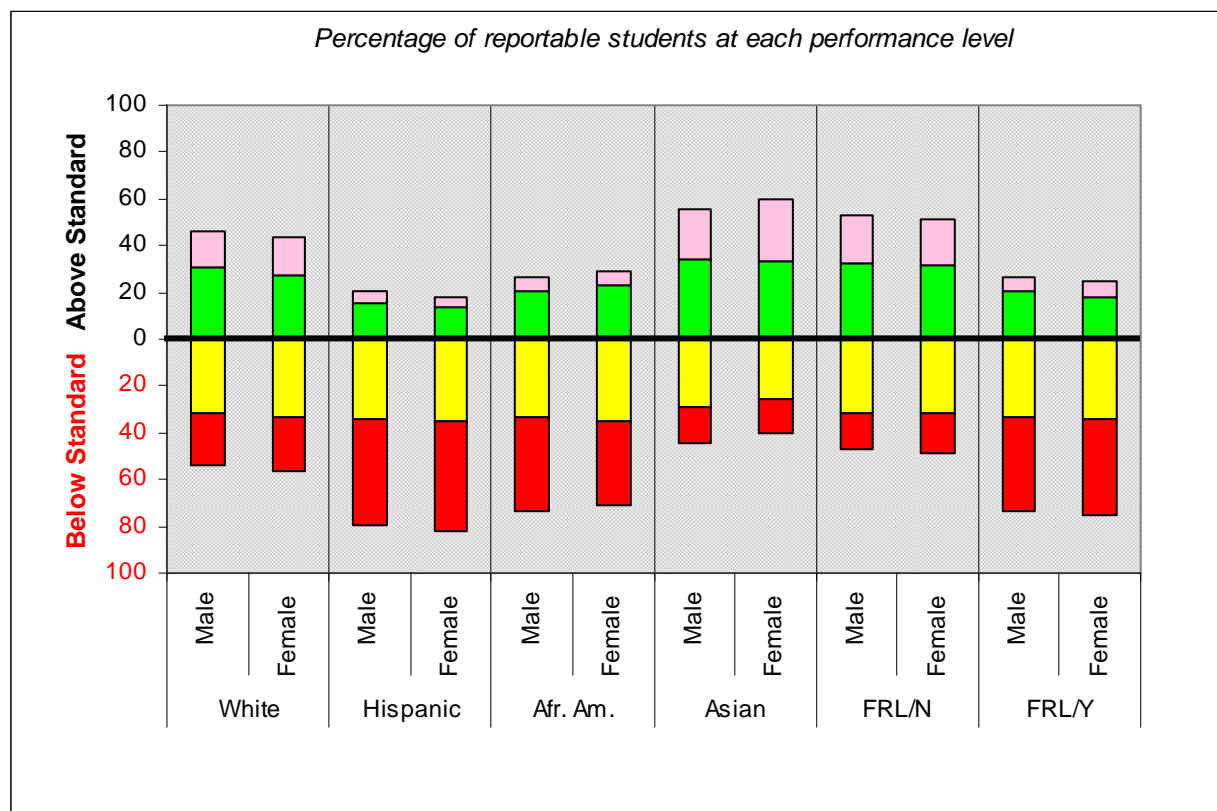
**Figure/Table 18: MCAS English Language Arts (ELA) Test Performance by Race/Ethnicity and Socioeconomic Status by Gender, 2007**



		White		Hispanic		African-American		Asian		FRL/N		FRL/Y	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	Advanced	5	12	1	2	1	4	5	10	6	14	1	3
	Proficient	48	52	27	29	33	45	42	51	53	55	31	36
	Needs Improvement	37	30	45	46	45	39	43	32	34	25	45	43
	Warning/ Failing	10	7	27	22	21	12	10	7	7	6	23	17
Percent Attaining Proficiency		53	64	28	31	34	49	47	61	59	69	32	39
Proficiency Index (EPI)		79.3	84.1	62.6	65.6	67.1	76.8	77.1	83.8	83.0	86.9	65.9	71.0
Number of Tests		2,406	2,397	1,848	1,850	706	665	470	443	1,917	1,997	3,640	3,482

On the 2007 MCAS tests in ELA, Worcester's female students outperformed male students in all racial/ethnic and socioeconomic subgroups. The performance gap in ELA between female and male students was narrowest for Hispanic students (three PI points) and widest for African-American students (10 PI points).

**Figure/Table 19: MCAS Math Test Performance by Race/Ethnicity and Socioeconomic Status by Gender, 2007**



		White		Hispanic		African-American		Asian		FRL/N		FRL/Y	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	Advanced	16	16	5	4	6	6	21	26	20	20	7	7
	Proficient	31	28	15	14	21	23	34	34	33	32	20	18
	Needs Improvement	32	34	34	35	33	35	29	26	31	32	33	35
	Warning/ Failing	22	23	45	47	40	36	16	15	16	17	40	41
Percent Attaining Proficiency		47	44	20	18	27	29	55	60	53	52	27	25
Proficiency Index (MPI)		71.3	69.8	51.3	49.5	55.4	58.9	77.6	79.2	75.9	75.1	56.0	54.8
Number of Tests		2,403	2,401	1,844	1,837	700	666	467	444	1,920	2,000	3,621	3,471

On the 2007 MCAS tests in math, Worcester's male students outperformed female students in all subgroups with the exception of the African-American and Asian subgroups. The performance gap in math between female and male students was narrowest for non low-income students (less than one PI point in favor of males) and widest for African-American students (four PI points in favor of females).



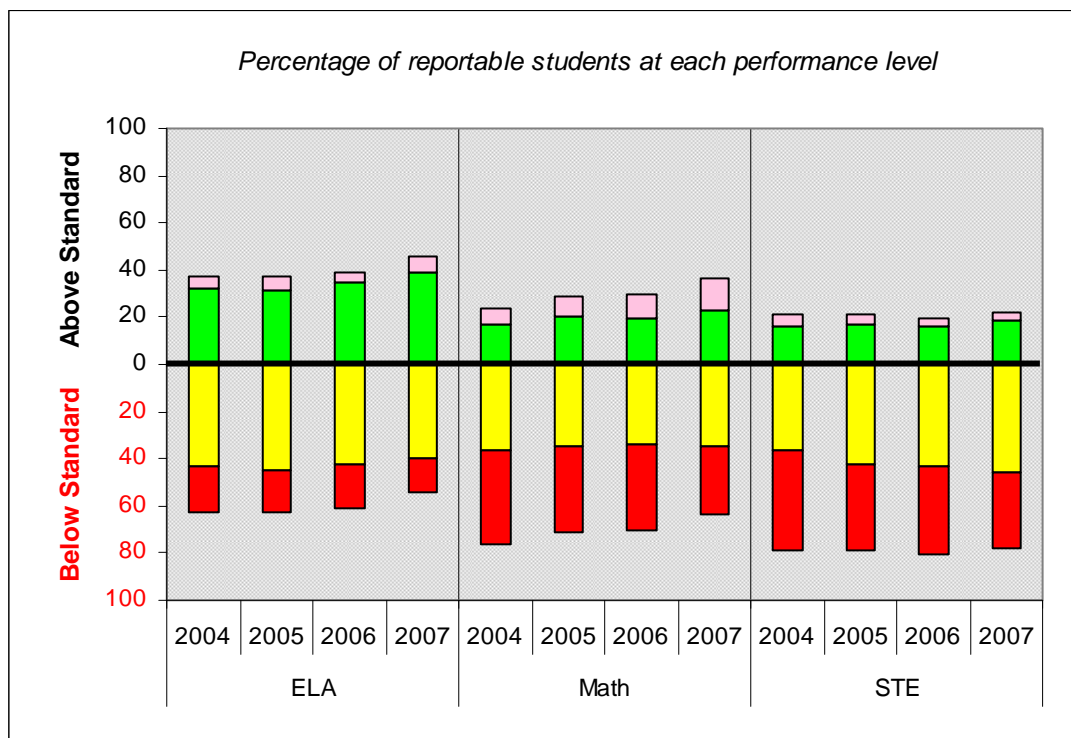
## **Improvement**

### **Has the district's MCAS test performance improved over time?**

#### **Findings:**

- Between 2004 and 2007, Worcester's MCAS performance showed improvement in English language arts, in math, and in science and technology/engineering.
- Over the three-year period 2004-2007, ELA performance in Worcester improved at an average of nearly two PI points annually. This resulted in an improvement rate, or a closing of the proficiency gap, of 17 percent, a rate lower than that required to achieve AYP. The percentage of students attaining proficiency in ELA increased from 37 percent in 2004 to 45 percent in 2007.
- Math performance in Worcester showed more improvement over this period, at an average of three PI points annually. This resulted in an improvement rate of 21 percent, also a rate lower than that required to achieve AYP. The percentage of students attaining proficiency in math rose from 24 percent in 2004 to 37 percent in 2007.
- Between 2004 and 2007, Worcester had an increase in STE performance of more than one PI point annually, resulting in an improvement rate of nine percent. The percentage of students attaining proficiency in STE increased from 21 percent in 2004 to 22 percent in 2007.

**Figure/Table 20: MCAS Test Performance by Subject, 2004-2007**



		ELA				Math				STE			
		2004	2005	2006	2007	2004	2005	2006	2007	2004	2005	2006	2007
	Advanced	5	5	4	6	7	9	10	14	5	4	4	3
	Proficient	32	32	35	39	17	20	20	23	16	17	16	19
	Needs Improvement	43	45	42	40	37	34	34	35	36	42	43	46
	Warning/ Failing	20	18	19	15	40	37	37	29	42	36	38	33
Percent Attaining Proficiency		37	37	39	45	24	29	30	37	21	21	20	22
Proficiency Index (PI)		68.8	69.5	69.7	74.0	54.6	57.8	58.1	64.0	52.9	55.1	54.1	57.2

Note: Trend data include grades at which testing was administered in each subject in all four years; therefore, the 2007 ELA and math data may differ from those reported in Figure/Table 1.

The percentage of Worcester students attaining proficiency in ELA increased from 37 percent in 2004 to 45 percent in 2007. The proficiency gap in ELA narrowed from 31 to 26 PI points over this period, resulting in an improvement rate of 19 percent, a rate lower than that required to make AYP.

The percentage of Worcester students attaining proficiency in math increased from 24 percent in 2004 to 37 percent in 2007. The proficiency gap in math narrowed from 45 to 36 PI points over this period, resulting in an improvement rate of 21 percent, also a rate lower than that required to make AYP.

The percentage of Worcester students attaining proficiency in STE increased from 21 percent in 2004 to 22 percent in 2007. The proficiency gap in STE narrowed by nine percent over this period, from 47 to 43 PI points.

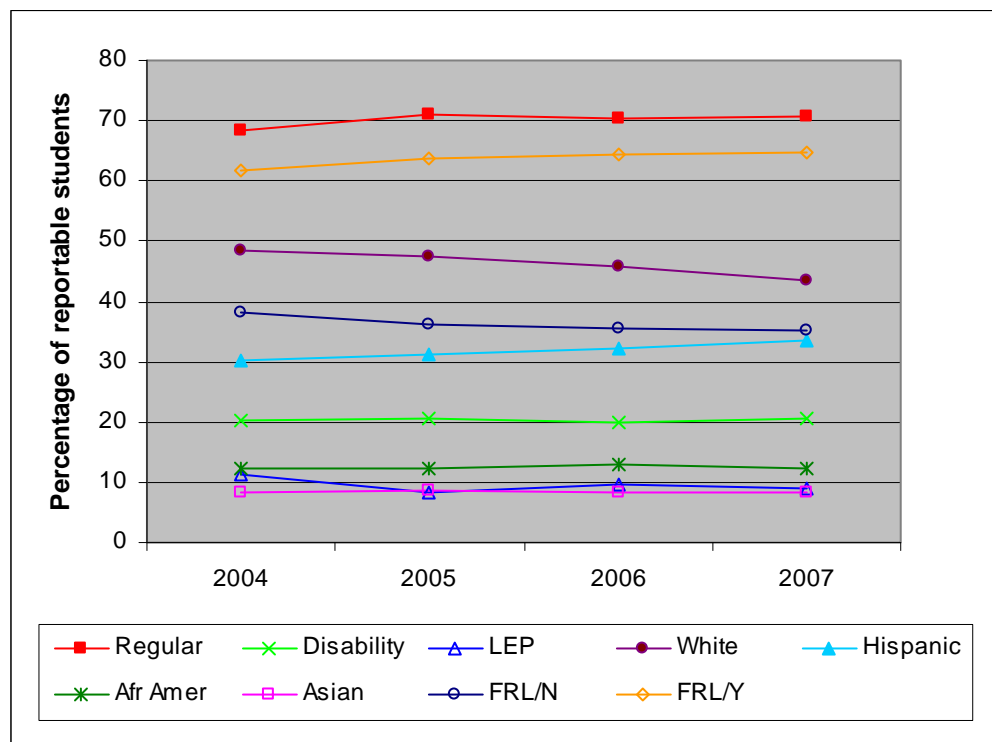
## **Equity of Improvement**

**Has the equity of MCAS test performance among the district's student subgroups improved over time?**

### **Findings:**

- In Worcester, the performance gap between the highest- and lowest-performing subgroups in ELA widened from 31 PI points in 2004 to 40 PI points in 2007, and the performance gap between the highest- and lowest-performing subgroups in math widened from 31 to 43 PI points over this period.
- All student subgroups with the exception of LEP students had improved performance in ELA between 2004 and 2007. The most improved subgroup in ELA was Asian students.
- In math, the performance of all student subgroups in Worcester with the exception of LEP students improved between 2004 and 2007. The most improved subgroup in math also was Asian students.

**Figure/Table 21: Student Population by Reportable Subgroups, 2004-2007**



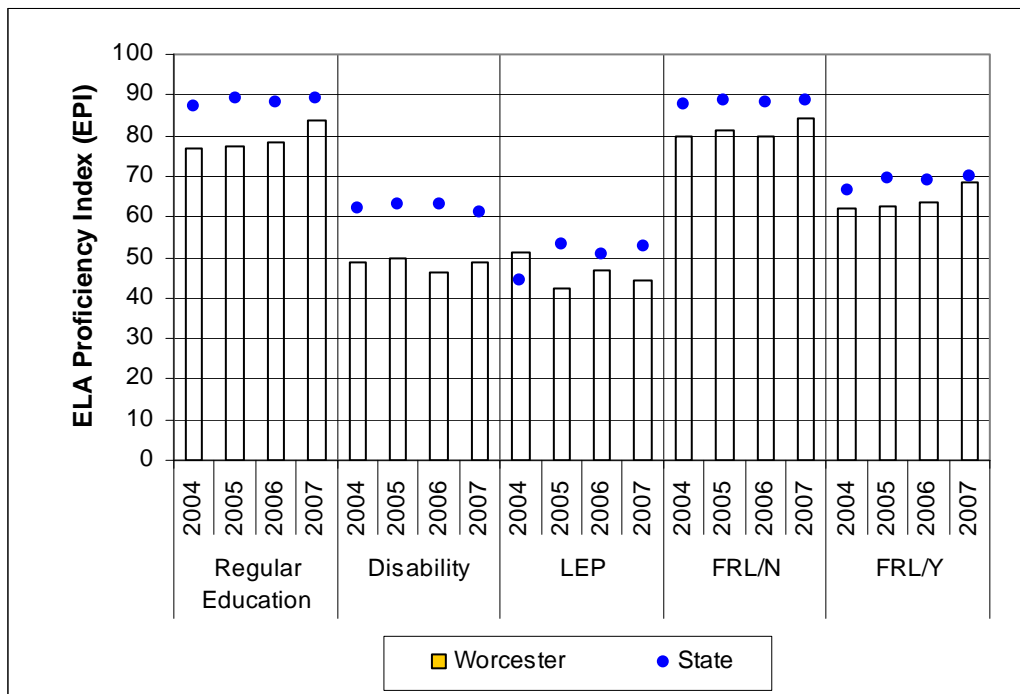
	Number of Students				Percentage of students			
	2004	2005	2006	2007	2004	2005	2006	2007
Worcester	10,766	10,221	11,845	11,247	100.0	100.0	100.0	100.0
Regular	7,367	7,265	8,333	7,942	68.4	71.1	70.4	70.6
Disability	2,173	2,091	2,376	2,312	20.2	20.5	20.1	20.6
LEP	1,226	865	1,136	993	11.4	8.5	9.6	8.8
White	5,217	4,854	5,407	4,898	48.5	47.5	45.6	43.5
Hispanic	3,257	3,173	3,814	3,786	30.3	31.0	32.2	33.7
Afr Amer	1,327	1,248	1,525	1,389	12.3	12.2	12.9	12.3
Asian	882	867	982	916	8.2	8.5	8.3	8.1
FRL/N	4,118	3,714	4,224	3,976	38.3	36.3	35.7	35.4
FRL/Y	6,648	6,507	7,621	7,271	61.7	63.7	64.3	64.6

Note: The 2007 percentages of students reported here may differ from those reported in Figure/Table 7; the percentages shown here are based on the total number of students in the district, whereas the percentages shown in Figure 7 are based on the number of students in reportable subgroups. Data include students in tested grades only.

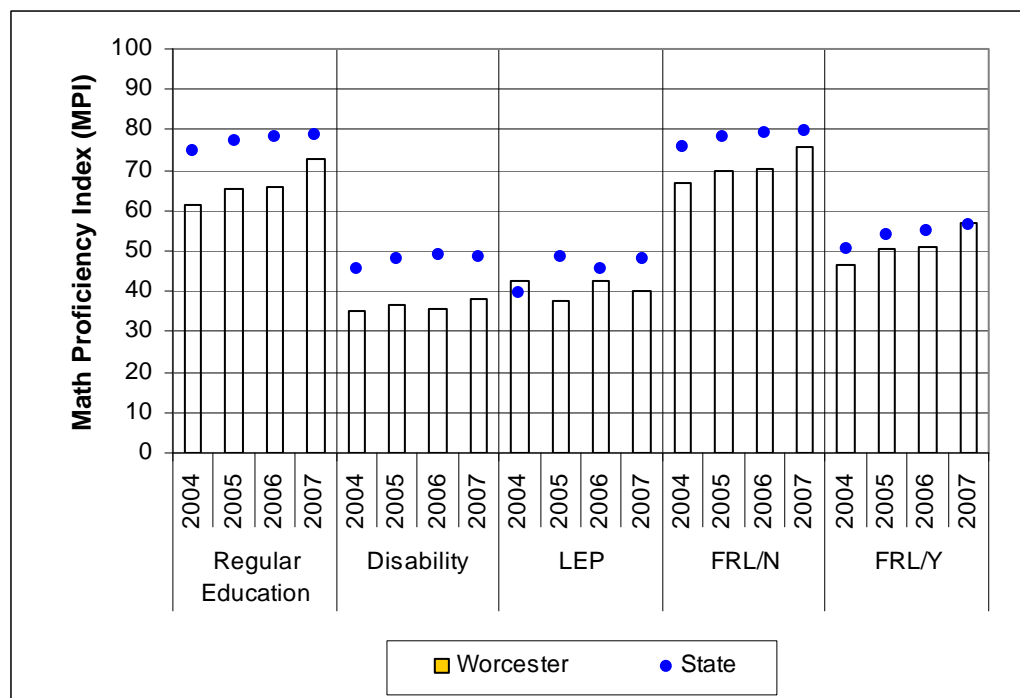
Between 2004 and 2007 in Worcester, the proportion of regular education students increased by two percentage points, students with disabilities increased by less than one-half percentage point, and LEP students decreased by nearly three percentage points. The proportion of White students decreased by five percentage points, Hispanic students increased by more than three percentage points, African-American students remained the same, and Asian students remained the same. The proportion of low-income students increased by three percentage points.

**Figures 22 A-D/Table 22: MCAS Proficiency Indices by Subgroup, 2004-2007**

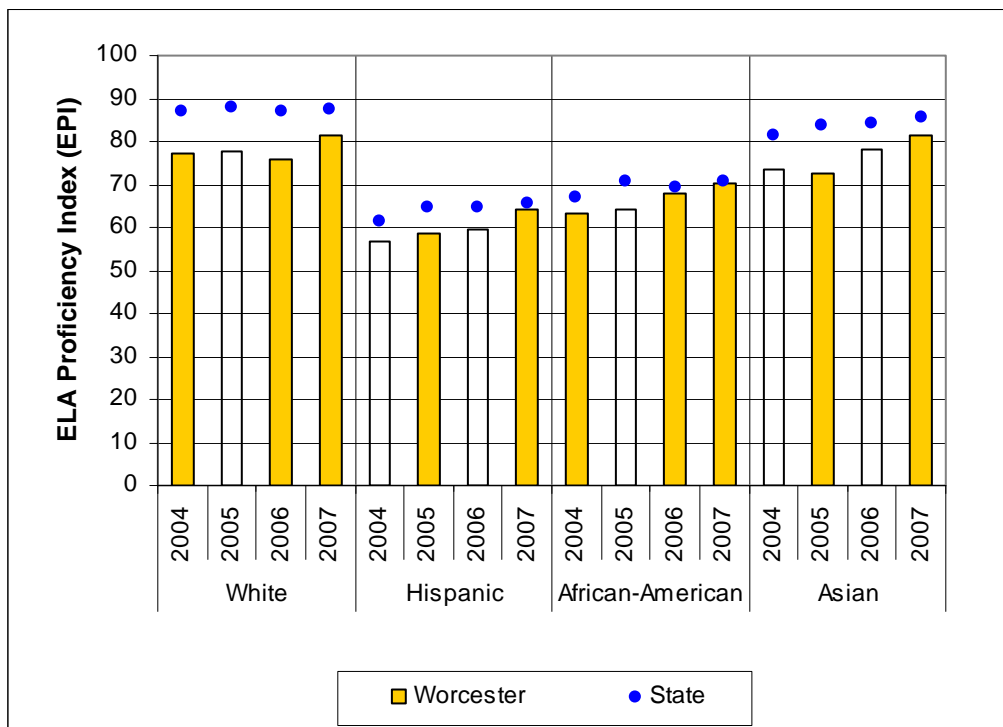
**A. ELA Proficiency Index (EPI) by Student Status and Free or Reduced-Cost Lunch Subgroups**



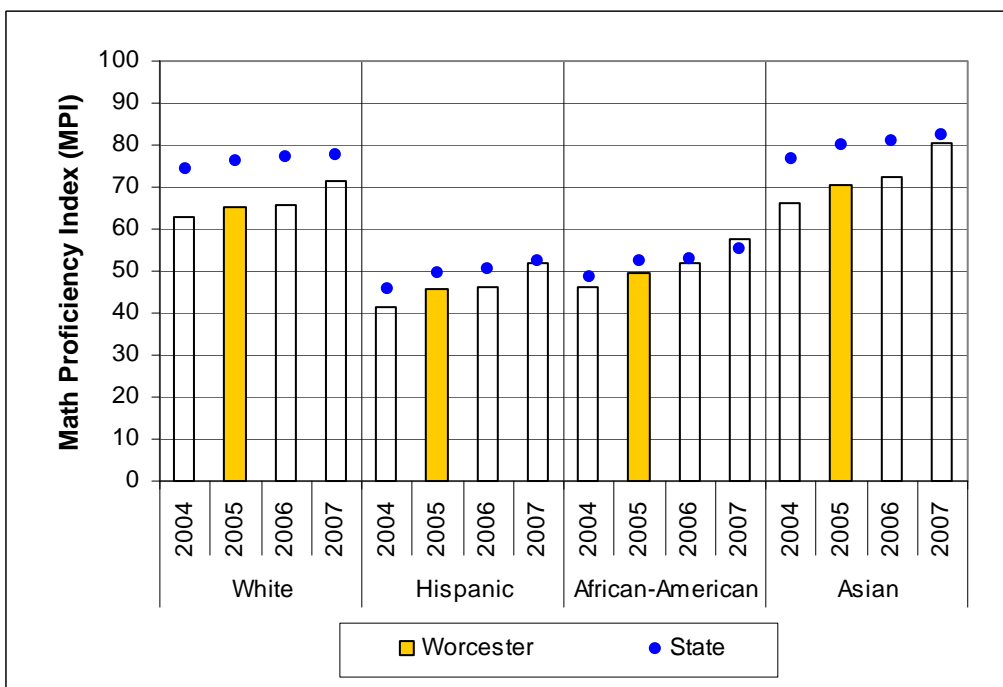
**B. Math Proficiency Index (MPI) by Student Status and Free or Reduced-Cost Lunch Subgroups**



### C. ELA Proficiency Index (EPI) by Race/Ethnicity Subgroup



### D. Math Proficiency Index (MPI) by Race/Ethnicity Subgroup



State				Worcester			
Subgroup	Year	EPI	MPI	Subgroup	Year	EPI	MPI
Regular Education	2004	87.3	74.7	Regular Education	2004	77.0	61.6
	2005	89.2	77.4		2005	77.4	65.1
	2006	88.3	78.2		2006	78.4	65.9
	2007	89.0	78.9		2007	83.6	72.7
Disability	2004	62.1	45.3	Disability	2004	48.6	35.3
	2005	63.3	47.9		2005	49.6	36.5
	2006	62.9	49.0		2006	46.2	35.7
	2007	61.2	48.4		2007	48.8	37.9
LEP	2004	44.4	39.6	LEP	2004	51.3	42.8
	2005	53.4	48.4		2005	42.4	37.7
	2006	50.9	45.6		2006	46.8	42.4
	2007	52.9	47.9		2007	44.2	40.2
FRL/N	2004	87.9	75.9	FRL/N	2004	79.9	66.6
	2005	88.9	78.1		2005	81.3	69.9
	2006	88.3	79.0		2006	80.0	70.3
	2007	88.6	79.7		2007	84.2	75.8
FRL/Y	2004	66.6	50.7	FRL/Y	2004	62.1	46.7
	2005	69.7	53.9		2005	62.7	50.5
	2006	68.8	55.0		2006	63.7	50.9
	2007	70.0	56.3		2007	68.3	57.1
White	2004	86.9	74.4	White	2004	77.1	63.0
	2005	87.7	76.2		2005	77.6	65.4
	2006	87.1	77.2		2006	75.6	65.8
	2007	87.4	77.8		2007	81.2	71.4
Hispanic	2004	61.4	45.7	Hispanic	2004	56.9	41.5
	2005	64.8	49.3		2005	58.7	45.8
	2006	64.6	50.6		2006	59.7	46.1
	2007	65.8	52.2		2007	64.4	52.1
African-American	2004	67.1	48.4	African-American	2004	63.2	46.3
	2005	70.5	52.3		2005	64.2	49.7
	2006	69.4	52.8		2006	68.1	51.8
	2007	70.9	55.2		2007	70.2	57.5
Asian	2004	81.2	76.6	Asian	2004	73.4	66.2
	2005	83.7	80.2		2005	72.7	70.5
	2006	84.3	81.0		2006	78.0	72.3
	2007	85.5	82.5		2007	81.6	80.5

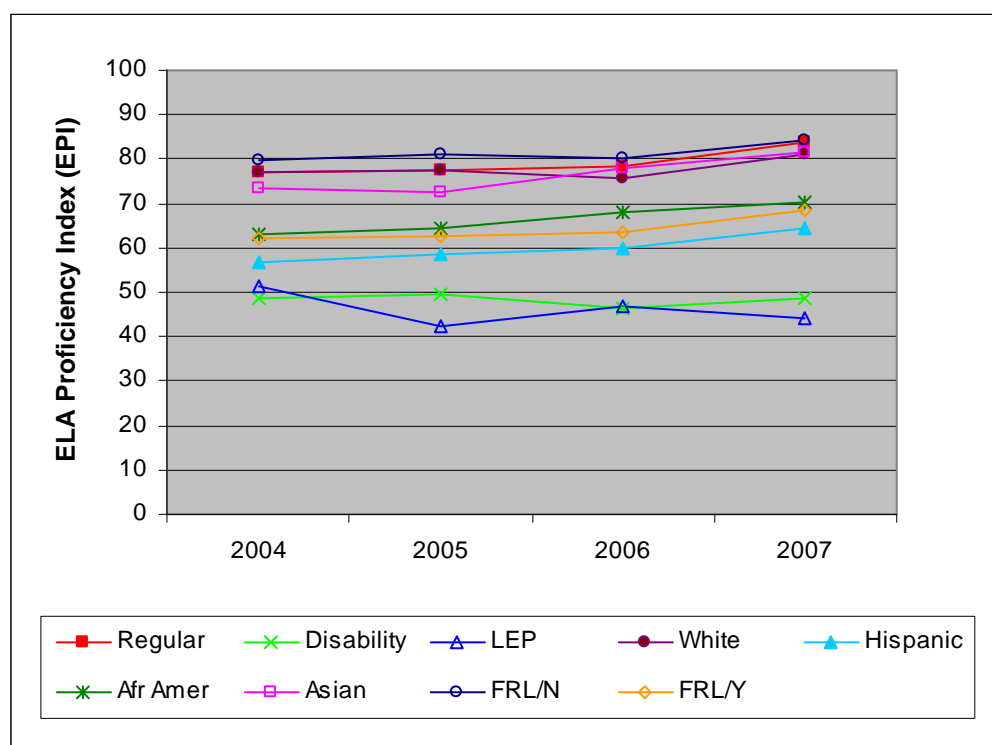
Note: Trend data include grades at which testing was administered in each subject in all four years; therefore, 2007 data may differ from those reported in Figure/Tables 8, 9, 11, 12, 14, and 15.

In Worcester, all student subgroups had greater improvement (or less of a decline as in the case of LEP students) in math than in ELA between 2004 and 2007. Over this period, the performance of regular education students improved by six and one-half PI points in ELA and by 11 PI points in math. The performance of students with disabilities improved by less than one-half PI point in ELA and improved by two and one-half points in math. The performance of LEP students declined by seven PI points in ELA and by two and one-half points in math. The performance of non low-income students improved by four PI points in ELA and by nine PI points in math, and the performance of low-income students improved by six PI points in ELA and by 10 and one-half points in math.

Also during this period, the performance of White students improved by four PI points in ELA and by eight and one-half points in math. The performance of Hispanic students improved by seven and one-half PI points in ELA and by 10 and one-half points in math. The performance of African-American students improved by seven PI points in ELA and by 11 PI points in math. The performance of Asian students improved by eight PI points in ELA and by 14 points in math.



**Figure/Table 23: MCAS English Language Arts Proficiency Index (EPI) by Subgroup, 2004-2007**



	ELA Proficiency Index (EPI)				Percent Attaining Proficiency			
	2004	2005	2006	2007	2004	2005	2006	2007
Worcester	68.8	69.5	69.7	74.0	37	37	39	45
Regular	77.0	77.4	78.4	83.6	48	47	49	58
Disability	48.6	49.6	46.2	48.8	11	11	9	11
LEP	51.3	42.4	46.8	44.2	16	6	10	7
White	77.1	77.6	75.6	81.2	49	50	47	57
Hispanic	56.9	58.7	59.7	64.4	21	21	24	31
Afr Amer	63.2	64.2	68.1	70.2	27	28	35	38
Asian	73.4	72.7	78.0	81.6	44	42	53	55
FRL/N	79.9	81.3	80.0	84.2	54	56	54	63
FRL/Y	62.1	62.7	63.7	68.3	27	26	30	36

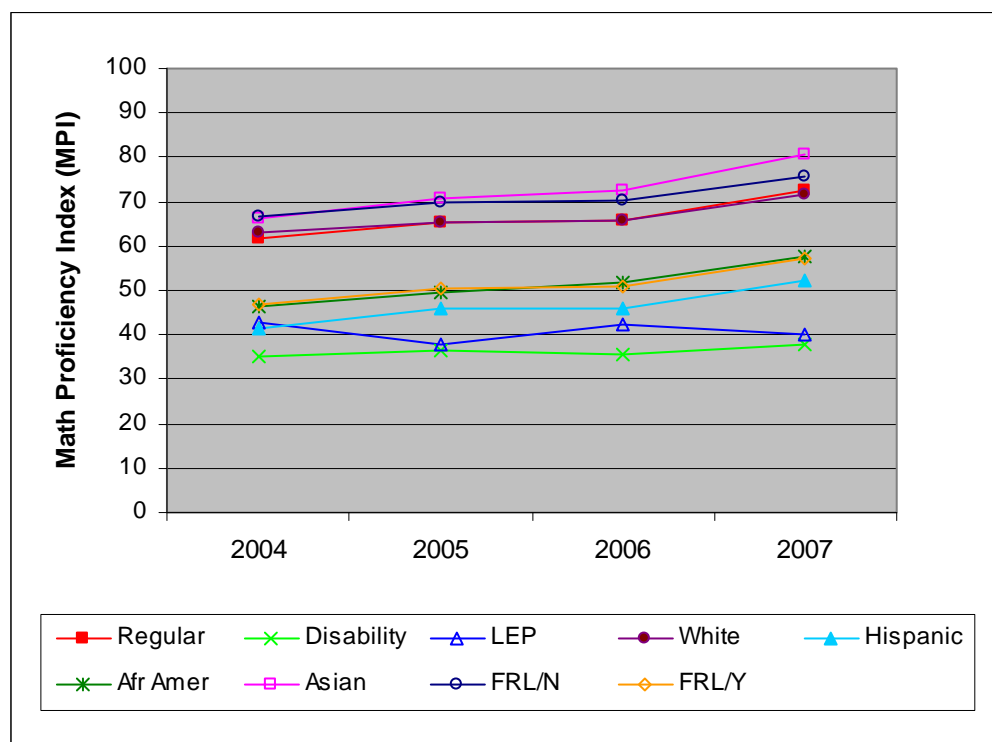
Note: Trend data include grades at which testing was administered in each subject in all four years; therefore, 2007 data may differ from those reported in Figure/Tables 8, 11, and 14.

All student subgroups in Worcester with the exception of LEP students had improved performance in ELA between 2004 and 2007. The ELA proficiency gap for Worcester's regular education students narrowed from 23 to 16 PI points over this period, resulting in an improvement rate of 29 percent; for students with disabilities, it remained at 51 PI points; and for LEP students, it widened by 15 percent from 49 to 56 PI points. The proficiency gap in ELA for White students narrowed from 23 to 19 PI points, an improvement rate of 18 percent; for Hispanic students, it narrowed from 43 to 36 PI points, an improvement rate of 17 percent; for African-American students, the gap narrowed from 37 to 30 PI points, an improvement rate of 19 percent; and for Asian students, it narrowed from 27 to 18 PI points, an

improvement rate of 31 percent. The ELA proficiency gap for non low-income students narrowed from 20 to 16 PI points, an improvement rate of 20 percent; and for low-income students it narrowed from 38 to 32 PI points, an improvement rate of 16 percent.

Between 2004 and 2007, the performance gap in ELA between regular education students and students with disabilities widened by six PI points, and between regular education students and LEP students it widened by 14 points. The ELA performance gap between White and Hispanic students narrowed by three PI points, between White and African-American students it also narrowed by three PI points, and between White and Asian students it narrowed by four points. The performance gap in ELA between non low-income and low-income students narrowed by two PI points over this period.

**Figure/Table 24: MCAS Math Proficiency Index (MPI) by Subgroup, 2004-2007**



	Math Proficiency Index (MPI)				Percent Attaining Proficiency			
	2004	2005	2006	2007	2004	2005	2006	2007
Worcester	54.6	57.8	58.1	64.0	24	29	29	36
Regular	61.6	65.1	65.9	72.7	30	36	37	46
Disability	35.3	36.5	35.7	37.9	7	8	9	8
LEP	42.8	37.7	42.4	40.2	11	7	12	8
White	63.0	65.4	65.8	71.4	33	38	38	46
Hispanic	41.5	45.8	46.1	52.1	10	15	16	20
Afr Amer	46.3	49.7	51.8	57.5	14	19	23	27
Asian	66.2	70.5	72.3	80.5	37	44	47	60
FRL/N	66.6	69.9	70.3	75.8	37	44	44	52
FRL/Y	46.7	50.5	50.9	57.1	15	20	21	27

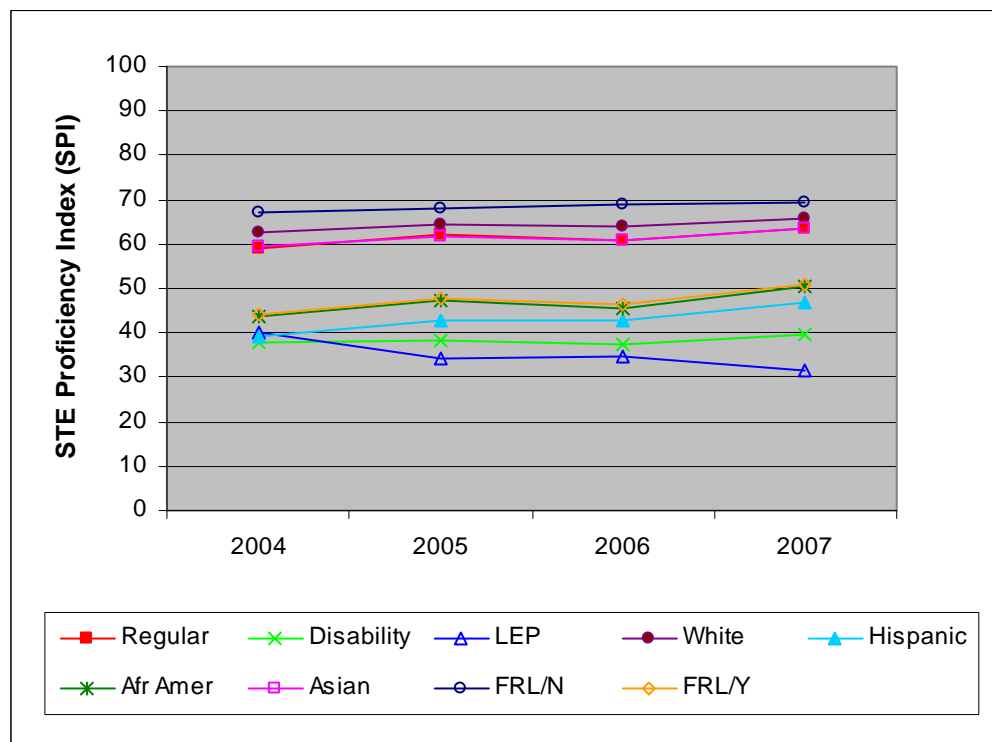
Note: Trend data include grades at which testing was administered in each subject in all four years; therefore, 2007 data may differ from those reported in Figure/Tables 9, 12, and 15.

In math, the performance of all student subgroups except LEP students improved between 2004 and 2007. The math proficiency gap for Worcester's regular education students narrowed from 38 to 27 PI points over this period, resulting in an improvement rate of 29 percent; for students with disabilities, it narrowed from 65 to 62 PI points, an improvement rate of four percent; and for LEP students, it widened by five percent from 57 to 60 PI points. The proficiency gap in math for White students narrowed from 37 to 29 PI points, resulting in an improvement rate of 23 percent; for Hispanic students, it narrowed from 59 to 48 PI points, an improvement rate of 18 percent; for African-American students, the gap narrowed from 54 to 43 PI points, an improvement rate of 21 percent; and for Asian students, it narrowed from 34 to 20 PI points, an improvement rate of 42 percent. The math proficiency gap for non low-income students

narrowed from 33 to 24 PI points, an improvement rate of 28 percent; and for low-income students it narrowed from 53 to 43 PI points, resulting in an improvement rate of 20 percent.

Between 2004 and 2007, the performance gap in math between regular education students and students with disabilities widened by nine PI points, and between regular education students and LEP students it widened by 14 PI points. The math performance gap between White and Hispanic students narrowed by two PI points, between White and African-American students it narrowed by three PI points, and between White and Asian students it narrowed by six PI points. The performance gap in math between non low-income and low-income students narrowed by one PI point over this period.

**Figure/Table 25: MCAS STE Proficiency Index (SPI) by Subgroup, 2004-2007**



	STE Proficiency Index (SPI)				Percent Attaining Proficiency			
	2004	2005	2006	2007	2004	2005	2006	2007
Worcester	52.9	55.1	54.1	57.2	21	21	20	22
Regular	58.8	62.1	61.0	63.7	27	27	25	27
Disability	37.8	38.1	37.2	39.8	8	6	5	7
LEP	40.0	34.1	34.8	31.4	9	2	5	1
White	62.4	64.3	63.8	65.6	31	32	30	32
Hispanic	39.4	42.6	42.7	46.9	7	7	7	10
Afr Amer	43.8	47.5	45.3	50.4	10	13	10	11
Asian	59.3	61.7	60.8	63.4	28	28	27	27
FRL/N	67.0	68.1	68.8	69.3	37	37	35	36
FRL/Y	44.3	47.8	46.4	50.7	12	12	12	14

In science and technology/engineering, all student subgroups except LEP students in Worcester had improved performance between 2004 and 2007. The STE proficiency gap for Worcester's regular education students narrowed from 41 to 36 PI points over this period, an improvement rate of 12 percent; for students with disabilities, it narrowed from 62 to 60 PI points, an improvement rate of three percent; and for LEP students, it widened by 14 percent from 60 to 69 PI points. The proficiency gap in STE for White students narrowed from 38 to 34 PI points, an improvement rate of nine percent; for Hispanic students, it narrowed from 61 to 53 PI points, an improvement rate of 12 percent; for African-American students, the gap narrowed from 56 to 50 PI points, an improvement rate of 12 percent; and for Asian students, it narrowed from 41 to 37 PI points, an improvement rate of 10 percent. The STE proficiency gap for non low-income students from 33 to 31 PI points, an improvement rate of seven percent; and for low-income students it narrowed from 56 to 49 PI points, an improvement rate of 12 percent.

Between 2004 and 2007, the performance gap in STE between regular education students and students with disabilities widened by three PI points, and between regular education students and LEP students it widened by 14 PI points. The STE performance gap between White and Hispanic students narrowed by four PI points, between White and African-American students it narrowed by three points, and between White and Asian students it narrowed by one PI point. The performance gap in STE between non low-income and low-income students narrowed by four PI points over this period.

## **Participation**

### **Are all eligible students participating in required state assessments?**

#### **Finding:**

- On the 2007 MCAS tests in ELA, math, and STE, eligible students in Worcester participated at levels that met or exceeded the state's 95 percent requirement.

## n-Values by Subgroup and Performance Level, 2007

Subgroup	Performance Level	ELA	Math	STE
Worcester	ALL LEVELS	11,040	11,012	3,144
	Advanced	568	1,261	89
	Proficient	4,483	2,612	591
	Needs Improvement	4,318	3,637	1,435
	Warning/Failing	1,671	3,502	1,029
Regular Education	Advanced	550	1,220	84
	Proficient	4,111	2,337	552
	Needs Improvement	2,859	2,804	1,193
	Warning/Failing	430	1,573	530
Disability	Advanced	13	24	4
	Proficient	265	141	39
	Needs Improvement	985	543	198
	Warning/Failing	830	1,372	367
Limited English Proficient	Advanced	5	17	1
	Proficient	107	134	0
	Needs Improvement	474	290	44
	Warning/Failing	411	557	132
White	Advanced	392	770	66
	Proficient	2,384	1,401	376
	Needs Improvement	1,611	1,571	644
	Warning/Failing	416	1,062	306
Hispanic	Advanced	60	170	9
	Proficient	1,049	538	99
	Needs Improvement	1,682	1,278	447
	Warning/Failing	907	1,695	485
African-American	Advanced	34	83	3
	Proficient	531	298	42
	Needs Improvement	577	465	197
	Warning/Failing	229	520	154
Asian	Advanced	66	213	7
	Proficient	425	310	62
	Needs Improvement	341	250	126
	Warning/Failing	81	138	63
Free or Reduced-Cost Lunch/No	Advanced	406	775	62
	Proficient	2,104	1,265	338
	Needs Improvement	1,158	1,241	508
	Warning/Failing	246	639	201
Free or Reduced-Cost Lunch/Yes	Advanced	162	486	27
	Proficient	2,379	1,347	253
	Needs Improvement	3,159	2,396	927
	Warning/Failing	1,422	2,863	828
Male	Advanced	167	625	51
	Proficient	2,130	1,360	320
	Needs Improvement	2,298	1,797	762
	Warning/Failing	962	1,759	478
Female	Advanced	401	636	38
	Proficient	2,353	1,252	271
	Needs Improvement	2,019	1,840	673
	Warning/Failing	706	1,743	551



### n-Values by Grade and Year, 2004-2007

Grade	Year	ELA	Math	STE
Grade 3	2004	1,818	0	0
	2005	1,693	0	0
	2006	1,680	1,682	0
	2007	1,630	1,633	0
Grade 4	2004	1,806	1,811	0
	2005	1,706	1,709	0
	2006	1,636	1,639	0
	2007	1,621	1,621	0
Grade 5	2004	0	0	1,921
	2005	0	0	1,690
	2006	1,620	1,626	1,625
	2007	1,580	1,584	1,573
Grade 6	2004	0	1,888	0
	2005	0	1,854	0
	2006	1,663	1,662	0
	2007	1,585	1,583	0
Grade 7	2004	1,803	0	0
	2005	1,738	0	0
	2006	1,696	1,703	0
	2007	1,481	1,481	0
Grade 8	2004	0	1,904	1,907
	2005	0	1,781	1,779
	2006	1,710	1,719	1,727
	2007	1,590	1,583	1,571
Grade 10	2004	1,535	1,518	0
	2005	1,538	1,529	0
	2006	1,659	1,628	0
	2007	1,553	1,527	0
All Grades	2004	6,962	7,121	3,828
	2005	6,675	6,873	3,469
	2006	11,664	11,659	3,352
	2007	11,040	11,012	3,144

## Notes

Trend data include grades for which testing was administered for each subject in all four years. The following grades are included in the trend data for 2004-2007 reported in Figure/Tables 20-25 and in the table of n-values by grade and year:

English language arts (ELA): 3, 4, 7, 10

Math: 4, 6, 8, 10

Science and technology/engineering (STE): 5, 8

The highest performance level for grade 3 reading in 2006 and 2007 was Advanced/Above Proficient; this level did not exist in prior years, when the highest level was Proficient.

Subgroup inclusion is based on the number of students and the number of schools in the district. To be included as reportable, a subgroup must have at least 10 times the number of schools in the district. Subgroup inclusion for all years of the trend data is based on the 2007 data.

N-values represent the number of tests taken unless otherwise specified.

Rounded values may result in slight apparent discrepancies.

## Reexamination Findings

This section summarizes the conclusions of the EQA team's reexamination of the Worcester Public Schools. It reports on only those 2005 indicators that received a 'Poor' or 'Unsatisfactory' rating and that the EQA team reassessed as well as new indicators related to safety, security, and access to programs. The table below displays the initial 2005 ratings and the 2007 reassessments. The narrative that follows presents the relevant 2005 indicators, followed by the ratings from 2005 and 2007 and corresponding evidence for the ratings. Because of the changes in the EQA standards and indicators, the 2005 indicators are organized according to the 2007 standards. In addition, the district was examined and rated on selected 2007 indicators that were not part of the prior examination.

<b>Standard I: Leadership, Governance, and Communication</b>								
	<b>2005 Indicators</b>						<b>2007 Indicators</b>	
<b>Ratings ▼ Indicators ►</b>	<b>11.6</b>	<b>11.9</b>	<b>13.2</b>	<b>13.4</b>	<b>14.7</b>	<b>15.3</b>	<b>13</b>	<b>14</b>
<b>Excellent</b>							<b>2007</b>	<b>2007</b>
<b>Satisfactory</b>	<b>2007</b>	<b>2007</b>	<b>2007</b>	<b>2007</b>	<b>2007</b>	<b>2007</b>		
<b>Needs Improvement</b>								
<b>Poor</b>	<b>2005</b>		<b>2005</b>	<b>2005</b>	<b>2005</b>	<b>2005</b>		
<b>Unsatisfactory</b>		<b>2005</b>						

### I. Leadership, Governance, and Communication

School committee, district leadership, and school leadership established, implemented, and continuously evaluated the cost effectiveness and efficiency of policies and procedures that were standards-based, focused on student achievement data and designed to promote continuous improvement of instructional practice and high achievement for all students. Leadership actions and decisions related to the attainment of district and school goals were routinely communicated to the community and promoted public confidence, financial commitment and community support needed to achieve high student and staff performance.

#### Findings:

- The district added the Measures of Academic Progress to its assessment battery and began to use the results diagnostically to improve student achievement.

- During each of the two years of the reexamination period, the superintendent received written evaluations from school committee members based on accomplishment of the goals and benchmarks in the District Improvement Plan.
- Worcester used student performance data to substantiate, plan, and implement initiatives to improve student achievement.
- Because of budget reductions over the last two years, the district needed to restore staff members and increase funding for supplies, textbooks, equipment, and technology.
- Worcester formed partnerships and collaborated with many agencies to assist at-risk students and needy families.
- The district developed, implemented, and audited safety plans in order to maintain an environment in the schools that was conducive to learning.

### **Summary**

The Worcester Public Schools made sufficient progress during the reexamination period to improve its ratings on all six indicators in the standard of Leadership, Governance, and Communication that the EQA reexamined. Five indicator ratings improved from ‘Poor’ to ‘Satisfactory’ and one improved from ‘Unsatisfactory’ to ‘Satisfactory.’ In addition, two new indicators in this standard were rated ‘Excellent.’

The rating on the indicator regarding the evaluation of the superintendent increased the most significantly, from ‘Unsatisfactory’ to ‘Satisfactory.’ The superintendent received a written evaluation from school committee members each year during the reexamination period. The evaluation narratives addressed the goals and benchmarks in the District Improvement Plan (DIP) approved by the school committee. As part of the evaluation process, the superintendent provided reports on the attainment of the DIP goals and benchmarks to the school committee at both midyear and the end of the year.

During the reexamination period, Worcester utilized assessment results to design and implement new programs and services intended to improve student achievement. The district developed a local assessment battery to monitor and analyze student achievement. This battery supplemented the state MCAS tests and included the Measures of Academic Progress (MAP), the Dynamic

Indicators of Basic Early Literacy Skills (DIBELS), and the Developmental Reading Assessment (DRA). Decisions about implementing or changing initiatives typically resulted from an analysis of achievement data. In one such initiative, Worcester standardized programs by implementing the Houghton Mifflin English language arts (ELA) series and the Everyday Mathematics program at the elementary level and the Connected Mathematics Program (CMP) at the middle school level, providing consistency for students and teachers transferring from one district school to another. Worcester also increased instructional time in ELA and mathematics to address the needs of struggling middle school students with identified weaknesses on the MCAS tests and MAP assessment. In addition, the district expanded the job descriptions of department heads at the middle school level to include teacher coaching.

Teachers of the same course used a common syllabus in all Worcester high schools, and high school teachers were developing and piloting common final examinations for each course. Worcester introduced the Advancement Via Individual Determination (AVID) program at the middle and high school levels and increased the number of Advanced Placement (AP) courses. The district also implemented the eWalk system to monitor the fidelity of implementation of the curriculum.

Worcester received a rating of ‘Excellent’ for forming active partnerships with community agencies to assist at-risk students and families. Administrators served as liaisons with businesses, the consortium of institutions of higher learning, community hospitals and health agencies, and state agencies such as the Department of Social Services (DSS) and the Department of Youth Services (DYS). Worcester received a second ‘Excellent’ rating for school safety. The executive assistant to the superintendent for school safety and violence prevention was responsible for overseeing safety plans for the district and each school. Worcester developed a plan entitled Worcester Public Schools: A Collaborative-Proactive Approach to Provide a Safe Teaching Learning Environment, with an accompanying PowerPoint explanation. This plan included goals, protocols, interventions, strategies, initiatives, and a referral process. In addition, the district implemented the Connect-ED communication system, received a \$250,000 emergency management grant, and instituted a pandemic flu prevention campaign. The district gave each teacher a copy of *The School-Centered Emergency Management and Response Guide for Schools in the City of Worcester*.

During the reexamination period, Worcester continued to modify its systems to improve student achievement, monitor the fidelity of implementation of the curriculum and programs, expand services to students, and provide a safe and secure environment for teaching and learning. Some of these modifications included the Public Education Leadership Project Coherence Framework, the MAP, data-driven decision-making, partnership and collaborative ventures, safety and security plans and audits, and improved teacher and administrator evaluation procedures.

## **2005 Indicators**

11.6. District leaders monitored student achievement data throughout the year, considered the goals identified in the DIP, and individual SIPs, and implemented programs, policies, and services that were most likely to result in improved student achievement.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

During the initial examination period (2001-2004), the EQA found little evidence that the district monitored student achievement during the school year. A few of the schools systematically monitored student achievement, but most did not, and it was not a districtwide effort. The administrative council and other groups monitored progress toward the goals in the District Improvement Plan (DIP) during the school year and produced an annual progress report on the DIP.

During the reexamination period under review (2005-2007), district leaders stated that they monitored student achievement, reviewed goals in the DIP and School Improvement Plans (SIPs), and implemented programs, policies, and services to improve student achievement. Administrators went on to say that the district analyzed the results of a number of tests and assessments, such as the MCAS tests, the Measures of Academic Progress (MAP), the Dynamic Indicators of Basic Early Literacy Skills (DIBELS), the Developmental Reading Assessment (DRA), the Preliminary SAT (PSAT), the Test of Silent Word Reading Fluency (TOSWRF), and the MathAssist-ments.

In addition, the district administered the Massachusetts English Language Assessment-Oral (MELA-O), the IDEA Proficiency Test (IPT), and the Language Assessment Scales-Reading/Writing (LAS-R/W) to assess the skills and needs of English language learner (ELL) students. Worcester administered the MCAS Alternative Assessment (MCAS-ALT) to special education students unable to participate in the standard administration of the MCAS tests. Interviewees told the EQA team that school personnel discussed student assessment results at meetings held throughout the year, including meetings of the of the management team, quadrant managers, principals, middle school and special education task forces, department heads and coaches, and the superintendent's cabinet.

Administrators gave examples of a number of initiatives to improve student achievement that resulted from an analysis of student assessment data. These included standardizing the curriculum by implementing the Houghton Mifflin English language arts (ELA) series and the Everyday Mathematics program at the elementary level and the Connected Mathematics Program (CMP) at middle school level, and developing common course syllabi and examinations at the high school level. Worcester also implemented "double-dosing" to increase instructional time in ELA and mathematics for struggling middle school students identified by the MCAS and MAP test results as in need of assistance.

Worcester provided more direct assistance to teachers by adding coaching to the role of the middle school department heads. The district also established the position of reading/writing coach to assist teachers and students in the schools with the lowest ELA performance. In addition, Worcester converted 20 teaching positions to 52 part-time tutor positions. This had the effect of making support services available to more students. Administrators stated that the district was attempting to increase the use of differentiated instruction in 2007-2008 to improve student achievement.

During the reexamination period, the superintendent introduced the Public Education Leadership Project (PELP) Coherence Framework to the district. The PELP, a joint initiative of the Harvard Graduate School of Education and the Harvard Business School, strives to identify effective leadership and management practices to support large-scale organizational change in urban school districts with the goal of improving teaching and learning for all students. According to

documentation, the Coherence Framework was designed to “help district leaders identify the key elements that support a districtwide improvement strategy, bring these elements into a coherent relationship with the strategy and each other, and guide the actions of people throughout the district in the pursuit of high levels of achievement of all students.” The superintendent told the EQA examiners that implementation was still in progress.

11.9. The superintendent’s performance was evaluated annually based on the district’s state assessment results and implementation of the DIP. This evaluation served as the basis for setting compensation and improving the future job performance of the superintendent.

**EQA Rating from 2005: Unsatisfactory**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

During the initial examination period, although the school committee evaluated the superintendent annually with that year’s DIP as the primary reference, there was no evidence that contract renewal or salary changes resulting from the evaluations were directly linked to student performance data.

During the reexamination period under review, the school committee evaluated the superintendent in both 2005-2006 and 2006-2007. According to the superintendent, the DIP strategic goals and related benchmarks formed the evaluation criteria. The district had four strategic goals: to ensure that all students achieve high standards; to enhance the quality and professionalism of all personnel; to ensure that all students have the best opportunity to learn by supporting excellence and accountability in all schools; and to create a community infrastructure that supports learning. The superintendent provided the school committee with midyear and end of year reports of the district’s progress toward accomplishment of each of the goals and the related benchmarks.

School committee members confirmed in interviews with the EQA team that each had an opportunity to write a narrative evaluation of the superintendent based upon the strategic goals and benchmarks in the DIP, and to meet with the superintendent to review the evaluation. The superintendent told the EQA team that according to district practice, the chairperson of the school committee did not combine the individual evaluations into a composite. The



superintendent received the same salary increase as the other district administrators, and the evaluation results were not used to determine the superintendent's compensation. The evaluation process conducted by the school committee culminated in the setting of future performance goals for the superintendent.

The EQA team reviewed the evaluations of the superintendent prepared by the school committee. These evaluations focused on DIP strategic goals and benchmarks, and the narratives were both informative and instructive. All school committee members submitted evaluations of the superintendent in 2005-2006, and five of the seven members submitted evaluations in 2006-2007.

13.2. Relevant budget development decisions were premised on a clear, documented systemic analysis of student performance data as well as other pertinent information.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

#### **Evidence**

During the initial period under review, Worcester referred to student achievement data in making budget decisions. The district's budget requests were reduced from 2002-2003 to 2003-2004. Worcester introduced the Everyday Mathematics program in 2000-2001 and completed implementation in 2003-2004. In addition, the district developed and implemented math action plans based on student achievement data. The school committee, administration, and staff agreed that the priority for these budgets was to maintain small class sizes as recommended by the foundation budget and dictated by the teachers' contract.

During the reexamination period under review, budget decisions were based on a systematic analysis of student performance and other relevant data. According to the superintendent, the budget priorities were advantageous class sizes, school safety, DIP and SIP goals, and adequate materials, supplies, textbooks, and technology. District leaders stated that they analyzed MCAS, MAP, DIBELS, and DRA results as part of the budget development and review process. These data informed initiatives to improve student achievement. For example, at the elementary level the district provided ELA and mathematics intervention teachers to schools in need of improvement. The district also expanded the roles of department heads in ELA and mathematics

at the middle school level to include a coaching component. Administrators told the EQA team that approximately 875 students at the middle school level were receiving additional instruction in ELA and mathematics in 2007-2008 through a “double-dosing” schedule initiated in the prior year. In addition, the district developed and implemented a special program for grade 9 repeaters.

Worcester identified funding sources to continue the positions of MCAS specialists and tutors at the high school level. These personnel helped students pass the MCAS tests and satisfy the Competency Determination requirements. In addition, the superintendent stated that the district was about to replace numerous computers with funds awarded from a class action settlement.

Interviewees repeatedly expressed concern about the inadequacy of resources for the school department, limiting its ability to provide necessary programs and services. According to documents made available to EQA team, the district had eliminated 514 positions and closed four elementary schools since the last EQA review. As the budget declined, the district reallocated resources, redesigned programs, and used grants to increase services. For example, Worcester added eight staff positions in the ExcELL (Excellence for English Language Learners) Academy over the past two years, and five ELL tutors system-wide. In interviews, administrators stated that the district increased teaching positions by decreasing instructional assistants in the sheltered English immersion (SEI) program. In addition, Worcester redesigned and consolidated behavioral intervention classrooms in a quadrant-based structured therapeutic educational program model. The superintendent stated that over the last two years, the City of Worcester and school department reallocated both city funds and school department capital funds and provided the school department \$3,500,000 to recall approximately 30 teachers each year.

13.4. The district allocated its resources based on the ongoing analysis of student assessment data in the aggregate and disaggregated by student subgroups to improve achievement for all student populations.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

#### **Evidence**

During the initial period under review, the district allocated staff members based on enrollments. Staff members had the contractual right to “bid” on open positions in the district. The district did

not formally consider student achievement data or the impact of teacher assignments on student achievement as part of the “bidding” process. The district administration cited several examples of subgroup data analysis influencing budget decisions and the allocation of resources, such as the district’s SEI program and its integrated preschool program. During the last budget deliberations, the preschool program was a possible area of reduction in order to balance the budget. During each budget development cycle, the special education director presented the needs of the special education department. The district also conducted subgroup analysis of Title I data. Thirty-four of the 37 elementary schools were Title I schools.

During the reexamination period under review, Worcester made progress in allocating its resources based upon an analysis of aggregated and disaggregated assessment data in order to improve student achievement for all student populations. Leaders cited examples of the use of data to identify and meet the needs of students and teachers. The superintendent stated that the district closed four elementary schools and reassigned the students to nearby elementary schools with available seats. According to the superintendent, the school closings saved the district \$3 million. The district established clusters of 75 students with a five-teacher team to reduce class sizes at Worcester East Middle School. Worcester also established reading/writing coaches and central office content area specialists to work with department heads and teachers, and increased assistance and services to needy students by underwriting 52 part-time tutoring positions through the conversion of 20 full-time teaching positions.

Other examples included hiring five additional tutors to assist ELL students; strengthening the SEI program by converting four instructional assistant positions to two teaching positions; and converting 11 special education instructional assistants in order to fund five additional special education teaching positions. According to district leaders, Worcester designed new special education programs and services based upon an analysis of student performance data.

The district also implemented the Advancement Via Individual Determination (AVID) program, which focused on developing high expectations for students from low to middle income families through accelerated rather than remedial instruction. Administrators stated that Worcester expanded Sheltered Instruction Observation Protocol (SIOP) training and professional development on differentiating instruction in order to improve student achievement. In addition,

the district introduced the eWalk system to provide supervisors a checklist to use in formative classroom observation walk-throughs for determining fidelity of implementation of the curriculum at the elementary and middle school levels and the use of research-based instructional practices at the middle school level.

14.7. The district reviewed student achievement data and the reviews were reflected in the district's financial decisions.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

**Evidence**

During the initial period under review, the financial decision-makers used the MCAS test data to determine the needs of the district. However, the district primarily based its financial decisions on maintaining small class sizes. This was a critical priority of the school committee, the administration, principals, and staff members.

During the reexamination period under review, administrators examined and used data on student progress to make financial decisions. According to the superintendent, data analysis led to the decision to assign content coaches and intervention tutors to the elementary schools needing improvement under No Child Left Behind (NCLB) guidelines. In addition, the district expanded the Houghton Mifflin ELA series across all elementary schools to provide continuity of instruction for mobile students and a standard curriculum for teachers assigned to different district schools. Worcester had previously implemented the Everyday Mathematics program at the elementary level and the Connected Mathematics Program 2 (CMP 2) at the middle school level to ensure continuity of teaching and learning.

District leaders told the EQA examiners that the analysis of student assessment data resulted in a decision to reduce class size at the Worcester East Middle School, a Commonwealth Priority School, by the assignment of a team of five teachers to 75 students. They went on to say that the role of all middle school ELA and mathematics department heads had been expanded to include coaching. In addition, with “double-dosing,” instructional time in ELA and math increased at all middle schools for students who performed poorly on the MCAS and MAP tests.

Administrators stated that the staff developed syllabi for all courses at the high school level. Teachers who taught the same high school course used a common syllabus, and high school teachers were continuing to develop and administer common final examinations.

According to interviewees, the increase in the last two years from three to 11 staff positions at the ExcELL Academy resulted from a review of student achievement data. In addition, the district added five English as a second language (ESL) tutors to assist ELL students.

Interviewees gave other examples of resource allocation based upon a review of student assessment data, including the AVID program, additional Advanced Placement (AP) courses, school adjustment counselors to assist underperforming students, redesign of the SEI program to include more teachers and fewer instructional assistants, and redesign and consolidation of district behavioral intervention classrooms.

15.3. The district implemented formal preventive maintenance programs for buildings and equipment.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

**Evidence**

During the initial period under review, the district did not have a formal preventive maintenance program. A plan was developed annually that focused on capital rehabilitation. Each year, the district received between \$2.5 and \$3 million dollars for these capital rehabilitation projects. The school committee's standing committee on schools' physical plants reviewed maintenance and capital expenditures. Worcester managed preventive maintenance through contracts with vendors.

During the reexamination period under review, Worcester implemented formal inspection and preventive maintenance procedures to maximize and prolong the effective use of the district's capital and major facility assets. The district's web-based software program School Dude enabled schools to submit maintenance requests and work orders on-line, and to track the progress from request to completion date. This program also enabled the district to prioritize requests, and to develop a database of and schedule for routine maintenance tasks.

The district maintenance staff consisted of licensed personnel, including electricians and plumbers, who performed in-house preventive maintenance tasks. Worcester contracted for inspections of elevators, energy management, and repair and replacement of roofs, boilers, and safety and security systems. The EQA examiners visited the schools and found that the buildings were clean and maintained, including those worn due to age. The facilities were well illuminated, safe, and conducive to student learning and achievement. The Massachusetts School Building Authority (MSBA) inspected 46 district school buildings. Seventeen were rated as approaching poor condition, and four were rated in poor condition, possibly needing replacement.

### **2007 Indicators**

13. The district formed partnerships with community human service agencies and benefactors, such as corporate and civic sponsors, to provide at-risk students and families access to health, social, recreational, and supplemental educational services.

### **EQA Rating from 2007: Excellent**

#### **Evidence**

The district formed numerous partnerships with community human service agencies and benefactors, and corporate and civic sponsors, to provide at-risk students and families access to health, social, recreational, and supplemental educational services. District leaders provided the EQA team a list of partnerships the district had formed with health organizations to assist at-risk students and families. Examples of these organizations included the Community Healthlink, the Worcester Community Action Council, the Worcester Community Connection Coalition, the Worcester Communities of Care, the Fallon Clinic Foundation, the University of Massachusetts Dental Program, and the Blue Cross Blue Shield Healthy Choices Program. Worcester also had relationships with the Allied Health Pipeline partnership with UMass Medical School, the South Worcester Neighborhood Center, the Homeless Services Committee, the Parent/Professional Advocacy League, the Family Health Center, the Quinsigamond Community College Dental Program, and the Great Brook Valley Health Center. The district used the school-based intake process for mental health service providers.

Among the partnerships that the district formed with organizations to provide social services to at-risk students and families were the Worcester Head Start Program, the Elementary and

Secondary Schools Intervention Program, the Student and Staff Support Services Collaborative, the Student and Family Development Council, the Life Skills Student Jobs Program, and the EOHHS/Schools Partnership. Administrators stated that some of these partnerships included representatives from the Department of Social Services, the Department of Youth Services, the juvenile courts, and the Worcester Police Department.

Administrators went on to describe recreational partnerships with organizations including the United States Golf Association, the Worcester Parks and Recreation Department, the YWCA, the Buffone Skating Arena, and East West Karate. These partnerships provided memberships, lessons, job opportunities, and physical fitness activities.

Administrators also described various supplemental educational services and school-business partnerships. The Junior Achievement (JA) program had approximately 7,900 student participants and 425 volunteers. In addition, JA Academies provided services to 105 at-risk students in grades 11 and 12. According to the superintendent, the JA program twice received worldwide recognition. Twenty partners in the 21st Century partnerships assisted at-risk students. U.S. First Robotics coordinated the activities for six high schools participating in local and regional robotics competitions. The Intel Corporation made technology and curriculum support available to the schools in the district. The Worcester Education Development Foundation donated over \$400,000 during the period under review to support programs in performing and visual arts, technology, engineering, and athletics. Also, the EMC Corporation donated \$40,000 for achievement initiatives at North High School, including Nova Net software for math instruction. Hanover Insurance donated \$50,000 for each of the last four years to Burncoat High School to support programs such as AVID as well as pilot initiatives to improve student achievement. Other contributing businesses included National Grid, NYPRO, and Bromberg & Sunsteen. Administrators also cited committees such as the United Way's Building Brighter Futures for Youth Committee, the Worcester Polytechnic Institute Education Advisory Committee, the Mayor's Youth At-Risk Committee, the City Manager's Office of Youth, and the Chapter 74 advisory committees.

The Colleges of Worcester Consortium (COWC), consisting of 13 area colleges and universities, also collaborated with the Worcester schools. Examples of the benefits to the schools included

dual enrollment for eligible junior and senior high school students, scholarships, the long-running Kids to College program for grade 6 students, teacher preparation programs, Professional Development School collaboratives, summer workshops, student teachers, tutors, curriculum advisors, grants, resource centers, and donations of computers and science equipment. According to the COWC's most recent 2005-2006 community placement survey, approximately 634 college students devoted nearly 90,000 hours to 26 Worcester schools.

14. The superintendent created and disseminated a comprehensive safety plan in collaboration with the community and plans were reviewed annually with the police and fire departments prior to each school year. School and district safety plans were aligned.

### **EQA Rating from 2007: Excellent**

#### **Evidence**

District leaders stated that the superintendent created and disseminated a comprehensive safety plan in collaboration with the community. The executive assistant to the superintendent for school safety and violence prevention reviewed the plan with representatives from the police and fire departments annually. The school safety plans were aligned with the district safety plan.

The superintendent and the executive assistant to the superintendent for school safety made a PowerPoint presentation entitled Worcester Public Schools: A Collaborative-Proactive Approach to Provide a Safe Teaching and Learning Environment to members of the EQA team. The presentation included: the primary goal and the composition of the Mayor's Advisory Committee on At-Risk Youth; the primary goal and the composition of the superintendent's communication protocol committee; the goal for sharing of information protocol-participating agencies; Worcester school prevention and safety initiatives/strategies; interventions and strategies; the student school safety center referral process; alternative education programs; and recent school safety initiatives.

The superintendent and executive assistant told the EQA examiners about recent school safety initiatives such as the \$250,000 emergency management grant from Department of Education, the Connect-ED communication system that allowed school officials to inform parents about a school crisis or incident, and the pandemic flu prevention campaign. They also described collaborative initiatives with the police department and other public safety agencies, including



the emergency guide for personnel, a Project “Sure Steps” grant, the emergency management training program, and the city bioterrorism response collaborative.

The district furnished EQA team members with the *School-Centered Emergency Management and Response Guide for Schools in the City of Worcester*. This guide contained chapters on orienting the school community to the task, creating the school-centered emergency management plan, emergency management, and notes on the recovery and aftermath.

All teachers in the district had a copy of the Worcester Public Schools emergency guide. This guide contained emergency procedures for such threats as biological agents, explosives, and weapons and included evacuation lockdown and physical restraint procedures.

According to the superintendent and executive assistant, principals were required to submit their school crisis response plans to the central office for review. The district provided principals with staff training videos on school safety. Administrators stated that a team conducted unannounced safety assessment audits twice a year in the schools and issued a comprehensive safety and security assessment report. This report consisted of 10 categories including driveways and parking lots, landscaping features, exterior lighting, building exteriors, building interiors, alarm systems and cameras, communications, general safety, monitoring, and safety review. In addition, the assessment report form had space for other safety concerns and resources.

Central office administrators told the EQA team that the district developed and distributed a school safety parent information brochure each year during the period under reexamination. This brochure contained important telephone contact numbers, district- and school-level responses, crisis communication procedures, emergency response procedures, and information on support services.

Standard II: Curriculum and Instruction														
	2005 Indicators												2007 Indicators	
Indicators► Ratings▼	5.1	5.3	5.4a	5.5	5.6	5.7	5.8	6.2	6.4	6.5	6.6	6.9	9	11
Excellent														
Satisfactory	2007	2007	2007	2007			2007		2007		2007	2007		
Needs Improvement					2007	2007		2007		2007			2007	2007
Poor	2005	2005	2005	2005		2005		2005	2005	2005	2005			
Unsatisfactory					2005		2005					2005		

## II. Curriculum and Instruction

The curricula and instructional practices in the district were developed and implemented to attain high levels of achievement for all students. They were aligned with components of the state curriculum frameworks and revised to promote higher levels of student achievement.

### Findings:

- Worcester Public Schools established practices for curriculum review, revision, and implementation.
- The district aligned academic programs and textbooks to the state curriculum learning objectives, and involved teachers in the revision of curricula based on student assessment data.
- Worcester revised and aligned its curricula in the tested content areas horizontally and vertically and with the state curriculum frameworks.
- The district provided training in new programs or revised curricula for all teachers. For example, all teachers received training in the revised writing portfolio.
- The district introduced the MAP assessment to provide teachers with individual student diagnostic information to plan instruction.
- The district increased the percentage of special education students in mainstream classes, but many continued to receive services in substantially separate classrooms.

- The middle school task force reduced the number of enrichment offerings with a goal of increasing instructional time. This district decision resulted in a 10-minute increase of instructional time per period, thus gaining 30 hours per course per year.

### **Summary**

During the reexamination period under review, the Worcester Public Schools made improvements in the area of curriculum and instruction. Of the 12 indicators in this standard reexamined by the EQA, the district improved on nine and received a rating of ‘Satisfactory’ on eight.

Worcester ensured that its curriculum, programs, and textbooks addressed the required learning objectives in the state frameworks. The district established a documented process for a regularly scheduled annual review and revision of curriculum based on assessment results that involved teachers through their involvement in the Performance Improvement Mapping (PIM) process at the school level and through the establishment of teacher curriculum revision teams at the district level.

Worcester revised its ELA curriculum in 2005 and the mathematics and science curricula in 2006. The district scheduled regular reviews of the curricula for the following years, and full revisions of each curriculum approximately five years after each prior complete revision. Administrators and teachers began curriculum revision by determining that to address the high levels of both teacher and student mobility in the district, the district should adopt common programs or texts for all schools. After selecting common programs and texts, curriculum teams developed the written curricula by creating a crosswalk between the state learning objectives and the elements of the common programs selected by the district. This was followed by the establishment of a progression of learning activities in a scope and sequence.

At the elementary level, the district used the Houghton Mifflin series in ELA and the Everyday Mathematics program in math. At the middle school level, the district used the McDougal Littell text in ELA teachers and the Connected Mathematics Program (CMP) in math. At the high school level, teachers mapped the curricula of the courses they taught, and teachers who taught common courses used a common syllabus. At the time of the site visit, administrators indicated that the next step would be to design and implement common assessments at every level.

Administrators and teachers were beginning to pilot common exams at the middle and high school levels.

The curriculum documents examined by the EQA included scope and sequence, syllabi, and lesson plans, all of which brought horizontal and vertical alignment to the content taught in the schools. Although curriculum modifications led to improved student achievement overall, particularly on the Measures of Academic Progress (MAP) assessment, the achievement of special education and limited English proficient (LEP) students remained low. The district provided coaches to assist with the implementation of the curriculum and trained principals in a classroom walk-through protocol so they could better determine the fidelity of implementation of the curriculum and other programs.

Worcester trained teachers to use the diagnostic information from the MAP assessment and also provided training in differentiated instruction. In addition, the district increased the instructional time for the tested content areas, but still did not meet Department of Education time on learning requirements at any level. Classroom observations conducted by the EQA team substantiated improvement in the quality of instruction in the Worcester schools since the last EQA examination.

## **2005 Indicators**

- 5.1. The district had written curricula for all grade levels and tested core content areas that were clearly aligned with the State Curriculum Frameworks.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

During the initial period under review (2001-2004), the school committee approved the district's preK-12 ELA curriculum guide, which aligned with the state framework, on December 19, 2002. It consisted of grade-level benchmarks that described skills and learning outcomes in four strands: language, reading and literature, composition, and media. However, interviewees said that the benchmarks did not align with the district's testing program. The district's mathematics curriculum dated from 1999 and did not align with the state framework. The district set new

grade-level benchmarks in math during the period under review, but it did not create a districtwide testing program linking the benchmarks to the MCAS tests. The district wrote its science and technology/engineering (STE) curriculum before 1999, so it also was not aligned with the state framework.

During the reexamination period under review (2005-2007), the district revised the ELA, mathematics, and science curricula and aligned them with the state the frameworks. The district used the Everyday Mathematics program at the elementary level and the Connected Mathematics Program (CMP) at the middle school level. In mathematics at the elementary level, the curriculum document consisted of a chart that listed each framework objective and the Everyday Mathematics section that addressed it. Middle and high school mathematics curricula were similar and consisted of a course syllabus. The second section of the syllabus was a chart that listed topics in the CMP or the specific high school math text, related skills, and the state learning objective.

The document inserted into the ELA curriculum, entitled *Massachusetts English Language Arts Curriculum Framework*, aligned to the Houghton Mifflin English language arts program. Framework learning objectives were listed by grade alongside the sections of the Houghton Mifflin program that addressed each state learning objective. As with math, the middle school ELA curriculum used a syllabus format that charted topics, skills, and assessments and included the state learning objectives. High school ELA courses followed the same pattern.

The science curriculum at the elementary level, revised in 2006, listed science topics by grade and by quarter. A separate section followed that listed the science and technology/engineering benchmarks, which were also learning objectives from the state framework. These were followed by sample lessons that listed the framework objective they addressed. The middle school science curriculum followed the same format as the elementary one. The high school science curriculum consisted of a syllabus for each of the courses, which referenced state learning objectives.

The components of the district curriculum materials were in most cases directly linked to the learning objectives in the state frameworks. However, in some cases, such as elementary ELA, the curriculum had no scope and sequence. Presumably, teachers followed curriculum topics listed in broad two-month sequences. Scope and sequences at the middle and high school levels

provided only limited references to the curriculum materials. There were few references in any of the curricula to the assessments to be used to measure student attainment of the objectives.

5.3. The district had an established, documented process that involved teachers in the annual review and/or revision of curricula based on the analyses of results of standardized tests.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

Interviewees stated that they had routinely looked at MCAS test results during the initial period under review. They said that this was done primarily at one of the 90-minute after-school staff meetings each month. Interviewees said that principals and grant-funded curriculum-support teachers were trained to use TestWiz to look for strengths, weaknesses, and trends in the MCAS test results. They led the rest of the faculty in looking at the results during after-school meetings.

While it was clear that the district collected test results at the elementary level, it was unclear how all teachers used them to improve student achievement. Interviewees said that the district's high school ELA program was mostly literature based and not designed to teach reading. Therefore, alternative assessments in secondary ELA were not systematic but rather school-specific and often connected to a specific program. When the district discontinued the SAT 9 in the fall of 2002, the MCAS tests became its primary assessment at the secondary level.

During the reexamination period under review, the district charted its curriculum revision process to reflect Massachusetts framework changes, Worcester curriculum revision and review, and the next scheduled curriculum revision. According to the chart, the district revised the ELA curriculum in 2005 and the mathematics and science curricula in 2006. The district scheduled regular reviews of the curricula for the following years. The district scheduled full revisions of each curriculum approximately five years after each prior complete revision or as the Board of Education approves revisions to the relevant state curriculum framework.

Teacher involvement in the curriculum revision process included committee work and participation in the School Improvement Plan (SIP) review process. Each year schools reviewed their respective SIPs and determined areas of need based on an analysis of student achievement

data. In addition, the district's curriculum office annually surveyed teachers to determine curriculum issues needing review. The curriculum office also formed a committee of teachers to review the surveys as well as student achievement data, such as those from the MCAS tests, the MAP assessment, the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment, and the Preliminary Scholastic Aptitude Test (PSAT), to make decisions regarding curriculum modifications.

5.4a. (In academic districts) The results of student assessment data (i.e., longitudinal, demographic, disaggregated, diagnostic, and/or surveys) indicated that the district implemented an established process to ensure the scope, sequence, and alignment of learning goals, competencies, and expectations from one grade to the next in grades K-12 in ELA, mathematics, science and technology (and other tested core academic subjects as added).

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

Only by the end of the initial period under review did the district demonstrate that it used the disaggregated MCAS test data to create specific goals for subgroups. The 2003-2004 SIPs featured specific subgroup goals. Interviewees said that the 2003-2004 goals were markedly different from those of previous years.

During the reexamination period under review, the district followed a process to revise and sequence the curriculum. Administrators and teachers began by determining that to address the high levels of both teacher and student mobility in the district, the district should adopt common programs or texts for all schools. Prior to the selection of common programs and texts, curriculum teams developed the written curricula by creating a crosswalk between the state learning objectives and the elements of the common programs selected by the district. What then followed was the establishment of a progression of learning activities in a scope and sequence, whether monthly, as in elementary mathematics, or by sequencing framework learning objectives by grade level, as in middle school ELA. At the middle and high schools, teachers developed course syllabi using a common format.

5.5. The district's curricula in all tested content areas were aligned horizontally to ensure that all teachers of a common grade level addressed specific subject matter following the same time line, and vertically to ensure complete coverage, eliminate redundancies, and close any gaps.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

For the initial period under review, the EQA team found no evidence that the ELA curriculum was horizontally articulated to ensure that teachers of the same grade addressed the same subject matter and followed the same timeline to close gaps in the curriculum. The ELA curriculum guide recommended many instructional methods and tests. Although interviewees said they all used balanced literacy while using different reading programs, the practices they described were inconsistent, except among the Success for All (SFA) schools. Some elementary school teachers used leveled books for individual and flexible group instruction, while others used class sets at specific grade levels with reading groups. Although most schools, with the exception of the smallest ones, had similar support personnel, they used a variety of programs and resources. Teachers in the smaller schools said that their schools did not have teachers specifically trained in sheltered English immersion (SEI), leaving the classroom teacher to accommodate the needs of ELL students in the regular classroom.

Although the district developed ELA benchmarks at each grade level, interviews provided little evidence that the benchmarks were linked to a comprehensive testing program or that they served to vertically align the curriculum with the variety of elementary level reading programs. Interviewees said that, with the exception of the SFA program, the district and its schools did not evaluate the reading programs during the initial period under review.

During the reexamination period under review, the district made progress in horizontally aligning its curricula in the tested core content areas. The district required that elementary schools use the Houghton Mifflin series for ELA. The schools using the Success for All (SFA) program changed to the Houghton Mifflin program. In addition, the curriculum noted for teachers the specific sections of Houghton Mifflin that addressed each state learning objective. In



mathematics, all teachers used Everyday Mathematics. The curriculum provided them with a month by month list of state learning objectives and the Everyday Mathematics topics that addressed them. Teachers were encouraged, but not required, to use the unit tests in the ELA and mathematics series.

In the middle schools, teachers were trained and required to teach mathematics using the Connected Mathematics Program (CMP). The district also purchased the McDougal Littell text for use in middle school ELA. Use of this ELA program brought greater commonality to teaching ELA at the middle school level. At the high school level, teachers spent time mapping the curricula of the courses they taught, and teachers who taught common courses used a common syllabus. Administrators and teachers were beginning to pilot common exams at the middle and high school levels.

To determine fidelity of implementation of these programs, principals used the eWalk protocol when conducting classroom visits. Administrators recorded what they observed in the classroom on a hand-held Palm Pilot. Coaches also had responsibility for working with teachers to ensure horizontal alignment of curriculum. The MAP assessments gave teachers and students periodic measures of how well students were mastering the state learning objectives. At the time of the site visit, administrators indicated that the next step would be to design and implement common assessments at every level.

5.6. Modifications to the curriculum resulted in improved, equitable achievement for all student populations.

**EQA Rating from 2005: Unsatisfactory**

**EQA Rating from 2007: Needs Improvement**

**Evidence**

During the initial period under review, the district had nine citywide curriculum liaisons for ELA, mathematics, science, world languages, history/social studies, visual arts, performing arts, and technology and media. They reported to the manager for curriculum and staff development. Despite this, the district did not have adequate practices for supporting the curriculum and its overall effectiveness in all tested subject areas at all levels. In both ELA and mathematics, only the Asian and White student subgroups made adequate yearly progress (AYP) in 2004.

According to 2004 AYP data, the trend for attendance was on the decline for all subgroups in the district.

During the reexamination period under review, the district made a number of modifications to the curricula of tested core content areas; however, these modifications did not result in equitable rates of improvement for all student populations. Examples of modifications the district made to the curriculum to improve student achievement were numerous. For example, to address the problem of intradistrict mobility of teachers and students, Worcester implemented a single program or textbook for each grade level and content area.

In addition, the district revised the requirements for the writing portfolio. The district had also adopted the Advancement Via Individual Determination (AVID) program at grades 7-9 to provide at-risk students with the tools to be successful in a challenging academic setting. In addition, during the period under review, the high school and then the middle school developed, adopted, and implemented a common format for a syllabus and a lesson plan.

Implementation of the AVID program had increased minority enrollment in honors and Advanced Placement (AP) classes; however, proficiency of subgroup populations remained low.

5.7. Staffing levels were adequate to deliver the district's curriculum to all students, as indicated by equitable rates of improvement for all student populations.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Needs Improvement**

#### **Evidence**

During the initial period under review, the district lost more than 200 classroom teaching positions to budget cuts. Interviewees said that this increased class size, mainly at the middle and high schools. During the time of the site visit, the district was calling teachers back. Interviewees said that some high schools lost specific programs such as industrial arts, home economics, and business. The superintendent also cited the loss, in 2002-2003, of specially trained SEI teachers, who were the last hired and the first laid off, in compliance with the teachers' contract.

During the reexamination period under review, staffing levels in Worcester were not adequate. The district experienced a 15 percent reduction in teachers and support staff members over the

previous five years. Interviewees made it clear at the time of the site visit that the district was trying to use its limited staffing resources to the greatest advantage. The district eliminated No Child Left Behind Implementation Teacher (NCLBIT) positions at the elementary level and provided reading/writing and math coaches at schools that had not made AYP. However, as soon as a school made AYP with coaching support, the district transferred the coach to another school with greater needs. Additionally, middle school department chairs saw their positions change to part coach, part department head. Academic literacy coaches were active at the high school level during the period under review, but when grant funds became unavailable the district reduced a number of these positions. In addition, the district converted 20 teaching positions and created 52 part-time tutor positions for providing interventions for at-risk students.

Administrators agreed that ELL and special education students would be more successful if they had access to support from additional teachers and paraprofessionals in their mainstream classrooms. Interviewees reported that special education students had access to some support, but support was more limited for ELL students.

Contract language limited class loads to 125 students at the middle and high schools; however, while the superintendent maintained as a priority keeping class size at manageable levels, interviewees told the EQA team that class size was increasing at the elementary level. Principals and teachers also reported that during the period under reexamination elementary schools either had lost or had cut in half their preschool programs. After-school and summer school programs were also curtailed. Interviewees agreed that these programs provided needy students with important support.

5.8. The district established practices that adequately provisioned for and supported the curriculum and its overall effectiveness in all assessed subject areas and all levels.

**EQA Rating from 2005: Unsatisfactory**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

During the initial period under review, the district did not establish adequate practices for supporting the curriculum and its overall effectiveness in all tested subject areas at all levels.

According to the 2004 MCAS test data, 22 of 47 schools in Worcester were on the federal list of schools that did not make AYP in 2004.

During the reexamination period under review, the curriculum office provided curriculum training for new teachers hired before the start of school and for all classroom teachers on an ongoing basis as it implemented new or revised curricula. For example, all teachers received training in the revised writing portfolio. Additional support for implementation of the curriculum was available from the districtwide content-level liaisons and, in the schools that had not made AYP, from coaches. In addition, principals received training in curriculum revisions and were responsible for overseeing implementation of the curriculum. The eWalk protocol was an important tool available to principals for determining fidelity of implementation of the curriculum and other programs.

6.2. The district expected that teachers used current assessment information to plan instruction and provided teachers with support and training in this process. MCAS and other trend data indicated that the district's practices, provisioning, and support for the instructional program were sufficient, as indicated in student achievement that consistently equaled or surpassed the state averages across grade levels.

#### **EQA Rating from 2005: Poor**

#### **EQA Rating from 2007: Needs Improvement**

##### **Evidence**

During the initial period under review, the MCAS test scores in both ELA and mathematics did not improve significantly between 2002 and 2004. Certain schools improved and made AYP, but 22 of the district's 47 schools were on the federal list of schools not making AYP for at least two consecutive years. District administrators said that the district expected teachers to use test data in designing and delivering instruction. However, neither the teachers' contract nor the district's 2003-2004 policy manual referred to using test data in this way. Furthermore, none of the teacher or principal evaluations that the EQA team reviewed referred to MCAS test scores.

During the reexamination period under review, the district developed systems to improve student achievement. Teachers began using the MAP assessment in ELA and mathematics for students in grades 2-10. These results provided teachers and students with information on growth since the

previous testing, as well as diagnostic information about each student's strengths and needs. When the district introduced the MAP assessment, it provided each teacher with eight hours of training, except at the technical high school. Then, since teachers had MAP data for each of their students, the next step was to equip them to plan instruction that addressed their students' individual instructional needs. In 2007-2008, teachers received eight hours of training in differentiated instruction. This training was not dynamic since it consisted of teachers reading chapters on their own and answering questions. Additionally, the district had undertaken to train all teachers in the SIOP model for teaching ELL students in mainstream settings.

However, student achievement in Worcester did not equal or surpass state averages. There were, however, improvements in some domains at certain grade levels.

6.4. The district provided instructional leadership and support for strategies, techniques, and methods that resulted in improved student achievement.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

#### **Evidence**

During the initial period under review, achievement in some district schools improved. Thirteen of the district's 47 schools made AYP in both ELA and mathematics in 2004. However, another 13 did not make AYP in either subject that year. According to DOE data, ELA scores declined in eight schools and 14 showed no change. Mathematics scores declined in three schools and 13 showed no change. The district's organizational chart showed a districtwide manager of NCLB curriculum and professional development. Each school also had NCLBITs to provide leadership in instruction. Along with the principal, they helped drive change in their schools. The district expected the NCLBITs to conduct professional development, coach staff members, and model best practices.

During the reexamination period under review, the district introduced the MAP assessment in grades 2-10 in ELA and mathematics. The diagnostic results teachers received for each of their students enabled them to tailor instruction to students' needs. To assist teachers in framing instruction that incorporated the diagnostic information gleaned from the MAP assessment, in the 2006-2007 school year each teacher received eight hours of professional development in

differentiated instruction. In addition, during the period under reexamination, the district supported the continuing implementation of the balanced literacy program in elementary ELA by purchasing books for the classroom libraries. Additionally, the district was in the process of training teachers in the SIOP model for instruction of ELL students. Finally, the district offered students AVID instructional training to assist in honors and AP courses.

6.5. The district analyzed student achievement data and allocated instructional time in the tested core content areas that resulted in improved rates of proficiency for all students.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Needs Improvement**

### **Evidence**

During the initial period under review, the district's MCAS test scores in both ELA and mathematics did not improve significantly between 2002 and 2004. Subgroup scores followed a similar trend, though special education students improved noticeably more in ELA than did regular education students. Certain schools did improve and make AYP, but 22 of the district's 47 schools were on the federal list for not making AYP for at least two consecutive years.

Interviewees said that during the period under review, the district and its schools frequently analyzed MCAS test results. These analyses revealed that the district had weaknesses in ELA and more significant weaknesses in mathematics. Administrators and principals said that the district responded by increasing the time allocated for those subjects, as well as lengthening overall instructional schedules.

During the reexamination period under review, according to information submitted by the district to the EQA, the district met the state requirements for student learning time at the elementary, middle, and high school levels. The district reported student learning times of 929 hours at the elementary level, 1,245 hours at the extended learning time elementary schools, 1,049 hours at the middle school level, and a minimum of 1,049 hours at the high school level. The technical high school met the requirement with 1,111 hours of instructional time. Worcester did allocate substantial amounts of time in the tested content areas due to analysis of the MCAS test results. The district mandated that elementary ELA instruction take place in a 120-minute block and that mathematics instruction take place in a 90-minute block. The district also decided to require at-

risk middle school students scoring in a particular range on the MAP assessment to “double dose” in mathematics or ELA, which meant that students took a second mathematics or ELA course in addition to the required course. The high school continued to offer MCAS test preparation classes and used the results of the MAP assessment as one eligibility criterion to schedule students into these sections. During the reexamination period, both the MCAS tests and the MAP assessments demonstrated growth.

6.6. The district recognized the importance of instructional stability by not only maintaining accurate information on staff attendance but also by evaluating the effects of staff attendance on student achievement.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

#### **Evidence**

During the initial period under review, the district tracked teacher attendance in a central database. Both district administrators and principals stated that teacher attendance was not a problem. According to district data, teachers were absent nine days per year on average, excluding long-term absences. This rate did not exceed the 15 days that the teachers’ contract allowed for sick leave.

During the reexamination period under review, district and school staff members stated that they worked diligently to ensure instructional continuity and stability in all classrooms. To make this happen, school office staff members arranged for substitutes to cover for any absent member of the staff and entered employee attendance data daily into the district’s data collection system. According to central office interviewees, principals monitored staff attendance daily and monitored substitute teachers to ensure instructional continuity in each classroom. Central office and school administrators expected teachers to have complete lesson plans and school-specific substitute folders available for substitutes. The district employed a number of permanent substitute teachers to further support the continuity of instruction for students. District staff members attempted to have the same substitutes work at the same schools so that they would be familiar with the school’s routines and know the students better. All substitute teachers hired by the district had college degrees and many were certified teachers.

In addition to using all of these approaches to promote the stability and continuity of instruction for students, the district also provided the same ELA and mathematics programs at the same grade levels across all schools. This decision by the district addressed the high student mobility rate by ensuring that students moving to another school within the district continued to use the same mathematics and ELA programs. The district pacing guides ensured that the schools were covering the same units of instruction by subject and grade level at the same time of year. This also helped mobile students maintain parity with their peers. Teachers transferring to other district schools also used the same ELA and mathematics programs, promoting instructional continuity and saving staff training costs.

Worcester kept close track of staff attendance using an automated system to record daily attendance. According to school-specific teacher attendance data provided by the district to the EQA, including long-term illness, short-term illness, military and jury duty, professional development, and days absent for other reasons, teachers averaged approximately 11.4 days absent for the 2006-2007 school year. Excluding long-term illness, military and jury duty, and professional development days, teachers averaged approximately 8.3 days absent. To encourage good staff attendance, the district's contract with teachers allowed for the redemption of sick leave in a lump sum cash payment at retirement. At the time of the reexamination, the district had no established method for evaluating the effect of staff attendance on student achievement.

6.9. Student achievement data indicated that the district provided effective instruction, programs, and services to all English language learners.

**EQA Rating from 2005: Unsatisfactory**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

For the initial period under review, DOE data showed that LEP students comprised 13.5 percent of the district's student population in 2003-2004. The 2003 mid-cycle AYP report showed that while the district's LEP students did not meet their performance targets in ELA and mathematics, they did meet their improvement targets in both subjects. Worcester's LEP students had a proficiency index in ELA of 56.2 PI points in 2002, 43.6 in 2003, and 55.0 in 2004, a proficiency index in math of 40.8 in 2002, 36.2 in 2003, and 42.8 in 2004. Principals and central



office administrators said that the district had a two-tiered ELL instruction program. Worcester offered transitional bilingual education (TBE) for Hispanic students who needed it. The district had a consent decree that overrode the law requiring districts to discontinue such programs. During the period under review, ESOL students could not attend the Worcester Technical High School because of safety concerns. Administrators said that ESOL services were not available there.

During the reexamination period under review, interviewees reported that the district had 93 ELL staff members in its schools, most of them working with students in the early stages of second language development. According to interviewees, while budget restrictions limited the availability of specific ELL staff members to provide services in mainstream classrooms, the district did provide trained regular education teachers to address the needs of ELL mainstreamed students. Only 2.5 percent of the students attending the technical high school were classified as LEP. The district provided a full-time teacher at the technical high school to support ELL students.

When the state mandated SIOP training for all teachers, the district made an effort to provide teachers with the SIOP training. This training provided teachers with strategies for teaching ELL students in mainstream classrooms. The EQA examiners found teachers incorporating ELA language acquisition and ELA language development goals in their instruction in 73 percent of the classrooms they observed during the site visit.

## **2007 Indicators**

9. The district created inclusive classrooms or programs for student populations, through an integrated services model, minimizing separation from the mainstream.

## **EQA Rating from 2007: Needs Improvement**

### **Evidence**

Administrators reported that an important part of the textbook selection process was searching for a text which provided particular strategies and support for subgroup populations. Both the new and newly revised versions of Everyday Mathematics and Connected Mathematics had sections with strategies for including special education students in the mainstream instruction. In addition, administrators noted that the screening program for elementary ELA identified special

education and ELL students as well as regular education students and assigned them all to appropriate groups. The assumption was that all students' needs could be addressed in the mainstream classroom. Forty-four percent of special education students were included in regular education classrooms. Administrators noted that this was up from 37 percent the previous year. These data show that a large percentage of special education students received instruction in a separate setting.

11. Random observations of classrooms revealed that teachers used a variety of effective techniques and strategies to address differences in learning style, and that instruction was student-focused, reflected high expectations, and called for engaged learning and participation on the part of students.

### **EQA Rating from 2007: Satisfactory**

#### **Evidence**

During the site visit, the EQA examiners observed a total of 119 randomly selected classrooms and recorded the presence or absence of 33 attributes reflected in the Principles of Effective Teaching, grouped into five categories: classroom management; instructional practice; expectations; student activity, work, and behavior; and classroom climate for learning. Examiners recorded the attributes observed in each of the five categories during their time spent in the classroom. Observations were conducted in 22 of the district's 44 schools as follows: 53 at the elementary level, 32 at the middle school level and 34 at the high school level. In total, the EQA examiners observed 49 ELA classrooms, 52 math classrooms, 16 science classrooms, and two classrooms of other subjects. In calculating the presence of observed practices, where appropriate, the practices that would not be applicable were noted and were removed from the total to obtain a proper basis for determining the percentage.

While the examiners noted variations and inconsistencies in instruction at the schools where they conducted observations, overall the EQA team determined that the quality of instruction was satisfactory and had improved since the last examination of Worcester Public Schools that included classroom observations. Overall, examiners observed consistent use of classroom management and instructional practices. Examiners also observed moderate levels of practices related to classroom expectations and student activity, work, and behavior.

*Classroom management* refers to the maintenance of order and structure within the classroom. Classroom rules and routines are established and internalized, and students take responsibility for their work with or without teacher direction. The teacher models and promotes respectful behavior and maintains safety in the classroom. Instructional time is maximized due to smooth transitions between activities. Other adults working in the classroom have an active instructional role. Positive indicators of classroom management were evident in 81 percent of the classrooms observed districtwide, with 87 percent at the elementary level, 78 percent at the middle school level, and 75 percent at the high school level.

Examiners observed teachers modeling and promoting respectful behavior and maintaining safety in 95 percent of the possible instances districtwide, 94 percent at the elementary level, 97 percent at the middle level, and 94 percent at the high school level. In addition, positive instances of transitions from one activity to another maximizing instructional time were noted in 84 percent of the classrooms observed districtwide, with 87 percent, 88 percent, and 76 percent at the elementary, middle, and high school levels, respectively.

*Instructional practice* was the largest category reviewed by the examiners. Effective instructional practice is considered evident when the teacher implements instructional strategies that reflect school and/or district priorities. The teacher makes learning goals clear to students, and students understand their relevance. The teacher increases the level of learning by using a variety of instructional techniques. Instructional time is allocated and used effectively, and the pace of instruction is appropriate to students' varied rates of learning. The teacher elicits student contributions and uses a variety of questioning techniques that encourage elaboration, thought, and broad involvement. The teacher checks for student understanding and corrects misunderstandings, and provides clear and explicit directions that are understood by students. English language acquisition and language development are embedded in all subject areas. The teacher uses available technology appropriately to deliver instruction. Positive indicators of instructional practice were evident in 78 percent of the classrooms observed districtwide, with 81 percent at the elementary level, 81 percent at the middle school level, and 70 percent at the high school level.

Observers noted that teachers provided clear and explicit directions that were understood by students in 91 percent of the classrooms observed districtwide. This was also true in 91 percent of possible instances at the elementary, middle, and high school levels. Examiners noted an average of 5.7 computers available in classrooms for student use districtwide, with an average of 4.8 at the elementary level, 10.7 at the middle school level, and 5.1 at the high school level. However, teachers were observed using technology appropriately in only 26 percent of the classrooms observed districtwide, with 22 percent at the elementary level, 25 percent at the middle school level, and 32 percent at the high school level. In addition, observers found that teachers increased the level of learning by using a variety of instructional techniques in 61 percent of the classrooms observed districtwide, with 77 percent at the elementary level, 66 percent at the middle school level, and 29 percent at the high school level. In contrast, teachers elicited student contributions and questions in 91 percent of the classrooms observed districtwide, with 92 percent at elementary level, 78 percent at middle school level, and 100 percent at the high school level.

*Expectations* refers to the maintenance of high standards for students by teachers. The teacher communicates and enforces expectations and guidelines for student work and behavior, and the teacher encourages students and expresses confidence in their ability to do challenging work. Instructional time focuses on having students produce high quality work, and the teacher provides models and rubrics to exemplify such work. High quality student work is shown to be valued through activities such as celebration, citation, exhibition, and publication. Positive indicators of expectations for students were evident in 69 percent of the classrooms observed districtwide, with 76 percent at the elementary level, 79 percent at the middle school level, and 47 percent at the high school level.

Examiners noted that teachers encouraged students and expressed confidence in their ability to do challenging work in 81 percent of possible instances districtwide, with 83, 84, and 74 percent at the elementary, middle, and high school levels, respectively. Also, examiners found that teachers communicated and enforced standards, expectations, and guidelines for student work and interpersonal behavior in 76 percent of classrooms observed districtwide, with 81 percent at the elementary level, 88 percent at the middle school level, and 56 percent at the high school level.

Positive *student activity, work, and behavior* are considered evident when students are actively engaged in the learning process. They show an understanding of the lesson's objective, and they demonstrate ownership of learning by asking their own questions. Students are able to recall information from prior learning and make connections to new learning. They make appropriate use of technology in the classroom. The interaction between students is respectful, and they are purposefully and productively engaged in learning. Student work reflects quality, complexity, and care. Positive indicators of student activity, work, and behavior were evident in 72 percent of the classrooms districtwide, with 76 percent at the elementary level, 71 percent at the middle school level, and 68 percent at the high school level.

Observers found that the interaction between students was respectful and productive in 89 percent of the classrooms districtwide, with 92 percent at the elementary level, 81 percent at the middle school level, and 91 percent at the high school level. Also, students showed an understanding of the learning goals in 87 percent of possible instances districtwide, with 91 percent at the elementary and middle school levels and 79 percent at the high school level. Finally, students were found to be actively engaged in learning, purposeful, and productive in 87 percent of classrooms observed districtwide, with 92, 88, and 79 percent at the elementary, middle, and high school levels, respectively.

Finally, indicators of positive *classroom climate for learning* are considered evident when the teacher creates an inclusive environment where all students are accepted and where the space is used to accommodate a range of learning activities. The teacher uses positive reinforcement to enhance students' self-esteem and self-confidence, and appeals to students' interests or curiosity to motivate them. The classroom is well provisioned and includes multiple resources that address different learning styles. Positive indicators of classroom climate for learning were evident in 83 percent of the classrooms observed districtwide, with 93 percent at the elementary school level, 74 percent at the middle school level, and 75 percent at the high school level.

Examiners found that the teacher created an inclusive environment in which all students belonged in 95 percent of the classrooms observed districtwide, with 96 percent at the elementary level, 91 percent at the middle school level, and 97 percent at the high school level. In addition, observers noted that space was used flexibly to accommodate a range of learning

activities in 75 percent of possible instances districtwide, with 94 percent at the elementary level, 66 percent at the middle school level, and 53 percent at the high school level. Examiners found that the classrooms were well provisioned and included multiple resources that address all learning styles in 64 percent of the classrooms observed districtwide, with 89 percent at the elementary level, 38 percent at the middle school level, and 50 percent at the high school level.

### Summary of Classroom Observations

	Number of Classrooms				Average Class Size	Average Paraprofs. per Class	Computers		
	ELA	Math	Other	Total			Total Number	Number for Student Use	Average Students per Computer
<b>Elementary</b>	26	24	3	53	19.5	0.3	230	217	4.8
<b>Middle</b>	12	16	4	32	18.7	0.1	61	56	10.7
<b>High</b>	11	12	11	34	17.4	0.1	134	116	5.1
<b>Total</b>	49	52	18	119	18.7	0.2	425	389	5.7

	Classroom Management	Instructional Practice	Expectations	Student Activity & Behavior	Classroom Climate
<b>Elementary</b>					
Total observations	220	464	201	275	247
Maximum possible	252	575	264	362	265
Avg. percent of observations	87%	81%	76%	76%	93%
<b>Middle</b>					
Total observations	119	281	126	157	118
Maximum possible	153	349	160	220	160
Avg. percent of observations	78%	81%	79%	71%	74%
<b>High</b>					
Total observations	120	262	80	161	127
Maximum possible	160	374	170	236	170
Avg. percent of observations	75%	70%	47%	68%	75%
<b>Total</b>					
Total observations	459	1,007	407	593	492
Maximum possible	565	1,298	594	818	595
Avg. percent of observations	81%	78%	69%	72%	83%

### Fidelity of Implementation

A characteristic of effective educational organizations (schools and districts) is the strong alignment of goals, plans, processes, and actions, from policymakers to the classroom. Therefore, the EQA has developed a protocol for assessing the alignment of these elements. The *fidelity of implementation (FI)* is an indicator of the consistency of execution of a district's expectations: its

stated goals, plans, curricula, and various processes, down to the level of instruction. When these various components are consistent and highly aligned, a high level of fidelity of implementation exists. When these are inconsistent and poorly aligned, a low or poor level of fidelity of implementation exists. The classroom observation protocol is designed to collect evidence of district and school goals, plans, and expectations in the instructional setting.

Since the last EQA review, the district reviewed goals in the DIP and SIPs and implemented programs, policies, and practices that would likely lead to improved student achievement. During the reexamination period, the district began participating in the Public Education Leadership Project (PELP) Coherence Framework, a program to improve public urban education based on a collaboration with the Harvard Business School and the Harvard Graduate School of Education. District leaders used the PELP to identify and support district improvement strategies and create a systematic approach to improving student achievement.

The district monitored fidelity of implementation of programs, policies, and practices in a number of ways, most prominently through the analysis of student achievement data and by observing teachers in the classroom both formally and informally. Interviewees indicated that while the district utilized a number of assessments to determine district, school, and student progress and to monitor fidelity of program implementation, the MCAS tests provided the principal source of summative student achievement data and the MAP assessment provided the principal source of formative student achievement data. The district also used data from formative assessments such as the DRA and the DIBELS to monitor student progress. In addition, the district collected data from the following assessments to monitor progress of English language learners: the MELA-O, the IDEA Proficiency Test (IPT), and the Language Assessment Scales-Reading/Writing (LAS-R/W).

As previously discussed, during the site visit the EQA examiners conducted 119 classroom observations in 22 of the district's 44 schools: 53 at the elementary schools, 32 at the middle schools, and 34 at the high schools. EQA examiners observed instruction in the classrooms and recorded the presence or absence of 33 attributes, grouped into five categories: classroom management; instructional practice; expectations; student activity, work, and behavior; and classroom climate for learning. As part of the classroom observation process, examiners

interviewed 21 principals to determine the depth of the fidelity of implementation of district and school goals and programs. Examiners interviewed principals from four high schools, three middle schools, 12 elementary schools, and the principals of Woodland Academy and the Claremont Academy/University Park School.

Examiners interviewed principals during a scheduled one-hour period. The EQA examiners asked the same nine questions of the principals to determine the extent to which the district and schools supported instructional priorities and linked them to four major district systems: curriculum development, student assessment, professional development, and supervision and evaluation. Examiners also asked principals to describe their school safety plans.

The summary below provides the questions asked to principals and a composite of the responses to each question. The bulleted responses pertain to all principals interviewed regardless of level.

### **1. What are the instructional priorities of the district?**

- Twenty principals indicated they had a priority to have all students achieve at a higher level (higher expectations).
- Eighteen indicated safety for all students and staff members was a priority
- Eighteen indicated that aligning the ELA and math curricula was a top priority.
- Fourteen stated having all teachers familiar with and use differentiated instruction was a priority.
- Twelve indicated paying attention to the needs of ELL and special education students was a priority.
- Ten indicated fidelity of implementation of instruction was a priority.
- Ten indicated using data to drive instruction was a priority.
- Ten indicated attaining AYP in all grades and subjects was a priority.
- Four indicated decreasing the dropout rate and offering more alternative education programs for at-risk students was a priority.

### **1a. What are the instructional priorities of your school?**

- Most principals responded that their school's instructional priorities were similar in almost all aspects to the district priorities and that the two were linked and went hand in hand.



**1b. How were the school priorities related to the district priorities?**

- All principals responded that their School Improvement Plan (SIP) used the District Improvement Plan (DIP) as the foundation of the school plan and that their teachers knew the contents of the SIP and geared their day to day instruction on the priorities of the district and the school.

**2. How were the school priorities determined?**

- Twenty principals indicated the analysis of school achievement data determined what areas the school should stress in the classroom and how the school should set priorities.
- Seventeen principals indicated that the results of the MCAS tests and the MAP assessment were important elements in identifying the strengths and weaknesses of the school's instructional program.
- Sixteen principals indicated meeting the needs of a diverse student population helped determine school priorities.
- Three principals indicated the responsibility of taking middle school students and preparing them to become productive high school students helped set priorities.
- Five principals collaborated with department heads/coaches and teachers to set priorities.

**3. How were school priorities communicated to staff members?**

- Twenty-one principals communicated priorities at regularly scheduled faculty meetings (usually monthly); 18 through departmental or grade-level meetings; 15 through staff memos; 14 through e-mail or hard copy faculty bulletins; and 12 through direct one on one communication.

**4. How does curriculum development support the accomplishment of the school's priorities?**

- Twenty-one principals indicated that because of high student mobility it was imperative for the district to use a standardized approach to curriculum, i.e., the same programs and books.
- Seventeen principals indicated the curricula were always based on the Massachusetts frameworks and the district benchmarks, but were always in a state of flux and/or revision to meet the needs of the students.
- Ten principals indicated districtwide curriculum committees worked on revising the curriculum through either departmental and/or grade-level efforts.
- Ten principals indicated curriculum liaisons/coaches worked with principals and teachers.
- Eight principals indicated the school used pacing guides.
- Seven principals indicated vertical coordination between grades occurred regularly.

- Seven principals indicated that the substantial number of ELL students made teaching literacy and vocabulary an important part of the curriculum and critical to the success of these students.

**5. How do formative and summative assessments support the accomplishment of the school's goals?**

- Fifteen principals indicated that because the MCAS test results determined AYP status, they steered the district's attempts to improve achievement.
- Fourteen principals indicated the MAP assessment, administered to all students in grades 3-10 three times a year, acted as a baseline measure to attain district and school goals.
- Twenty principals indicated schools used teacher-generated/created assessments regularly, such as quizzes, unit tests, and midyear/final exams, to support the achievement of school goals.
- Fourteen principals regularly distributed progress reports and report cards to inform parents of their child's progress.
- Nine principals indicated they began a portfolio assessment program in the fall of 2007.
- Eight principals indicated curriculum coaches disaggregated data and discussed the results of the analysis with teachers.

**6. How does mandatory professional development support the accomplishment of the school's priorities?**

- Twenty principals indicated the district provided all teachers two full days and eight hours of after-school mandatory professional development each year.
- Twenty-one principals noted major professional development initiatives in the last three years to train teachers in ELL pedagogy, the MAP assessment, and differentiated instruction.
- Fifteen principals indicated schools offered many schoolwide and grade-level professional development opportunities during the period under review.
- Eight principals indicated schools provided common planning time to teachers.
- Seven principals indicated teachers shared and/or demonstrated best practices.
- Eighteen principals indicated schools provided safety professional development for staff members, such as restraint training, CPR training and/or retraining, and training in crisis management.
- Seven principals indicated curriculum liaisons/coaches were available to support teachers.

**7. How do supervision and the evaluation of instruction support the accomplishment of the school's priorities?**

- Twenty-one principals indicated they supervised teachers primarily by checking plan books weekly and performing regular classroom walk-throughs.
- Twenty principals indicated they monitored whether teachers posted objectives on the classroom board daily.
- Fourteen principals indicated that analysis of the MCAS and MAP tests scores was a component of supervision and evaluation in that the results measured student improvement.
- Eleven principals indicated they used classroom walk-throughs to look for fidelity of implementation of programs and the curriculum.
- Twelve principals indicated that during walk-throughs they looked for examples of differentiated instruction.
- Twenty principals indicated they followed the teacher contract when conducting an evaluation.
- Fifteen principals indicated that consistent teacher observations performed by principals included pre- and post-conferences.
- Eleven principals indicated professional status teachers, during the off evaluation year, had goal-setting conferences with teachers.

**7a. To whom are you accountable for supervision? How does that work?**

- All principals indicated they were accountable to the quadrant manager for evaluations.
- All principals indicated they were evaluated based on the Principles of Effective Administrative Leadership.

**8. What should we look for as evidence of the implementation of the district and school priorities when we observe classes?**

- Twenty principals stated examiners should look for objectives of the day posted in all classrooms.
- Eighteen principals stated examiners should look for well organized lessons.
- Eighteen principals stated examiners should look for or see student-centered learning and an abundance of group work.
- Fourteen principals stated examiners should look for or see students working on open-response questions and/or concentrating on writing.
- Twelve principals stated examiners should look for or see collaborative and cooperative learning.

- Ten principals stated differentiated instruction should be apparent.
- Nine principals indicated learning was “personalized” and teachers had a stake in their student’s learning.

## **9. Describe your school safety plan?**

- Twenty principals indicated all teachers had a Worcester Public School Emergency Guide.
- Eighteen principals indicated all doors were locked and check-in systems were in place in schools.
- Seventeen principals indicated a crisis plan was in place in schools and crisis codes were issued to all personnel.
- Fifteen principals indicated that evacuation drills and lockdown drills were common occurrences.
- Eleven principals indicated faculty and staff members wear identification badges.
- Seven principals indicated that the high schools and middle schools had administrators and faculty in corridors during class passing periods.

The EQA teamed also interviewed 36 teachers during the site visit. These interviews were voluntary, and they were conducted as examiners performed classroom observations in the elementary, middle, and high schools.

An individual examiner interviewed each teacher during a scheduled time. The EQA examiners asked the same nine questions of the teachers to determine the extent to which the district supported curricular and instructional priorities. In addition, examiners asked teachers to describe their school safety plans. The following is a summary of the teacher interviews.

## **1. What are your school’s instructional priorities?**

- Fifteen teachers indicated MCAS test preparation and improvement in MCAS test performance were instructional priorities.
- Ten teachers indicated that the use of the MAP assessment data to monitor student progress was a priority.
- Eleven teachers indicated a challenging curriculum and the use of creative instructional strategies based on achievement data were instructional priorities.
- Eleven teachers indicated using differentiated instruction to address diverse learning styles was an instructional priority.

- Ten teachers stated developing students as life-long learners and having them work toward their full potential was an instructional priority.
- In general, teachers noted the need to continue to triangulate student assessment and achievement data (i.e., MAP, MCAS, and district/school benchmarks) to inform curricular decisions and to develop appropriate instructional strategies.

**2. How were the school's instructional priorities determined?**

- Twelve teachers indicated the schools used an analysis of the MAP and MCAS test data to determine instructional priorities.
- Nine teachers observed a link between instructional priorities and the SIP.
- Sixteen teachers indicated schools used district and school initiatives to establish instructional priorities.
- Teachers noted that both district and school leadership initiated the need to analyze student achievement data to align the curriculum to the state frameworks, to monitor student achievement, and to improve instruction.

**3. How were the school's instructional priorities communicated to you?**

- Seven teachers indicated instructional priorities were communicated through the SIPs.
- Twenty-four teachers indicated instructional priorities were communicated through district and school meetings.
- Teachers noted that principals and especially department heads provided the leadership and support to improve their efforts to meet the needs of all students. Teachers were involved in the curriculum/instruction decision-making process and were encouraged to provide input that gave them a sense of ownership.

**4. How do the district and school curriculum development reflect your school's instructional priorities?**

- Five teachers indicated the SIP was used as a guide to curriculum development and instructional priorities.
- Five teachers indicated they followed curriculum guides and syllabi to determine instructional priorities.
- Ten teachers indicated they used state curriculum frameworks and district/school benchmarks to develop the curriculum and determine instructional priorities.
- One teacher indicated the classroom curriculum reflected the school's instructional priorities.
- Three teachers indicated the state curriculum frameworks were used to align curricula.

- Seven teachers indicated instructional priorities came from student needs determined through the analysis of MCAS and MAP test data.
- Teachers indicated that the district's focus on making data-driven decisions based on student progress and achievement provided the impetus to develop effective SIPs, and to provide appropriate professional development to improve instruction.

**5. How do you use student assessment results to plan instruction that reflects the school's priorities?**

- Ten teachers indicated they used MAP and MCAS test data to develop flexible grouping.
- Five teachers indicated they used MAP and MCAS test data to develop student folders/portfolios.
- Six teachers indicated they used MAP and MCAS test data to give pre-and post-tests.
- Seven teachers indicated MAP, MCAS, and teacher assessments drove instruction, development of fluency checklists, and skill remediation.
- Thirteen teachers indicated they used MAP assessment data to analyze student deficits.
- Teachers noted that assessments play an important role in the areas of whole class versus small group learning arrangements (flexible grouping), meeting the needs of students whose progress needs attention, and planning effective lessons.

**6. How is the mandatory professional development program related to the district and school priorities?**

- Twenty-nine teachers indicated the district provided professional development in differentiated instruction.
- Fourteen teachers indicated the district indicated the district provided professional development on the use of the MAP assessment.
- Nine teachers indicated the district provided professional development on strategies to teach ELL students.
- Teachers noted that mandatory professional development plans for the 2005 to 2007 school years reflected the schools' instructional priorities. The plan focused on English language learners in 2005-2006, the Measures of Academic Progress in 2006-2007, and differentiated instruction in 2007-2008.

**7. How do supervision and evaluation of your work support you in accomplishing the school's priorities?**

- Three teachers indicated the principal had open door policies.
- Seven teachers indicated some department heads were coaches and made regular classroom visits and provided support.

- Four teachers indicated assistant principals regularly visited classrooms and provided support.
- Multiple teachers indicated principals visited classrooms, provided feedback, reviewed lesson plans, looked for use of data, and had high expectations.

**8. How will we see district and school priorities during the classroom observations?**

- Teachers indicated examiners would see such things as flexible grouping, learning objectives visibly posted, student engagement and student displayed work, one on one instruction, a challenging academic and apprehension-free environment, cooperative peer learning, and an emphasis on literacy.
- Teacher comments focused on making transitions from the more teacher-centered and direct instruction classroom to a more student-centered learning environment. Students needed to become more proactive in their own learning. Teachers expressed needs for a more challenging academic environment, increased student engagement in classroom activities, and development of more effective instructional strategies.

**9. What is your school's safety plan?**

- Teachers described school safety plans as including evacuation, lockdown, and bus drills, and a crisis response team. Teachers indicated the principal was responsible for safety, and schools had locked doors at all times. Schools had telephone trees and emergency codes in place, and teachers were provided safety and crisis plan books. Schools had visitor sign-in procedures.
- Teachers indicated that they all had copies of the district safety (crisis) plan located in their classrooms. Each school's plan reflected the district plan.

Interviewees generally confirmed that since the last EQA review the district focused on improving student achievement, and affirmed that the district implemented effective systems and programs such as the MAP and the analysis of student achievement data to determine and monitor school and district priorities and to monitor fidelity of implementation.

<b>Standard III: Assessment and Program Evaluation</b>									
<b>Ratings ▼ Indicators ►</b>	<b>1.2</b>	<b>1.4</b>	<b>1.5</b>	<b>1.7</b>	<b>4.1</b>	<b>4.2</b>	<b>4.3</b>	<b>4.4</b>	<b>4.5</b>
<b>Excellent</b>									
<b>Satisfactory</b>		2007	2007	2007	2007	2007	2007	2007	2007
<b>Needs Improvement</b>	2007								
<b>Poor</b>	2005	2005	2005	2005		2005	2005	2005	2005
<b>Unsatisfactory</b>					2005				

### III. Assessment and Program Evaluation

The district and school leadership used student assessment results, local benchmarks, and other pertinent data to improve student achievement and inform all aspects of its decision-making including: policy development and implementation, instructional programs, assessment practices, procedures, and supervision.

#### Findings:

- During the period under reexamination, the district implemented and administered the MAP assessment three times a year in grades 2-10 as a value-added assessment to help teachers and administrators advance student achievement.
- The district implemented a common SIP template used by all schools to develop their SIPs. The template included a list of approved assessments that schools used as evidence of goal attainment.
- Classroom teachers in each school analyzed student achievement data for their grade level and collaborated to develop grade-level SIP achievement goals.
- Worcester Public Schools was admitted into a research study, at no cost, to evaluate the effectiveness of early literacy programs.
- Based on the results of a staff technology survey, the district planned to purchase numerous refurbished computers to replace obsolete equipment using funds awarded from a class action lawsuit settlement.



## **Summary**

During the reexamination period, the Worcester Public Schools improved its capacity for assessment and program evaluation. Of the nine indicators in this standard reexamined by the EQA, the district improved on eight to a rating of ‘Satisfactory.’ This overall improvement reflected the district’s commitment to using a variety of student achievement data to inform decisions about program effectiveness, staff allocation, and resource acquisition.

In 2006, the district adopted the Measures of Academic Progress (MAP) for students in grades 2-10 and administered it three times a year as a value-added assessment. The district used the DesCartes Continuum component of the MAP assessment to determine students’ understanding of skills and concepts and to diagnose weaknesses. The MAP results were monitored at all levels, and teachers used the data to plan instruction. Worcester also implemented individual student goal worksheets to track student progress.

Administrators used eWalk software to monitor teachers’ use of MAP data to plan instruction and their implementation of districtwide programs in ELA and mathematics. Worcester also implemented consistent procedures and timelines for administering other approved assessments, such as the Developmental Reading Assessment (DRA) and the Dynamic Indicators of Early Literacy Skills (DIBELS). During the reexamination period, the district implemented a standard template for the development of its School Improvement Plans (SIPs) that aligned with the District Improvement and focused primarily on raising student achievement. Each school developed its respective SIP based on student achievement data, and classroom teachers at each grade level collaborated and developed SIP student achievement goals in ELA and mathematics. Teachers and administrators annually reviewed assessment data to determine student progress, and made decisions about the effectiveness of programs and resources. In addition, Worcester worked with a researcher, P. David Pearson, to evaluate the effectiveness of its early literacy programs. The two-year study was expected to be completed in January 2008.

Although Worcester’s subgroup populations districtwide did not make AYP in mathematics and ELA from 2004 to 2007, achievement scores for subgroups increased at some schools and grade levels during the reexamination period.

## **2005 Indicators**

- 1.2. In order to improve achievement for all students, the district used aggregated and disaggregated assessment scores to assess student progress for all populations. Student performance has improved across all subgroups.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Needs improvement**

### **Evidence**

During the initial period under review (2001-2004), the district used aggregated and disaggregated MCAS test scores to assess the progress of all student populations. Between 2002 and 2004, the district added two districtwide reading tests at the elementary level: the Developmental Reading Assessment (DRA) and the Dynamic Indicators of Early Literacy Skills (DIBELS). An administrator stated that the district's review of the MCAS test scores began at the central testing and evaluation office, which the district established in the late 1990s. The office created reports on individual students, item analyses, and subgroups, as well as student profiles. Near the end of the period under review, the district incorporated these student profiles with other student information into its SAGE database. During the initial period under review, the district's aggregate MCAS test scores and the scores of its subgroups were below the state averages; its aggregate ELA scores were flat, and its aggregate mathematics scores declined slightly.

During the reexamination period under review (2005-2007), the district used aggregated and disaggregated MCAS data to assess student progress. In 2006-2007, the district implemented and used the MAP test to assess student progress for all populations. The district had systematic procedures for the analysis, interpretation, and use of both MCAS and MAP data by central office personnel, principals, subject-specific liaisons, department heads, and classroom teachers. Furthermore, assessment data provided the foundation for the development and revision of the SIPs.

Thirty-three of the 44 schools in the district were identified for improvement, corrective action, or restructuring in ELA, mathematics, or both in 2007. Districtwide, Worcester's subgroup populations did not make AYP in both ELA and mathematics from 2004 to 2007. More

specifically, special education and former limited English proficient (FLEP) students did not make AYP in all grades in mathematics and ELA in 2006 and 2007. Also in 2006 and 2007, Hispanic students did not make AYP at all levels except in ELA in grades 6-8. Low-income students did not make AYP in mathematics and ELA in grades 3-5 and in mathematics in grades 6-8.

Although MCAS scores had not improved for all subgroup populations across the district, administrators and teachers said the district had made improvements for subgroups at some grade levels and in certain schools, and that the district's emphasis on increasing participation in rigorous instruction had resulted in increased enrollment of subgroup populations in AP courses. For example, the Worcester Technical High school met the 2006 and 2007 AYP targets in both ELA and mathematics for all subgroups. The Clark Street Elementary School made AYP for all subgroups in both ELA and mathematics for 2005-2007. Lakeview Elementary School made AYP in ELA for 2003-2007 and in mathematics for 2003-2006 for all subgroups. Both the Jacob Hiatt Magnet School and Burncoat Street Elementary School made AYP in mathematics for 2007, and the Norrback Avenue Elementary School made AYP in both ELA and mathematics in 2007 for all subgroups. University Park High School made AYP for all subgroups in both mathematics and ELA for 2003-2006.

In 2005, Worcester made a commitment to increase AP enrollments, especially for subgroup populations, and tracked data for these groups. As a result, the district implemented the AVID program at the middle school level to provide underrepresented students an avenue to honors and AP coursework. In the AVID elective, taught one period a day, students were taught the organizational and writing skills required to succeed in honors and AP courses in preparation for college. The number of students enrolled in AP courses increased from 511 in 2005 to over 800 in 2007. AP course offerings also increased, including an AP Human Geography course for grade 9 students.

During the reexamination period, the district implemented MAP testing as a value-added assessment linked to the district curriculum in reading and mathematics and the Massachusetts curriculum frameworks. Developed by Northwest Evaluation Association (NWEA), the MAP test is a computerized adaptive assessment. In 2004-2005, seven schools in the district piloted the

MAP computerized assessment. Positive feedback from educators at pilot sites and improved MCAS scores influenced the district to implement the MAP in all schools for students in grades 2-10. One staff member said that MAP assessments were “the best thing we’ve done.” In 2005-2006, students were tested during the year, and all teachers and administrators, except those at the Worcester Technical High School, received eight hours of mandated professional development in test administration, analysis, and use of data to inform classroom planning and instruction. In 2006-2007, the district continued regular testing at three points during the school year to measure student progress.

This MAP baseline data helped the district determine student growth and predict student performance on the MCAS tests. The district utilized funds to add components to the MAP assessment program, including a professional development option available on-line. A diagnostic component provided teachers with reports on each student’s strengths and needs, and a goal-setting component helped students develop a personal action plan to raise their own achievement. Students, parents, and teachers signed the student’s goal-setting worksheet. Teachers discussed students’ goals at meetings with coaches, and submitted them electronically to central office personnel. Administrators and teachers stated that MAP assessment scores were available within 48 hours of test completion. This immediate feedback allowed teachers to plan appropriate instruction and students to develop attainable learning goals.

Another component identified student deficiencies in specific skills and concepts by strand in order to target instruction and enhance student performance in mathematics and reading. Coaches and principals monitored the MAP assessment data through multilevel meetings to review student progress. Based on information gathered at these meetings, and a review of the range of student performance in individual classrooms, the district initiated an eight-hour training in differentiated instruction in the fall of 2007. Baseline aggregate MAP assessment data for the 2006-2007 school year demonstrated that students in grades 3-6 and grades 8-10 met or exceeded the 50 percent growth target in mathematics established by the district for the first year of MAP testing. However, only students in grade 5 and in grades 8-10 exceeded the MAP growth targets in reading. Although interviewees were pleased with the initial MAP assessment data and the resulting information that teachers used to inform instruction, they stated that it was too early

to determine the effectiveness of this new assessment program in helping to raise student achievement.

- 1.4. In addition to the MCAS, the district regularly employed the use of standardized tests, local benchmarks, or other assessments to measure the progress of all student populations at regular intervals and used these results to measure the effectiveness of achieving district objectives for student learning.

#### **EQA Rating from 2005: Poor**

#### **EQA Rating from 2007: Satisfactory**

##### **Evidence**

During the initial period under review, between 2002 and 2004, the district added two districtwide reading tests at the elementary level: the DRA and the DIBELS. Interviewees said that the district used the data to determine instructional supports. However, the EQA found no evidence of protocols for using the results of these or other tests to measure achievement of district objectives for student learning.

During the reexamination period under review, the district regularly employed the use of standardized tests and other assessments to measure the progress of all student populations at regular intervals, and used these results to determine the accomplishment of objectives for student learning. In addition to the MCAS tests and the MAP assessment, the district used other measures including the DIBELS, DRA, IDEA Proficiency Test (IPT), Early Screening Inventory (ESI), Massachusetts English Proficiency Assessment (MEPA), and Massachusetts English Language Assessment-Oral (MELA-O), as well as the unit and chapter tests from the Houghton Mifflin reading series and the Everyday Mathematics program and Connected Mathematics Program (CMP). Individual schools used all of these results to set SIP goals.

In 2006, the district used a common SIP template for all schools. This template included aggregate and subgroup AYP data, and MCAS, MAP, DIBELS, and DRA assessment data. Other components of the SIP included general achievement goals for ELA/reading and mathematics, grade-level goals with actions steps, related professional development, timelines for completion of goals, resources, person(s) responsible, and measurable outcomes to support goal attainment. The SIP planning guide had a checklist of district-approved evidence, including

the results of the MCAS, MAP, DIBELS, DRA, MELA-O, and MEPA. assessments. Administrators and teachers stated that schools could adjust their instructional goals based on the results of formative assessments. In interviews, teachers stated that they had an integral role in the development and refinement of the 2006-2007 SIPs for their schools. Teachers had used assessment data relevant to their respective grades or content areas to develop standards-based grade-level goals. They stated that this process created a sense of ownership and empowered them to use data regularly to measure their own students' achievement. Schools submitted their SIPs to the quadrant managers, who gave feedback and suggestions for change. A team comprised of district personnel such as managers, coordinators, content liaisons, and program facilitators read the SIPs and rated them as 'approved,' 'approved with changes,' or 'not approved.' Faculties made changes based on the readers' comments. Administrators said that future SIPs would have a greater emphasis on the use of MAP assessment data to improve subgroup performance.

During the reexamination period, the district adapted the Massachusetts Reading First three-tier model for reading instruction. Students were assigned to the tiers based on the results of the DIBELS, DRA, MAP, and other assessments. The instructional model for at-risk students varied in frequency, intensity, and student to teacher ratio according to severity of need. In 2005, Worcester adopted the DIBELS assessment for all students in grades K-1. The district provided training for 143 classroom teachers, enabling them to administer the assessment using hand-held Palm Pilots.

The district also provided teachers with additional professional development to increase their skills in using data to improve reading instruction. Students were tested at a minimum of three times a year, and the data were submitted electronically to the Title I office. Title I staff members provided oversight and assistance. Teachers monitored the reading progress of students scoring in the red zone on the DIBELS assessment every two weeks. Students scoring in the yellow zone were monitored monthly, and students scoring in the green zone were monitored at the required intervals.

As a result of Worcester's partnership with the Massachusetts DOE in the Reading Excellence Program, the district continued to administer the DRA to all students twice a year in grades 1 and

2. The results were submitted electronically to the Title I office. Worcester administered the ESI to entering kindergarten students in September.

In addition to the MEPA and MELA-O, the district also incorporated the Annual Measurable Objective Assessment (AMOA) to evaluate the effectiveness of its ELL program. Administrators said that results from these assessments helped them identify instructional gaps, improve supplemental programs, determine professional development needs, and make program adjustments.

Administrators stated that the district was in the final stages of developing common syllabi at both the middle and high school levels to provide consistency in content areas across the district, and was in the process of developing common assessments to align with these syllabi at both levels.

Teachers at each school administered formative assessments from the Houghton Mifflin reading series, and the Everyday Mathematics program and the Connected Mathematics Program. Administrators stated the district did not require submission of these results to the central office, and principals directed teachers' use of formative assessment results in their buildings. In 2005, the district incorporated the MathAssist-ments system to help prepare middle school students to succeed on the MCAS math test. This computer-assisted program was created by a team of educators headed by a consultant from Worcester Polytechnic Institute. The program used released MCAS test questions as test items, and provided immediate feedback to inform teachers of the instructional needs of individual students. Problems that students answered incorrectly were broken down to help them work out the solutions part by part.

1.5. The district engaged in a formal, documented annual review of student assessment data to reallocate staff and prioritize resource distribution to improve achievement for all student populations.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

## **Evidence**

For the initial period under review, according to document reviews and interviews, Worcester documented its formal annual review of student assessment data. The EQA, however, found little evidence that this led the district to reallocate staff members and resources to improve achievement for all student populations during the initial review period. Administrators indicated that the district budgeted the same per pupil amount to each school. Grant funds, on the other hand, provided for specific services, programs, or opportunities at specific schools or levels, or were used to address specific issues.

During the reexamination period under review, despite an increase in fixed costs and a decline in state and federal funds, Worcester engaged in a formal, documented annual review of student assessment data and used data to reallocate staff members and prioritize resource distribution to improve achievement for all student populations. Examples of reallocation of staff members included the assignment of coaches and tutors at the elementary and middle school levels, recruitment and selection of AP teachers, and the reduction of class sizes at the middle schools struggling to make AYP. An analysis of job descriptions led the district to create instructional coaching positions in 2007. The district augmented the service delivery model with 22 elementary coaches in mathematics, reading, and writing at the elementary and middle school levels. The role of eight middle school coaches included modeling effective instructional and assessment practices, collaborative planning with teachers, peer observations and feedback, professional development, research and data analysis, and program monitoring.

Additionally, the district hired 79 tutors supported by a combination of grant and local funds. These tutors provided Tier II intervention services at the elementary level in reading and mathematics. A review of documents and interviews with administrators verified that the selection criteria for AP teachers included academic preparation and willingness to participate in specific professional development. Administrators also compared students' AP scores with their end of course grades as a measure of the effectiveness of AP instruction.

The district was committed to reducing class sizes, and the teachers' contract contained a negotiated caseload of 125 students per teacher. Worcester made reducing class sizes at the middle school level a priority, and most middle school classes had fewer than 25 students. For



example, at Worcester East Middle School, groups of 75 students were assigned to a five-teacher team to help address low AYP results.

Due to the increase in fixed costs and the decline in state and federal funds, the district suffered significant staff and program reductions during the reexamination period. Instructional supply allocations were \$65 per pupil in 2005, \$40 in 2006, \$70 in 2007, and \$63 in 2008. Although each school received the same per pupil expenditure, administrators said the district continually prioritized resource distribution based on student assessment data. Resources from grant funding targeted the neediest schools based on AYP data. For example, several underperforming schools in the district received Extended Learning Time (ELT) grants, and the 21st Century grant targeted schools ‘in need of improvement’ under NCLB guidelines. Distribution of Title I funding to schools ranged from \$300 to \$800 per student based on AYP data. Although some support programs at the elementary and middle school levels were eliminated because of budget restrictions, the district maintained MCAS test tutors and specialists in mathematics and ELA at the high school level. Worcester allocated city and grant funds enabling all grade 10 students to take the PSAT starting in 2005 in order to encourage and prepare students to enroll in post-secondary education programs. The PSAT was also another source of student assessment data.

1.7. Assessment trend data indicated that classroom assessment standards, practices, and expectations for students were consistently linked with the learning standards articulated in the State Curriculum Frameworks.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

#### **Evidence**

For the initial period under review, the district’s benchmarks, the DIP and SIPs, the district’s Math Action Plan, and documentation of grant-funded initiatives listed links between classroom assessment standards, practices, and expectations for students. During the period under review, the district’s aggregate MCAS test scores and the scores of its subgroups were below the state averages. Its aggregate ELA scores were flat, and its aggregate mathematics scores declined slightly.

Principals said that it was their responsibility to monitor the link between instruction and assessment in their schools. The principals said that they did not analyze cohort test data over time. They monitored instruction and testing for alignment with the state curriculum frameworks, the district's benchmarks, and the DIP and SIP goals. During school year 2003-2004, the district piloted an elementary report card that linked local and state benchmarks to performance outcomes. The district's secondary report cards did not display such links.

During the reexamination period under review, the district collected assessment trend data and developed procedures to monitor classroom assessment standards, practices, and expectations. These procedures linked the learning standards and district expectations to classroom assessment practices. The district regularly collected and reviewed assessment trend data through a multilevel system involving central office personnel, principals, content-specific liaisons, department heads, and classroom teachers. During the reexamination period, Worcester implemented a lesson plan template that teachers were required to use for planning. The template included lesson connections to the Massachusetts curriculum frameworks. The district required teachers to submit their lesson plans to principals each week at the elementary school level, and to department heads/academic coaches at the middle school level. At the high school level, department heads reviewed lesson plans in their content areas. Interviews with administrators validated the effectiveness of these procedures on pacing, consistency of instruction, and teacher expectations.

In 2005, Worcester implemented the eWalk system, which provided a checklist for principals to monitor the consistent implementation of programs and use of MAP data to inform instruction. Elementary and middle school principals said that the eWalk system promoted effective communication between administrators and teachers, and verified the consistency of program implementation in teachers' performance evaluations. In 2005, all elementary schools used a standards-based report card. Elementary teachers aligned specific student outcomes to classroom assessment standards, practices, and expectations. Administrators stated that the district had not yet developed standards-based report cards at the middle and high school levels because of teachers' concerns about a change in their working conditions. Information provided by the district indicated that colleges rejected implementation of a standards-based report card by one school in the district, thus encouraging that school to reconsider this reporting approach. Middle

and high school report cards were not revised due to ongoing impact bargaining with the Education Association of Worcester (EAW).

- 4.1. The district and each of its schools implemented a data-driven system for the evaluation of programs and services, and resource acquisition that was linked to student achievement data.

**EQA Rating from 2005: Unsatisfactory**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

During the initial period under review, the district did not have a systemic process for evaluating programs, services, or resource acquisitions. The district used a data-driven process for evaluating programs only when it was mandatory, as when a funding agency required it, or when the district contracted with an outside organization to look at a specific issue. In general, administrators were not aware of a regular and systematic process connected to student data for evaluating internal programs.

During the reexamination period under review, Worcester implemented a data-driven system for the evaluation of programs, services, and resource acquisition, primarily through the annual development of the SIPs. The revision of each school's SIP by school administrators and grade-level teachers required staff members to review student achievement data and evaluate how student programs, services, and resources had affected learning outcomes. Interviews with administrators and teachers verified that some schools had revised their SIP goals when the staff determined that the measurable outcomes were either too high or too low based on a review of student progress.

Also during the reexamination period, the district participated in an independent program evaluation of its reading literacy programs. The two-year study, conducted by a researcher, measured the effectiveness of reading instruction using student achievement data and classroom observations. Although the final results of this program evaluation were expected in January 2008, preliminary results indicated improved scores for students in schools using the K-6 Making Meaning reading comprehension curriculum. In addition to the evaluative component of

the SIPs and the independent literacy evaluation, annual grant program evaluations provided data on the effectiveness of these programs for the district and the grant sponsor.

In 2005, Worcester was one of the pilot districts participating in the grant funded DOE data warehouse project. Administrators told EQA examiners that the district worked with the state to design the data warehouse system. The goal of the data warehouse project is to store all assessment data for a district in one place to facilitate curriculum and program evaluation.

4.2. District and school administrators used student assessment and other pertinent data to measure the effectiveness of the district's instructional, supplemental, and support programs and services.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

#### **Evidence**

For the initial period under review, policy documents and staff interviews did not provide evidence of a formal plan for program evaluation or schedules for evaluating grade-level curricula. Administrators said that the district adopted the DOE's Performance Improvement Mapping (PIM) process during 2002-2003, after training the principals. The district dropped some components in 2003-2004, after which it revised the process with guidance from DOE school support staff.

During the reexamination period under review, administrators used student assessment and other relevant data to measure the effectiveness of instructional, supplemental, and support programs and services. The district participated in a two-year study of its reading literacy programs from 2005 to 2007. Additionally, in 2005 principals began using eWalk software to monitor visual and instructional components of programs such as Everyday Mathematics and Connected Mathematics in classrooms at the elementary and middle school levels in order to determine the fidelity of implementation of these adopted programs.

Budget restrictions during the reexamination period affected the timely replacement of older computer equipment. The district had a goal to replace 1,000 computers annually so that no computer was more than six years old. Worcester received slightly over \$1 million in vouchers

from the Microsoft class action lawsuit settlement, and some of these funds were used to replace 420 computers in 2006. In March 2007, Worcester surveyed staff members to determine the quantity, condition, and usage of technology in classrooms and schools, as well as technology professional development needs. The survey had a 100 percent return rate, and the results provided the impetus for the district to use the remaining Microsoft settlement funds to make hardware and software purchases. Worcester purchased numerous refurbished computers with extended warranties, 220 refurbished laser jet printers, operating system software, and Microsoft Office licenses.

4.3. The evaluation results of the district's instructional, supplemental, and support programs and services were used to inform decision making and resulted in sustained or continued improvements in the quality of teaching and learning.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

#### **Evidence**

For the initial period under review, the document review and interviews provided no evidence that the district had a formal, coherent schedule for evaluating the effectiveness of instructional, supplemental, and support programs and services. The district evaluated mandated and grant programs as required.

During the reexamination period under review, evaluation results of the district's instructional, supplemental, and support programs and services were used to inform decision-making, and resulted in sustained improvements in the quality of teaching and learning. For example, in 2006-2007 the district conducted a program evaluation of the grade 8 Connected Math Program 2 (CMP2), comparing the achievement of honors students using the traditional grade 8 Algebra I textbook to those using the new CMP2. The same teacher taught both classes. The results indicated that while both groups of students made significant progress, the students using the CMP2 scored almost 20 percent higher than the group using the traditional Algebra I text. This comparative data validated the use of the CMP2 for Algebra I courses in grade 8.

After using the eWalk system to monitor fidelity of program implementation from 2005 to 2007, the district expanded the eWalk indicators to include evidence of differentiated instruction and

specific mathematics concepts. Central office administrators monitored compliance regularly based on data submitted electronically by principals, and consulted with principals whose data showed irregular or poor implementation. A middle school taskforce evaluated academic literacy and validated the use of a 3-2 Word Study program piloted at the Burncoat Middle School. This program was developed by school educators following a review of achievement data on students with disabilities, and led to the utilization of multiple Wilson reading strategies. Interviewees stated that the reading proficiency scores of many students enrolled in the program increased, sometimes by as much as two grade levels.

4.4. District and school administrators used student assessment and other pertinent data to measure the effectiveness of acquired resources, including capital improvements and projects, equipment, materials, and supplies.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

#### **Evidence**

During the initial period under review, data analysis led the district to adopt a districtwide mathematics program, EDM, in grades 1-6. This project was completed in the 2003-2004 school year. There was no evidence that the district similarly used data to decide on resource acquisitions for its ELA programs or its upper-level mathematics programs. Budgets originated at the central office and were based on traditional distribution formulas that did not include achievement data, but the district could allocate grant funds for particular programs aimed at improving student achievement.

During the reexamination period under review, administrators used student achievement and other relevant data to measure the effectiveness of acquired resources, including capital improvements and projects, equipment, materials, and supplies. Principals and teachers used student achievement data to determine the effectiveness of resources in developing their building-based SIPs. Additionally, data from the district technology survey informed the central office about the sufficiency and condition of computers throughout the system. Worcester increased per pupil funding for books and classroom materials to meet the rising costs of consumable materials for academic programs. The per pupil expenditure increased from \$40 in

2005-2006 to \$70 in 2006-2007 but declined to \$63 in 2007-2008. During the reexamination period, an increase in the E-rate enabled the district to make capital improvements to 20 of its poorer schools by installing new wiring switches. Worcester used the specific criteria from the National Instructional Materials Access Committee (NIMAC) to select instructional materials for district special education and ELL students.

4.5. The results of the district's evaluation of acquired resources, including capital improvements and projects, equipment, materials, and supplies, were used to inform decision making and resulted in sustained or continued improvements in the quality of teaching and learning.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

#### **Evidence**

For the initial period under review, the document review and administrator interviews revealed that the district did not have a districtwide process for evaluating acquired resources, capital improvements, projects, equipment, materials, and supplies. The district relied heavily on principals and teachers to use a variety of means, including TestWiz data analysis, to assess the effects of various programs.

During the reexamination period under review, Worcester developed a variety of processes and procedures to evaluate programs and resources, and used the results to make decisions. These included the SIP planning process, multilevel communication procedures, annual grant evaluations, a technology survey, and internal and independent program evaluations. School-based administrators and grade-level teachers reviewed student achievement data in developing the SIPs, evaluated the effectiveness of programs and resources, and formulated achievement goals for the following year.

Prior to 2006, teacher feedback, data analysis, and the need to align programs with state standards led the district to purchase the 2005 Houghton Mifflin program for all elementary schools. Grant coordinators were responsible for determining the effectiveness of grant funded programs and services, and for auditing the use of grant funds. In 2007, the results of a staff technology survey led to the purchase of refurbished computers and printers to replace obsolete

equipment. An internal evaluation of the CMP2 Algebra I program confirmed its effectiveness, validating its continued use in grade 8.



<b>Standard IV: Human Resource Management and Professional Development</b>										
2005 Indicators										2007 Indicator
Ratings▼ Indicators►	3.1	3.3	3.4	3.5	3.6	3.7	3.8	8.2	12.5	13
Excellent										2007
Satisfactory	2007	2007	2007	2007			2007	2007	2007	
Needs Improvement					2007	2007				
Poor	2005	2005	2005		2005			2005	2005	
Unsatisfactory				2005		2005	2005			

## IV. Human Resource Management and Professional Development

The district identified, attracted and recruited effective personnel, and structured its environment to support, develop, improve, promote and retain qualified and effective professional staff who were successful in advancing achievement for all students.

### Findings:

- In 2006-2007, the district implemented an administrator evaluation instrument aligned with the Principles of Effective Administrative Leadership. The majority of recommendations in administrators' evaluations focused on fidelity of implementation of district programs, use of data in decision-making, and attention to MCAS test scores.
- The employment contracts of principals contained specific language stating that the performance of the principal and the students were considerations in contract renewal.
- Worcester Public Schools averaged \$7.1 million annually in professional development expenditures during the reexamination period; however, due to budget restrictions, the expenditures for professional development decreased by over \$1.2 million from 2006 to 2007.
- The district increased its percentage of certified teachers from 88.0 to 97.5 percent during the reexamination period, and applied for and received DOE waivers for all uncertified teachers.
- The district negotiated a new two-year evaluation cycle for teachers which brought the frequency of evaluation of professional status teachers into compliance with DOE regulations. The evaluations of professional status teachers lacked instructive comments and specific directions for improvement.

- The district was proactive in providing a variety of professional development trainings in dealing with crises and emergencies, and conducted district-level safety audits in the form of team walk-throughs of schools.

### **Summary**

The Worcester Public Schools made a number of improvements in the area of human resource management and professional development during the reexamination period. Of the nine indicators in this standard reexamined by the EQA, the district improved on eight and received a rating of ‘Satisfactory’ on seven. In addition, on the one new 2007 indicator reviewed, which pertained to training in school safety measures, the district received a rating of ‘Excellent.’

The district aligned administrator evaluation practices with the Department of Education’s Principles of Effective Administrative Leadership, and developed a new instrument that promoted professional growth and effectiveness. Evaluations were informative, instructive, and contained references to the district’s fidelity of implementation of its goals and initiatives. Evaluations encouraged the use of data in decision-making, and they made specific references to MCAS test scores and both student and teacher attendance data. The district held administrators accountable for student achievement results in a variety of ways. For example, the principals’ evaluation instrument focused them on improving student performance through implementing guidelines for assessment and accountability, collaborating with teachers to collect and use data, and monitoring implementation of their respective School Improvement Plans. Principals’ contracts contained evidence that the performance of the principal and the students were considerations in renewal.

Also during the reexamination period, the district aligned the teacher evaluation process with the DOE’s Principles of Effective Teaching, which were included them in the teachers’ contract. The district strengthened formative classroom observation techniques, although reductions in teaching positions beyond those attributable to attrition and reduced enrollment affected the delivery of services to students. Two-thirds of the teacher positions eliminated resulted from insufficient funding rather than reduced student enrollment. In addition, budget restrictions weakened support programs for students as well as support for instruction.

The district averaged \$7.1 million annually in professional development expenditures during the reexamination period, with 25 percent of the funding coming from the district's budget and 75 percent from both public and private grant funding sources. However, a decrease of over \$1.2 million in expenditures from 2006 to 2007 due to budget restrictions limited professional development offerings. Worcester developed three professional development brochures annually, including offerings in content and pedagogy. The district also offered its own two-tier professional development system to prepare teachers for administrative licensure and, subsequently, National Institute of School Leadership (NISL) training.

Worcester conducted an annual evaluation of its professional development program through a variety of means, including an analysis of student achievement data from the MCAS, MAP, PSAT, and AP tests. Additional components of the evaluation of the professional development program included SIP reviews, principal requests, evaluations of professional development workshops, professional development surveys, and external evaluations.

The percentage of teachers certified during the reexamination period increased from 88.0 to 97.5 percent, and the district applied for and received DOE waivers for all uncertified teachers. All administrators were appropriately certified for positions they held. Ninety-four percent of the teachers whose personnel files the EQA reviewed were appropriately certified for their positions. Ninety-nine percent of district paraprofessionals met the federal definition of 'highly qualified.'

Teacher recruitment consisted primarily of an annual job fair, advertising, and networking at area colleges to identify candidates. A major constraint was that the district did not become aware of its Chapter 70 funding until late in the fiscal year. This, coupled with the required application of contractual transfer language in the teachers' contract, often resulted in delayed hiring of new teachers.

The district provided a variety of mandatory professional development trainings on dealing with crises and emergencies in concert with the district's safety officer. It also conducted district-level safety audits in the form of a team walk-through of the school sites. The district reviewed and updated safety and crisis training schedules and manuals annually. Among other provisions for safety, Worcester had an emergency response guide, crises prevention institute training, a video on physical restraint training procedures, national weather alert receivers, school safety parent

brochures, and emergency management training materials. The district provided all teachers with a flip-chart emergency guide detailing emergency procedures for numerous scenarios. School crisis response teams were responsible for conducting fire, bomb threat evacuation and lockdown drills, weather alert detection trainings, and reviewing the school's emergency guide. The district provided classroom management training to all teachers in order to diffuse crises and school safety incidents including fights, threats, and tragedies. In addition, Worcester implemented positive behavior interventions and supports strategies in some of its elementary and middle schools to improve school climate.

### **2005 Indicators**

- 3.1. The district and each of its schools implemented systems for the evaluation of personnel performance that were linked to student achievement data and resulted in sustained or continued improvements in the quality of teaching and learning.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

During the initial review period (2001-2004), there was no adopted school committee policy covering performance standards for any category of professional license holder, as required by 603 CMR 35.04. In 1996, the school committee adopted CMR 35.00 regulations as a guide for the district's teacher and administrator evaluations, and the teachers' labor contract adopted the same language soon thereafter. However, in practice the administrator and teacher evaluation forms lacked the descriptors, and the "third year" option put the district out of compliance with CMR 35.00's requirement that teachers be evaluated every two years.

During the reexamination period under review (2005-2007), the district completed negotiations for a new collective bargaining agreement, which included a two-year calendar for summative evaluations of professional status teachers and brought the district into compliance with DOE regulation CMR 35.00. The district retained the off-year goal setting component of its evaluation process and included the incorporation of student achievement data into the teacher evaluation process.

Although the collective bargaining contract had no language specifically allowing the district to use student achievement data in performance evaluations of teachers, their use by the district arose out of its interpretation of the criteria and indicators in CMR 35.00. However, according to a review of documents and interviews with administrator, student achievement results were not included in a teacher's personnel file.

The EQA team reviewed evaluations included in 66 randomly selected teacher personnel files. Two evaluations of professional status teachers referred to student achievement data. No non-professional status teacher evaluations contained information regarding student achievement. Since the new agreement with the teachers' union was initiated last year, only one year of evaluations reflected the new biennial evaluation process.

3.3. The form and content of the district's evaluation process for administrators was informative, instructive, and used to promote individual professional growth and overall effectiveness.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

#### **Evidence**

During the initial review period, the district intended to use conferences and the SIPs as part of the administrative evaluation process in order to improve student achievement, but a disconnect existed between the intent and the usage. For example, none of the evaluations reviewed by the EQA team contained baseline or outcome data. Some administrator evaluation plans included detailed action plans that outlined specific tasks related to annual goals and supporting information in matrix form. Others lacked supporting data to sustain the expectations.

During the reexamination period under review, the district initiated procedures to align its administrator evaluation practices more closely with the DOE's Principles of Effective Administrative Leadership and to ensure that these practices promoted professional growth and effectiveness. The district developed a new administrator evaluation instrument based upon the Principles of Effective Administrative Leadership. Previously, administrators below the level of principal and assistant principal were evaluated with the instrument for classroom teachers. The new instrument, implemented in the 2006-2007 school year, assessed the administrator's

performance in the areas of instructional leadership, data-driven improvement, and organization to improve student learning.

Administrators stated that quadrant managers could recommend or require specific professional development activities for principals based upon the new instrument. Some examples of these included sessions on the MAP assessment program, the effective and reflective practitioner, and efficacy training. According to a review of 26 randomly selected administrator evaluations by the EQA examiners, all were informative, 19 were instructive; and seven did not contain any recommendations to promote professional growth and effectiveness. Thirteen of the 19 evaluations containing instructive recommendations included references to the fidelity of implementation of district programs, encouraged the use of data in decision-making, and directed attention to MCAS test results and student and teacher attendance data.

3.4. Administrators in the district were held accountable for student assessment results in their yearly evaluations.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

**Evidence**

During the initial review period, although administrators discussed the flow of expectations for improved student achievement from the quadrant manager to the principal to the SIP to the teachers, written performance evaluations did not reflect this flow. Evaluations did not contain baseline or outcome data. All of the teachers and administrators whose evaluations were reviewed by the EQA team were rated satisfactory, and no professional status teachers were recommended for support.

During the reexamination period under review, the district held administrators accountable for student assessment results in a variety of ways. One section of the administrator evaluation instrument implemented in September 2006 focused principals on improving student performance through implementing guidelines for assessment and accountability, collaborating with teachers to collect and use student achievement data, understanding internally and externally gathered data, and monitoring the implementation of the SIPs.

Over half of the randomly selected administrator evaluations reviewed by the EQA examiners directed the administrator's attention to specific MCAS test and other student performance results. As part of developing and revising the SIP, principals were required to evaluate the success of the current SIP in improving student performance, and to submit a SIP evaluation worksheet to their quadrant manager. Further, interviewees told the EQA team that the district linked principals' employment contracts to student achievement data because principals were accountable for academic performance, student attendance, and AYP goals.

Student performance was a factor in determining the duration of principals' contracts. According to the contract language, all principals' contracts were reviewed within a specified time "to determine if the performance of the principal and the students in the school were satisfactory and whether the principal's contract would be renewed." In interviews, district administrators stated that the review period for considering student achievement data in the renewal of a principal's contract was typically 18 months.

Central office administrators stated that principals recognized that they were held accountable for student assessment results during the reexamination period and went on to say that principals had recommended 13 teachers for support by resource teams. These teams were designed to assist struggling teachers to grow in their ability to improve student achievement. In addition, during the reexamination period, 30 teachers were required to participate in specific staff development activities as a condition of continued employment.

3.5. The district utilized an evaluation procedure for teachers that was aligned with the requirements of the MGL Chapter 71, §38 and 603 CMR 35.00.

**EQA Rating from 2005: Unsatisfactory**

**EQA Rating from 2007: Satisfactory**

#### **Evidence**

During the initial review period, the district's teacher evaluation process had two components, formative and summative. The summative process was used to begin the cycle of performance assessment for teachers with professional status. CMR 35.00 required a two-year cycle of performance assessment for teachers with professional status, and the incorporation of the Principles of Effective Teaching into that two-year performance assessment. Worcester varied

from this requirement by creating a third-year option for teachers consisting of a goal-setting process, independent of the required form and format. It was called the “Self-Initiated” or “Peer-Review” process. This optional third-year process was chosen by the majority of Worcester’s professional status teachers, thereby putting the entire evaluation system out of compliance with CMR 35.00.

During the reexamination period under review, a new collective bargaining contract aligned the district’s evaluation process with the biennial cycle for professional status teachers as required by CMR 35.00.

3.6. The form and content of the district’s evaluation process for teachers was informative, instructive, and used to promote individual professional growth and overall effectiveness.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Needs Improvement**

#### **Evidence**

During the initial review period, some of the summative teacher evaluations provided minimal feedback, while others were very detailed and informative. Few contained records of observations, or links to past or future performance. Most stand-alone documents contained only commendations on the past year’s performance. Some contained recommendations for course work and professional development.

During the reexamination period under review, the EQA team reviewed evaluations included in 66 randomly selected teacher personnel files. A review of information in the files showed that 62 of the teachers had valid teaching licenses, two had waivers, and two contained no licensing information, but human resources staff members responded immediately to determine the reasons. Six evaluations of professional status teachers were untimely, and except for one, all evaluations of non-professional status teachers were informative and instructive. The EQA examiners found no references to improved instruction for increased student achievement using student achievement data.

All of the evaluations in the 53 personnel files of professional status teachers were informative, some included detailed records of classroom observations, and one-fourth were instructive in



some way. Of those judged instructive, many simply had the words “continue to” before certain practices, but none contained any forward linkage to assessment of the outcomes. A few evaluations contained specific references to areas of instruction or maintaining a credible learning environment. In most cases, there were no comments by the evaluator in the required comments section of the cover sheet. When this section was completed, the comments were usually commendations. One teacher’s evaluations contained the same comment in multiple years. Only two evaluations had specific references to student achievement, one to the MCAS tests and one to the MAP assessment. No evaluations reviewed contained specific suggestions for professional development to improve instruction. All but one evaluation was signed. Although quadrant managers reviewed all evaluations, six were not timely. However, the district requires all teachers to maintain individual professional development plans (IPDPs) that the principal approves.

3.7. Teachers in the district were held accountable for student assessment results in their respective schools and classrooms. These results were cited in the evaluation process.

#### **EQA Rating from 2005: Unsatisfactory**

#### **EQA Rating from 2007: Needs Improvement**

##### **Evidence**

During the initial review period, some of the 287 teacher evaluations that the EQA team reviewed contained general feedback, but none featured a link to student achievement data. Administrators indicated that such data were not among the criteria for teacher transfers.

During the reexamination period under review, the district placed new attention on instruction and accountability for instruction. Examiners found evidence that the district had developed new classroom observational protocols, implemented a new interpretation of the Principles of Effective Teaching, and negotiated collective bargaining language to promote a clearer alignment of instructional activities with student achievement outcomes. There was a uniform system for reviewing lesson plans and heightened expectations for learning in classrooms.

In addition, the district administration showed flexibility and resiliency in maintaining reasonable class sizes and a learning environment that supported effective teaching during a period of teacher reductions, restrictive transfer language, and budgetary restrictions. Worcester

made gains in providing clear feedback to teachers about the effects of their instructional strategies on student learning. The increased emphasis on instruction and student achievement was embedded in the district's Public Education Leadership Project (PELP) plan and in the performance evaluations of principals.

Worcester also made gains in managing the three-tiered teacher transfer process with new contract language requiring that "quality of performance in the education profession" have equal weight with "seniority" as criteria for approving teacher transfers from one school to another.

In an effort to analyze demands on the district and to organize for efficiency, the school committee and superintendent were working with faculty from Harvard University to promote more coherence and cohesion. A model of the PELP Coherence Framework was displayed at the central office and referenced in district documents and discussions. According to administrators, this model was intended to frame the interaction among internal and external realities in a complex school district. District administrators stated interest in using this model to meet student learning needs in a time of diminishing resources.

3.8. When evaluations were not satisfactory, after following due process, the district had and applied consequences for compensation, advancement, or employment.

**EQA Rating from 2005: Unsatisfactory**

**EQA Rating from 2007: Satisfactory**

**Evidence**

For the initial review period, administrators described an internal process for identifying weak teaching and talked about how the district supported improved teaching. However, none of the 287 randomly selected teacher evaluations that the EQA team reviewed fell into the "weak teaching" category. The district provided written evidence that it had dismissed six professional status teachers in 2003-2004 under MGL Chapter 71, §38 "for reasons of student achievement."

During the reexamination period under review, the district terminated six professional status teachers for "failure to increase student academic achievement" as recorded in official school district documents and corroborated by interviewees. In addition, the district did not renew 20 non-professional status teachers for "failure to increase student academic achievement." The

district recommended that 30 teachers “participate in staff development as a condition of continued employment.” Worcester recommended another 13 teachers for assistance from the teacher resource team. In addition, supervisors could place any professional status teacher on the summative cycle at any time with proper notification.

8.2. The district’s plan met or exceeded state requirements for resources committed to professional development, and the plan was evaluated for its effectiveness in advancing student performance.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

During the initial review period, the district exceeded the state requirement for professional development expenditures for FY 2002. For FY 2003, the district spent \$527,953 less than the state required. Each professional development activity required evaluation by the participants. Interviewees said that professional development evaluation forms asked what participants learned and how they would use it. However, the district did not formally use test data to evaluate the activities’ effectiveness in improving student performance.

During the reexamination period under review, while there was no longer a state minimum requirement, the district professional development expenditures averaged approximately 7.5 percent of the district’s budget, despite budget restrictions. In FY 2005, the district expended \$6,635,953 for professional development: \$1,561,968 from the budget and \$5,073,985 from combined federal, state, and private grant funding. In FY 2006, the district expended \$7,941,444 for professional development: \$1,962,999 from the budget and \$5,978,445 from combined federal, state, and private grant funding. In FY 2007, the district expended \$6,720,985 for professional development: \$1,746,162 from the budget and \$4,974,823 from combined federal, state, and private grant funding. While Worcester averaged \$7.1 million annually in professional development expenditures during the period under reexamination, district administrators indicated that the decrease of over \$1.2 million in expenditures from FY 2006 to FY 2007 had a negative impact on how much professional development the district could offer. For

example, the district cited the need for more professional development funding for its mentor program.

Worcester produced three professional development brochures annually during the period under reexamination. The offerings embraced content and pedagogy, including eight hours of training for all teachers on using the MAP assessment, eight hours of training for all teachers on differentiating instruction, training for all sheltered English immersion (SEI) teachers, and training for all teachers on modifying curriculum and instruction for special education and ELL students. Further, interviewees stated that in addition to offering districtwide programs, Worcester designed professional development opportunities specific to the needs of individual schools. Worcester offered its own two-tier professional development system to prepare teachers for administrative licensure and subsequent National Institute of School Leadership (NISL) training.

The district dedicates three full days for professional development in addition to two mandated staff meetings per month (30 hours), eight contractual hours per year for all professional contracted staff, on-site coaching, and professional development upon request for grades preK-12.

In evaluating the district's professional development program, and subsequently determining professional development offerings, administrators stated that they prioritized offerings based upon a variety of factors including student achievement results, such as those from the MCAS, PSAT, and AP tests, a review of SIPs, principal requests, evaluations of professional development workshops, professional development surveys, and external evaluations.

12.5. The district employed qualified teachers who were certified in the area(s) of their primary assignment or responsibility.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

## **Evidence**

During the initial review period, according to the district's NCLB report card posted on its website, only 88 percent of the district's teachers were licensed to teach in Massachusetts. NCLB required that 89 percent of core academic classes be taught by 'highly qualified' staff members.

During the reexamination period under review, a review of district documents indicated that the district increased its percentage of 'highly qualified' teachers from 88.0 to 97.5 percent. A review of 66 randomly selected teacher evaluations indicated that 62 of the files contained appropriate certifications; two files indicated the teachers were serving on waivers; and two contained expired certifications. Interviewees stated that all 54 of the uncertified teachers in the district were teaching on valid DOE waivers. All 91 of the district's administrators employed in positions that required DOE certification were appropriately certified. Ninety-nine percent of the paraprofessionals employed by the district met the federal definition of 'highly qualified.'

Administrators told the EQA team that there were no financial or salary scale limits imposed during the hiring process. Rather, the district focused its recruitment efforts on hiring the "best fit" for each vacancy. District recruiting was coordinated through the office of human resources with assistance from the principals. Annually, the district conducted and attended job fairs and worked with area colleges to recruit teachers. Administrators said that the budget timeline was a major constraint to the recruitment process. Administrators told the EQA examiners that hiring was sometimes delayed because the district did not know the amount of its Chapter 70 funding until late in the fiscal year, and teachers had the contractual right to request transfers. Such transfers filled some vacancies while creating others.

## **2007 Indicator**

13. The district provided ongoing and regular training in dealing with crises and emergencies to all staff, provided procedures for substitutes, student-teachers, and volunteers responsible for students, and provided opportunities to practice emergency procedures with all students

## **EQA Rating from 2007: Excellent**

## **Evidence**

During the period under reexamination, the district provided professional development trainings on dealing with crises and emergencies. Interviewees told the EQA team that that these training

sessions were mandatory for all teachers each year. The district reviewed and updated training schedules and manuals annually. At the time of the reexamination, the district had in place an emergency response guide, crises prevention institute training, a video on procedures for physical restraint training, national weather alert receivers, school safety parent brochures; and emergency management training materials. The district received a federal emergency management grant, and had crisis response teams in each school responsible for conducting fire, bomb threat evacuation and lockdown drills, weather alert detection trainings, and reviewing the school's emergency guide.

Interviewees stated that the district provided classroom management training to all teachers in order to diffuse crises and school safety incidents including fights, threats, and tragedies in classrooms. In addition, the district had implemented positive behavior interventions and support strategies in some elementary and middle schools. These strategies included training in the development of common language and behavioral expectations designed to result in a consistent environment for learning and response to student behaviors throughout a school. The district's safety officer presented an overview of safety procedures to substitute teachers as part of their two-hour initial orientation. The schools briefed student teachers on safety procedures, and principals provided informal safety and crisis training for volunteers. Each school provided annual mandated physical restraint training. Worcester conducted nationally certified crisis prevention institute trainings for school staff members working with volatile students. Further, schools provided teachers with an emergency guide in a flip-chart format detailing emergency and crisis procedures. District administrators stated that school safety teams conducted school safety audits by walking-through each secondary school.

Standard V: Access, Participation, and Student Academic Support											
2005 Indicators									2007 Indicators		
Ratings ▼ Indicators ►	7.1	7.3	7.4	7.5	9.4	9.5	10.3	10.5	4	5	6
Excellent											
Satisfactory	2007	2007	2007	2007	2007		2007	2007	2007	2007	2007
Needs Improvement						2007					
Poor	2005	2005	2005	2005	2005		2005				
Unsatisfactory						2005		2005			

## V. Access, Participation, and Student Academic Support

The district provided quality programs for all students that were comprehensive, accessible and rigorous. Student academic support services and district discipline and behavior practices addressed the needs of all students. The district was effective in maintaining high rates of attendance for students and staff and retained the participation of students through graduation.

### Findings:

- The district provided the same ELA and mathematics programs at the same grade levels in all schools in the district to ensure instructional continuity and stability for students and teachers moving from one district school to another.
- The district experienced small increases in average attendance, graduation, and Competency Determination attainment rates, and decreases in the dropout and chronic absenteeism rates.
- Suspension, retention, and dropout rates of student subgroups were not disproportionate during the reexamination period.
- The district discontinued the use of expulsion by sending long-term suspended students to an alternative setting.
- The Advancement Via Individual Determination program was a pathway to accelerated classes under Worcester's AP action plan. The district intended to increase the participation of historically underrepresented grade 5-12 students in such classes.
- The district used a three-tier reading model that included all of the district's early intervention programs.

- The percentage of Worcester grade 3 students achieving proficiency on the MCAS reading test decreased by five percentage points from 2005 to 2007.
- Worcester had high numbers of low-income, homeless, and mobile students and provided many services for these students and their families, including free transportation, childcare, translation services, and health services.

## **Summary**

Worcester Public Schools improved in the area of access, participation, and student academic support since the last EQA examination. Of the eight indicators in this standard reexamined by the EQA, the district improved on all eight and received a rating of ‘Satisfactory’ on seven. In addition, Worcester also received ‘Satisfactory’ ratings on the three new indicators in this standard that were included in the reexamination.

The EQA team reviewed data, policies, and practices relevant to student participation and the attendance of students and staff members in the Worcester Public Schools for the period of 2005 to 2007. The district had fair and equitable policies and procedures for student attendance, discipline, promotion, and retention. MCAS test participation of the aggregate student population averaged from 99 to 100 percent during the reexamination period, with no subgroup averaging less than 97 percent. Average attendance rates for students increased slightly during this period, from 93.7 percent in 2005 to 94.0 percent in 2007, compared to the 2007 state average of 94.6 percent. The chronic absenteeism rate dropped by almost three percentage points, although it still remained high.

Staff absences due to short-term illness averaged approximately 11.5 days during the 2006-2007 school year. District and school staff members endeavored to maintain instructional continuity for students when teachers were absent through proper planning, the use of quality substitute teachers, and consistent application of ELA and mathematics curricula.

Although the average percentage of Worcester students suspended remained relatively high, no student subgroups had disproportionately high rates of suspension. The district discontinued student expulsion and provided alternative educational settings for students at risk of expulsion. Worcester also operated many programs to prevent, minimize, and recover dropouts, such as the Gerald Creamer Center, the School Age Mothers program, the Woodward Day School, the



Worcester Alternative School, and the Goddard Learning Center. The district's dropout rate declined from 5.5 percent in 2005 to 4.2 percent in 2006, compared to the 2006 state average of 3.3 percent.

Worcester provided a number of academic support programs that promoted success and addressed the needs of students. The Measures of Academic Progress (MAP) and other assessments identified students performing below grade level, and the district used this information to assign students to various interventions, including small group reading and mathematics classes, additional reading and math periods, and extended day and summer school programs. Although achievement gaps existed for some subgroups, the aggregate percentage of students scoring 'Proficient' or higher on the MCAS tests increased by eight percentage points in both ELA and math between 2005 and 2007. Worcester used an Advanced Placement (AP) action plan to increase the number of nontraditional students in accelerated classes in grades 5-12. The Advancement Via Individual Determination (AVID) program contributed to these increases by enrolling upper elementary and middle school students in these accelerated classes. The number of African-American, Asian, Hispanic, and low-income students enrolled in Advanced Placement (AP) classes increased during the reexamination period.

## **2005 Indicators**

- 7.1. District and school policies and practices require all staff and students to be in attendance.  
All of the students in the district graduated in their senior year. All senior students met or exceeded the state's Competency Determination.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

During the initial period under review (2001-2004), not all district students earned a Competency Determination (CD) in time to graduate in their senior year. The DOE reported that 95.5 percent of the Class of 2003 earned a CD, compared to the statewide rate of 95.0 percent. The DOE also reported that 93.0 percent of the Class of 2004 earned CD, compared to the statewide rate of 96.0 percent. District documentation showed that 90.9 percent of seniors graduated in 2000, 94.2 percent in 2001, 96.3 percent in 2002, and 91.4 percent in 2003. The retention rate was 9.0

percent in 2000 and 8.6 percent in 2003. Of the students in the Class of 2003, 1,170 graduated with a CD and 53 received certificates; of the Class of 2004, 1,181 graduated with a CD and 46 received certificates.

During the reexamination period under review (2005-2007), district leaders expected all staff members to attend. The contract between teachers' association and the school committee allowed teachers to use leave time for certain reasons. District and school administrators accessed teacher and staff attendance data through the district's database. Principals monitored staff absences with attendance reports. Quadrant managers reviewed monthly reports on staff attendance and met with principals quarterly to review them. During these meetings, the principals and quadrant managers discussed staff attendance issues, and the actions the principals had taken to address them. Quadrant managers shared concerns about excessive absences and gave principals directives when further action was warranted.

Worcester had written policies on student attendance and truancy. During the reexamination period, average student attendance, graduation, and Competency Determination attainment rates increased, and dropout and chronic absenteeism rates declined. Administrators attributed these improvements to enforcement of the district attendance policy and implementation of alternative education programs at the high school level.

The district's quadrant managers and principals monitored student attendance daily, monthly, and quarterly. When students accumulated seven or more unexcused absences, administrators could file a Child in Need of Services (CHINS) petition, or an Inducing Absence of a Minor action with the Worcester Juvenile Court. The district did not allow students to attend or participate in school events when they were absent from school on the day of the activity, unless the principal gave permission.

At the elementary level, the district expected parents to notify the school of student absences by phone or written note within two days. Administrators notified parents in writing after three unexcused absences. Examples of actions taken by principals after students accumulated three or more unexcused absences included parent conferences, student support team meetings, referrals to the school nurse, referrals to a social services agencies, petitions to the court, withdrawal of privileges, behavior modification plans, demerits, and detention. Elementary principals notified

parents when students reached five, 10, and 14 excused absences. Worcester considered 14 absences excessive, and according to the district's promotion policy, excessive absenteeism could result in retention. Absences for religious holy days or a death in the student's immediate family did not count toward the absence limit, provided that the parent sent an explanatory note.

Middle schools utilized the district's grades 7-8 school attendance and academic credit policy. Middle school principals notified parents when students reached five, 10, and 14 excused absences. After five absences, middle school staff members informed parents about the school's procedures for improving student attendance, and principals could schedule a parent meeting. Consistent with the district promotion policy, middle school students accumulating more than 14 absences did not receive course credit.

The high school attendance and academic credit policy was similar to the middle school policy. High school staff members provided parents interim progress reports every five weeks, and report cards every 10 weeks. These reports included tallies of class and school absences. High school staff members notified parents when students lost credit for a class by exceeding 14 absences. Students with seven or more absences in a semester course also received no credit. In addition to absences for a death in the family or religious observances, absences for out-of-school suspensions, a court appearance, or extended hospitalization did not count toward the absence limit. During the 2007-2008 school year, the district continued to conduct an attendance buyback program to permit students to make up credits lost because of excessive absenteeism. Worcester allowed students who had accumulated between 15 and 22 absences and earned a passing grade in a course to receive full credit by completing additional hours of instruction on Saturday mornings.

During the reexamination period, the district's attendance rate was approximately 94 percent. The chronic absenteeism rate declined by almost three percentage points. According to DOE and district data, average attendance increased from 93.7 percent in 2005 to 94.3 percent in 2006, but decreased slightly to 94.0 percent in 2007. According to DOE summary statistics, the percentage of chronically absent students in the district declined from 17.6 percent in 2004 to 17.2 percent in 2005 to 14.5 percent in 2006.

According to DOE data, 92 percent of Worcester's Class of 2007 earned the Competency Determination, compared to the state's expectation of 95 percent. The district's special education and limited English proficient subgroups performed below the aggregate rate, with 73 percent of special education and 69 percent of LEP students earning the Competency Determination. For the Class of 2008, 83 percent of the students had already earned the Competency Determination.

7.3. Disaggregated trend data (minimum of three years) indicated no significant differences or disproportionate rates of discipline referrals, retentions, suspensions, exclusion, or dropout rates among students of all subgroup populations.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

During the initial period under review, according to administrators and a review of documents, Worcester monitored subgroup rates of discipline referrals, retentions, suspensions, exclusions, and dropouts by district and school. Administrators said that the superintendent scheduled monthly cabinet meetings to review and analyze data on referrals, retentions, suspensions, exclusions, and dropouts in the SAGE database.

During the reexamination period under review, Worcester had fair and equitable policies and procedures for discipline, according to a review of documents by the EQA examiners. The EQA team also found that suspension, exclusion, retention, and dropout rates for subgroups were not disproportionate during this period. According to the district's policies handbook, "effective learning can only occur when students obey basic rules of conduct." The handbook outlined responsibilities of students, parents, teachers, and administrators in implementing the district's code of conduct.

According to district documents and central office interviewees, Worcester initiated and maintained initiatives to reduce problematic behavior during the reexamination period. At secondary schools, the district created student support classrooms to address chronic misbehavior. Student support instructors taught students strategies to improve their behavior, gave students appropriate consequences for misconduct, and helped them to avoid out-of-school suspensions. The district also began the Positive Behavior Interventions and Supports (PBIS)

program four years ago in response to the increasing number of students exhibiting problematic behavior. The PBIS program was compatible with the district's code of conduct, and more schools adopted the program each year. At the time of the EQA reexamination, 18 elementary schools, four middle schools, and three alternative schools used the PBIS program.

The district's promotion and retention policies were also fair and equitable. Staff members intervened in several ways before students were retained. According to a document entitled *A Parent's Guide to the Worcester Public School System*, all schools used the student support process (SSP). Teachers or parents referred struggling students to the SSP support team. SSP team members offered teachers recommendations for improving student achievement. When teachers had implemented the recommended strategies for a reasonable length of time without success, the team considered providing additional reading or mathematics support, or initiated a referral for a special education evaluation. The district's policies handbook outlined retention procedures at the elementary, middle, and high schools. The district's retention rates for subgroups were not disproportionate; in 2006 no subgroup exceeded the district average by more than two percentage points.

According to interviewees, the district had programs to prevent, minimize, and recover dropouts during the period under reexamination. The Gerald Creamer Center was an alternative general education program designed for high school students who dropped out of school or were at risk of dropping out. With a maximum capacity of 220 students, the Center offered students a non-traditional approach to learning in a smaller environment. The number of graduates from the Gerald Creamer Center grew steadily from 89 in 2004 to 137 in 2005 to 144 in 2006 to 152 in 2007. The district also offered the School Age Mothers program as an alternative for pregnant students. Through this program, the district enabled seniors to graduate with their own class and receive their high school diploma. Girls Inc. provided childcare and transportation for these students.

The Woodward Day School, located at three sites, offered regular and special education services to grade 7-12 students suspended long term from the Worcester Public Schools, or charged with a felony. The district provided services for special education students unable to attend classes in a traditional school setting due to emotional and behavioral problems in the Worcester

Alternative School. The district also offered programs and services for middle and high school students with serious emotional disturbances at the Goddard Learning Center.

7.4. The district used aggregated and disaggregated student achievement data on participation and achievement to adjust instruction and policies for populations at risk and evaluated the effectiveness of these adjustments.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

For the initial period under review, according to administrator interviews, teacher focus groups, and a review of documents, Worcester continuously used aggregated and disaggregated student data on participation and achievement to adjust instruction and policies for at-risk populations. As required by law, the district submitted end of year grant evaluations. The district did not otherwise formally evaluate the effectiveness of its programs and instructional adjustments in improving the academic performance of at-risk students. Despite changes to programs, instruction, and policies, the district's MCAS test scores were generally flat and remained below the state average during the initial period under review.

During this period, Worcester developed Individual Student Success Plans (ISSPs) for students scoring in the 'Warning/Failing' category on the MCAS tests. Administrators said that at-risk students and students with ISSPs received additional support. In Title I elementary schools, students continued to receive additional support from Title I teachers. Worcester introduced additional remedial reading programs, Early Success for grades 1-2 and Soar to Success for grades 3-6, to meet the needs of struggling regular education students. Reading programs for special education students included Wilson Reading, Project Read, and Lexia. Two elementary schools used the Foundation phonics program for all students. The district also hired MCAS test tutors and MCAS specialists to work with students at all levels. To improve scores in ELA at the secondary level, the district created the position of literacy coach and assigned one coach to each secondary school. Administrators also cited before-school, after-school, and summer MCAS test and academic support programs. Administrators said that prior to cuts in the district's budget and entitlement grants in 2002, all of the elementary schools had extended day programs. After 2002,

the district used grant funds to continue after-school programs at some schools. These programs were of shorter duration than the previous programs.

During the reexamination period, district staff members made adjustments in instructional programs and services based on aggregated and disaggregated student achievement data. MCAS test participation was satisfactory in the district, with the aggregate participation rate exceeding 99 percent and no subgroup averaging less than 97 percent participation. According to district documents and interviews, based on NCLB needs improvement status for Title I schools, the district added Title I intervention teachers and instructional coaches in literacy and mathematics to provide intervention services and improve instruction in identified schools. To support improved interventions in reading and mathematics, the district used Title I tutors to implement the Houghton Mifflin reading and the Touch Math intervention programs.

District staff members used MAP data to develop instructional programs in reading and mathematics for students. These programs were offered during the school day and after school. Teachers of the 21st Century Community Learning Center after-school program developed thematic units based on the MCAS and MAP test data. Because of low MCAS math scores in the elementary schools, the district updated its Everyday Mathematics program to Everyday Mathematics Version 3, which contained more practice in mathematics computation and other instructional adjustments. For similar reasons, the district purchased the Connected Mathematics Program 2 (CMP2) to meet the needs of its middle school students.

In another adjustment, the district began to use silent word reading fluency assessment results in combination with MAP scores to improve the process for identifying at-risk students in the middle schools. Based on these results, teachers assigned students to academic literacy classes or word study program classes employing Wilson Reading program strategies. In addition, district and school staff members reviewed an item analysis of MCAS test results to determine the content and types of questions that gave students difficulty. Several teachers described how this analysis resulted in changes in instructional content. They went on to say that they focused on areas such as test-taking skills for the MCAS tests, including factual writing, mathematics vocabulary, or a particular type of question, such as open response.

7.5. Enrollment data indicated equitable participation in higher level, advanced, and AP-type courses in all assessed grade levels and programs.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

During the initial period under review, Worcester's DIP and SIPs focused on improving student performance and ensuring that all students met high standards. Nevertheless, enrollment data for the period under review showed that district policies and practices resulted in inequitable participation in higher level, advanced, and AP courses. The elementary schools used flexible grouping, and teachers used various formal and informal tests to measure student performance and regroup students. The middle schools assigned students to and grouped them within clusters. Although grade 8 students were grouped by ability in mathematics, a relatively small percentage completed Algebra I by the end of grade 8. Administrators said that middle school administrators, teachers, and guidance counselors met regularly with students and parents, beginning in grade 7, to discuss the high school academic programs, AP offerings, and the importance of earning good grades and pursuing education after high school. Administrators said that in 2003 the district started two initiatives to challenge more students to enroll in higher level and advanced courses: vertical teaming at the middle and high schools, a model promoted by the College Board to increase enrollment in AP courses; and the AVID program. Administrators said that more than 600 students participated in the AVID program during the 2003-2004 school year.

During the reexamination period under review, Worcester offered advanced and accelerated programs for middle and high school students so that all students could be college ready. District and secondary school staff members also made efforts to increase the number of minority and other subgroup students in these challenging courses. The district continued implementation of its Advanced Placement action plan to promote the increasing participation of "historically underrepresented students" in higher level classes, increase AP scores, enhance parent awareness, and provide professional development for AP teachers. The district provided the Advancement Via Individual Determination (AVID) program, with the goal of increasing the number of students in grades 5-12 in AVID, honors, and AP classes. The AVID program targeted underachieving, disadvantaged, and underrepresented middle and high school students



including those who would be first-generation college students. District staff members utilized the College Board's My College QuickStart program to identify students who qualified for higher level course work. This program offered academic instruction and lessons in note taking, study skills, library research skills, test taking, and preparation for the MCAS tests and the SAT. Tutors from area colleges and exemplary high school peer tutors provided support for AVID students. The district also offered AP and AVID family awareness nights.

According to district data, all of these efforts resulted in an increase in the number of students in AVID, honors, and AP classes. AVID enrollment increased from 511 in 2005 to 659 in 2006 to 805 in 2007. Enrollment in honors classes increased from 10,793 students in 2004 to 12,455 in 2005 to 11,936 in 2006 to 12,185 in 2007. AP enrollment increased from 806 in 2006 to 1,074 in 2007. The percentage of low-income students enrolled in AP classes increased from 32 percent in 2006 to 40 percent in 2007. A small number of English language learners and special education students were enrolled in district AP classes during the reexamination period. According to three-year trend data, racial/ethnic subgroup enrollments in AP courses increased. The number of African-American students taking AP exams increased from 39 students in 2005 to 55 in 2006 to 85 in 2007. During the same period, the number Asian students taking AP exams increased from 101 students in 2005 to 97 in 2006 to 131 in 2007, and the number of Hispanic students taking AP exams increased from 91 students in 2005 to 111 in 2006 to 119 in 2007. The percentage of students earning a qualifying score of '3' or higher on AP exams ranged from 51 percent in 2005 to 48 percent in 2007. This meant that the district was maintaining a 50 percent success rate with increased participation.

9.4. At each grade level, the district used data available from classroom teachers, standardized tests, and local benchmarks to identify all students who are not meeting grade-level performance expectations and provided these students with sufficient supplementary and/or remedial services.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

## **Evidence**

For the initial period under review, the EQA examiners reviewed the Student Support Team (SST) documentation, and interviewed district and school staff members. The interviewees stated that the district used the SST process to solve problems and review student needs. For the period under review, teachers in focus groups stated that data analysis had evolved in a positive way. They went on to say that data analysis was now consistently used to identify students who were not achieving the benchmark standards or meeting grade-level expectations. Identified students were referred to the Student Support Team, and this team determined what type of services would be appropriate to meet their needs. The team developed Individual Student Success Plans (ISSPs) for students scoring at the 'Warning/Failing' level on the MCAS tests. These services included 504 plans, Title I support, MCAS test tutoring, NCLBIT specialists, literacy coaches, and after-school and summer programs. In interviews, administrators noted that in 2002 most of the elementary extended day programs were eliminated due to budget cuts.

During the reexamination period under review, Worcester used MAP assessment data to identify struggling students and assigned them to appropriate programs and services. Curriculum leaders stated that many staff members used data to identify student needs and services, but went on to say that more experience with the MAP assessment would improve their use of these data. District staff members offered some examples of the use of MAP, MCAS, and other assessment data to identify students achieving below grade level and assign them to supplemental and remedial services. According to a review of district documents provided to the EQA team, the district used a three-tier reading model based on Reading First to identify students needing reading intervention services. At Tier I, the district used the 2005 edition of Houghton Mifflin Nation's Choice as its core elementary reading program for all students. Central office staff members expected all classroom teachers to provide an uninterrupted 120-minute reading block daily consisting of 30 minutes of whole group instruction and 90 minutes of small group instruction. Examples of assessments given at Tier I included the DIBELS three times a year and the DRA two times a year. Teachers also administered the Houghton Mifflin core assessments, including end of unit and end of book tests, and the MAP assessment.

School staff members placed students identified by DIBELS results as at some risk or at risk in Tier II intervention programs where they received an additional 30 minutes of small group

instruction daily for 10 to 12 weeks. Students not making adequate progress after two rounds of Tier II intervention were enrolled in Tier III intervention programs. These students received an additional 60 minutes of intensive small group instruction daily.

9.5. Early intervention programs in literacy were provided at the primary level to ensure that by the end of Grade 3 students were reading at the ‘Proficient’ level on the MCAS test. \*

\*This indicator is not applicable to secondary and vocational-technical schools and districts.

**EQA Rating from 2005: Unsatisfactory**

**EQA Rating from 2007: Needs Improvement**

**Evidence**

During the entire initial period under review, the grade 3 reading results for the Worcester Public Schools were below the state average. In 2001, 43 percent of grade 3 students were proficient in reading; in 2002, 50 percent; in 2003, 48 percent, and in 2004, 39 percent. The statewide proficiency rate for both 2003 and 2004 was 63 percent. While the district made some gains in 2002 and 2003, there was a significant drop in the reading scores in 2004. From 2001 to 2004, the district provided an array of early intervention programs in literacy for at-risk and struggling readers. According to documents and administrators, these programs included Success for All, Early Success, Soar to Success, Wilson Reading, Project Read, and the Waterford Early Literacy Program. The district also purchased the On Our Way to English program for ELL students in the sheltered English immersion program. The On Our Way to English program corresponded well to the district’s balanced literacy approach and included leveled books.

During the reexamination period under review, Worcester provided a number of early intervention programs and assessments to help students attain proficiency in grade 3 reading. According to district documents provided to EQA examiners, the district used a three-tier reading model based on Reading First. At Tier I, the district used the 2005 edition of Houghton Mifflin Nation’s Choice as its core elementary reading program for all students. Worcester assigned Title I intervention teachers as additional literacy support staff members to schools identified as needing improvement. Worcester also offered professional development in all four DOE-identified categories to all teachers of sheltered English immersion (SEI) students.

During the reexamination period, as part of a research study, a researcher from the University of California at Berkeley was nearing completion of an independent evaluation of Worcester's literacy programs. Evaluators measured teacher effectiveness using student achievement data, and gathered data from classroom observations. The district did not expect the results of this two-year study until January 2008. However, preliminary findings indicated improved scores for students in schools using the K-6 Making Meaning reading comprehension curriculum provided by the researcher.

A review of grade 3 MCAS reading scores for Worcester showed that the percentage of students scoring 'Proficient' or 'Advanced' on the grade 3 MCAS reading test decreased by approximately five percentage points during the review period. In 2004 and 2005, 39 percent of all Worcester grade 3 students were 'Proficient' in reading. In 2006, 34 percent were 'Proficient,' and in 2007, 33 percent were 'Proficient.' In 2006, 58 percent of the grade 3 students statewide were 'Proficient' in grade 3 reading, and in 2007, 59 percent of grade 3 students statewide were 'Proficient,' placing the district about 25 percentage points below the state average.

10.3.District and/or school administrators evaluated the overall effectiveness of its grant-funded MCAS success program.

**EQA Rating from 2005: Poor**

**EQA Rating from 2007: Satisfactory**

**Evidence**

For the initial period under review, through both the documentation review process and the interviewing of central administrators and principals, EQA examiners found evidence which showed that the district conducted and completed analyses of the grant funded academic support programs. These were mandatory evaluations tied to refunding. There was, however, no evidence that these evaluations were linked to student achievement.

During the reexamination period under review, after the state discontinued funding grants for MCAS test support, Worcester applied for grants to take the place of the grants lost and allocated local funds. At the middle school level, the district established two mathematics periods daily for all middle school students to help improve middle school MCAS mathematics scores. District

leaders shifted from district intervention teachers paid with grant funds at the middle schools to intervention coaches paid with local funds. While the district cut MCAS test coordinators at the high school level because of the loss of MCAS test grant funds, it assumed the cost of high school MCAS test specialists formerly paid with grant funds. These decisions essentially continued the support the district previously provided to students.

Two years ago, the school and city provided funds to set up a remediation externship providing three hours of tutoring support daily four days a week to 107 high school students who had not passed the MCAS tests. Worcester applied for Extended Learning Time (ELT) grants to extend the school day at three elementary schools. Worcester received the largest the 21st Century Community Learning Centers continuation grant in the state because of the success of its after-school programs. The 21st Century Community Learning Centers added seven district schools in 2007-2008 to the 15 schools already operating this after-school program. Students received tutoring in ELA and mathematics through the 21st Century programs. Title I conducted after-school programs at 11 sites.

10.5. Evaluations of academic support programs indicated that overall programs were efficient, managed effectively, and resulted in moving students from ‘Warning/Failing’ and ‘Needs Improvement’ to the ‘Proficient’ category.

**EQA Rating from 2005: Unsatisfactory**

**EQA Rating from 2007: Satisfactory**

### **Evidence**

For the initial period under review, examiners found evidence in both documents and interviews that the academic support programs offered by the Worcester Public Schools were not managed efficiently enough to result in an increase in the number of students moving from the ‘Warning/Failing’ and ‘Needs Improvement’ categories to the ‘Proficient’ category on the MCAS tests.

During the reexamination period, Worcester conducted several evaluations of the effects of academic support programs on MCAS test achievement, and district staff members provided the EQA team with the reports. One of the reports, from March 2007, was the year three evaluator’s report on the district’s Smaller Learning Communities (SLC) grant funded program in the high

schools, produced by the University of Massachusetts Donahue Institute. The results showed that establishment of the SLC program in the high schools enabled the district to accomplish many of the grant goals to increase student achievement. For example, Worcester raised the aggregate percentage of students passing the grade10 MCAS ELA and mathematics tests, increased the number of students enrolled in AP courses, and increased the number of students scoring '3' or higher on the AP exams. The district also raised graduation rates and increased the number of students accepted into postsecondary education programs.

While Worcester raised the aggregate percentage of students passing the grade 10 MCAS tests, a disparity existed between the aggregate grade 10 passing rate and the passing rates for limited English proficient and special education students. Specifically, 84.3 percent of all grade 10 students passed the 2006 MCAS ELA test, compared to 41.9 percent of limited English proficient and 59.9 percent of special education students; and 70.1 percent of all grade 10 students passed the 2006 MCAS mathematics test, compared to 45.3 percent of LEP and 35.9 percent of special education students. Despite the performance gap, the percentage of LEP students passing the MCAS tests increased by 19.1 percentage points in ELA and 15.4 percentage points in mathematics from 2005 to 2006. During the same period, the passing rate of special education students increased by 7.0 percentage points in ELA but decreased by 4.8 percentage points in math.

The 2006-2007 evaluation of the 21st Century Community Learning Centers grant program completed by the district reported improved reading and math achievement. This program, operating in 15 elementary and middle schools, targeted students in grades 3-10 scoring in the 'Warning' or 'Needs Improvement' categories on the MCAS tests or with low scores on the MAP assessment. Program staff members used pre- and post-testing in reading and mathematics on the Survey of After-school Youth Outcomes (SAYO) to assess growth. The district analysis demonstrated improvement of 18.4 percentage points in ELA/reading, 20.5 percentage points in ELA/verbal communication, 20.6 percentage points in ELA/written communication, 20.3 percentage points in mathematics computation, 20.7 percentage points in mathematical reasoning, and 21.4 percentage points in mathematical problem solving.

The Worcester Public Schools conducted other academic support program evaluations during the reexamination period. One evaluation was the previously cited two-year evaluation of the district's reading literacy programs conducted by a researcher as part of a literacy research study. In another evaluation, a middle school task force validated the use of the 3-2 Word Study program, which incorporated many Wilson Reading strategies. Interviewees reported that reading scores of learning disabled students using the program improved overall, and in some cases by as much as two grade levels.

The district also compared the growth of two grade 8 honors math classes taught by the same teacher. Students in one group used the CMP2 program and the other group used a traditional Algebra I text. The results showed that while both groups made significant progress, the students in the CMP2 group scored almost 20 percentage points higher than students in the traditional Algebra I group.

## **2007 Indicators**

4. The district immediately assessed the skills and needs of entering and mobile students when records were not available or accessible, and made educationally appropriate and effective placements.

## **EQA Rating from 2007: Satisfactory**

### **Evidence**

During the reexamination period, according to interviewees and district documents, parents of all new preK-6 students registered their children at the Garvey Parent Information Center (PIC). Parents of Head Start students registered their children at the Head Start office located next door to the PIC. Parents of middle and high school students registered their children at the school they were to attend. In order to expedite the registration process, the district expected parents to come with several documents. Parents needed to provide health/immunization records, proof of birth and/or school records, and proof of Worcester residency.

District ELL staff members at the PIC tested the language skills of all K-6 students whose parents indicated that the family spoke a language other than English at home. In grades 7-12, middle and high school ELL staff members assessed the language skills of students who spoke no English. ELL staff members administered the IDEA Oral Proficiency Test (IPT) and the

Language Assessment Scales (LAS) and obtained a native language writing sample for students in grade 3 or higher. If a student was eligible for ELL services, ELL staff members explained the options available to the parents.

Worcester developed the New Citizens Center for students who were recent immigrants, had little or no schooling, and spoke little or no English. The Center was part of the ExcELL (Excellence for English Language Learners) Academy located at the Chandler Magnet Elementary School, and served students in grades 3 and above. In this program, teachers oriented students to public school structure and expectations. The Entryway Program was another component of the ExcELL Academy. This program served students in grades 3-12 requiring intensive English instruction in order to succeed in mainstream classes. Students from both programs eventually moved to a sheltered English immersion (SEI) program school.

PIC staff members also checked with the parents to confirm whether their child was eligible for special education services. If so, they worked with special education staff members to review the student's IEP in order to determine a comparable special education placement. Worcester also had procedures for expedited enrollment of homeless and foster care students. The district never delayed a student's enrollment in a school because records had not arrived. After PIC staff members collected all available records and completed necessary testing, they prepared to send the students to their new schools.

School staff members conducted some additional assessments to determine new students' strengths shortly after they began attending school in Worcester. Students who enrolled during an open testing window took the full version of the MAP assessment, and students who enrolled during a non-testing window took the abridged version. Elementary school staff members used MAP, DIBELS, and DRA assessment results to place newly arriving students in classrooms and instructional groups.

5. The district provided programs and services to alleviate the adverse effects of poverty (including delayed language development, lack of readiness skills, low self-esteem and aspirations, high mobility, and family instability) on students' social, emotional, and intellectual development.

**EQA Rating from 2007: Satisfactory**



## **Evidence**

During the reexamination period, district and school staff members stated that many students and their families lived in difficult circumstances. A review of DOE data from school year 2006-2007 showed that the percentage of low-income students in Worcester was 63 percent. A statistical analysis contained in a study entitled *Benchmarking Public Education in Worcester: 2007*, conducted for the district by the Worcester Regional Research Bureau, calculated an average combined mobility rate of 41 percent in 2005-2006. Interviews and documentation showed that during 2006-2007 the district had 1,444 homeless students, including 688 students awaiting foster care, three students residing in hotels or motels, 20 unsheltered students, six unaccompanied youth, 66 students in shelters, and 661 students “doubling up” with another family.

The district assigned a central office staff member to make sure the district complied with the McKinney-Vento Homeless Education Act, and to serve as the liaison to homeless students and families. The McKinney-Vento act defined homeless students as lacking a fixed, regular, and adequate nighttime residence. According to interviewees, district and school staff members tried to minimize the effects of mobility on students by allowing them to stay in their present schools and providing free transportation when their families moved to another part of the city, and by implementing consistent academic programs in schools across the district.

Homeless students received many free services including transportation, school materials, mentoring programs, counseling, after-school and summer programs, and referrals for medical, dental, and other health services, and the district coordinated collaboration with schools, shelters, and community agencies. The district budgeted \$304,202 to cover the cost of homeless transportation. The homeless education liaison told the EQA team that the district spent about half this money to transport students placed in temporary housing for lengthy periods by the Department of Social Services (DSS) and the Department of Transitional Assistance (DTA). District staff members made outreach to homeless shelters to educate families about their rights and the services available to them. They also conducted Child Find activities to identify preschool children in need and to provide necessary services for eligible children.

According to a review of documents and interviews, Worcester provided multiple programs and used many strategies to support students and families who lived in challenging circumstances. The district offered half or full-day Head Start programs which served low-income three- and four-year-old students. The district also offered a half-day preschool program for students turning four years old by December 31. Worcester formed partnerships with Head Start, Family Ties, and the Together for Kids Coalition to provide workshops for parents on preparing preschoolers for school. The district also provided a multidisciplinary preschool team to identify services for children in a family-friendly setting.

Worcester provided many other services to families through partnerships with the Latino Education Institute (LEI), the African Education Program (ACE), Assumption College, and the Community College Connections (CCC) program. Worcester also coordinated services for students and their families with the DTA, the DSS, and numerous other state and private agencies.

6. The district directly involved parents and community organizations in the education of their children through their regular communication and outreach, and facilitated their participation by such means as holding meetings and events at convenient times and locations and providing translators, transportation, and child care.

### **EQA Rating from 2007: Satisfactory**

#### **Evidence**

During the reexamination period under review, according to documents and interviews, district and school staff members designed the Garvey Parent Information Center (PIC) and developed other activities in the schools to encourage parent involvement. Staff members used strategies from the Epstein model for parent involvement to make it easier for parents to participate in school events. The district elaborated on the Epstein model in its Family Involvement Plan, including an emphasis on two-way communication, volunteering, collaboration, and staff development in parent, family, and community involvement. The PIC was the first contact that many parents had with the district. Schools held events to encourage parent involvement such as open houses, parent conferences, student performances, and award ceremonies. Worcester made it easier for parents to get involved in school activities by offering free transportation, providing

translators for parent conferences and other meetings, holding trainings at different times during the day and evening, and providing free childcare. The district welcomed parents as volunteers in the schools, and at least one parent served on every school council.

The district used many forms of communication to keep parents informed about their child's progress and school activities. Teachers sent report cards home four times a year, and all teachers sent midterm progress reports to inform parents of student progress. The district sent *The Worcester Educator*, a district newspaper, to parents semi-annually to inform them about district news. Principals also provided monthly newsletters to families. District and school staff members sent messages to parents by telephone using the Connect-ED communication system. The district and the schools held meetings to keep parents informed, such as school council meetings, AVID/AP family awareness events, and special education, ELL, and PTO parent meetings and activities. Other forms of communication used by the district included district and school websites, the Homework Hotline cable show, translation services for parents in six different languages, and five family liaisons to support parents at the elementary level.

<b>Standard VI: Financial and Asset Management Effectiveness and Efficiency</b>														
<b>Ratings ▼ Indicators ►</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>Total</b>
<b>Excellent</b>									✓					<b>1</b>
<b>Satisfactory</b>	✓	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓	<b>11</b>
<b>Needs Improvement</b>			✓											<b>1</b>
<b>Unsatisfactory</b>														

Rather than reexamine the district only on those 2005 indicators on which the district was rated ‘Poor’ or ‘Unsatisfactory,’ the EQA conducted a full examination of the district on Standard VI covering the period 2005-2007.

## **VI. Financial and Asset Management Effectiveness and Efficiency**

The district engaged in a participative, well-documented, and transparent budget process that used student achievement as a factor in the overall budget. The district acquired and used financial, physical, and competitive capital resources to provide for and sustain the advancement of achievement for all students enrolled in the district. The district regularly assessed the effectiveness and efficiency of its financial and capital assets and had the ability to meet reasonable changes and unanticipated events.

**Standard Rating: Satisfactory**

### **Findings:**

- The district developed its budget in two formats, a line item budget and a program budget. Administrators provided budget documents and supporting information to all stakeholders during the budget development process.
- Although the district exceeded its net school spending requirements during the reexamination period, due to budget restrictions it had to close schools and reduce personnel, programs, and instructional supplies and equipment.
- From 2001 to 2008, the portion of the district budget for direct instructional costs decreased from 64 to 51 percent, while the portion for fixed costs, such as health insurance and energy costs, increased from 22 to 36 percent.

- Although the district experienced reductions in entitlement grant revenues, it made efforts to obtain federal and state competitive grants and private grants to develop partnerships with businesses, community organizations, and local colleges and universities.
- The district secured its school buildings by monitoring main entrances, securing exterior doors, installing alarms, cameras, and exterior lighting, and providing security personnel in some schools.
- The district employed licensed maintenance personnel and used specialized web-based software to identify, schedule, and address preventive maintenance tasks and plan capital repairs in its schools.

### **Summary**

The district's budget was prepared in two formats, a line item budget and a program budget containing 74 separate programs with a budget and description for each program including goals and expected outcomes. The resulting documents were comprehensive, complete, and understandable. Explanatory data, charts, graphs, and PowerPoint presentations supported the budget. The budget document contained historical and forecasted data. The district had a published timeline with benchmarks for the budget development process that included meetings with all stakeholders and public listening sessions for presentation of the budget. This timeline included all budget events from the beginning of the process in late fall to final approval the following summer when the district became aware of the amount of revenue it would receive from the state.

The district exceeded its net school spending (NSS) requirement and the city met its required minimum contribution every year since 2000, but the average amount of net school spending over the requirement during the reexamination period was less than one percent. During recent years, district enrollment decreased by approximately 2,000 students and the district experienced a reduction in entitlement grants. The district provided staff members and resources to secure competitive and private grants and to develop partnerships with business, community, and educational organizations.

The district reduced staff members over recent years due to budget restrictions. From 2005 to 2008, the number of teaching positions declined by 50. From 2002 to 2008, the district had a

reduction of 306 teaching positions. The total number of all district positions reduced from 2005 to 2008 was 177. Worcester closed four elementary schools during the reexamination period, realizing a savings of approximately \$3 million. The district provided evidence that from 2001 to 2008 the percentage of its budget spent on direct instructional costs decreased from 64 to 51 percent, and the percentage spent on fixed costs increased from 22 to 36 percent. Increases in health insurance, energy, charter school tuition, and special education costs were the major causes of the increase in fixed costs.

The district employed licensed maintenance personnel to address routine maintenance and had a long-term capital plan that was part of the city's capital plan. School district and city administrators reviewed the plan annually. The Massachusetts School Building Authority (MSBA) inspected 46 district schools in 2005 and reported that four buildings were in poor condition, possibly needing replacement, and 17 buildings were approaching poor condition, with some building systems that may need attention. Although some schools visited by the EQA examiners showed signs of wear, they were clean and well maintained.

The school buildings were secure with main entrances locked and monitored. Many schools had buzzer activated entry systems, security cameras, and alarms, and some schools had security personnel located within or outside the building. The schools had sign-in procedures, and the district required visitors and staff members to wear identification badges.

## **Indicators**

1. The district's budget was developed through an open, participatory process, and the resulting document was clear, comprehensive, complete, current, and understandable. The budget also provided accurate information on all fund sources, as well as budgetary history and trends.

## **Rating: Satisfactory**

### **Evidence**

Interviewees stated that the district's budget was developed through an open, participatory process, and most administrators told the EQA team that they were included in the budget development process. According to the district's annual budget benchmark chart, budget development began before December with the administrators preparing initial cost estimates for

the following fiscal year. A review of the October 1 student enrollment also occurred at this time. In February, central office administrators met with each principal and program director to discuss staffing levels and other budget accounts. In March, the school committee held public listening sessions, and principals began to discuss the budget with their faculties and school councils. In April, the administration met with the citywide parents planning advisory committee. The superintendent also met with representatives of the Worcester Educational Association to discuss the budget. In May, the superintendent presented the final budget recommendations to the school committee, and in June the district held public hearings on the final budget proposal. The school committee did not have specific policies on development of the annual budget, but some documents provided to the EQA team described the process.

The resulting budget document was clear, comprehensive, complete, current, and understandable. The district developed the budget document using two distinct formats. The line item budget was organized by account, including administration, teaching, educational support, transportation, maintenance, and employee benefits. This budget contained an introductory letter from the superintendent highlighting major funding, revenues, and expenses. The line item budget displayed expenditures for the prior year, the current budget, the requested budget, and anticipated sources of revenue. The budget included graphs and a verbal description of each line item, and the history of each line item for the previous seven fiscal years.

The program budget contained descriptions of 74 distinct programs with performance data for the prior year, goals, and expected outcomes for the next budget year, as well as the budget resources for each program. The budget documents provided accurate information on all fund sources, history, and trends. The budget contained the financial sources of revenue for each line item and each program. The budget also contained an eight-year history for approximately 45 line items. The district also developed a document that projected enrollments, budget expenditures, and anticipated revenues in major budget areas for a five-year period beyond the current budget.

2. The budget was developed and resources were allocated based on the ongoing analysis of aggregate and disaggregated student assessment data to assure the budget's effectiveness in supporting improved achievement for all student populations.

**Rating: Satisfactory**

**Evidence**

The district developed the budget and allocated resources based on ongoing analysis of aggregated and disaggregated student achievement data. District administrators stated that despite budget cuts, they attempted to protect the instructional core by maintaining low class sizes and alternative education programs. The district used student achievement data to provide a rationale for reorganization of certain teaching positions. For example, Worcester converted some teaching positions to mathematics and reading and writing coaches. The district hired 52 tutors from grant and city funds to provide Tier II intervention services in reading and mathematics at the elementary level.

In 2007, the district changed its delivery model and hired 21 instructional coaches in mathematics and ELA at the elementary and middle school levels. Each high school had MCAS test specialists to work with students who had not yet passed the MCAS tests. The district converted enrichment teacher positions at the middle school level into positions to provide the double-dosing of ELA, reading, literacy, and math. District administrators stated that although the per pupil rate for materials and textbooks was fixed, they prioritized resource distribution based on student achievement data.

3. The district's budget and supplemental funding were adequate to provide for effective instructional practices and to provide for adequate operational resources. The community annually provided sufficient financial resources to ensure educationally sound programs and facilities of quality, as evidenced by a sufficient district revenue levy and level of local spending for education.

**Rating: Needs Improvement**

**Evidence**

The city annually met its regulatory requirements by providing required financial resources for educational programs and maintenance of facilities. The district provided staff members and



resources to secure additional funding through competitive grants and other alternative funding. Worcester exceeded its net school spending (NSS) requirements from 2000 to 2007 by an average of less than 1.0 percent; however, during this period the district reduced personnel and programs because of budget restrictions. School committee members told the EQA team that the district was in the sixth consecutive year of deficits. A member expressed concern that middle class families would leave the district because “we were not able to keep up.” According to Department of Revenue data for 2007, Worcester had excess levy capacity of \$11,992,596 and override capacity of \$120,317,696. The city had certified free cash of \$529,815, a stabilization fund of \$2,642,054, and an overlay reserve of \$3,102,476.

The EQA examiners reviewed a survey prepared for the school committee by district administrators to determine where Worcester ranked in comparison to other Massachusetts school districts in the percentage of funds spent in excess of NSS requirements in 2006. Worcester expended \$234,301,356 in 2006, or \$1,057,882 over the NSS requirement of \$233,243,474. Two hundred eighty five of the 328 districts surveyed responded. According to the survey results, Worcester’s percentage of funds expended over its NSS requirement for 2006 was 0.5 percent, ranking it 272 out of the 285 school districts that responded to the survey.

The EQA examiners also reviewed a graph prepared by the district displaying the percentages of the budget for direct instructional costs, fixed costs, and other costs. This graph demonstrated that from FY 2001 to FY 2008, the budget percentage for direct instructional costs decreased from 64 to 51 percent while the budget percentage for fixed costs increased from 22 to 36 percent. The budget percentage for other costs was level at approximately 13 percent. The major causes for the increase in fixed costs were health insurance, energy, charter school assessments, and special education costs.

Examiners reviewed another document prepared by the district consisting of charts and graphs tracking increases and decreases. According to these data, teaching positions declined by 50 and instructional support positions declined by nine from FY 2005 to FY 2008. Instructional supply allocations per pupil decreased from \$65 in FY 2005 to \$63 in FY 2008. Total budget expenditures for health insurance increased from \$35.1 million in FY 2005 to \$44.0 million in

FY 2008. Charter school assessments increased from \$12.6 million in FY 2005 to \$18.6 million in FY 2008.

The administration presented another graph of position history for city funded full-time groups. This chart included positions such as administrators, teachers, instructional assistants, plant maintenance personnel, clerical personnel, and nurses, and showed that the number of these employees decreased from 2,808 in FY 2005 to 2,631 in FY 2008, a reduction of 177 employees. This chart also showed that before the period under review, from FY 2002 to FY 2005, there had already been a reduction of 337 employees.

In September 2005, the superintendent requested an additional budget appropriation from the city to hire more teachers to reduce class sizes. Through the reallocation of school department funding for technology and school repairs, the city transferred \$1.5 million to the district to hire 28 elementary teachers and eight elementary tutors. The additional \$500,000 came from the city's capital improvement program. In his letter to the city council requesting approval of the transfer of these funds, the city manager stated that officials must work to "seek the necessary and the essential reforms to eliminate the existing structural imbalance that exists between annual revenues and operating expenditures to continue to provide and to increase the critical public services, such as teachers in our classrooms, to our citizens."

The EQA team reviewed a chart administrators prepared for the 2008 budget presentation showing that 69 district classes had enrollments of between 27 and 29 students, and 26 classes had enrollments of 30 or more students in 2006-2007. Worcester closed four elementary schools in 2006-2007 to address budget concerns. These closings resulted in the elimination of 41 positions, relocation of 73 other positions, and a net savings of \$3 million. The administration provided the EQA with another document showing that the district enrollment decreased by approximately 2,000 students from 2002 to 2008. During this time, Worcester eliminated 306 teaching positions, but according to administrators only 102 of those positions were eliminated because of enrollment decreases.

In interviews with parents, teacher association representatives, and teacher focus groups, the EQA examiners learned that Worcester lacked instructional supplies and textbooks. The interviewees went on to say that there were inequities in the availability of technology. Teachers

and parents stated that they paid for supplemental instructional supplies out of their own pockets, and that parent organizations were actively raising funds for supplies and materials. Parents were also concerned about the increases in class size.

4. The district, as part of its budget development, implemented an evaluation-based review process to determine the cost effectiveness of all of its programs, initiatives, and activities. This process was based, in part, on student performance data and needs.

**Rating: Satisfactory**

**Evidence**

Interviewees stated and a review of documents confirmed that the district conducted an evaluation-based review process to determine the cost effectiveness of programs as part of its budget development process. In 2007, Worcester closed four elementary schools and consolidated to address declining enrollment and resources. This resulted in a savings of almost \$3 million. In a memorandum to school committee members, the superintendent stated that had these four schools remained open, the reductions required of the other schools would have been even more severe.

Worcester evaluated its special education out-of-district placements and returned some students to district or collaborative programs. The district converted 22 teaching positions to 52 part-time tutor positions for at-risk students. Worcester also restructured its bidding process for regular and special education transportation services. Before 2006, the district sought one bidder for both types of transportation. The district separated the bid requests, and received more responses and more favorable bids. The district also participated in PowerOptions, a process for bulk purchasing of natural gas and electricity through Massachusetts Health and Educational Facilities.

5. The district and community had appropriate written agreements and memoranda related to 603 CMR 10.0 that detailed the manner for calculating and the amounts to be used in calculating indirect charges levied on the school district budget by the community.

**Rating: Satisfactory**

**Evidence**

This district provided memoranda related to 603 CMR 10.0 detailing the amounts used in calculating indirect charges levied on the school district budget by the city.

The EQA examiners reviewed official documents prepared and executed by the municipality's chief financial officer listing administrative, health, and other insurance assessments and the methods used to calculate justifiable costs. The EQA examiners confirmed these assessments in the district's End of Year Pupil and Financial Report. The district and city were in the process of incorporating these documents into a formal written agreement.

6. The combination of Chapter 70 Aid and local revenues, considering justified indirect charges, met or exceeded the Net School Spending (NSS) requirements of the education reform formula for the period under examination.

**Rating: Satisfactory****Evidence**

The combination of Chapter 70 aid and local revenues exceeded the NSS requirements of the reexamination period. Worcester exceeded the NSS requirement by \$2,025,807 or 0.9 percent in FY 2005, by \$1,057,882 or 0.5 percent in FY 2006, and by \$2,028,766 or 0.8 percent in FY 2007.

The amount of Chapter 70 aid to the district in FY 2005 was \$158,861,691, an increase of 2.8 percent over FY 2004. The amount of Chapter 70 aid to the district of \$161,059,359 in FY 2006 amounted to an increase of 1.4 percent over FY 2005, and the Chapter 70 aid to the district of \$167,480,913 in FY 2007 amounted to an increase of 4.0 percent FY 2006. Chapter 70 aid spending accounted for \$69 out of every \$100 spent in actual NSS in both FY 2005 and FY 2006, and \$68 out of every \$100 spent in actual NSS in FY 2007.

7. Regular, timely, accurate, and complete financial reports were made to the school committee, appropriate administrators and staff, and the public. In addition, required local, state, and federal financial reports, and statements were accurate and filed on time.

**Rating: Satisfactory**

## **Evidence**

District leaders provided regular, timely, accurate, and complete financial reports to the school committee, administrators, staff, and the public. The EQA examiners reviewed a number of reports developed by the district. The district developed a report entitled Report on Revenue and Expenditure Projections that included an executive summary of the reductions in the school budget during the five previous years, a summary of budget requests for the next school year, and detailed projections for the two subsequent school years.

The administration also prepared a budget status report each quarter for the school committee and other interested stakeholders. This report contained the initial budget, the amount expended to date, and the projected balance. The report also contained a narrative of factors considered in developing the projected balance, such as energy, transportation, out-of-district transportation, and tuition costs. These projections resulted in formal requests to the school committee to transfer funds between line items. The EQA team reviewed the minutes of subcommittee meetings of the standing committee on business, which first reviewed requests for transfers, and the minutes of full school committee meetings when the school committee voted on these transfer requests.

School committee members stated in interviews that the administration kept them well informed on the budget and other financial matters. They went on to say that administrators provided good budget documents and access to financial and school achievement data, and kept them informed about the district's programs. Local, state, and federal financial reports were accurate and filed on time. The district bonded all personnel who handled funds in conjunction with the schools' student activity accounts and athletic gate receipts.

8. The district used efficient accounting technology that integrated the district-level financial information of each school and program, and the district used forecast mechanisms and control procedures to ensure that spending was within fiscal budget limits. District administrators were able to regularly and accurately track spending and other financial transactions.

**Rating: Satisfactory**

## **Evidence**

Worcester used efficient accounting technology that integrated district and school financial program information. The district and city used the Pentamation financial software program. The principals received a line item budget from the administration and could ascertain their school's current budget status on-line through computers at their schools. Principals sent hard copy purchase order requisitions to the central office to assure that the spending was within financial limits before sending them electronically to the city financial administrators for approval. The EQA examiners interviewed city financial administrators who stated that all requests for purchasing from the schools, including formal bid procedures, were reviewed and approved before submission to vendors. City administrators stated that they regularly monitored school districts expenditures and the budget.

The district used forecast mechanisms and control procedures to ensure that spending was within budget limits. Worcester had developed forecasting models in Excel software, and the district's quarterly budget report to the school committee contained a narrative of adjustments to the original budget.

District administrators tracked spending and other financial transactions. The EQA team reviewed quarterly financial reports prepared by the administration for the school committee's subcommittee on business and the full school committee, and confirmed that transfer requests were action items on school committee agendas.

9. The district had a system in place to pursue, acquire, monitor, and coordinate all local, state, federal, and private competitive grants and monitored special revenue funds, revolving accounts, and the fees related to them to ensure that they were managed efficiently and used effectively for the purposes intended.

## **Rating: Excellent**

## **Evidence**

The district had a system for pursuing, acquiring, monitoring, and coordinating all local, state, federal, and private competitive grants. The EQA team reviewed a district-developed booklet entitled Grant Budgets: Understanding the Budget, which contained all forms used by the district in grant budget management. The booklet contained sample grants, instructions on preparing

time sheets, travel authorizations, grant audit procedures, consultant information, and requisitions for materials and supplies.

The EQA examiners reviewed a document developed by the district listing all federal and state entitlement and competitive grants awarded for that school year, a detailed description and budget for each grant, and the district contact person for that grant.

The district had numerous partnerships with corporate and civic sponsors, human service agencies, and other benefactors. Examples included Junior Achievement, Hanover Insurance, EMC Corporation, Intel Corporation, First Robotics, and National Grid. A consortium of 13 local colleges and universities provided support to the district including professional development, workshops, tutors, and equipment.

The Worcester Educational Development Foundation, Inc. (WEDF) was founded in 2005 for the sole purpose of supporting students and teachers in the Worcester Public Schools. WEDF provided support for the enhancement of programs and facilities that addressed the needs of a large, urban school system.

The district monitored special revenue funds and revolving accounts to ensure they were managed efficiently and used effectively for the purposes intended. Grant expenditures followed the same process as the school committee budget, which required district and city approval before the commitment of funds. An independent auditing firm audited the student revolving account annually.

10. The district had a system in place to ensure that state procurement laws were followed, that appropriate staff had MCPPO credentials, and that all assets and expenditures were monitored and tracked to insure efficient and maximum effective utilization. The district also competitively procured independent financial auditing services at least every five years, shared the results of these audits, and consistently implemented their recommendations. All procurement, tracking, monitoring systems, and external audits were accurate, current, and timely.

**Rating: Satisfactory**

## **Evidence**

The district had a system to ensure compliance with state procurement laws. All purchasing was processed through the city's purchasing department, including all formal bid proposals and quotations. The purchasing director for the city was MCPPO certified. The director of materials management for the district was also MCPPO certified.

The district website included policies and practices of procurement. The website also contained information on the bid process, the application for placement of prospective bidders on the bid list, current requests for bid solicitations, and current outstanding contracts.

The city was responsible for procuring independent audit services for the annual financial audit of the city and the district. The district had contracted with a different audit firm to conduct the compliance audit for the End of Year Pupil and Financial Report. The school district had also contracted with the audit firm to review its student activity account. All procurement, tracking, monitoring systems, and external audits were accurate, current, and timely.

11. The district had a formal preventative maintenance program to maximize and prolong the effective use of the district's capital and major facility assets, to ensure that educational and program facilities were clean, safe, well-lit, well-maintained, and conducive to promoting student learning and achievement.

## **Rating: Satisfactory**

## **Evidence**

Worcester implemented formal inspection and preventive maintenance procedures to maximize and prolong the effective use of the district's capital and major facility assets. The district used the SchoolDude web-based software program to enable schools to submit maintenance requests and work orders on-line and to track the progress of their work order from request to completion date. The program allowed the district to prioritize requests, and to develop a database of maintenance tasks and a schedule for routine tasks.

The Worcester Public Schools maintenance staff consisted of licensed electrical, plumbing, and HVAC personnel who performed in-house preventive maintenance tasks. The district also



contracted for routine inspections of elevators, and for energy management, roofs, boilers, and safety and security systems.

The facilities were clean, safe, well illuminated, well maintained, and conducive to teaching and learning. The EQA team visited the schools and found that even buildings worn due to age were clean and well maintained. The Massachusetts School Building Authority (MSBA) inspected 46 district schools and reported that four were in poor condition, possibly needing replacement. MSBA also reported that 17 schools were approaching poor condition with systems that may need attention.

12. The district had a long-term capital plan that clearly and accurately reflected the future capital development and improvement needs, including educational and program facilities of adequate size. The plan was reviewed and revised as needed with input from all appropriate stakeholders.

**Rating: Satisfactory**

**Evidence**

The district had a long-term capital plan that clearly and accurately reflected its future capital development and improvement needs. Worcester presented a five-year capital rehabilitation plan for 2008–2012 listing each need by planned year of undertaking and location, together with a description of the project and the estimated budget. In interviews, municipal officials stated that the city had a five-year capital rehabilitation and renovation plan that contained input from all city departments, including the schools. The city considered funding projects in the plan outside of the operational budgets. The district had completed a number of capital projects in various schools during the reexamination period, including boiler replacement, HVAC system replacement, oil tank replacement at 14 sites, and partial roof replacement.

13. The schools were secure and had systems to ensure student safety.

**Rating: Satisfactory**

**Evidence**

The schools were secure and had systems to ensure student safety. The EQA examiners reviewed the recent MSBA assessment of the district schools, which indicated that all schools had secure

main entrances, most with buzzer and intercom systems, and security camera configurations. The district had sign-in requirements and required identification badges in the schools. Most schools had alarms, and some secondary schools had security personnel stationed in or outside the building. School personnel routinely checked exterior doors to ensure they were locked.

The district installed security cameras in secondary and alternative schools. Hallways, blind spots, and certain volatile areas of school buildings were monitored with security cameras. Two-way radios and Nextel phones were an integral part of the communication system.

Administrators responsible for security stated in interviews that they worked with the city emergency management team to develop security plans, and utilized the metropolitan medical response system. Administrators added that they were continuing to improve exterior lighting.

## **Appendix A: Worcester Technical High School**

The on-site review of the Worcester Technical High School (WTHS) was conducted on November 26-29, 2007 in conjunction with the reexamination of the Worcester Public Schools.

As part of this review of WTHS, the EQA examiners conducted 13 interviews. The participants included the principal, the director of vocational and technical education, two assistant principals, the cooperative education coordinator, and the facilities manager. The examiners also interviewed the mathematics, English language arts, and special education department heads, the general advisory committee for vocational programs chairperson, a parent, and members of the school council and program advisory committees.

The EQA team also conducted a focus group interview that included a social studies teacher, the social studies department head, a mathematics teacher, an Advancement Via Individual Determination program teacher, an office technology teacher, the auto technology department head, the guidance department head, and a student support instructor.

The EQA examiners made five classroom observations during the site visit. These observations included mathematics, English language arts, and technical classes. The EQA team also reviewed the instructional content of several technical programs. The EQA team members had many informal discussions with staff members and students, and attended portions of two professional development sessions for technical and academic teachers on developing instructional strategies to help students address open-response type questions.

The EQA examiners reviewed a number of school and district documents including the Worcester Technical High School 2006-2008 School Improvement Plan (SIP); the Perkins Local Plan Update, Spring 2006; the Worcester Public Schools 2005-2006 and 2006-2007 program budgets and related budget worksheets; the Worcester Technical High School 2006-2007 and 2007-2008 budget summary of accounts; and the 2006-2007 account expenditures. The examiners also reviewed the curriculum documents for ELA and mathematics, the student handbook, and several school newsletters and brochures. Also reviewed were the Table of Organization and Responsibilities/Tasks List, the job description of the director of vocational and technical education, and the minutes of meetings of the general advisory committee and the

program advisory committees for several technical programs. The EQA team examined the five-year capital and operating cost plans prepared by each program advisory committee, a school report entitled Academic and Vocational Integration, 1998-2007, and informational brochures on the school-based health center. The EQA examiners also viewed and accessed data from the school and district websites.

Other documents consulted and used by the EQA team included enrollment indicators from the Department of Education, the Worcester Public Schools, and the Worcester Technical High School; district and school MCAS test results in the aggregate and by subgroup; reports on adequate yearly progress (AYP); the Merrimack Education Center (MEC) data prepared for the EQA; and a comparable value analysis. The district and school provided the EQA examiners data on pupil and teacher attendance, dropouts, suspensions, and students' post-graduate plans, and the schedule of professional development activities for 2006-2007.

The district made a presentation to the EQA team describing its use of the Measures of Academic Progress (MAP) as a formative assessment. The EQA examiners consulted the Public Education Leadership Project (PELP) Coherence Framework, a Harvard University initiative recently adopted by the district to develop an improvement strategy affecting the instructional core. EQA team members reviewed 10 randomly selected teacher evaluations as well as the principal's evaluation.

## **Standard I: Leadership, Governance, and Communication**

### **Rating: Satisfactory**

The appointment of the principal coincided with the opening of the new \$90 million, 400,000 square foot Worcester Technical High School (WTHS) in September 2006. The new principal had a clear understanding of the vision, mission, and goals articulated in the School Improvement Plan (SIP). WTHS used the district format for its SIP. The plan was standards based, focusing on the improvement of student achievement. The SIP identified those responsible for the accomplishment of activities, and contained timelines, evidence of goal attainment, and the professional development and non-financial resources needed to meet the goals. The SIP did not, however, identify the sources of financial support needed to complete SIP activities. Interviews with administrative and instructional staff members and a review of

documents confirmed that the school developed the SIP based on a review of student achievement data, monitored progress toward accomplishment of the goals, and evaluated the outcomes. WTHS regularly modified academic and vocational curricula, and adapted student services based on an ongoing review of student achievement data.

The principal effectively delegated the educational and operational responsibilities of the school to the director of vocational/technical education and the four assistant principals. All reported to the principal, who provided them frequent opportunities for input, feedback, and comment. Administrators stated that they were both held accountable and supported by the school leadership. The school is broken down into four small learning communities with six technical areas in each. Each of the four assistant principals was assigned to a Small Learning Community (SLC) and oversaw the day to day functions of his/her respective SLC, which was also assigned a guidance counselor and secretary. The director of vocational/technical education oversaw the technical areas.

The principal also effectively delegated instructional and supervisory responsibilities to academic and technical department heads, and communicated openly and frequently with them. Department heads stated that they were both held accountable and supported by the school leadership. The lines of reporting authority in the organizational chart were unclear. Although administrative roles were defined, there was duplication or overlap in the decision-making process because of unclear lines of authority. For example, an individual administrator or teacher may have had to contact or notify multiple administrators, including the principal, the director of technical education, an assistant principal or a department head, during the decision-making process. This complex distributed leadership model was balanced by a demonstrated culture of collaboration which led to all working together cohesively to improve student achievement.

Community representatives interviewed by the EQA team supported the school leadership and the mission of the school to provide quality academic and technical education. They told the EQA team that the school provided Worcester youth and adults greater economic opportunities. Many public-private partnerships and collaborations existed in the community in support of the school and its students. These relationships demonstrated the commitment of the business community to improve education and provide opportunities to district students. The business

partners included Cisco Systems, Dell Computers, Saint-Gobain/Norton Abrasives, and the Worcester Credit Union.

The school also formed a partnership with the Great Brook Valley Health Center. A physician assistant and bilingual administrative assistant worked in conjunction with the school nurse and an adjustment counselor assigned to the campus health center. This team identified students with physical and mental health needs and provided them with services. Health center staff members also worked with school guidance counselors on dropout prevention when issues related to the well-being of the student were identified that might affect school attendance. The health center provided services to students with and without health insurance.

## **Standard II: Curriculum and Instruction**

### **Rating: Satisfactory**

WTHS provided academic and technical instruction on alternating weeks according to a daily schedule of eight 40-minute blocks. Grade 9 students were enrolled in 40-minute blocks of ELA and mathematics, and grade 10 students were enrolled in a 40-minute block of mathematics every day during both weeks.

### **Academic**

The districtwide ELA and mathematics curricula were aligned with the state frameworks. The curriculum components included objectives, resources and websites, instructional strategies, timelines, and outcomes or “understandings.” A district liaison met with department heads as part of the established district curriculum review cycle. Department heads reviewed lesson plans and student assessments every two weeks, and the principal reviewed a sample of teachers’ lesson plans monthly to ensure fidelity of implementation of the written curriculum. Department heads and the principal provided teachers with frequent feedback.

The 2006-2008 SIP focused on all students attaining grade-level standards and proficiency through the implementation of appropriate instructional strategies. According to an analysis of achievement data, special education students were weak in number sense, and the SIP targeted this as an area for improvement. The SIP goals were based on the rationale that students would achieve at higher levels when teachers analyzed and used data to inform instruction, and differentiated instruction to meet individual student needs. In 2007-2008, the school began to

develop instructional strategies to help students address open-response type questions. To implement this major new initiative, administrators expected both technical and academic teachers to give students instruction and practice on answering open-response type questions relevant to their areas.

An inclusion classroom model served over 60 percent of the 210 special education students in grades 9-12. The school assigned a regular education content teacher to co-teach with a special education teacher who provided instructional strategies for special education students. One inclusion and one resource room classroom were provided in the four core subjects at each grade level, except in grade 12 where no resource room classroom was available during one of the two-week technical and academic cycles. The resource room model was a separate instructional setting for special education students.

The MCAS specialist coordinated the administration of state and school assessments, and analyzed the results of the MCAS tests. The school had an academic coach in 2006-2007 whose duties included implementing the MAP assessment program, observing classes, and recommending instructional modifications and strategies.

### **Technical**

The curriculum for the technical areas was competency based and realized by project-based instruction rendered both in school and off campus. The school was implementing the state Vocational Technical Education (VTE) frameworks at the time of the EQA review. Technical instruction was reinforced with paid and unpaid work-based experiential learning supervised by the cooperative education coordinator. As many as 95 eligible seniors were participating in experiential learning. Student progress and achievement were determined by performance assessments and the attainment of competency standards.

The school had 24 technical programs with aligned curricula leading to licensure and certification. These programs included Automotive Collision, Automotive Technology, Biotechnology, Carpentry, Culinary Arts/Baking, Cosmetology, Drafting/CAD, Early Childhood, Electrical, Electro-Mechanical, Financial Services, Graphic Communications, Allied Health, Nursing Assistant, Horticulture, Environmental Technology, Hotel and Restaurant

Management, HVAC/R, Machine Technology, Office Technology, Painting and Decorating, Plumbing, Sheet Metal, and Telecommunications.

The school provided site-based experiential learning opportunities for students through two retail stores, a coffee shop, a restaurant, a credit union branch, a beauty salon, and an early childhood preschool. In addition, WTHS provided services to the public, including automotive and collision repair, computer services, and health services.

Integration of academic and technical instruction was a critical feature of the program. This required that both academic and technical teachers take responsibility for the acquisition, reinforcement, and improvement of academic competencies. According to interviews and documentation, academic integration projects were implemented at the former WTHS. While some of these efforts continued at the new school, it lacked a systematic model for integrating academic and technical instruction. The WTHS campus consisted of four modern buildings or academies with up to date equipment. Each academy contained a cluster of four to nine technical programs with a common theme. Academic teachers located in each cluster taught the core subjects. This structure provided a foundation for integrating academic and technical instruction, but not all the components required for integration were in place. However, information provided by the district indicated that academic and vocational integration did take place through academy and schoolwide projects. Some examples included the U.S. First Robotics project in which students developed competitive robotics; the Green Hill projects in which students in teams maintained the Vietnam Memorial, vernal pools during breeding season, the petting zoo, and golf club and park buildings; and the Mathew 25 project, in which students developed plans to construct an eco-friendly two-family house.

The school lacked common planning time for teachers and an integrated curriculum with instructional strategies that allowed abstract concepts to come alive in real world situations, giving students an opportunity to apply their learning. In 2007-2008, the school was moving forward with the development of an instructional strategy to address open-response type questions. As a significant aspect of this major new initiative, WTHS was preparing both technical and academic teachers to provide instruction and practice for students on answering open-response type questions in their areas.



WTHS had articulation agreements with five institutions of higher learning including Quinsigamond Community College, Massachusetts Bay Community College, Becker College, Bay State College, and the New England Institute of Technology. According to a review of the Perkins Local Plan Update, Spring 2006 and interviews with administrators, 36 agreements in 14 fields of study were in place with these institutions. These agreements provided an opportunity for students to progress by competency from a high school technical program to the same program at a higher educational level.

Worcester Technical High School offered 14 professional development days (10 half days and four full days) in the past two years. The entire faculty (vocational and academic) received MAP training in 2007-2008. In addition, the School Improvement Plan contained a detailed description of the integration. WTHS developed a schoolwide “Open Response Strategies” plan, and every teacher (vocational and academic) spent two half days developing open-response questions, designing rubrics, evaluating anchor papers, and sharing student work. Additional days were spent with the entire faculty (vocational and academic) on Certificate of Occupational Proficiency (COP) requirements and expectations and VTCTE. The school also had a math problem of the month for all academic and vocational classes.

### **Standard III: Assessment and Program Evaluation**

#### **Rating: Satisfactory**

##### **Academic**

The SIP included ELA and mathematics achievement goals for all students by grade level, and for the special education subgroup. According to interviews with administrators and instructional staff members and a review of documents, the school developed the SIP based on an analysis of student achievement data. MCAS and MAP test results were used to determine the educational needs of students and their performance levels.

According to previous EQA reviews, the district was beginning to analyze data systematically to improve student achievement. When an analysis of school MCAS test data showed that students were weak on open-response type questions and the long composition, WTHS instituted an instructional strategy addressing open-response type questions in 2007-2008. A review of the

MAP test results also showed the need to strengthen special education students' knowledge of number sense.

WTHS met the 2006 and 2007 AYP targets in ELA and mathematics in the aggregate and for all subgroups. Between 2006 and 2007, ELA failure rates dropped from 14 to seven percent while proficiency rates increased from 27 to 48 percent. Between 2006 and 2007, mathematics failure rates dropped from 23 to 16 percent, while proficiency rates increased from 35 to 46 percent.

### **Technical**

The EQA team reviewed the minutes of meetings held by the general advisory and program advisory committees for technical programs. Program advisory committees met semi-annually. The school did not hold an annual meeting of the general advisory committee with the school committee. Advisory committees were composed of business, industry, and union representatives, parents, and students. These committees made recommendations on curriculum, technology, capital equipment, enrollments, staffing, funding, and other factors relevant to program quality based on workforce and job market trends. The program advisory committees prepared five-year capital and operating plans and presented them to the director of technical education together with curriculum recommendations.

WTHS made 36 articulation agreements with five institutions of higher learning in 14 fields of study. These relationships also provided an opportunity to evaluate program quality and to promote higher levels of student achievement. According to the DOE, 70 percent of graduates planned to pursue further education, 23 percent planned to enter the work force, and four percent planned to join the military. The Perkins Local Plan Update, Spring 2006 cited a three-year average state positive placement rate of 95.58 percent for students in technical programs. Positive student placements included enrollment in a postsecondary program, employment in a field related or not related to the training received, and enlistment in a related military program. The WTHS positive placement rate was 93.74 percent.

### **Standard IV: Human Resource Management and Professional Development**

#### **Rating: Satisfactory**

The principal met all licensure requirements and was awaiting DOE certification. The principal was evaluated annually by the district quadrant manager using criteria aligned with the DOE's

Principles of Effective Administrative Leadership. The evaluations were endorsed by the principal, informative, and contained instructive comments and recommendations to promote growth and overall effectiveness.

The EQA examiners reviewed 10 randomly selected teacher evaluations. The evaluation criteria were partially aligned with the DOE's Principles of Effective Teaching. While most of the teacher evaluations reviewed were informative, they lacked specific recommendations to promote professional growth.

Assistant principals and the director of technical programs were evaluated annually by the principal. Assistant principals and their academy and technical department heads evaluated academic and technical teachers. Continued employment was linked to the results of the personnel evaluation and improvement of student achievement. The principal cited excessive teacher use of personal days as a problem affecting student achievement.

Department heads assigned teachers and considered time allocation and resource development. Student assessment results and other data were not used to determine teacher assignments.

WTHS planned and coordinated professional development each year. As previously cited, in 2007-2008 the school began to develop an instructional strategy addressing student weaknesses on open-response type questions. The professional development support for this initiative was thorough and based on sound academic and technical integration principles. However, the impact on student achievement was as yet unknown because of the recency of the initiative.

The 2006-2007 professional development plan and schedule of activities focused on technology. The school had one full-time technology support person, and six teachers provided part-time support. Three teachers and some students in the telecommunications department provided schoolwide help desk service.

The school provided optional professional development on the MAP formative assessment used to determine students' educational needs and performance levels, and compensated the participants. This professional development was optional because of the limitations on work hours in the teachers' contract in effect prior to the consolidation of the technical high school with the district. These work hour limitations were carried over. In 2006-2007 the school had a

MAP data coach to assist teachers in using MAP test results formatively to modify instruction and to provide professional development.

WTHS had a crisis management team and created a crisis safety plan in collaboration with the district. The crisis command center was changed from the front office of the school to a less accessible location. Crisis management handbooks were in each classroom. Emergency procedures were reviewed with administrators, the faculty, and the staff. Lockdown practices were held, and an actual lockdown occurred in 2006-2007. The front door was unlocked to provide access for patrons of the retail services offered by the school. A security guard was stationed at the front door to direct people to the main office or to the retail services. Faculty and staff members were required to wear identification badges.

### **Standard V: Access, Participation, and Student Academic Support**

#### **Rating: Satisfactory**

The mission of the WTHS was to provide academic and technical education to prepare students to meet the challenges of a global society. The school offered a range of instructional levels from resource to honors in the core academic subjects, and 94.2 percent of the WTHS academic teachers met the federal ‘highly qualified’ teacher standards. One AP course in biology was offered in 2007-2008 for grade 11 and 12 students. WTHS offered 24 technical programs satisfying industry certification and licensure requirements in alignment with the state vocational frameworks.

The approved school admission policy complied with the DOE non-discriminatory admission guidelines. The director of ELL translated the admission application to Spanish and distributed it to every middle school. Acceptance was determined by a weighted system on a 100-point scale with up to 40 points awarded for grades, 20 for conduct and effort, 20 for attendance, and 20 for the recommendation by the middle school guidance counselor. In 2006-2007, the student population was 30.4 percent first language not English, 2.5 percent limited English proficient, 59.3 percent low-income, and 17.3 percent special education. School enrollment by ethnicity was 7.4 percent African-American 35.6 percent Hispanic, and 52.9 percent White. The school enrolled 656 male and 585 female students.

Approximately 400 of the 800 students applying to the school each year were accepted into grade 9. Three hundred students were assigned to the waiting list. The school conducted a three-day summer transition orientation program for all entering grade 9 students. During the first two weeks of school, grade 9 students explored 24 technical programs in the four academies. They then selected six programs and spent two weeks of further exploration in each. WTHS granted requests to change these selections subject to space availability. Following the exploratory period, students selected a program and attended it during the last two weeks of the first semester. Final placement decisions were based on weekly grades, conduct, effort, attitude, and attendance.

According to 2006-2007 data on teacher and pupil attendance provided to the EQA team, WTHS had an average teacher absence rate of 6.58 days. This rate was the lowest of the Worcester high schools, but the total of 183.5 teacher personal days at WTHS was highest. The student attendance for 2006-2007 of 94.85 percent ranked first among the Worcester high schools. One hundred and sixty WTHS students, or 13.3 percent, were absent more than 14 days in 2006-2007. WTHS had the second lowest number of in-school and out-of-school suspensions of the Worcester high schools.

WTHS had a 2005-2006 dropout rate of 1.8 percent compared to the district rate of 4.2 percent, and a retention rate of 4.6 percent compared to the district rate of 4.2 percent. The WTHS graduation rate was 79.3 percent compared to the district graduation rate of 67.2 percent, and the school met its AYP graduation rate target.

The Worcester Public Schools modified its in-school suspension procedures by adopting the Positive Behavior Interventions and Supports (PBIS) instructive behavior modification model. WTHS expanded this approach by including a self-reflection component and problem-solving activities. Student expectations were clear and restrictive within a supportive environment. The in-school suspension room was replaced by a student support classroom managed by the student support instructor.

The school provided remediation for students who failed the MCAS tests during physical education periods, grade 12 study periods, and technical education periods as a last resort. ELA and mathematics tutors were available after school, in the evening, and during the summer. An

MCAS test specialist coordinated testing, performed data analysis, provided data, and assisted in hiring tutors.

One guidance counselor was assigned to each academy. The counselors were responsible for monitoring student progress to address performance issues. Counselors held meetings with students and parents to promote MCAS test success and graduation. A school-based health center provided early identification and services to meet students' physical and mental health needs.

The Worcester Technical High School had 20 ELL students in 2005 and 41 in 2007, an increase of 105 percent. The school now has a full-time ELL teacher, who conducted English as a second Language (ESL) testing, provided ELA instruction, and assisted with mathematics instruction for the school's ELL students. This teacher had a class load of approximately 20 students per week.

#### **Standard VI: Financial and Asset Management Effectiveness and Efficiency**

##### **Rating: Satisfactory**

The principal and director participated in the district budget development process through discussions on staffing and other budget accounts. The school budget was established by the central administration. An amount for instructional materials was assigned to each program-based cluster. Funding was determined based on student enrollment. A review of school budget documents revealed the same total budget amount of \$244,378 for both FY 2007 and FY 2008, although the enrollment increased by approximately 125 students during this interval. The school divided the \$244,378 by academic, technical, academy, support, and principal line items. Each department had a budget based on needs demonstrated over the past five years, the number of students per department, and curricular needs. If a department had a budgetary need that exceeded the amount budgeted, the principal and director reviewed the request, and if approved, funds from the principal's line item were authorized.

The director of technical education was responsible for administering the school budget in collaboration with the principal. Thirty-three department and cluster accounts were assigned an amount for instructional materials. Nine additional accounts were funded, including administration, repair, student organizations, conferences, and dues. A school-based electronic spreadsheet was used to track expenditures through the district purchase order system. All

department accounts were for instructional materials. According to FY 2007 financial records, expenditures ranged from \$39 for pins to \$9,558 for social studies textbooks.

Department heads did not participate in the budget process and were unaware of department account allocations or balances. The district held school administrators accountable for not exceeding the bottom line for instructional materials. School administrators did not have on-line access to district financial information on the school's account balance enabling reconciliation. The school financial clerk checked periodically with the district financial clerk on line item balances. The district provided the school an additional \$17,000 for materials and supplies in FY 2007 based on a per pupil allocation, as it did for all schools in the system; these funds were held pending unanticipated system-wide costs.

The school generated supplemental funding from receipts from entrepreneurial activities that were part of the experiential learning program. These included two retail stores, a coffee shop, a restaurant, a credit union branch, a beauty salon, and an early childhood preschool. In addition, WTHS provided services to the public, including automotive and collision repair, computer services, and health services. A chain of custody was in place for receipts. Receipts were deposited in the school branch of the Worcester Credit Union. The funds were electronically swept by the district, and credited to revolving accounts in the name of the respective departments. The school provided each department an open purchase order of \$500 for immediate purchases of consumable supplies and materials to meet their emerging needs.

The general advisory committee and program advisory committees for technical programs met semi-annually. Recommendations were based on workforce and job market trends affecting the curriculum and technology developments. The committees addressed capital equipment, enrollment, staffing, supply and maintenance operating budgets, and other factors related to program quality. Each program advisory committee prepared a five-year capital and operating cost plan for the consideration of the director of technical education. These plans included student enrollment projections, staffing and capital needs, and yearly operating budgets, including maintenance and repairs, textbooks, software, travel, and dues.

This procedure was needs driven rather than based on the analysis of student achievement data. There was no direct correlation between the recommendations in the five-year plan and the

annual assigned budgets, although this information was useful to determine the financial needs of the various departments. No annual meeting was held between the general advisory committee and the school committee as required by regulation 603 CMR 4.03(1)(c)2. The principal and director did participate in the district budget development process to discuss staffing and other budget accounts.

Administrators, department heads, faculty members, and community representatives were aware of the availability of supplemental funds. They stated that the school budget and supplemental funding were adequate to provide for effective instruction. Annual federal Perkins grant funds amounted to approximately \$250,000. School and department entrepreneurial efforts also added to the supplemental funding stream. The general advisory committee and the school administration established a non-profit foundation to solicit funds and in-kind contributions to support school programs. The foundation raised \$3 million from local industries for capital equipment in the new school. These funds qualified for matching state funding. An additional \$1 million dollars was raised in cash and in-kind donations with a target of \$10 million. The objective was to provide a sustainable stream of supplemental funding for the purchase and maintenance of modern equipment guided by the equipment needs documented in the five-year plans.

The central administration created a new position of facilities manager at WTHS because of the size and sophistication of the building. An automated inspection and preventive maintenance schedule was created to ensure that these functions were performed systematically. In addition, ongoing tasks were placed on an automated schedule. A Microsoft Outlook calendar and task list were used to automate the inspection and preventive maintenance schedules. A detailed weekly and summer building cleaning schedule was established using Microsoft Word and Excel programs. Custodial personnel had clear and specific duties and the head custodian was accountable for supervision.

A tour of the school showed it was clean, well maintained, and well illuminated. Security cameras and alarms were installed and functioning. Funding for building maintenance and cleaning was provided through the district and supplemented with foundation funds.



## Appendix B: Proficiency Index (PI)

The proficiency index is a metric used to measure and compare all schools and school districts regarding their performance on the MCAS tests. The proficiency index is a measure of the level of achievement a district, school, grade, or subgroup has made in relation to the 'Proficient' achievement level on the MCAS tests. The EQA computes three indices: the English Language Arts Proficiency Index (EPI), the Math Proficiency Index (MPI), and the Science and Technology/Engineering Index (SPI).

The proficiency index is calculated as follows:

Percentage of students scoring 200-208 on test	x 0 = A
Percentage of students scoring 210-218 on test	x 25 = B
Percentage of students scoring 220-228 on test	x 50 = C
Percentage of students scoring 230-238 on test	x 75 = D
Percentage of students scoring 240 or more on test	x 100 = E

The proficiency index equals the sum of  $A + B + C + D + E = PI$

*Example:* The Anywhere High School had the following results on the 2007 MCAS tests in a given content area:

12 percent of all students scored 200-208; therefore,	12 percent x 0 =	0
15 percent of all students scored 210-218; therefore,	15 percent x 25 =	3.75
21 percent of all students scored 220-228; therefore,	21 percent x 50 =	10.5
34 percent of all students scored 230-238; therefore,	34 percent x 75 =	25.5
18 percent of all students scored 240 or more; therefore,	18 percent x 100 =	18.0

The proficiency index is calculated by adding:  $0 + 3.75 + 10.5 + 25.5 + 18 = 57.75$

The proficiency index (API) for the Anywhere High School would be 57.75.

The EPI is calculated using the ELA results for all students taking the ELA exam. The MPI is calculated using the math results for all students taking the math exam. The SPI is calculated using the STE results for all students taking the STE exam.

The 100 point proficiency index is divided into six proficiency categories as follows: 90-100 is 'Very High' (VH), 80-89.9 is 'High' (H), 70-79.9 is 'Moderate' (M), 60-69.9 is 'Low' (L), 40-59.9 is 'Very Low' (VL), and 0-39.9 is 'Critically Low' (CL).

## Appendix C: Chapter 70 Trends, FY 1998 – FY 2007

	Foundation Enrollment	Pct Chg	Foundation Budget	Pct Chg	Required Local Contribution	Chapter 70 Aid	Pct Chg	Required Net School Spending (NSS)	Pct Chg	Actual Net School Spending	Pct Chg	Dollars Over/Under Requirement	Percent Over/Under
FY98	24,017	3.6	162,663,089	6.1	53,996,974	102,394,910	12.4	156,391,884	9.6	159,032,640	10.4	2,640,756	1.7
FY99	23,976	-0.2	167,731,885	3.1	67,107,795	110,232,004	7.7	177,339,799	13.4	178,095,919	12.0	756,120	0.4
FY00	26,303	9.7	189,799,371	13.2	61,712,408	130,666,545	18.5	192,378,953	8.5	192,380,365	8.0	1,412	0.0
FY01	26,458	0.6	199,757,473	5.2	62,625,752	137,131,721	4.9	199,757,473	3.8	200,100,476	4.0	343,003	0.2
FY02	26,898	1.7	212,472,503	6.4	64,692,402	147,939,972	7.9	212,632,374	6.4	212,781,634	6.3	149,260	0.1
FY03	27,056	0.6	218,099,326	2.6	64,996,032	153,103,294	3.5	218,099,326	2.6	219,673,808	3.2	1,574,482	0.7
FY04	27,087	0.1	220,281,292	1.0	65,762,985	154,518,307	0.9	220,281,292	1.0	222,362,743	1.2	2,081,451	0.9
FY05	26,650	-1.6	227,373,569	3.2	68,511,878	158,861,691	2.8	227,373,569	3.2	229,399,376	3.2	2,025,807	0.9
FY06	26,369	-1.1	233,243,474	2.6	72,184,115	161,059,359	1.4	233,243,474	2.6	234,301,356	2.1	1,057,882	0.5
FY07	25,950	-1.6	242,782,324	4.1	77,309,187	167,480,913	4.0	244,790,100	5.0	246,818,866	5.3	2,028,766	0.8

	<u>Dollars Per Foundation Enrollment</u>			<u>Percentage of Foundation</u>			<u>Chapter 70 Aid as Percent of Actual NSS</u>
	Foundation Budget	Ch 70 Aid	Actual NSS	Ch 70	Required NSS	Actual NSS	
FY98	6,773	4,263	6,622	62.9	96.1	97.8	64.4
FY99	6,996	4,598	7,428	65.7	105.7	106.2	61.9
FY00	7,216	4,968	7,314	68.8	101.4	101.4	67.9
FY01	7,550	5,183	7,563	68.6	100.0	100.2	68.5
FY02	7,899	5,500	7,911	69.6	100.1	100.1	69.5
FY03	8,061	5,659	8,119	70.2	100.0	100.7	69.7
FY04	8,132	5,705	8,209	70.1	100.0	100.9	69.5
FY05	8,532	5,961	8,608	69.9	100.0	100.9	69.3
FY06	8,845	6,108	8,885	69.1	100.0	100.5	68.7
FY07	9,356	6,454	9,511	69.0	100.8	101.7	67.9

Foundation enrollment is reported in October of the prior fiscal year (e.g., FY07 enrollment = Oct 1, 2005 headcount).

Foundation budget is the state's estimate of the minimum amount needed in each district to provide an adequate educational program.

Required Net School Spending is the annual minimum that must be spent on schools, including carryovers from prior years.

Net School Spending includes municipal indirect spending for schools but excludes capital expenditures and transportation.