



Greater Lowell Regional Vocational Technical School District Review

Review conducted January 9–12, 2012

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Overview of District Reviews

Purpose

The goal of district reviews conducted by the Center for District and School Accountability (CDSA) in the Department of Elementary and Secondary Education (ESE) is to support districts in establishing or strengthening a cycle of continuous improvement. Reviews consider carefully the effectiveness, efficiency, and integration of systemwide functions using ESE's six district standards: **Leadership and Governance, Curriculum and Instruction, Assessment, Human Resources and Professional Development, Student Support, and Financial and Asset Management.**

District reviews are conducted under Chapter 15, Section 55A of the Massachusetts General Laws and include reviews focused on "districts whose students achieve at low levels either in absolute terms or relative to districts that educate similar populations." Districts subject to review in the 2011-2012 school year include districts that were in Level 3¹ (in school year 2011 or school year 2012) of ESE's framework for district accountability and assistance in each of the state's six regions: Greater Boston, Berkshires, Northeast, Southeast, Central, and Pioneer Valley. The districts with the lowest aggregate performance and least movement in Composite Performance Index (CPI) in their regions were chosen from among those districts that were not exempt under Chapter 15, Section 55A, because another comprehensive review had been completed or was scheduled to take place within nine months of the planned reviews.

Methodology

To focus the analysis, reviews collect evidence for each of the six district standards (see above). The reviews seek to identify those systems and practices that may be impeding rapid improvement as well as those that are most likely to be contributing to positive results. The district review team consists of independent consultants with expertise in each of the district standards who review selected district documents and ESE data and reports for two days before conducting a four-day district visit that includes visits to various district schools. The team holds interviews and focus groups with such stakeholders as school committee members, teachers' union representatives, administrators, teachers, parents, and students. Team members also observe classes. The team then meets for two days to develop findings and recommendations before submitting the draft of their district review report to ESE.

¹ In other words, as Level 3 is defined, districts with one or more schools that score in the lowest 20 percent statewide of schools serving common grade levels pursuant to 603 CMR 2.05(2)(a).

Greater Lowell Regional Vocational Technical School District

The site visit to the Greater Lowell Regional Vocational Technical School District, usually called the Greater Lowell Technical High School or “Greater Lowell,” was conducted from January 9–12, 2012. The site visit included 34 hours of interviews and focus groups with over 79 stakeholders ranging from school committee members to district administrators and school staff to teachers’ association representatives. The review team conducted focus groups with approximately 40 high school teachers and 6 parents. The team also visited 42 academic classes and 35 technical classes or shops at the school for a total of 77 observed classrooms. Further information about the review and the site visit schedule can be found in Appendix B; information about the members of the review team can be found in Appendix A. Appendix C contains student performance information from 2009–2011. Appendix D contains finding and recommendation statements.

Note that any progress that has taken place since the time of the review is not reflected in this benchmarking report. Findings represent the conditions in place at the time of the site visit, and recommendations represent the team’s suggestions to address the issues identified at that time.

District Profile²

The Greater Lowell Regional Vocational Technical School District is among the largest of the state’s regional vocational technical school districts. The district was chartered in 1967 and since the early 1970s has occupied a sprawling, multi-storied building in Tyngsborough, a few hundred yards from the Merrimack River and about five miles from the center of Lowell. Its member communities include the city of Lowell, a “Gateway City” that attracts recent arrivals to the country, and the three smaller neighboring communities of Dracut, a suburban industrial center on the periphery of Lowell, Dunstable, a rural farming community, and Tyngsborough, a small residential community. In 2010–2011, the district enrolled 2056 students in grades 9–12, a 6.5 percent increase over the 1,920 students enrolled in the 2007 school year. The city of Lowell sent 1,521 students, 74 percent of the student population. Dracut enrolled 433 students; Dunstable sent 10 students, and Tyngsborough enrolled 135 students. In addition, two school-choice students from Chelmsford and one from Lawrence attended.

Greater Lowell’s mission aims to “ensure students’ readiness for career, college, and citizenship in the 21st century.” Parents in a focus group told review team members that each of the member communities shares the commitment to provide the option for young people to pursue secondary education in a setting other than the local or regional high school—one that helps students develop technical and vocational as well as academic skills.

² Data derived from ESE’s website, ESE’s Education Data Warehouse, or other ESE sources. Other profile information derived from the school’s website and community profiles from the Massachusetts Department of Housing and Community Development, 2012.

Tables 1a and 1b illustrate the racial and ethnic composition of the student population in 2010-2011 and 2011-2012. Greater Lowell has larger percentages of Asian and Hispanic/Latino students and smaller percentages of African-American/black and white students than the percentages statewide.

**Table 1a: Greater Lowell Regional Vocational Technical School District
Student Enrollment by Race/Ethnicity & Selected Populations
2010–2011**

Selected Populations	Number	Percent of Total	Percent of State	Enrollment by Race/Ethnicity	Number	Percent of Total	Percent of State
Total enrollment	2,056	100.0	--	African-American/Black	66	3.2	8.2
First Language not English	299	14.5	16.3	Asian	318	15.5	5.5
Limited English Proficient*	87	4.2	7.1	Hispanic/Latino	488	23.7	15.4
Special Education**	469	22.8	17.0	White	1,129	54.9	68.0
Low-income	1,145	55.7	34.2	Native American	3	0.1	0.2
Free Lunch	850	41.3	29.1	Native Hawaiian/ Pacific Islander	1	0.0	0.1
Reduced-price lunch	295	14.3	5.1	Multi-Race, Non-Hispanic	51	2.5	2.4
*Limited English proficient students are referred to in this report as “English language learners.” **Special education number and percentage (only) are calculated including students in out-of-district placements. Sources: School/District Profiles on ESE website and other ESE data							

In 2011–2012 the largest subgroup in the district was the 58.7 percent of students from low-income homes, higher than the percentage statewide of 35.2 percent. And 23.1 percent of students were students with disabilities, also higher than the percentage statewide of 17.0 percent. Students from homes where English is not the first language (FLNE) made up 13.1 percent of the student population, and 6.1 percent were identified as limited English proficient (LEP) and participated in the district’s English Language Learner (ELL) program, which is called English Language Education or ELE.

**Table 1b: Greater Lowell Regional Vocational Technical School District
Student Enrollment by Race/Ethnicity & Selected Populations
2011–2012**

Selected Populations	Number	Percent of Total	Percent of State	Enrollment by Race/Ethnicity	Number	Percent of Total	Percent of State
Total enrollment	2,116	100.0	--	African-American/Black	84	4.0	8.3
First Language not English	278	13.1	16.7	Asian	320	15.1	5.7
Limited English Proficient*	130	6.1	7.3	Hispanic/Latino	517	24.4	16.1
Special Education**	489	23.1	17.0	White	1,139	53.8	67.0
Low-income	1,243	58.7	35.2	Native American	6	0.3	0.2
Free Lunch	976	46.1	30.4	Native Hawaiian/Pacific Islander	1	0.0	0.1
Reduced-price lunch	267	12.6	4.8	Multi-Race, Non-Hispanic	49	2.3	2.5
*Limited English proficient students are referred to in this report as “English language learners.” **Special education number and percentage (only) are calculated including students in out-of-district placements. Sources: School/District Profiles on ESE website and other ESE data							

Greater Lowell’s program of studies is organized for students to alternate study of academic and technical programs every other week, with some adjustments that ensure stronger academic preparation in the early years. For instance, grade 9 students attend ELA, mathematics, and science classes daily and grade 9 Title I students have daily reading classes. In grade 10, students attend mathematics classes daily and study ELA, science, social studies, and Title I reading every other week. Grade 11 and 12 students follow the pattern of alternating between academic and technical programs every other week.

The district offers 25 technical program options with enrollments of 17 to 115 students. First-year students follow an exploratory program for the first three quarters of the school year, sampling each technical area for three weeks before declaring a specialty area to begin studying in the fourth quarter. A number of technical programs offer multiple options for students to pursue as shown in Table 2 below. For example, in the automotive program students can learn automotive technology and automotive collision repair and refinishing. The district’s largest single program option is the graphic communications program with 115 students.

**Table 2: Program Enrollment
Greater Lowell Regional Vocational Technical High School, 2010–2011**

Program*	Number of Program Options	Enrollment in All Options
Exploratory for entering students		548
Construction-related	7	422
Medical assisting/health	2	174
Automotive/diesel	3	153
Graphic communications	1	115
Machine tools/metal fabrication	2	112
Programming/electronics	2	81
Other programs	8	451
Source: Data derived from SIMS and compiled by ESE's data collection unit. .		

Greater Lowell was chartered as a regional vocational-technical school district under Chapter 74, the state's general law that defines vocational-technical school programs and funding mechanisms. The funds for vocational-technical school budgets are appropriated from member communities with approval from votes in town or city council meetings. Table 3 shows the fiscal year 2011 assessments and student enrollments from member communities in the Greater Lowell Regional Vocational Technical School District.

**Table 3: Assessments Received from Member Towns
Greater Lowell Regional Vocational Technical School District and
Enrollments for Fiscal Year 2011**

Community	Assessment	Enrollment
Dracut	\$2,901,459	433
Dunstable	\$168,590	10
Lowell	\$5,608,401	1521
Tyngsborough	\$1,034,903	135
Source: 2011 End of Year Report; Oct. 1, 2010 SIMS		

Table 4 offers a more detailed financial profile of the district from fiscal year 2010 (actual) to fiscal year 2012 (estimated). In each of the years cited, the district has just met required net school spending (NSS) levels. District leaders and instructors believed that they had adequate resources to meet almost all programmatic needs.

The district spent \$17,542 per in-district pupil in fiscal year 2010 while in-district per-pupil expenditures in three comparison districts ranged from \$17,415 at Greater New Bedford to \$18,892 at Northeast Metropolitan.³ The district's expenditures were slightly above the \$17,478 median for the 12 vocational/technical/agricultural districts with more than 1,000 students. However, among the comparison group of four districts, Greater Lowell was the lowest spender per in-district pupil in the categories of teachers and instructional materials, equipment and technology, and the second lowest spender in the categories of other teaching services and operations/maintenance. Greater Lowell was the highest spender in the group only in the category of guidance, counseling and testing, which was 4.8 percent of in-district expenditures. The district staffs more heavily in instructional support positions for students with disabilities (e.g., adjustment counselors) than the other districts.

**Table 4: Greater Lowell Regional Vocational Technical School District
Expenditures, Chapter 70 State Aid, and Net School Spending
Fiscal Years 2010–2012**

	FY10		FY11		FY12
	Estimated	Actual	Estimated	Actual	Estimated
Expenditures					
From school committee budget	31,835,211	31,228,965	32,272,032	31,833,887	34,181,899
From revolving funds and grants	---	5,524,575	---	5,371,780	---
Total expenditures	---	36,753,540	---	37,205,667	---
Chapter 70 aid to education program					
Chapter 70 state aid*	---	20,611,676	---	20,785,128	21,736,787
Required local contribution	---	8,466,385	---	9,232,155	9,860,549
Required net school spending**	---	29,078,061	---	30,017,283	31,597,336
Actual net school spending	---	29,634,792	---	30,241,825	32,023,326
Over/under required (\$)	---	556,731	---	224,542	425,990
Over/under required (%)	---	+1.9%	---	+0.7%	+1.3%
*Chapter 70 state aid funds are deposited in the local general fund and spent as local appropriations. **Required net school spending is the total of Chapter 70 aid and required local contribution. Net school spending includes only expenditures from local appropriations, not revolving funds and grants. It includes expenditures for most administration, instruction, operations, and out-of-district tuitions. It does not include transportation, school lunches, debt, or capital. Sources: FY11 and FY10 District End-of-Year Reports; Chapter 70 Program information on ESE website					

In January 2012, the time of the review, the district was in the second year of change in its most senior leadership positions. The superintendent and assistant superintendent/principal had been

³ The third comparison district was Southeastern Regional Vocational Technical School.

in their positions for 1.5 years, although each had served in the district in various teaching and leadership capacities for over 30 years. Based on introductions at the opening session of the site visit, most district and school leaders had followed similar career paths, starting as teachers in the district, and then working their way up to appointments as the cluster chairs, directors, and coordinators who make up the current 21.5 FTE leadership team. When leaders and instructors described the character of the staff and culture of the school during interviews, it was clear that many were loyal to their colleagues and dedicated to the district. Almost all had spent the larger part of their careers there. School committee members also—often as alumni or the parents or grandparents of graduates of the school—articulated an abiding affection and commitment to Greater Lowell Technical High School.

For the past several years, the district had undertaken an ambitious improvement agenda derived from ideas developed at professional development programs with the Change Leadership Group at Harvard's Graduate School of Education. Nearly 50 district leaders and instructors had attended those sessions over time. At the core of agenda were goals to transform the learning and teaching environment to one that was more student-centered, more rigorous and relevant and emphasized 21st century skills. These were defined as skills and competencies for work and life in the new century: collaboration and team work, problem solving, strong communication skills, self-motivation, and the ability to think critically and analytically, among others. In addition, leaders embraced a collaborative decision-making model.

Additional professional development was intended to support the district's improvement efforts. Among the professional development offerings was a course on the practices developed in *The Skillful Teacher* (Saphier and Gower, eds., 1997); all new teachers must take this course within the first five years of service in the district. The course was also recommended for veteran teachers, and interviewees noted that about 100 of the district's almost 200 instructors had participated in the course. Leaders took part in sessions to understand and apply strategies incorporated in *The Skillful Leader* (Platt, Tripp, Ogden, Fraser, eds., 1999). Over several years, Teachers 21 has worked with staff members who co-teach inclusion classes in ELA and mathematics. Lesley University has worked with the Title I reading teachers and with five other staff to become literacy coaches. Thirty others from the teaching staff have been learning to be facilitators to support the school's literacy effort. Other professional development addressed how to differentiate instruction.

As will be explained in the findings below, the agenda for improvement has redefined the district's ethos for many, but not all stakeholders. As the review team interviewed district and school leaders and instructors and observed classes in both academic and technical programs, it appeared that the perceptions of what was needed to realize improvement goals and the fulfillment of those goals were still a distance apart. Several systems and practices were either not yet firmly understood or not yet well defined or consistently implemented; others needed intervention or repair to ensure success in meeting the diverse needs of all students. The improvement goals are worthy of the considerable effort already expended and the efforts needed in the future to ensure a successful academic and technical experience for all students at Greater Lowell. Progress has been made, to be sure, but there is still much work to be done.

Findings

Student Performance⁴

The percentage of students in Greater Lowell who were proficient or advanced in ELA was higher in 2011 than in 2009 although the district had a substantial drop in performance in 2010; gains were likely due to the district’s focus on inclusion, literacy and extra help.

ESE redefined Greater Lowell from a Level 3 district to a Level 1 district for 2011 because of improvement according to No Child Left Behind (NCLB) criteria, and because student performance was no longer in the lowest 20 percent of districts. Yet, classification as a Level 1 district does not imply that student performance as measured by MCAS results reaches the highest levels. The percentage of Greater Lowell’s grade 10 students who were proficient or advanced in ELA in 2011 (68 percent) was the second lowest among a comparison group of peer vocational-technical districts (see Table C5 in Appendix C), and Greater Lowell’s 2011 proficiency rate in ELA was 16 percentage points below the grade 10 ELA proficiency rate statewide (see Table C1 in Appendix C).

The review team was interested in better understanding the precipitous drop in the district’s grade 10 proficiency rate on ELA MCAS tests from 2009 to 2010 and its subsequent recovery in 2011 (see Table C1 in Appendix C). Specifically, the grade 10 ELA proficiency rate decreased 14 percentage points from 65 percent in 2009 to 51 percent in 2010 and then increased by 17 percentage points to 68 percent in 2011. As expected, grade 10 CPIs also increased slightly from 87.3 in 2009 to 89.0 in 2011, after dropping to 81.7 in 2010. Median student growth percentiles (SGPs)⁵ for grade 10 remained steady at 44 in both 2009 and 2011, after dropping to 38 in 2010. During this same time period, the results for grade 10 students with disabilities demonstrated a different performance pattern than students overall (data not in a table). From 2009 to 2011, the share of students with disabilities in grade 10 who were proficient or advanced increased from 22 percent (in 2009) to 28 percent (in 2011) with a drop of only one percentage point to 21 percent in 2010, the year that the proficiency rates in the district as a whole dropped 14 percentage points from 2009. (Statewide grade 10 proficiency rates for students with disabilities were 38 percent in 2010 and 49 percent in 2011.)

When interviewed, district and school leaders as well as instructors pointed to the implementation of the new inclusion program with its co-teaching model in the 2009–2010 school year as a reason for both the decline in overall student performance in 2009–2010 and its recovery in 2010–2011. Interviewees’ explanation was that in 2009–2010, the first year of

⁴ Please see Appendix C for student performance tables.

⁵ “Student growth percentiles” are a measure of student progress that compares changes in a student’s MCAS scores to changes in MCAS scores of other students with similar performance profiles. The most appropriate measure for reporting growth for a group (e.g., subgroup, school, district) is the median student growth percentile (the middle score if one ranks the individual student growth percentiles from highest to lowest). For more information about the Growth Model, see “MCAS Student Growth Percentiles: Interpretive Guide” and other resources available at <http://www.doe.mass.edu/mcas/growth/>.

inclusion, co-teachers were still gaining expertise in new instructional strategies. In addition, interviewees stated that in reviewing MCAS results and academic records of recently entering students they noted that these students had lower achievement levels. These factors may have contributed to substantially lower performance in 2010 MCAS results. By 2010–2011, the review team was told, co-teaching was much stronger and both students and instructors were more attuned to the inclusion model. Interviewees described other contributing factors to explain the gains in student performance. For example, the district had heightened its commitment to literacy and a more rigorous curriculum. Students with Individualized Education Programs (IEPs) not only had the benefit of a more rigorous ELA curriculum in mainstream classrooms, but they also had reading support in a reading class. Reading teachers also worked with Title I and English language learners (ELLs). The school also provided several options for extra help after school. (The strengths and challenges of these programs and others are described in more detail in the Curriculum and Instruction findings and in the Student Support findings below.)

Mostly, subgroups of students in Greater Lowell lagged behind their peers statewide in ELA in 2011 (see Table C3 in Appendix C). Compared with their peers statewide, two subgroups in Greater Lowell did demonstrate higher proficiency rates in ELA: Hispanic/Latino students had a 68 percent proficiency rate compared with 64 percent statewide, and ELLs had a 45 percent proficiency rate compared with 28 percent statewide. In addition, both ELLs and students with disabilities demonstrated stronger growth in ELA than their peers statewide (ELLs: SGP of 64.0 versus 48.0; students with disabilities: 50.0 versus 42.0).

There was evidence that newly developed and implemented inclusion strategies and other programs and supports have made a positive impact on student performance and growth in ELA for students with disabilities. For ELLs and Hispanic/Latino students, there was evidence of stronger proficiency than statewide peers. The continued strengthening of inclusion strategies and other supports for all students in general and students in particular subgroups can help improve achievement across all subgroups.

From 2009 to 2011, Greater Lowell’s overall mathematics MCAS proficiency rate showed no improvement and lagged substantially behind those of the state and most vocational-technical schools in a comparison group. The math proficiency rate for students with disabilities, however, improved in 2011 by 5 percentage points over 2009 and 9 percentage points over 2010.

Although the proportion of grade 10 students who scored proficient or advanced in mathematics MCAS results increased over the years from 2007 to 2011 from 43 percent in 2007 to 59 percent in 2011, the gain was all from 2007 to 2009 (data not in a table). Five percentage points were lost in 2010 (a less steep decline than in ELA) and four regained in 2011 (a much smaller rise than for ELA that year) (see Table C2 in Appendix C). In 2011, the district’s overall proficiency rate in math lagged the state rate of 77 percent by 18 percentage points and was the ninth lowest when compared with ten similar vocational-technical districts (see Table C5 in Appendix C). Although Greater Lowell’s students showed moderate growth in 2011 (median SGP of 50), when

compared with those in the ten comparison districts, Greater Lowell's student growth was among the lowest.

In 2007 22 percent of Greater Lowell students with disabilities were proficient or advanced in mathematics; the proportion dropped to 17 percent in 2008, increasing to 27 percent in 2009 and 32 percent in 2011 after a downturn of four percentage points, to 23 percent, in 2010. In 2011, the median SGP in mathematics for students with disabilities was 60, verging on the high end of growth, which contrasted with the growth of other subgroups that ranged from a low of 36 for ELLs to a high of 53 for students from low-income families. The median SGP in math for student with disabilities had been 62.5 in 2009 and 44.5 in 2010.

There is evidence for the view expressed to the review team in interviews that the inclusion model has had a positive influence on the math performance as well as the ELA performance of students with disabilities. It was a good decision for the district to move to an inclusion model and use co-teaching as a strategy to enhance its potential for success. However, as was described earlier and will be elaborated below, until all students in the district can experience instruction tailored to their strengths and weaknesses, substantial progress across the board will be hard to achieve.

Leadership and Governance

The leadership team had set in motion a number of initiatives aimed at increasing achievement for all students, which, for the most part, were not widely understood or broadly implemented across the district.

When the current superintendent was principal she developed a School Improvement Plan (SIP). The school council and the current principal have updated and reviewed the plan. The school council meets monthly and members include the principal and several administrators, instructors, parents, and community members. The SIP includes a mission statement, philosophy, and six goals relating to student achievement, skill acquisition for all students, increased literacy, professional development opportunities, increase in parental involvement, and the fostering of school culture and climate. All goals include improvement strategies, timelines, evaluation tools, people responsible, and the degree of attainment. The SIP is presented to the school committee annually; the SIP current at the time of the review was approved by the school committee in June 2011. The evaluation of the principal is tied directly to the SIP; the principal had a completed evaluation on file.

Interviewees stated that because of the district's Level 3 status in 2010 (see first Student Performance finding), leaders had been able to work closely with ESE's Northeast District and School Assistance Center (DSAC). As a result, the leadership team became focused on a number of important areas with support from the DSAC. These include better analysis of data, implementation of a full-inclusion model, after-school programs for homework and additional classroom support, and a summer program for entering grade 9 students—who were described as often being the lowest achieving students from the sending junior high and middle schools.

Interviewees stated that data is analyzed and the information derived from the analysis is used to make curriculum and policy adjustments. Examples given were revising the student attendance policy several years ago and adjusting the science curriculum sequence by changing the time to teach biology from two years to one. Also, the fashion design program was dropped because of low enrollment and a new engineering technology program was planned. This year, the district has also implemented data teams to assist staff to understand and use data when preparing and revising lessons and considering policy.

During the two years before the review the district implemented an inclusion model for mathematics and English language arts (ELA) spearheaded by the superintendent, who had been the special education director before her promotions to principal and superintendent. Interviewees stated that this initiative had resulted in academic growth for all students and might account for both the decrease in ELA MCAS results in 2010, the first year of inclusion when co-teaching strategies were less sure, and the subsequent increase in 2011, the second year of inclusion when co-teachers had more training and were more used to collaborating. While the administrative team was very optimistic that the inclusion effort would continue to prove successful, some instructors in a focus group had reservations because a number of inclusion classes had large proportions of students with disabilities, along with students without disabilities whose achievement was low. Instructors also noted the need for smaller class sizes.

According to interviewees, offering additional academic support for students has also proven effective. For example, the school encourages students to participate in after-school programs to receive needed extra help. There are two types of after-school programs. One is an after-school homework program that struggling students must attend three out of the four days that it is offered. Teachers are compensated for working with students during these sessions. There is also a one-day after-school program in which students may report to their classroom teacher for additional help; each teacher is required to stay one day a week for 30 minutes. The superintendent hoped to increase this model from one day per week for 30 minutes to four days per week for 44 minutes as part of a new teachers' collective bargaining agreement. The district also offers a summer support program for entering grade 9 students. A review of students' records showed that all participants in the summer program (approximately 60 students) made the honor roll. Teachers in the after-school programs track student attendance daily. Using the X2 Aspen data portal that provides access to student records, the school has tracked students who participated in the after-school programs and noted their academic progress. The relatively new administrative team was in the process of developing a collaborative approach to meet the academic and support needs of all students.

In order to keep leaders focused, the leadership team meets weekly with the principal and, based on the agenda, may ask the superintendent to join the meeting. The superintendent said that in the course of mentoring the principal her attendance at these meetings had become more frequent during the past year. All members of the team have the opportunity to put items on the agenda. Initially agenda items were informational and dealt with day-to-day issues; since April 2011 they have become focused on planning and have been guided by the book *Strategy in Action* (Curtis and City, 2009). The superintendent meets with the upper tier of the leadership team (principal

and directors) once a week in a round-table format. There is no set agenda and all members have the opportunity to share information and discuss what is happening at the school.

While all these initiatives to increase student achievement had been implemented, sometimes in bits and pieces, several obstacles hindered broad implementation across the district.

One hindering factor, according to the superintendent is reliable follow-through by all members of the team in using newly established protocols such as requiring lesson planning and conducting walkthroughs. Follow-through at the classroom level is needed to ensure a total understanding and strong implementation of these initiatives by the teaching staff. This need was obvious to the review team as well. For example, while interviewees stated that instructors worked to align their objectives to their scope and sequence documents, in observations of 77 classrooms the review team observed objectives that identified student learning outcomes in only 47 percent of classrooms and students engaging with content through a variety of instructional strategies that accommodate a variety of learning needs in only 19 percent of classrooms. Clarity of learning objectives and differentiating instruction were not commonly observed. Administrators also said that staff members had been trained to use literature circles, yet in observed classrooms there was no evidence of small group work or of literature circles.

Another hindering factor is the perceptions of some stakeholders that there is an insufficient culture of collaboration. Some interviewees expressed the view that the development of a culture of collaboration in Greater Lowell is hindered by perceptions of an “in crowd,” non-merit-based promotions, retaliation, and exclusion of some teachers from committee participation. In interviews, the superintendent stated that the current leadership team, which had several new members, could benefit from team-building activities—perhaps conducted by an outside consultant.

In the judgment of the review team, while the entire leadership team has an ambitious vision for improvement and change, not all members of the leadership team were at the same stage in terms of implementing various improvement strategies. Also, a number of instructors were not on the same improvement course as the leadership team members. Some of them did not clearly understand the leadership team’s vision or the need for change in the district, and teachers’ association leaders said that there were problems in communication, respect, involvement, and management.

Insufficient clarity of goals and insufficient follow-through meant that the district’s bold plan to improve achievement had become somewhat fragmented and in some cases not systemic. Without collaborative review by the leadership team of the district’s improvement initiatives for clarity, and consistent understanding and “buy-in” by all its members, it was apparent to the review team that it would be difficult for the district to implement these initiatives consistently.

The district did not have an updated strategic plan for long-term planning.

The district has defined multiple improvement goals for implementation—across the academic and technical program areas—that require considerable conceptual understanding and instructional knowledge and skills on the part of leaders and instructors to implement well. In

most districts/schools of this size (over 2000 students) a carefully developed strategic plan would be considered helpful in structuring and pacing the efforts and resources needed to ensure successful implementation of improvement goals of this magnitude. In interviews with the superintendent and school committee members, the review team was told that the establishment of a strategic plan was not currently being discussed. Interviewees said that a district strategic plan had been developed about ten years ago. At that time there was a formal, collaborative, strategic planning process under the direction of an outside consultant and parents and community members as well as school personnel were involved. The superintendent stated that the strategic plan was used in a limited fashion for a number of years and then its use was discontinued. She said that she had referred to this document when she wrote the first school improvement plan (SIP) during her first year as principal.

In the three interviews with school committee members, when review team members asked about the existence of a strategic plan, the answer was the same—“There is no strategic plan.” One member said that he remembered a strategic plan being established perhaps five or ten years ago but the committee as a whole had not recently discussed the development of either a long range strategic plan or a capital improvement plan. When the line of questioning was pursued in one interview, a member of the committee suggested to his fellow members that perhaps they should look into this type of plan. Although some school committee members appeared knowledgeable about their responsibilities as a policy-making board, they had not recently played an active role in strategic and long range planning (see the next finding).

Greater Lowell did not have a long-term, multifaceted strategy for the district that encompassed improvement goals for teaching and learning, curriculum, and faculty development, and infrastructure needs such as technology and the integration of new equipment and new programs into the district. Although the SIP had several goals that could be considered strategic, more often it focused on action steps, which are appropriate for a yearly improvement plan. Not having a current strategic plan impedes the administration’s efforts to oversee the process of improvement and provide the necessary learning environment and resources to improve student achievement and develop confident and prepared learners.

At the time of the review the school committee had not evaluated the current superintendent, was not engaged in long-range planning, and had not taken an active role in budget development.

The eight-member school committee, which is composed of both veteran and recently elected members, has representatives from each of the district’s four member communities. With the exception of a newly elected member, all committee members had participated in Massachusetts Association of School Committee (MASC) training sessions. While committee members do not participate in local round-table meetings, they do attend the yearly joint conference held by MASC and the Massachusetts Association of School Superintendents (MASS). Interviewees said that the chair and other veteran members mentor new members. In addition, newly elected school committee members meet with the superintendent before their first meeting to discuss their roles

and to receive MASC information, the policy manual, and a set of the Massachusetts General Laws governing school committees.

Subcommittees are established annually for finance/warrant, policy, legal contracts, negotiations, superintendent evaluation, technology, building expansion, and alternative energy. In interviews, the review team perceived the strong ties and bonds to the school of a majority of school committee members who have graduated from the school, taught at the school, have children and grandchildren who are graduates, or have family members who are school employees.

The ten-year old school committee policy manual was being revised and updated and was scheduled to be adopted in the spring of 2012. The three-member policy subcommittee had engaged the assistance of MASC to update the manual; one committee member stated that it was an “arduous process” because the policy manual had not been reviewed for over a decade.

The school committee and the superintendent cooperatively established an evaluation tool that addresses the superintendent’s working relationship with the school committee, educational leadership, general management skills, budget development and management, personnel management, communications/public relations, and personal qualities and characteristics. Each area of the evaluation tool includes goals, and each member is asked to rate the superintendent as exceeding, meeting, or failing to meet expectations for each goal. Among the goals included in the evaluation tool were an increase in MCAS scores, assessment of programs, monitoring of data, and reorganization and streamlining of the administrative staff. If a member chooses “fails to meet expectations,” a written explanation must accompany the final evaluation document. All evaluations are given to the chairperson who tallies the scores and presents a final evaluation document to the superintendent. In interviews school committee members and the superintendent acknowledged that the superintendent had not received an evaluation since her appointment for the 2011 school year. In an interview one member of the school committee said that the unsigned teachers’ bargaining agreement was the reason for the delay: the member said that because the superintendent’s evaluation includes a financial component, the school committee decided to wait to evaluate the superintendent until a new teachers’ bargaining agreement had been agreed to and signed.

When asked about their participation in the budget process, members explained that their subcommittee reviews the draft budget submitted by the superintendent and the business manager. The budget is then forwarded to the finance subcommittee and, when it has been completed, brought back to the full school committee for approval. The team did not see evidence that the school committee defines goals or sets assumptions for the budget. The school committee does receive detailed monthly financial updates for the current budget from the business manager, complete with line item totals, encumbrances, and the overall status of the budget. As previously mentioned, school committee members acknowledged that they had not addressed establishing a strategic plan or a long-range capital improvement plan in collaboration with the superintendent. The committee treats each school year separately, finding the money for emergency equipment needs if and as they arise. Members said that a 40 million dollar addition/upgrade to the school building with 80 percent reimbursement was needed. There

appeared to be some confusion among the members about the difference between long-range planning in the form of a strategic educational plan and the need to plan for the upcoming project for the school addition/upgrade.

The absence of long-range, collaborative, strategic planning by the school committee in collaboration with the superintendent has led to a planning cycle that is limited in time and in scope and prevents the district from taking a longer-range view of program, personnel, and other resource needs. Without being evaluated yearly the superintendent is not informed of the committee's appraisal of her successes or failures in meeting mutually agreed-upon goals. Without being involved in the initial planning and development of the budget by setting budget goals and assumptions, for example, the committee does not meet its fiduciary responsibilities to ensure a budget that meets the needs of all students. All these roles and responsibilities form important components of the school committee's trusteeship. Without fulfilling these roles and responsibilities fully, the committee cannot provide sure and certain guidance and leadership for the district—leadership that only the school committee can provide.

Curriculum and Instruction

Administrative leaders have established a comprehensive process to align and improve curriculum documents and to improve the rigor of the academic program.

In their efforts to function as a collaborative leadership team working toward identified, shared goals, the district's administrative leaders have continued to make important strides toward improving curriculum and instruction schoolwide. During an interview with the assistant superintendent and the directors, interviewees said "We are in the middle of a major transition." They said that the transition included goals to continue curriculum alignment to state frameworks and the Common Core standards. According to technical and vocational administrators and classroom teachers, every teacher has a curriculum binder that serves as a curriculum guide with a scope and sequence that includes the state curriculum standards and in some instances the Common Core standards. Some technical teachers also have grading policies in their binders.

In a review of several course binders in both academic and technical subjects during the site visit, the review team noted that the binders and their components were organized consistently across courses. The required elements included a scope and sequence that was developed and informed by teachers and the relevant state curriculum standards, learning objectives, activities related to the learning objectives, and methods of informal assessments to note student progress. Cluster chairs from both the academic and technical programs review the binders at the end of the school year and at conferences as a part of each instructor's formal evaluation. Cluster chairs check the scope and sequence segments quarterly. Interviewees said that academic binders are reviewed more frequently than technical binders.

According to interviewees, all instructors have the flexibility of inserting or replacing classroom activity materials in their binders; however, they cannot deviate from the state curriculum standards. Also, instructors teaching the same subject and level must collectively maintain a shared binder with agreed-upon activities. Approval to make changes to team binders must be

given by the team teaching that subject, grade, and level of the course. As noted in one interview of academic and cluster chairs, curriculum binders are “living and evolving documents that follow a basic scope and sequence.”

Administrative leaders said that they have worked toward ensuring and maintaining consistency in the contents of the course binders across classrooms and stated that their next goal was to ensure quality. When asked how quality would be determined, leaders said that “Quality will be determined based on a rubric to be created,” and that this rubric would be different from the checklist used to ensure that all binders contain specific items. Administrators and instructors described another project that involved electronic access to curriculum binders through SharePoint. Even as administrators worked on refining the process, instructors stated that all staff can access SharePoint and post or upload scope and sequence documents to the site.

According to the assistant superintendent/principal and the directors, there have been other collaborative efforts to develop the curriculum and increase academic rigor for all students. For example, a curriculum team consisting of the director of curriculum, the Title I director, the director of guidance, the director of assessment, instructors of history and English, and one instructor from a technical program, continues to work with other administrators on how to implement differentiated instruction and increase rigor on a larger scale and decide how to address the incorporation of the Common Core standards into new Massachusetts frameworks. For example, the team has revamped grade 9 and 10 ELA classes by eliminating the basic level and changing the other two levels to college preparatory and honors with the hope of elevating the rigor of course work and providing students with more academic challenge; this change was to be extended to grades 11 and 12 in 2012–2013.

Administrators said that they used Race to the Top monies to collaboratively support instructors in making necessary adjustments to these efforts. For example they said that they had paid for substitutes so that instructors could work together during school time to make decisions about the curriculum and strategies. Instructors meet by course twice a month after school. According to both instructors and cluster leaders, meeting time is used to discuss curriculum, instruction, and assessments. Furthermore, full cluster teams are required to meet once a month. According to administrators, sometimes these teams meet more often. The review team examined several of the notes and agendas that are kept for cluster-team meetings.

The Title I and special education departments have also participated in change efforts to improve how they meet the needs of diverse populations of students. In 2010 the Title I and special education departments, working with other school leaders, included students with disabilities in grade 9 classes in English and reading. This inclusion practice has continued and was expanded in 2011.

MCAS results for all grade 10 students declined in ELA and mathematics in 2010 and subsequently increased in 2011 (see Tables C1 and C2 in Appendix C). MCAS performance for grade 10 students with disabilities (data not in Tables) declined slightly in ELA from 22 percent proficient in 2009 to 21 percent proficient in 2010, increasing to 28 percent proficient in 2011. In mathematics, the proficiency rate for students with disabilities declined from 27 percent in 2009

to 23 percent proficient in 2010, but increased to 32 percent proficient in 2011. Title I and special education directors and instructors attributed the increases in 2011 to the inclusion model that was implemented in 2010. Under this model, the Title I and special education departments successfully placed special education teachers with ELA instructors to co-teach in each of the inclusion classrooms. Directors attributed the improved proficiency rates of students with disabilities to the increased instructional rigor in mainstream inclusion classrooms, which allows students to effectively access the state curriculum standards.

According to directors and cluster chairs, steps were taken to support instructors in the inclusion classes. For example, a coaching program was developed using Teachers 21. According to administrators, when teachers expressed a need for more guidance in content they responded by providing content coaches in the second year of implementing the inclusion model.

Administrators have used collaborative, supportive, and comprehensive approaches to inform curriculum and support teachers in change efforts that align, inform, and develop curriculum with the hope of increasing academic rigor across the school. Administrators continue to make progress toward establishing a comprehensive, schoolwide plan to align, deliver, and improve curriculum. In addition to the creation and development of curriculum binders, the district has eliminated some basic level classes and placed students with disabilities in inclusion classes. Based on recent improvements in MCAS performance, it appears that these efforts have contributed positively to the performance of students with disabilities.

Although there was an overall positive classroom climate reflecting order and mutual respect between staff and students, observed instruction did not yet reflect the vision or expectations described by the district’s administrative leaders with respect to high expectations, higher-order thinking skills, clearly communicated learning objectives, and differentiated instruction.

The review team observed instruction in 77 classrooms, 35 technical and 42 academic. Of the academic classrooms observed, 14 were English classes (two inclusion classes), ten were mathematics, ten were science, four were history, two were English language education (ELE), and the rest were classified as “other.” Classrooms were observed for a minimum of 20 minutes using a standard instructional inventory tool that focuses on several indicators that fall under one of the following categories of effective instruction and learning: classroom climate, learning objectives, use of class time, content learning, instructional techniques, activation of higher order thinking, instructional pacing, student thinking, student groups and use of student assessments. Observers rated these characteristics as observed or not observed.

Organization and High Expectations for Learning

Overall, organization was evident in both the academic and technical classrooms observed by the review team. In the majority of the 42 academic classrooms observed, 81 percent, students demonstrated clear communication of behavior expectations, class rules, and procedures; in 93 percent of observed academic classrooms, students behaved according to rules and expectations. And in 95 percent of the observed academic classrooms, students and teachers demonstrated positive and respectful relationships. In 60 percent of observed academic classrooms teachers

appeared to set high expectations for learning and to convey those expectations to students. As an example of low expectations, in a grade 10 college preparatory English class, students warmed up using a grammar exercise requiring them to copy each of four given sentences and then make each of the boldfaced nouns plural. Two of the four sentences read, “*I went to the zoo with my **brother** and sister*” and “*We saw the **fox** in the forest habitat.*” Neither the reading comprehension difficulty of these sentences nor the complexity of the exercise was at a high school level.

Organization was frequently observed in technical classrooms as well. Of the 35 technical classrooms observed, 89 percent demonstrated clear communication of behavior expectations, class rules, and procedures and students behaved according to rules and expectations. In several of the technical classrooms, safety rules and procedures such as the requirement to wear safety glasses were posted. Review team members heard instructors referring to these rules and observed students displaying appropriate behaviors. Other indicators of organization of the classroom, students and instructors demonstrating positive and respectful relationships, were evident in 100 percent of observed technical classrooms. Technical classrooms had less evidence of teachers setting high expectations for learning and conveying high expectations to students. These indicators were evident in 53 percent of the technical classrooms observed.

Learning Objectives

According to both instructors and administrators, every instructor has a curriculum binder with a scope and sequence that includes written objectives. Instructors work to align their objectives to state standards and in some cases the Common Core Standards. Synchronized with these efforts, 55 percent of observed academic classrooms had clearly communicated learning objectives yet, only 40 percent of observed classrooms had objectives that identified student learning outcomes. On several occasions, members of the review team noted teachers communicating agendas and lists of activities versus learning objectives and learning outcomes. During one observation a teacher was heard saying that students were going to work on a specific topic. However, the observer noted that the teacher spent the entire observation time discussing another topic without referring to the topic said to be the focus for that lesson.

Communication of learning objectives was observed in 66 percent of the technical classrooms. Possibly due in part to the standards and competency requirements for technical programs, communication of learning objectives was more evident in the technical classrooms than in the academic classrooms. During one observation a technical instructor said that she used the curriculum, standards, and objectives to inform students’ work orders.

Content Learning and Differentiated and Tiered Instruction

In the area of content learning, while 93 percent of observed academic classrooms had content that appeared appropriate for the grade level and while 83 percent of observed classrooms had teachers communicating academic content with clarity and accuracy, only 7 percent of these classrooms had students participating in different or tiered activities based on academic readiness. Nineteen percent of observed classrooms had students engaging with content through a variety of instructional strategies that accommodate a variety of learning needs (i.e. auditory,

visual, and kinesthetic). In cases in which students were observed receiving additional assistance from the instructor, there was no evident scaffolding or use of resources or strategies that appeared to be different from those used with the whole class. In 29 percent of observed academic classrooms students were seen engaging with a variety of curriculum resources or technology that enhanced their learning. While administrators and instructors said that instructors had participated in workshops and training sessions on how to use literature circles, no literature circles or small-group work were evident.

In less than half (43 percent) of the observed technical classrooms were students engaged with the content through a variety of instructional strategies that accommodated different learning styles and needs. Possibly due in part to the hands-on and project-based nature of most technical classrooms, engagement with content was still higher in the technical classrooms than in the academic classrooms (43 percent versus 19 percent). At the same time, in 83 percent of the academic classrooms compared to 49 percent of technical classrooms teachers communicated content with clarity and accuracy. This difference may be attributed to the lecture style that is used in many observed academic classrooms. In 37 percent of observed technical classrooms, students participated in differentiated and tiered activities. This percentage is in contrast to the seven percent of academic classrooms with evidence of tiered and differentiated instruction.

Instructional Techniques (Whole Class and Grouping)

The overall instructional technique used in the academic classrooms was direct, whole-group instruction (lecture, Q and A, and modeling). This technique was evident in 71 percent of the observed classrooms. Guided practice with students and teacher practicing together was observed in 40 percent of academic classrooms, i.e., in less than half of the total number of observed academic classrooms. Fewer, 29 percent, were observed engaging in small group and paired learning. At 62 percent, the second most observed instructional technique in the academic classrooms was independent practice (students having full responsibility for a task). In many instances students were observed sitting at desks and listening to the teacher or working on an assignment (often a worksheet) independently while the teacher walked around, pausing to assist a student who appeared to have difficulty. Only 24 percent of observed academic classrooms had students inquiring, exploring, or solving problems together in small groups or pairs. In only nine percent of observed classrooms were students held accountable for their contribution to group work when grouping of students was apparent.

In contrast, the observed technical classrooms appeared to rate higher in the area of guided practice and small group or paired learning. In 71 percent of observed technical classrooms, as opposed to 40 percent of academic classrooms, there was evidence of guided practice. Also, small group and paired learning was observed in 66 percent of technical classrooms as opposed to 29 percent of academic classrooms. In spite of these differences, the dominant form of instruction observed in both technical and academic classrooms was direct, whole-group instruction.

Activation of Higher-Order Thinking

Finally, while administrators and teachers said that rigor has improved over the last few years, in most observed academic classrooms there was an absence of rigor in relation to higher-order thinking. In 57 percent of observed academic classrooms, students were observed examining, analyzing, or interpreting information. When students were asked questions, they were often required by the phrasing of the questions to recall facts or to respond with one-word answers, a “yes” or a “no.” Questions heard throughout observations included: “Was the goal accomplished?”, “Did we land on the moon?”, “What policies did he try to pass?”, “What do we remember about...?”, “What is different?”, “What does it mean if two variables are ...?”, “What else does moisture do to the air?”, and “What are alumni?” Of the 42 classrooms observed, in more than a quarter, 26 percent, students were required to form predictions, develop arguments, or evaluate information. Students were rarely observed asking questions (for clarification or new information) about the lesson objective.

In the technical classrooms percentages for the activation of higher-order thinking skills were even lower across the board. In 40 percent of observed technical classrooms, students were observed examining, analyzing, and interpreting information and in 43 percent, generating questions (clarifying or new) about the objective. In even fewer technical classrooms, one percent, were students observed forming predictions, developing arguments, or evaluating information. Similarly, in two percent of technical classrooms were students observed evaluating or reflecting on their own thinking, progress, and approach. With the ongoing development of curriculum binders that contain teacher-prepared scope and sequence guides that address state frameworks (and in some cases, the Common Core standards now incorporated into the new state frameworks) and aligned learning objectives, administrators and teaching staff have developed curricula that reflect high expectations. However, based on classroom observations, these high expectations were not evident in instruction taking place in classrooms schoolwide. Nor did observed classroom instruction take place in ways to support individual students and groups of students with diverse learning needs.

With the absence of consistent evidence of high expectations and higher-order thinking, with a regular absence of clearly communicated learning objectives, with almost no differentiated instruction, students are clearly not experiencing the expected rigor described by administrators and teachers. Without more intense application of higher levels of instructional techniques that promote critical and analytical thinking and support students’ individual learning needs, students will continue to struggle to meet the expectations set by a more rigorous and challenging curriculum. In the judgment of the review team, until instructional practice schoolwide reflects the vision and beliefs of what should take place in classrooms, students’ learning experiences and opportunities to access and successfully handle rigor will be limited.

Assessment

Greater Lowell is developing and implementing a more balanced and data-based assessment system. At the time of the review application of the new assessment system was inconsistent and uneven across academic and technical programs.

Early on in its improvement efforts, Greater Lowell initiated changes in the design of its assessment system and in the collection and use of assessment data. In professional development sessions offered by the Department of Elementary and Secondary Education (ESE) in 2005, school leaders learned to use the Performance Improvement Mapping (PIM) model. Current school leaders credit their experiences with the PIM model as well as the findings from the 2005 EQA Report as motivation to improve the assessment system. This initially meant developing common assessments in all courses and eventually led to collecting, analyzing, and using assessment data more explicitly to inform decisions about curriculum and instruction and to better understand students' strengths and weaknesses.

Assessment in the Academic Program

Student assessment begins at entry to the school at either grade 9 or grade 10. The school requires entering students to take the Stanford 10 Achievement test and reviews students MCAS test results and academic records to help determine placement in ELA and mathematics classes. In addition, the special education team examines the academic records and the Individualized Education Programs (IEPs) of students in special education to select appropriate ELA and mathematics placements and refine students' education plans. The records of English language students (ELLs) are similarly reviewed; grade 8 MEPA scores are also evaluated to ensure proper literacy and language support. Title I staff members also review students' records to identify candidates for Title I reading support. In addition, MCAS test results and students' records and grades are reviewed to select students to participate in the four-week summer program for entering grade 9 students.

Directors and cluster chairs described goals to expand and improve assessment as part of districtwide efforts to increase rigor and relevance in curriculum and to develop students' 21st century skills such as collaboration, team work, communication skills, problem-solving, and higher-order thinking skills. Initiatives to improve assessment have evolved to require not only the use of common assessments and common quarterly exams but also formative assessments in both academic and technical courses. The district provided some in-service and professional development to administrators and instructors to help them learn to apply new assessment formats. This year in-service professional development is being provided on formative assessment. Even so, a focus group of nearly 40 instructors demonstrated little clarity about the district's assessment system overall, appeared to be unfamiliar with the language of formative or summative or benchmark assessments, and not able to describe how assessments were used to track student performance. This raised questions about the depth of the professional development and the degree to which educators engaged in professional conversations on how to adjust instruction to meet student learning needs identified by data.

Students take common chapter and unit tests and teacher-designed, common quarterly examinations for like courses in ELA, mathematics, science, and social studies. According to interviewees, before this year, ELA quarterly exams were more MCAS focused. This year ELA quarterly exams have included testing of MCAS standards-based skills and of more content-based knowledge from literature read for class. These modifications have taken place mainly in grades 9 and 10 with the gradual alignment of ELA courses to the Common Core Standards and with closer attention to grade-to-grade articulation using backward design. Mathematics and science quarterlies continue to focus on skills-based knowledge and content defined by state standards; interviewees explained this focus as the nature of how one learns mathematics. Interviewees noted that assessment practices for mathematics and science are similar to those used in ELA and that mathematics students could also give more reflective feedback to teachers about “how things are going.” Students are also assessed by other summative and formative assessments that check for understanding such as reader-writer notebooks, “ticket out the door,” pre-tests, post-tests, and vocabulary tests in ELA. Cluster leaders and instructors alike noted that the use of formative assessments, however, is still a work in progress.

Cluster chairs also said that academic instructors review assessments and assessment data in cluster meetings twice monthly after school, because there is no scheduled common planning time during the school day. Interviewees also noted that some instructors occasionally find time during the school day to continue their discussions. Cluster meetings typically cover analysis of assessment results and lead to adjusting pedagogy, fine-tuning scope and sequence documents, and creating and sharing new teaching materials.

Interviewees gave examples of various formative and summative assessments to the review team. They also explained that the goal to upgrade the rigor of the academic curriculum in ELA and mathematics and the cluster teams’ analyses of MCAS test results have led to higher expectations for literacy instruction in all subjects, both academic and technical. Consequently, the district has required more dedicated time for generative and open-response writing throughout the curriculum, including technical courses. Although writing has more prominence than in the past, interviewees noted that there are no established districtwide writing standards or rubrics to define common, high expectations and standards and to use to assess student writing across disciplines or for students to apply to assess their own writing. Interviewees confirmed that a few individual writing rubrics are used.

In observations of 42 academic classrooms during the review, the use of formative classroom assessments to evaluate students’ progress was infrequently observed. In 36 percent of observed classrooms, at least one informal assessment was used to check for understanding. In 12 percent, teachers adjusted instruction based on either on-the-spot or formal assessments. In 36 percent, students received feedback about where they were in relation to learning goals. And in 17 percent of observed academic classrooms, students revised work based on feedback. In addition, the review team observed that students only occasionally developing or reflecting on their thinking. In 26 percent of observed academic classrooms, students generated questions about lesson objectives. In 14 percent, students evaluated or reflected on their own thinking, progress, or approach. And in 26 percent, students formed predictions, developed arguments, or evaluated

information. In contrast, in 57 percent of observed classrooms, students examined, analyzed, or interpreted information.

In interviews, instructors and cluster leaders as well as school leaders described how assessment results have focused cluster meeting discussions on student performance mainly by using item analyses of test results. One ELA cluster member shared the Common Assessment Test Item Analysis and Follow-up Activity Worksheet that her team used to analyze test results and track improvement strategies. Interviewees most often described re-teaching specific concepts or skills as the strategy used to address achievement gaps identified by item analyses. Several leaders observed that initially there was some stress and resistance on the part of instructors to publicly discuss classroom assessment data, thus exposing achievement differences across classrooms. At the time of the review there was less reluctance because of the improvement in MCAS test results in 2011. ESE data shows that over the period from 2007 to 2011, the ELA proficiency rate had increased 23 percentage points—from 45 percent proficient in 2007 to 68 percent proficient in 2011, after a drop to 51 percent in 2010. In mathematics, the proficiency rate had increased 16 percentage points from 2007 to 2011, from 43 percent proficient in 2007 to 59 percent proficient in 2011. One leader said that in mathematics “60 percent of students had moved up [in MCAS results], more than 200 students were now in acceleration courses, the school had the largest population of students ever enrolled in Algebra II, and many students had moved to college-level mathematics.”

Assessment in the Technical Programs

Cluster chairs and instructors in the technical programs described how grade 9 students follow an Exploratory Program during their first three quarters at school, spending three weeks learning about each technical area. In the fourth quarter they choose and begin to study a specialty area. According to interviewees, there are no formal summative assessments given during the exploratory period, although student work is evaluated.

Once students begin studying their specialty areas, they follow a performance-based curriculum that consists of a prescribed sequence of activities. Students take quarterly exams and competency tests that certify proficiency in specific technical skills and knowledge. In addition, instructors assess employability skills such as being on task and on time, completing daily logs, and wearing a uniform. Competency tests emanate from national or international associations. For instance, the school offers certification from The National Automotive Technicians Education Foundation (NATEF) through its Automotive Service Exams (ASE); in the automotive shop, students can attain eight competency certifications.

Along with the increased rigor and emphasis on literacy and writing in the academic program, interviewees noted the requirement to include more literacy and writing skills in technical courses. Administrators stated that they wanted students to better understand the relevance of academic skills such as reading and algebra in technical assignments. To emphasize literacy skills, for example, every Monday automotive students bring to class an article about automobiles or the auto industry to explain and discuss. Review team members noted that the assessment and review process varied from shop to shop, but followed a basic pattern. For

example, in the automotive shop, students are assessed throughout grade 10 on their understanding of various performance tasks or competencies but cannot do live work until the instructor considers them prepared. Automotive students in grades 11 and 12 are graded daily on self-assessment job sheets or logs and the instructor's daily assessment. Daily assessments also inform weekly grades that include an employability rating. One instructor described the calibration of daily assessments as 25 percent production time, 25 percent work ethic, 25 percent quality (defined as "a good job"), and 25 percent knowledge of safety issues. Other instructors noted that their programs followed a similar pattern, usually with the first major assessment given in grade 11.

A carpentry instructor explained that performance-based assessments are done with students often working in teams. Instructors evaluate how well students completed final carpentry projects and how much help they needed while on task. However, in carpentry, students also have mandatory reading and writing assignments that contain relevant technical information and they must complete the required mathematics for each competency. Clear criteria for success that are determined by project rubrics, written tests, and quizzes offer carpentry students the formats to demonstrate their level of competency. The quarterly examination in carpentry requires students to integrate knowledge and skills through a completed project.

In the print shop, grade 12 students can become shop managers and help grade 11 students to develop their leadership skills and show organizational and communication skills. Students are assessed on their promptness, on the number of completed print jobs, and on job quality. Student shop managers and printers also keep daily journals that instructors evaluate. In an observed visual design class, students were designing medieval-themed programs and other projects for a superintendent's dinner event and described how they were evaluated by a rubric that contained mostly employability skills.

For the most part, using formative classroom assessments to evaluate students' progress or promote thinking skills in class was more frequently observed in technical classrooms than in academic classrooms, although neither demonstrated strong use of formative assessments. At least one informal assessment was used to check for understanding in 43 percent of the 35 technical classrooms observed by the review team, and in 36 percent of the 42 academic classrooms. Teachers adjusted instruction based on on-the-spot or formal assessment in 20 percent of technical classrooms, and in 12 percent of the academic classrooms. Students received feedback that told where they were in relation to learning goals in 37 percent of technical classrooms and in 36 percent of academic classrooms. Students revised work based on teacher feedback in 34 percent of technical classrooms and in 17 percent of academic classes.

Student assessments have clearly become more balanced at Greater Lowell with the introduction of common quarterly exams, chapter and unit tests, and the attempt to integrate more formative assessments into classroom instruction. The school also relies more on assessment data to track and understand student progress and achievement and to guide teachers' decisions about what to teach and how to teach. However, instructors' use of formative assessments in both the academic and technical programs is still developing. Given the review teams' observations of classrooms,

students are not yet provided with frequent opportunities to either reflect upon their learning or to examine their progress through self- or peer assessment. Teachers are not yet fluent in using formative assessment to assess student comprehension or skill level and then adjust their teaching. In addition, the review team questions whether or not cluster teams have enough time to meet to discuss and accomplish all their goals: review and revision of scope and sequence documents based on assessment data, alignment of curriculum to Common Core Standards as noted above, and development of new assessments and lesson/teaching materials, to name just a few. Meeting twice a month after school does not seem ample time to accomplish the ambitious goals that the district has set for curriculum, instruction, and assessment. Until academic and technical instructors have deeper knowledge of assessment and the capacity to use multiple forms of assessment more frequently and more fluently in their work, it will be difficult for the assessment system to function at the level envisioned by the district.

Greater Lowell increasingly relies on the collection, analysis, and use of data to inform decision making, but there were missed opportunities in the district's identification, collection, and use of data both in improving instruction and in planning, budget development, and policy.

As a component of its improvement efforts, the review team found that the district has aimed for a more comprehensive use of assessment data and other data to inform and guide its decision making for instruction, curriculum, planning, budgeting, and policy development. It has established several systems to ensure better collection, analyses, and use of data, but more work needs to be done.

New Data Teams

From the first use of the Performance Improvement Mapping (PIM) model in 2005 to the close of the 2010–2011 school year, the collection, analysis, and dissemination of data was mainly a top-down process that emanated from a core data team that comprised the leadership team. During 2010–2011, the school's new leadership team enlisted support from ESE's District and School Assistance Center (DSAC) to help redesign how data was analyzed and used. As a result, in the 2011–2012 school year, the number of data teams was expanded from one to six, each with responsibility for a specific segment of school data. By design, the new data teams operate both "top down" and "bottom up." At the time of the review the district had just begun to ramp up the work of its new data teams and had staffed them with both leaders and instructors whose main responsibilities are linked to understanding and using each team's specific data sets to inform decision making and planning.

Most teams consist of appropriate administrators and instructors from across the district and include the:

- administrative (core) data team;
- discipline/attendance data team (attendance team existed before);
- MCAS data team;

- academic achievement data team;
- technical achievement data team; and
- placement data team.

Although it is too early to determine the effectiveness of the new structure, it has the potential to engage leaders and instructors more collaboratively across the district in tracking trends that have an impact on students' success in both the academic and the technical areas and in their behavior and attitudes at school.

Collection, Analysis, and Use of Student Assessment Data

The school has an Assessment Center managed by a director of assessment services. The Center oversees and monitors testing and collects, analyzes, and disseminates assessment data to leaders, to clusters, to instructors, and to data teams. The Center is also responsible for managing the X2 Aspen data portal with its multiple forms of student data such as assessment results, attendance, discipline, Individualized Education Programs (IEPs), student grades, report cards, and student progress reports. The Center ensures that student data is posted to the data portal and teaches instructors how to use the data portal. It also oversees password access to the data portal for students and parents. The director of assessment services noted that 65 percent of families have logged on to the X2 Aspen data portal and can receive multiple forms of information from the school about their student(s). He estimated that between 45 to 50 percent of families actively use the portal, although many families do not have a home computer. Leaders and instructors said that when they are considering how to better support struggling and at-risk students they often go to the data portal to gather more detailed information. The Center also can send reports about struggling and at-risk students to teachers.

The Assessment Center also provides an item-by-item plot analysis of MCAS data and other test data with supporting tables and then disseminates the analysis to relevant groups. For MCAS data, the Center also provides year-to-year comparisons to illustrate differences in achievement gaps for specific strands. Members of the leadership team discuss MCAS analyses as well as other inter-class assessment results such as quarterly exams at leadership meetings and sometimes present and discuss data analyses at schoolwide meetings. Cluster leaders and instructors in regular education, special education, Title I, and English language education (ELE) primarily discuss MCAS results and other assessment data at twice-a-month, after-school cluster meetings, especially on the academic side. Cluster teams use test results to probe deeper into pedagogy and discuss how to re-teach to support struggling and at-risk students. Cluster teams also use data analysis to help develop or revise common assessments, modify scope and sequence documents, and fine-tune lessons, as noted earlier.

In interviews, leaders and instructors credited their discussions of assessment results with the district's capacity to be more proactive rather than reactive in responding to gaps in achievement. They gave multiple examples of how data analyses, particularly of MCAS results, have been at the root of their - initiatives to raise student achievement. For example, interviewees indicated that the current emphasis on rigor and on expanding literacy throughout school programs and on

coaching and co-teaching emanated from analyses of MCAS open-response questions and other assessment results. Also, the new X2 Aspen data portal has given instructors access to student data that might have eluded them before. The X2 data portal also enables staff to track current student work and progress, especially when students use interventions that require a computer. For example, using the X2 data portal, instructors can monitor students' use of Math Skills Tutor and choice of tutoring activities as well as the results of pre- and post-tests.

Yet, there are missed opportunities in the district's identification, collection, and use of data to improve instruction. There are examples of data other than test data that educators can use to better understand student progress and how students learn. For example, the walkthrough procedure at the school is informal and has no protocol, format, or way of classifying observations based on school improvement goals. According to interviewees, the process for a walkthrough in academic classes involves a cluster leader conducting a short (five minute) classroom visit to "see what's going on" or "to talk to students to see how well they understand." Those conducting walkthroughs do not have a systematic process to look for indicators of good instruction that could be considered useful data. Examples of such data might be the frequency of types of observed teaching—such as differentiated instruction—that are identified as priorities for practice in the SIP. Or a series of walkthroughs could focus on instructional strategies such as formative assessments that have been discussed and reinforced in cluster meetings or promoted in professional development sessions.

Interviewees also said that they do not receive assessment data disaggregated by subgroup, only disaggregated by test item. Interviewees did not express an understanding of the benefits of analyzing subgroup performance data as a pathway to better understand achievement for high needs groups or to help differentiate instruction to better meet diverse learning needs of subgroups such as ELLs and students with disabilities. In addition, instructors can use other forms of data such as student work, completed projects, and homework to identify gaps in performance that are common to groups or subgroups. It should be noted, however, that the special education team and the ELE team do look at and use disaggregated MCAS data for their specific subgroups.

Collection and Use of Data for Planning, Budget Development, and Policy

A review of the SIP and interviews with school leaders indicated that achievement data, especially MCAS data, was referred to in strategies for a number of school improvement goals. The first goal, to increase student achievement in all subject areas, named data analysis as a first strategy to provide evidence of progress. Assessment and the use of data also was a strategy that underscored the fulfillment of goal number 3, targeting an increase in literacy skills. Goal number 4 also included a strategy to improve the design of formative assessments, which, by definition, can offer useful data and opportunities for improving teaching and learning. In addition, interviewees noted that the school now surveyed graduates during the year after graduation to learn their views on how well the school prepared them. Yet, interviewees also indicated they wanted to revamp the survey to collect more useful data on students' strengths and weaknesses based on their experiences at Greater Lowell.

However, there have been missed opportunities to use data other than test scores in planning, budget development, and decision making. Although there is a SIP, school committee members and school leaders noted that the district has embarked on a major improvement effort without guidance from a data-rich, long-range strategic plan to guide them. They do consult a book called *Strategy in Action* (Curtis and City, 2009) but it does not guide implementation of a multiyear, districtwide improvement effort that outlines supporting resources and paces initiatives to fulfill stipulated goals. Members of the leadership team said that achievement data and other data informed the development of the budget and the setting of priorities. One member of the leadership team stated that “student data is at the heart of the budget process” and that, over time, the newly designed data teams will become an integral part of how the budget is developed. Another commented that when resources declined, students’ needs came first and data indicators were used to make decisions about budget allocations. School committee members noted that they received presentations about MCAS test data, attendance, and program enrollment from various sources and that the committee has a budget subcommittee. However, before the superintendent and her team crafted the budget, the school committee was not involved in setting assumptions and priorities for the development of the budget based on tracking achievement and other data.

When asked about using data analysis to support policy development, school leaders and school committee members described changes in the attendance policy in 2008 as an example. That policy responded to a finding in the 2005 EQA Report that cited four years of high rates of chronic absenteeism. In addition, school leaders described more recent attempts to change school discipline policies to a “progressive discipline system” based on an analysis of discipline data. Some members of the school community resisted this effort but most eventually implemented it, according to administrators.

The collection, dissemination, and use of data are influencing decision making in a number of areas—teaching and learning, assessment, school improvement planning, and somewhat in budget and policy decisions. However, there are obvious gaps in the substance and depth of how data is identified, collected, analyzed, and used. The absence of useful and helpful instructional evidence from walkthroughs, the absence of subgroup analysis of achievement data, the omission of strategic planning and capital planning or presentations amplified by multiple forms of data to support major school initiatives indicate that there is considerable work for the district and its newly designed data teams to pursue. In the judgment of the review team, until these important uses of data are included in its operations and procedures and in how it thinks about its work, the district will continue to make only incremental gains in meeting the ambitious goals that it has set for improvement.

Human Resources and Professional Development

Several important components of the district’s human resources system operate relatively independently; this absence of connection may weaken the district’s efforts to recruit and hire qualified and effective professional staff who will help the district accomplish its priorities for improving student achievement..

Three components of human resource systems—staff recruitment, selection, and assignment; supervision and evaluation; and professional development—are inherently linked and interrelated in examples of best practices in human resources management. In Greater Lowell, these components are incomplete and do not work together to advance the district’s agenda for improvement.

Staff Recruitment, Selection, and Assignment

There was no formal recruitment plan in the district. The teacher turnover rate in 2011 was 8 percent, below the state’s rate of 12 percent. Often candidates who are interested in working in the school file applications and submit appropriate materials in advance of vacancy postings. When there is a vacancy, it is posted and a closing date is established. The position description is aligned with an existing job description, and applications are logged in at the human resources office. The administrator of human resources has no clerical assistance.

Once an application has been logged in and the closing date has been reached, the principal and the administrator of human resources work cooperatively with the supervisors, who screen and interview candidates. Teams of screeners and interviewers may or may not be used. Once a finalist (or finalists) has been chosen, the principal approves and the superintendent makes the final hiring decision. The superintendent sets the salary, the final details of entry into the district take place, and the final candidate becomes an employee.

In discussions about the details of the recruitment and selection process, the team was told that there was limited outreach to candidates from diverse racial or ethnic backgrounds, although there is a statement of nondiscrimination in all official documents. Despite a student population in 2011–2012 that was 15.1 percent Asian and 24.4 percent Hispanic/Latino, only 1 percent of the teachers were Asian and 1 percent Hispanic.

The Skillful Teacher discusses progressively and systematically building competence in fundamental good teaching practice while creating a common language for the specific behaviors that are exhibited in such practice. It is a required text and mandated training for all new teachers in Greater Lowell. Despite this requirement, no mention was seen in documents or heard in interviews of seeking candidates who had already completed *The Skillful Teacher* training. By hiring trained teachers, the district could see those teaching competencies featured in *The Skillful Teacher* immediately influence instruction as new hires began their assignments rather than waiting for several years to have new teachers put them into practice—since teachers can take up to five years to complete the training.

The review team examined the personnel files of 32 randomly selected instructors and all 22 administrators. The instructors’ files contained 100 evaluations. All but one teacher file included

evaluations that were timely under 603 CMR 35.00. All but two files included observation reports that contained goals suggested by the evaluator. Some goals referred to ongoing professional development events and suggested that instruction be aligned with them. Others suggested college courses or recommended that teachers “continue” to do certain things in the classrooms; most suggested goals that might improve the observed teaching or classroom routines.

Observations were written on a form that contained four possible ratings: satisfactory, in progress, unsatisfactory, and not observed. No observer rated any observation as unsatisfactory. Most ratings in the 100 evaluations were either satisfactory or in progress. Some were rated NO (not observed). All teacher evaluation forms were informative and instructive.⁶ Two teacher personnel folders contained expired licenses. Two teachers were on waivers, according to school records.

The team reviewed the personnel files of 22 administrators. Four did not contain timely evaluations. All administrators held active licenses. For seven administrators there was a three to four year gap between the most recent and the previous evaluation. Two administrator files contained teacher evaluation forms rather than administrator evaluation forms. All the completed administrator evaluations were informative, but eight were not instructive. One administrator’s file had no evaluation. With some exceptions, administrators’ evaluations did not have annual or multiyear goals that were aligned with the School Improvement Plan, but some had comments about improving future performance without specific instructions about how to do so. The narratives under the various competencies outlined in the administrators’ evaluation forms were informative and instructive. The superintendent had not been evaluated by the school committee at the time of the site visit.

In the district’s evaluation processes, there was no final rating of performance. Although the teacher observation form does contain four ratings and a section on recommended goals, there was no year-to-year forward or backward link among successive evaluations, nor was there any evidence in evaluation documents that prescribed goals had been completed. When professional development was recommended on an observation form, there was no evidence in records reviewed by the team of follow-up on the completion of the recommended professional development or its impact on an instructor’s performance.

Professional Development

Each year the district publishes a Professional Development Plan that contains professional development topics to be emphasized that year. Each year a planning team is formed and uses standard, year-to-year categories to select topics for professional development ranging from state mandates to school and departmental needs, including re-licensing suggestions. Each plan includes a graphic “Cycle of Professional Development.” A second document provides teachers

⁶ “Informative” means that the evaluation was factual and cited instructional details such as methodology, pedagogy, or instruction of subject-based knowledge that is aligned with the state curriculum frameworks. “Instructive” means that the evaluation included comments intended to improve instruction.

who seek professional development for relicensing with a thoughtful set of questions to help them choose activities for relicensing through their Individual Professional Development Plans (IPDPs). Since the district emphasizes holding a proper license as a condition of employment, this second document is a road map of sorts.

Included in the array of instructions, details, and benchmarks in the “Cycle of Professional Development” is a reference to an ongoing process of evaluating professional development events and to tying instructors’ relicensing through their IPDPs to professional development choices and their performance evaluations. The district has not awarded professional development points beyond college level or offered Massachusetts Association of Vocational Administrators (MAVA) courses since 2009, according to interviews and school records,, because of an ongoing arbitration about this issue.

The district requires that staff evaluate professional development events. The review team reviewed several enormous binders of evaluations from attendees of various workshops, most from the once-a-month (three-hour) professional development event required by the teachers’ collective bargaining agreement. According to the principal, the director of professional development and the principal review all evaluations and comments by professional development attendees. It is unclear what happens after this review, whether there is any feedback to the presenters (who are normally employees paid \$32.00 per hour for preparation time) or whether the professional development planning team blends the data into its considerations for next year’s training priorities. As mentioned above, the review team reviewed 32 randomly chosen personnel files for teachers, which contained about 100 evaluations. The team found that some professional development suggestions for instructors were made in their evaluations or on the district-approved observation forms, but there was no evidence in official documents that the evaluated instructors had implemented these recommendations or, if so, what effect, if any, the implemented recommendation had on instruction or student learning. It appears that there are ample opportunities for professional development available to staff, but little evidence in official records about its specific impact on teachers’ performance.

The district does not have a process to assess the impact of professional development on professional practice. There were surveys in place, but association leaders expressed concern that teachers may not be comfortable giving an anonymous assessment because of concerns that anonymity may not be guaranteed. Teachers’ association leaders also expressed their belief that there was insufficiently widespread involvement of teachers on committees and insufficient planning for professional development. Even though Research for Better Teaching’s book *The Skillful Teacher* and its corresponding training are mandatory for new teachers and recommended for veteran teachers—and are referred to in the teachers’ collective bargaining agreement and the Professional Development Plans—in a review of the professional development evaluations conducted or supported by the district during the 2010-2012 school years the review team found no written evaluations of that program. RBT’s *The Skillful Teacher* and its mandatory training component are referred to by title in official documents, but it was unclear what specific, instructionally targeted professional development based on the book should be headed to improve teaching and learning on both the academic and vocational sides of

the house. Teachers and supervisors may understand what effect RBT training is expected to have on practice, but that expectation is not described in official documents.

The connection between supervision, evaluation, and professional development were not yet clear. For example, in the 100 evaluations reviewed during the site visit, only one contained possible evidence of how an idea or concept learned in the mandatory *Skillful Teacher* course might improve instructional practice. It was obvious to the review team that the evaluator and instructor understood the context of the suggestion, which had to do with scaffolding an approach to help a student with a writing project. The comment was made as part of a suggestion to improve instructional competence. In the final evaluation report, the evaluator commented that the instructor had employed the suggestion successfully (although the review team found no interim observation report in that instructor's file). There was no evidence in these documents about whether this teacher had completed *The Skillful Teacher* training or whether the supervisor had read *The Skillful Leader* (see District Profile above), but it would seem important for the district to know whether these two professional development initiatives were making a difference in instruction and instructional supervision. No such connection was found in documents reviewed by the team. Professional development for administrators included a leadership training program at Harvard that used *Strategy in Action* (Curtis and City, 2009), as a foundational tool to help them change the culture of the district into one with priorities for high levels of student learning. The review team did not see clear evidence of use of the strategies or a link to supervision and evaluation during the review.

In summary, professional development activities were not clearly aligned to priorities in the district. *The Skillful Teacher* (required) and its companion book, *The Skillful Leader* (optional), are in use, but the material is not explicitly connected to expectations for specific teaching practices or evaluations. There are many college-level courses and school-sponsored workshops that offer college credit and in-service points toward relicensing and salary credit. In addition there are monthly, three- hour, in-service meetings held by the school during release time. Certain professional development events are evaluated, others are not. Some interviewees were satisfied with the way professional development is planned and organized, others are not.

Conclusion

Staff recruitment, selection, and assignment; supervision and evaluation; and professional development are the trinity of a successful human capital system in a district. In Greater Lowell, the three critical components of the district's human resources system operate on their own, relatively independently of each other, although the principal and a number of administrators provide unified, centralized oversight. Without connecting these three processes and aligning them with district priorities, the district will be foregoing a powerful boost to its efforts to achieve its student learning goals.

Negotiations for a successor collective bargaining agreement with teachers were in mediation at the time of the review, a year and a half after the expiration of the old agreement. Concern about this issue was clear among all levels, especially with some faculty members wearing pins supporting the teachers' association and some dressing all in black. Tensions between the administration and the association ran deep.

During the review, the inability of the school committee and the teachers' association to reach a new collective bargaining agreement after one and one-half years of discussion was an issue that surfaced in all school committee, administrator, and teachers' association interviews. Each group brought up many issues, including, but not limited to, the financial compensation package, health-care costs, sick leave buy-back provisions, language that in some cases was 30 years old, the teacher mentoring program, the delivery of professional development points, and the superintendent's desire to increase the amount of time teachers stayed after school to work with struggling students. The previous contract had expired in August 2010; no signed documents were available to show that the expired collective bargaining agreement had been extended operationally over the period since then.

The review team observed that some faculty members wore all black clothing and pins showing support for the teachers' association position. Tension was apparent in the results of the TELL Mass survey conducted in March and April of 2012⁷:

- 72 percent disagreed or strongly disagreed with the statement, "Teachers have an appropriate level of influence on decision making in this school."
- 69 percent disagreed or strongly disagreed with the statement, "The faculty and leadership have a shared vision."
- 81 percent disagreed or strongly disagreed with the statement, "There is an atmosphere of trust and mutual respect in this school."
- 71 percent disagreed or strongly disagreed with the statement, "Teachers feel comfortable raising issues and concerns that are important to them."
- 66 percent disagreed or strongly disagreed with the statement, "The school leadership consistently supports teachers."

Interviews with teachers' association executive board members showed strong perceptions of problems with district leader communication, involvement, and collaboration.

Communication channels were evidently strained both ways because of the tension that existed between labor and management. For the association leaders concerns included:

- Teachers find out the day before what topic or topics in-service training will be on;

⁷ TELL Mass is an anonymous statewide survey of school-based licensed educators to assess teaching conditions. One hundred percent of Greater Lowell's school-based educators responded to the 2012 TELL Mass survey; numbers responding to the questions quoted ranged from 195 to 201. Results can be found at <http://www.tellmass.org/reports/detailed.php?orgID=M0828>. The responses to these questions listed above were taken from questions 6.5 and 7.1 a-d.

- There had been a misunderstanding about the awarding of professional development points, or PDPs (legal issues delayed the issuance of PDPs).
- There were no regularly scheduled meetings between the association's president and the superintendent with the entire leadership team.
- Teachers had not yet been told by the administration that the school had gone from Level 3 (for 2010) to Level 1 (for 2011). Executive board members perceived the lack of recognition about the school improving to Level 1 to be an example of administrators not acknowledging, respecting, appreciating, and valuing the work of teachers.
- Resolution of the teacher handbook was delayed. There had been no teacher handbook the year before, and in 2011-2012 the plan for the team of five teachers to make and review changes was derailed. At the time of the review, a policy book/handbook had been ratified by the school committee, but had not yet been given to staff or seen by the executive board members.
- The teachers' association was unclear on the criteria for becoming mentors and the selection process.

Issues of involvement and cooperation also appeared to be complicated by the tension.

- The review found examples of teacher involvement on committees and decision-making, but the association claimed that only select teachers are allowed to participate.
- The executive board members wanted to be selected to go to seminars or conferences with administrators. Besides expressing concerns about teacher/administration issues, the executive board also expressed concerns they wanted to address such as the continuity of professional development, the rigor of courses, shop sizes and teacher/student ratios, and the reading levels of some students.
- Executive board members expressed the belief that, "Retaliation is big here"; "You'll get silence in a forum; everyone is afraid to speak their minds"; "The nature of the work [is] reprimands and warnings and retaliation and "If you speak your mind, you'll get a schedule change next year."

Some teachers' association executive board members and many in the current leadership team have been district employees throughout a number of administrations; it was clear to the visiting team that tensions were longstanding. The tension inherent in this situation may eventually impair the district's efforts to unify its academic and vocational instructional teams around district priorities. It was the hope of the review team that the collective bargaining agreement would be settled quickly.

The review team found a number of changes happening in the district in support of the shifting of priorities to more student-centered learning. These recently initiated projects are, in the opinion of the team, well thought out, based on research, and showing some success in the way in which some instructors are refining their instructional approaches. However, developing a culture of collaboration around goals is a priority, as the commitment of all instructors is

required to bring about these changes. In the judgment of the review team, the labor-management interactions are serious obstacles to district improvement.

The review showed feelings of mistrust and alienation among the association's executive board that were deep seated. Although the review team is not offering a judgment on positions held by labor or management, the team saw insufficient steps on the part of the district leadership to take the lead in establishing a culture conducive to collaborating and inclusive organizational learning. Unless the district finds a way to create a harmonious organizational culture and harness this professional energy, knowledge, and dedication, the attainment of its organizational goals and objectives will be impeded.

Student Support

The district has created systems to support students' behavioral, social, and emotional needs.

The Greater Lowell Regional Vocational Technical School District has devoted significant thought, personnel, and financial resources to meet student attendance goals, behavioral challenges, and emotional needs. Administrators said that four years before the attendance policy had been changed to limit unexcused absences in each quarter. If a student is absent without excuse five times or more in one quarter, the student receives no credit for that quarter. The student may reclaim the grade for the quarter if unexcused absences in the following quarter fall within the acceptable range. Absences generate a call from the school to the parent, and the parent also sees the failing grade on a report card is because of excessive absences. These steps frequently prompt a conversation with the assistant principal or dean of discipline. Students who are truant receive a home visit from the dean and a guidance counselor.

The attendance rate has remained between 93 and 94 percent since 2007 compared to the state rate of approximately 94 percent. The retention rate⁸, which was 1.3 in 2007, declined to 0.4 in 2010, though it rose again to 1.3 in 2011. During the same time period, the four-year graduation rate rose from 88 percent in 2007 to 92.1 percent in 2011. The resource officer, hired this year and shared with the Tyngsboro Public Schools, offers some assistance in this area. He is in the district three days per week. His duties include serving as a legal resource for students, helping to enforce the bullying policy, and enhancing safety in the school.

The district spends a significantly higher proportion than districts statewide on guidance staff—in 2010, for example, 4.8 percent of in-district expenditures versus 2.9 percent statewide. It chooses to handle many student issues through guidance, even those that might be in the purview of a dean of discipline in another district. Administrators and teachers said that the guidance staff frequently contact parents. Because the school wants to change the culture, guidance staff investigate incidences of bullying with the assistant principal, dean of discipline, and sometimes with the assistance of the special education staff. Guidance staff collect money, food, and

⁸ Retention rates represent the percentage of students retained in the grade in which they were enrolled during the previous year.

clothing for the Student Assistance Fund for students who do not have money for an activity or need a new pair of boots or a tool that the home cannot provide. The grade 9 Adolescent Issues class also acts as an entry point for guidance staff to assist students in their orientation to the school as well as to inform them about whom to contact for various types of help and where offices are located. The gender equity counselor is a guidance staff member who interacts with students on gender issues and a variety of disciplinary issues that may involve, for example, a bias toward differences. In the latter case, the counselor does incident interviews with the dean of discipline and helps students consider the workplace implications of behaviors that interfere with educational participation or continuity. She also works with students in small groups and is able to deliver some important instruction in the Adolescent Issues class. The district believes that the gender equity counselor is an important position because there are many students in shops whose programs of study are not traditional for their gender.

Since the school is a regional vocational technical facility, students come from four communities: Lowell, Dracut, Dunstable, and Tyngsborough. As noted earlier, Lowell supplies 74 percent of the enrollment. The district believes that it must work especially hard to help students become part of the new community. Since many students spend time at internships and co-op jobs, staff say that the time available for after-school activities is limited. Some of the school's activities are sports teams, drama, outing club, student council, and chorus. The district has hired a full-time school activities coordinator who arranges activities that involve the local communities. Students may participate in several service opportunities such as collecting food, assisting with festivals in the participating communities, and representing the school at the Lowell Folk Festival. These activities develop school spirit; but more importantly, they contribute to the sense of self-esteem of the students who participate. If needed, the school also provides transportation to off-site events. The co-op program is another opportunity for students to go into the community to work at short- or longer-term assignments in their chosen trade. The program gives students a chance to apply what they have learned, make important contacts for employment after high school, and assist various businesses in the participating communities. The program is popular as most students are able to participate and do so.

Although the dean of discipline handles the duties typical of such a position, the school also addresses many discipline-related questions in a pro-active or support-team approach. Interviews with staff revealed that the assistant principal has arranged nearly 50 meetings with several of the most troubled students and at least one other support person such as an adjustment counselor or a guidance counselor. The meetings were held so that the students would consider the reasons for various past discipline infractions, accept responsibility for their actions, and contemplate a course of action that would result in a better outcome as the new academic year unfolded.

The guidance staff and the assistant principal address infractions of the bullying policy. Discipline is a collaborative responsibility shared by the assistant principal, the dean of discipline, guidance staff, parents, and students. The five-year old progressive discipline policy is posted in classrooms and hallways around the school. The purpose of the policy is to direct student behavior and encourage teachers to take the first steps in the disciplinary process rather than sending students to the dean of discipline. The review team found the student body to be

respectful in their interactions in the classroom and elsewhere in the school. The school also has a “Caught Doing Good” recognition program monthly to encourage good behavior and increase self-esteem.

These support systems serve to keep children in class, treat the root causes of misbehavior, foster a sense of self-esteem, and develop the kinds of personal skills that enhance employability. When students feel safe, they can focus their attention on schoolwork. The district provides these sorely needed supports in a blended community where over half of the students are from low-income households. Parents appreciate the frequent contact with the school because it helps them to stay informed about their child’s educational program and reassures them that their children are safe in the school.

The district has many academic supports for its high-needs population; however, the teaching staff, particularly on the academic side, do not routinely employ instructional strategies that give all students access to the complete curriculum and encourage development of 21st century skills and skills emphasized in Common Core standards.

The Greater Lowell Regional Vocational Technical School District has established a number of supports for its high-needs population. Staff members said that when inclusion classes were introduced in the ELA, math, and science departments four years before, students with disabilities received access to mainstream education. The district uses a co-teaching inclusion model in which both the special education and regular education instructors teach a mixed group of students. Beginning in the 2009–2010 school year, the district partnered with Teachers 21 to coach the inclusion teams in differentiated instruction and content strategies. The Teachers 21 coaches visit the ELA and mathematics inclusion teams twice each month in grades 9-12 and also work with grade 9 and 10 science inclusion teams. In November 2011 they gave the co-teachers an all-day workshop. The school also provided mainstream education for English language learners (ELLs) in 2008. Title I provides ELLs with additional instruction in literacy through Read 180 and phonics instruction and readers-writers workshop. In 2010–2011, 97 percent of the ELLs tested placed at Level 3, 4, or 5 on the MEPA test.

Administrators say that Lesley University was engaged to train two Title I, two ELA, and one business technology instructor as literacy coaches. In 2010–2011 as part of their practicum, these instructors worked with 15 volunteers from the grade 10 technical shops and three academic teachers to develop literacy activities. The school has a Title I-funded summer transitional program for struggling students in the last several years. The program provides three hours of academic instruction in the morning along with afternoon programs that introduce students to the school, educate them about the kinds and locations of various services in the school, reach out to parents, and involve the guidance staff. Because the numbers of students moving out of Failing and into the Needs Improvement category of MCAS tests has been increasing, this program was in danger of losing funding. Five Title I instructors provide additional services to struggling students, ELLs, students with disabilities, and other students identified by the entrance application. These instructors implement Read 180, phonics, reader-writer workshops, math

classes, employability classes, financial literacy, and community service components for these students.

To enlarge the number of teachers trained in literacy strategies, the district has established a literacy team of 30 instructors who spend 30 hours per year exploring a variety of literacy practices and practitioners. These instructors select practices of use to the whole community and recommend them to a small group of administrators who bring these materials and presenters to in-service opportunities for the entire staff. In addition, administrators say that 159 staff members received the introduction to sheltering instruction for ELLs (Category 1 training). Fifty-one staff members took the next level of training, which gives deeper preparation for teaching mainstreamed ELLs (Category 2). This is less than one-third of the staff. Intensive work with Teachers 21 coaches delivering professional development for differentiated instruction strategies has been limited to inclusion teams. Staff interviews and school data indicate that professional development in differentiated or tiered instruction is an occasional event. For example, this year such instruction for one department was a half-day of in-service on the first day of school.

Another essential support is the homework tutoring session every day after school. At-risk students—those that have not passed the MCAS exams—are recommended to attend three sessions per week and attendance is monitored. The program is staffed by teachers who are paid a stipend. Some peer tutoring is also available during that time. During the regular school day, the school offers Essentials of ELA, Essentials of Math, and Essentials of Biology for students who have not passed MCAS. These courses replace physical education, history, or a related class until the student achieves a passing score. At-risk mathematics students also take a mathematics lab.

The data tells us that the school's student population has a much larger percentage of high-needs students than the typical high school. In 2011 56 percent of the student body was from low-income homes, considerably higher than the state percentage of 34 percent. At 23 percent, the proportion of students in special education was somewhat higher than statewide, where the proportion was 17 percent. While the supportive school culture and staff training are important, the number of high-needs students in the district demands that the instructional needs of these students be addressed in every classroom every day. The student population needs an instructional staff that employs sheltered English, differentiation, and tiered instruction strategies regularly; however, the review team rarely observed these strategies in academic classes observing them somewhat more frequently in technical classes. Pair and small group work was infrequent while whole group instruction was generally the norm. When students worked individually, they were usually all using the same worksheet. Word walls, vocabulary highlights, hands-on activities, and directions that were given in both oral and written form were rare. Literacy techniques such as making connections to prior knowledge and predicting were a distant second to fact checking and taking notes from the SMART board.

The support system for the general student population is to report after school to a teacher help session. As stipulated in the teachers' bargaining agreement, these sessions are held once per

week for 30 minutes. The alternative is a homework assistance and tutoring center after school, monitored for attendance and staffed by teachers who, in many cases, may be unaware of the students' particular difficulties because they are not the students' classroom teachers. In any case, the primary support for all students should happen during the regular class period rather than during a few precious minutes at the end of the school day. In the shops, standards and common instructional practices require hands-on activities, small group or paired work, cooperation, modeling, and problem solving. As a result, the technical shops provide a better classroom instructional model for high-needs students.

It is clear that the school has recently provided mainstream opportunities for students with disabilities and English language learners (ELLs; the school uses the term ELE for English Language Education) and has established a number of educational supports for those who have not passed MCAS. Nonetheless, insufficient differentiation in the academic classrooms does not ensure that all students have adequate access to the regular curriculum or are prepared for more challenging coursework—a stated goal of the district's improvement efforts.

In summary, supports for high-needs learners are properly provided in a number of programs for special populations and at-risk or struggling students. The general student population benefits from the emotional and behavioral supports. Administrators have taken some steps to provide appropriate professional development, although it may not have reached a majority of the staff in its depth and breadth. It is not clear that every classroom of every teacher is taught with appropriate strategies in this district that has a large high-needs population. In the absence of these appropriate strategies, students are not receiving instruction in a way that best meets their diverse needs. Without scaffolding, the result is lower MCAS results, disengaged students, and substantial obstacles to an effort to increase the rigor of courses in the district.

Financial and Asset Management

The finances of the district are adequate to support existing programs; the budget process within the district is basically transparent and includes consultation with various members of the school community, including instructors, but the budget is not developed in the context of a strategic plan that accounts for long-term needs.

The administrative team stated that district budgeting uses a “bottom up” approach based on goals that are developed year round through conversations with the staff. The superintendent said one of her key questions was, “How do we get the kids there and what do we need to make it happen?” She also said, “Student data is at the heart of the budget process,” and “I never heard, ‘We can’t do this for kids because of dollars.’”

The district has a policy manual that outlines development and control of the budget. The budget is prepared using the MUNIS accounting system. At the beginning of November, the instructional staff is requested to provide a “wish list” and a “must list” on a request-for-funding form. These are reviewed by the cluster chairs, who prioritize the requests and prepare rationales for them, before submission to the directors of curriculum and instruction, technical studies,

special needs, and plant services. As part of the budget process, a “Cost Effectiveness Form” for all program initiatives is required. One example is a request that was submitted by the special needs department based on weaknesses in the areas of reading, algebra, and geometry, and recommending the purchase of textbooks and supplies focused on the standards, in order to improve student performance. Another example is a budget review for cost effectiveness initiated by the automotive technology instructors on the advice of their advisory committee and the cooperative education employers, resulting in a recommendation for new lifts and a tire machine. During the budget process, programs are reviewed with respect to compliance with Chapter 74 on enrollment and job placement requirements. Two programs are targeted for elimination because of low enrollment, while a new program in Engineering Technology was to be added. One instructor was eliminated following a review of the program.

The preliminary budget incorporates requests for funding from the advisory committee members and the school council, who also review student achievement. The directors input budget recommendations into MUNIS in November. Then, the business manager reviews budget requests in December. The superintendent holds budget meetings in January with the cluster chairs and directors, the assistant superintendent, and the business manager.

When the governor’s budget is released at the end of January, ESE makes available the preliminary minimum contribution amounts for the four member communities and estimated Chapter 70 aid amounts, and the superintendent, the assistant superintendent, cluster chairs, directors, and business manager review the budget with an updated bottom line. For the past six years, the district assessments (except for transportation) were set at the level of minimum local contributions determined by ESE. Transportation assessments are in addition to the minimum contribution assessments from member towns and are allocated by the formula in the regional district agreement.

In April, a public hearing is held, and the budget is adopted by the school committee and then submitted to member towns. The regional assessments must be approved by a two-thirds vote of the district committee according to the regional agreement. There are at least two finance subcommittee meetings in February and March. After adoption of the budget by the school committee, meetings are held with town officials to review the budget and assessments in May and June. According to new ESE regulations, the district must submit the voted school committee assessments to the district city and towns 45 days before the first town meeting.

In fiscal year 2011, employee retirement benefits increased by 29 percent, from \$836,802 to \$1,075,766. The district pays 85 percent of health insurance premiums. In fiscal year 2011, the district’s expenditure per in-district pupil for retirement contributions was \$575 compared to \$375 statewide; its expenditure per in-district pupil for insurance for active employees was \$2,218 compared to \$1,407 statewide; and its expenditure per in-district pupil for insurance for retired employees was \$751 compared to \$409 statewide.

The approved budget for fiscal year 2012 was \$34,181,899 as compared to \$32,203,602 for fiscal year 2011 for a 4.5 percent increase of \$1,578,297. The committee allocated funds from reserves established several years ago; \$316,743 for transportation and \$380,000 for building upgrades

which were not part of the local appropriations budget. At the end of fiscal year 2010 \$1,919,047 in this account was available to subsidize operations including transportation.

The district's MUNIS accounting system gives access to budget information to cluster chairs and directors; as mentioned above, directors enter their budgets directly into the system. Requisitions for supplies and material are prepared by cluster chairs and directors using the MUNIS system, and are sent to the business office to convert to a purchase order signed by the business manager. Department staff has access to their budget and expenses using MUNIS. The school business manager also stated that staff attendance is reported using the MUNIS system. Year-to-date budget reports submitted to the school committee use an encumbrance system but do not project anticipated expenditures for the year. The school committee is made aware of grants in the monthly financial reports.

School committee policy requires the school committee to submit an annual financial report on the operation and maintenance of the school to the city and towns. Town and city officials stated that the district does not share student data. One town official categorized the school as "a relatively independent franchise." Town officials indicated they hear from the business manager during budget time. Town officials also indicated concern with a proposed renovation project (see below).

Overall, the budget development process has involvement and input from staff, which helps ensure that the needs of programs are met to the degree possible. Interviews with the leadership team and instructors showed positive attitudes toward the allocation of funding for the school's educational programs. School leaders believed that students were well served with supplies, materials, and equipment provided for instruction. But without a strategic plan, and without school committee establishment of budget goals and more committee involvement in budget development, the district is not doing all that it can to make sure that the available resources are being used in the best possible way to achieve its priorities.

The school facility needs an upgrade and possible expansion.

While the school is well maintained and provides a safe and healthy environment for teaching and learning, the building is approximately 40 years old and in need of upgrade and renovation. School committee members and administrators are working with MSBA to get approvals to bring the school into compliance with Chapter 74 requirements, educational standards, and building codes. A recent NEASC report and facility reports noted needs for efficient heating and ventilation, electrical upgrades, roof repairs, handicap access, and asbestos containment or removal. The NEASC report noted that the replacement of the heating and ventilating system should be considered. The school also has exterior envelope, egress, and fire safety issues, and some classrooms are undersized, according to the report.

Contracted services are used to maintain the HVAC system, electrical system, roofing, and several other pieces of equipment. Outside contractors specializing in these areas maintain the system through service agreements that include preventive maintenance. The school committee has received approval from Massachusetts School Building Authority (MSBA) to begin a feasibility study. District leaders expected to meet with MSBA in fall 2012, followed by

meetings at member municipalities to see approvals. At the May 12, 2011 school committee meeting, the committee voted to pay for a feasibility study costing \$825,000, appropriated from the “reserve for special purposes” account. The study is being funded without approval from city and town officials or town meetings.

With regard to the reserve fund, the business manager said the Department of Revenue considers the funds as excess and deficiency, which must be within a 5 per cent limit. When the current reserve fund is depleted, the district will not be allowed to maintain this account separate from Excess and Deficiency funds.

Recommendations

The priorities identified by the review team at the time of its site visit and embodied in the recommendations that follow may no longer be current, and the district may have identified new priorities in line with its current needs.

Leadership and Governance

The leadership team and the school committee should collaborate to develop a multiyear strategic plan for the district.

Although the district had a strategic plan about ten years ago, it has operated more recently using a School Improvement Plan that takes a shorter-term view of meeting its stated improvement goals, some of which are strategic in nature. At the time of the review the district had taken some early steps to define some of the components of a strategic plan: for example, it has a clearly defined mission and philosophy and had set out some strategies to accomplish its mission. Also, the district had articulated either in writing or orally in interviews, for the most part, how curriculum, teaching, and learning had to be improved and changed to meet the needs of students who will spend most of their lives living and working in the 21st century. The district has sufficient leadership personnel to guide improvement efforts thoughtfully and sequentially. Yet, from interviews and focus groups, the district staff seemed to feel adrift in multiple simultaneous initiatives and, in some areas, overcome by the ambiguities resulting from the changes taking place in the system. Some such feelings are normal in a major change effort; here they appeared to be profuse.

The review team recommends that the leadership team and the school committee collaborate with district stakeholders to set out a multiyear strategic plan to accomplish its goals. It had already, as noted, made a head start, and it may want to build on what it has already defined, or it may want to start fresh. The district should sequence multiple improvement efforts over a longer time frame, perhaps five years, to strengthen and sustain improvement. Also, the district should identify additions and modifications to current goals and identify tactical steps that support strategies and the responsible individuals and groups who can help accomplish its goals. The new plan should articulate the evidence and data to be used to ascertain goal completion; time frames; and resources needed such as funding, people, and materials. The review team recommends that the district form a planning committee including community leaders, parents, students, school committee members, administrators, instructors, and perhaps others so that all voices and points of view can be heard. There are many outside consultants that could provide the necessary guidance and expertise to assist in the development of the new strategic plan.

The leadership team should review all of the recent improvement initiatives to ensure that relevant stakeholders understand them; it should also assess the need for additional professional development to enable all professional staff to meet school improvement goals.

Many of the district's current initiatives will continue to be relevant and important as it further defines and stages its improvement strategies through a strategic planning process. It should take steps to ensure their success. In interviews and focus groups, it was unclear that all stakeholders had fully understood the improvement goals initiated by the leadership team and their implications for teaching and learning and leadership. At any rate, it was not clear from interviews or classroom observations that all instructors and leaders had made the accommodations and changes in their instructional and leadership practices needed to ensure that improvement goals could be achieved. For some instructors this was because they did not have the knowledge and therefore capacity to implement new strategies and instructional techniques in class. For example, as described in the findings above, professional development had not been made available to all staff on differentiated instruction; on literature circles; or on working effectively with English language learners (ELLs), students with disabilities, or other high-needs students. Insufficient professional development for some leaders was also apparent from the insufficient development of walkthrough procedures noted in the second Assessment finding. Walkthroughs did not follow a protocol to ensure effective monitoring and supervision to improve instruction. They provided an informal glance, at best, of what was taking place in classrooms. Without the needed expertise and tools, instructors and leaders typically will fall back on known strategies, which may not be aligned to the diverse needs of Greater Lowell's student population.

Therefore, the review team recommends that the leadership team carve out time to review each initiative to determine what progress has been made in each area and department and whether members of the team and the staff have the skills and knowledge needed to fulfill each initiative. As a follow-up, the review team recommends that the district create a professional development plan aligned to staff needs to build capacity.⁹ Professional development should be ongoing and its effectiveness monitored regularly to ensure that the district is on a dedicated track to meet its goals. It is also important that the school committee and the parent council be kept informed of these efforts.

The district should take steps to develop a more productive working relationship between staff and the teachers' association.

As mentioned earlier, in interviews with teachers' association leadership there were many expressions of frustration, but some had little to do with bargaining agreement language and suggested deep-seated, historic friction.

The review team found a variety of changes happening in the district in support of the shifting of priorities to more student-centered learning issues. These recently initiated projects are, in the

⁹ As part of this professional development, follow-through might be considered for the idea of team-building activities for district leadership, perhaps conducted by an outside consultant. See first Leadership and Governance finding above.

opinion of the visiting team, well thought out, based on research, and showing some success in the way in which some instructors are refining their instructional approaches. However, the commitment of all instructors is required to bring about these changes; discouragement at the current labor-management environment is a hindrance to securing that commitment.

The review team observed that some faculty members wore all black clothing and pins showing support for the teachers' association and others wore business clothing with or without pins showing support. This passive but obvious demonstration has quietly split the faculty between supporters and non-supporters of the teachers' association. The issue is the settlement of a new collective bargaining agreement. This visual separation of supporters and non-supporters of the teachers' association, while legal, may eventually impair the district's efforts to unify its academic and vocational instructional teams around district priorities. The review team hopes that the bargaining agreement will be settled quickly, and recommends that after an agreement has been reached the district form a union-management committee to iron out decades-old concerns.

Given the undercurrent of friction, there may soon be an organizational "tipping point" that may influence the success of the district's new student learning initiatives. Unless there is a purposeful, well-designed, structured intervention in the district to clear the air of union-management friction, the kind of organizational environment that embraces change will not materialize. Organizations in crisis do not heal themselves.

It is the unanimous opinion of the review team that this labor-management friction, if not healed, will impair the school's efforts to develop an increasingly successful learning environment for its students. This friction is diverting energy from day-to-day operations and may over time create its own set of unresolved issues for future staff. The district should confront this friction immediately, possibly by seeking labor-management resources from ESE or using an expert in organizational health and union-management relations to interpret the various issues and help the district implement policies and practices that promote a strong union-management partnership that, in turn, supports common goals.

Curriculum and Instruction

To help instructors communicate high expectations and clear learning objectives, engage students in higher- order thinking and use differentiated and tiered instruction to meet students’ diverse needs, the district should

- **provide more opportunities for instructors to participate in relevant professional development and ongoing small-group discussions,**
- **develop rubrics for successful instructional practices, and**
- **develop a protocol for walkthroughs that will be more useful tools in improving instruction.**

The review team learned from Greater Lowell administrators that they had worked with instructors to ensure that they have identified clear lesson objectives and that the objectives are aligned with state curriculum standards and in some cases the new state standards that incorporate the Common Core standards. Instructors and administrators confirmed that these efforts had resulted in curriculum binders with a scope and sequence and learning objectives aligned to the curriculum standards. The review team’s classroom observations showed not only that learning objectives were not being communicated consistently to students in classrooms districtwide, but also that students were not being consistently challenged to engage in a more rigorous curriculum requiring the use of higher-order thinking. Also, the review team rarely observed instructors using differentiated instruction or tiered instruction to meet individual or group learning needs.

Greater Lowell should provide professional development and convene follow-up discussions for teachers and administrators on how to 1) explicitly communicate learning objectives to students, 2) develop and frame higher-level thinking questions, 3) allow students to analyze, interpret, examine, predict, evaluate, reflect, and self-assess, and 4) identify and use various differentiated and tiered instructional approaches that address and support the diverse learning needs of their students. Greater Lowell’s instructors have already participated in several professional development opportunities including the various sheltered English immersion trainings and literacy workshops. Some sessions have focused on developing what instructors and administrators referred to as “literacy coaches.” Several instructors for whom it was not required participated in *The Skillful Teacher* training required of new teachers hired over the five or six years before the review. In interviews instructors described their interest in and efforts to participate in professional development that would help improve their teaching skills. Yet these professional development opportunities have not yet resulted in a high enough level of either people trained or skills learned and applied.

Considering the appropriate heavy emphasis on developing curriculum binders and the use of these binders to inform classroom instruction, the district should consider how it will improve the binders’ quality in ways that promote more rigorous lessons and a higher level of teaching in classrooms where these qualities are not evident. Administrators have mentioned several “next steps” to improve the quality of binders by using a rubric. The rubric should include the elements

of the four instructional practices mentioned in this finding, along with descriptions of what successful practices in these four areas look like: high expectations, learning objectives, differentiated and tiered instruction, and higher-order thinking skills. The director of curriculum, the director of technical studies, the curriculum teams, and groups of instructors should then develop samples of approaches and activities in the classroom that present students with opportunities to experience those practices. These samples and activities should be shared with all professional staff.

Finally, administrators should develop a walkthrough protocol using supervisory approaches that are more effective at improving instruction and plan and participate in walkthroughs using the protocol. The walkthrough protocol should provide for the classification of observations based on school improvement goals and the collection of data on the frequency of types of observed teaching—such as differentiated instruction—that are identified as priorities for practice in the SIP. It should also provide for the documentation of both skills and frequency of implementation in a neutral, transparent, non-judgmental way. In interviews instructors said that they typically receive feedback about teaching during formal evaluations. The district should use its large administrative staff of 21.5 members including directors and cluster leaders to conduct walkthroughs that provide written or oral feedback to instructors, individually or as a cluster or faculty. Walkthrough documentation can provide topics for discussion at faculty meetings or in cluster meetings. To start, these topics can include how well instructors communicate high expectations and clear learning objectives to students, how well they engage students in higher-order thinking, and how well they use differentiated and tiered instruction to meet students' diverse learning needs, as well as what the nature of instructors' questions to students is. These discussions will provide platforms for the district to increase instructional rigor schoolwide and promote students' ability to achieve at higher levels.

The district should ensure that all staff members understand the need to adopt instructional strategies that meet the diverse needs of the student population. It is recommended that the school offer substantial professional development in the area of differentiated and sheltered English immersion instruction and hold staff accountable for implementing these strategies in all classrooms.

The district has a number of student support options that function well to help students meet the requirements for high school graduation, including passing MCAS. Title I, the outreach by guidance, the attendance policy, the numerous activities that build self-esteem, the summer transitional program, the supportive school environment, and in particular the insistence that students attend extra help sessions—all provide a solid and supportive environment to help students learn and reach their goals. Nevertheless, the instructional methodology used by a large number of staff bypasses the substantial high-needs population at the school. While at-risk students—those who have not passed MCAS—are identified and placed in classes or programs to serve their needs, most students who are not officially “at risk” are members of a high-needs population. In 2011–2012 58.7 percent of the student population was from low-income households, 23.1 percent were students with disabilities, and 6.1 percent were ELLs.

Classroom observations conducted by the review team indicated that common strategies designed to address the needs of a broad spectrum of learners were not in place. Most academic classes were involved in teacher-led, whole-group instruction rather than in pair or small-group activities. Often, instructors used SMART Boards to show students the material that they were expected to copy. The review team saw little problem-solving and few graphic organizers or varied assessment strategies in the academic classes. While the district's leadership team clearly expressed a vision of differentiated and tiered instruction, the review team did not find this to be the reality in the classroom. The district has provided professional development to foster a new instructional model, but the training appears to have been short and sporadic. And the review team did not find much evidence that use of the new strategies is reinforced through the supervision and evaluation processes.

One staff member noted that strategies for sheltering English instruction were useful in any classroom. The same can certainly be said for all curriculum accommodations. Today's schools are charged with raising standards for all learners. The purpose of these teaching tools is to make it possible for all students to access the curriculum, meet higher standards, and succeed in developing 21st century and Common Core thinking skills. This district is gradually eliminating some basic courses in favor of college preparatory and honors courses. This initiative will succeed only if the district considers the importance of using appropriate teaching strategies to reach all learners in every classroom. If the district hopes to succeed in its improvement objectives, staff must teach all students more effectively.

Assessment

The district should continue to develop a comprehensive and balanced assessment system and build instructors' capacity to align assessments to teaching and learning goals. It should also continue to expand and deepen how it defines, collects, analyzes, and uses data in decision-making.

The district defined major initiatives to improve the nature of the curriculum and how it is taught in both academic and technical programs. These improvements include more rigor and relevance, stronger literacy skills, and the development of 21st century skills such as competencies, critical and analytical thinking, team work, and problem solving. Over time, the assessment system has been expanded to include more common summative assessments such as common quarterlies and common chapter and unit tests. In addition, instructors are learning to expand their assessment repertoire by developing more formative and informative assessments, especially in grades 9 and 10 ELA. The exploration of multiple assessment formats should continue and include, for example, peer assessment and self-assessment, which by their nature develop students' analytical, critical, and reflective thinking skills. The expanded use of multiple assessment formats should be more prevalent in all courses, both academic and technical.

The district should also continue to develop teachers' capacity to align assessments to curriculum and instructional priorities. For instance, if, as classroom observations indicated, problem-solving is an important goal for instruction, it should be prominently taught and assessed in both

academic and technical programs in class work, in projects, and in summative assessments. If a key district goal is to emphasize literacy skills across all content areas, assessments in all content areas should require students to demonstrate strong speaking and writing skills as well as reading comprehension and vocabulary skills. Several of these assessment practices had been implemented in some areas and should be expanded to all disciplines and grade levels.

It would also be useful to analyze data in more depth using more varied forms of data and more complex analytical approaches. For example, instructors and leaders can more precisely understand strengths and weaknesses for diverse groups of students when data is disaggregated by subgroups. One use for disaggregated data is to develop lesson plans for differentiated instruction or tiered instruction. Disaggregated data also helps develop priorities and “next steps” for curriculum and instruction and professional development and improvement planning. Trend data can be useful for identifying students at risk and can also provide a deeper understanding of weaknesses in instruction. In addition, the district should consider the other forms of data about student learning and progress: homework and, in the academic programs, examples of student work; student work in the form of projects and other samples of work is already used in the technical programs. Observational data from a more systematic walkthrough process can better inform instructors and leaders about how well instructional priorities are implemented and can be used to identify practices for discussion at cluster meetings or faculty meetings.

District leaders should help the school committee better understand its role in the budget process as well as its role in planning and developing policy with the guidance of data. For example, the superintendent can assist the committee to use data to define budget assumptions in order to set priorities and guide administrators as they build the budget. Developing a strategic plan will involve the identification of data milestones and other evidence to define goals as well as to indicate progress toward meeting goals. A carefully developed capital improvement and maintenance plan will have data that tracks the age of equipment and plans for repair or replacement. The review team found that data has become a more integral part of how work is considered and accomplished in the district; the team believes that these recommendations will help the district make the further progress needed for it to function at a high level in terms of how it identifies, collects, analyzes, and uses data.

Human Resources and Professional Development

It is recommended that the district add a human capital component to the strategic plan recommended above, linking recruitment and hiring, supervision/evaluation, and professional development with each other and with district priorities.

The district has a number of traditional human resource processes in place to hire, train, and evaluate staff. It also has a seasoned and experienced administrative staff. However, the organization does not have a strategic plan as a road map for raising student achievement. And internal human capital processes are not now aligned with each other or designed to promote district priorities. For instance:

- The review team found that there were no uniformly applied, district-approved screening instruments or standard interview questions tied to established school priorities, preventing the district from searching for candidates with competencies aligned with the district's priorities.
- Successive evaluation documents were not linked, nor was there any evidence in evaluation documents that prescribed goals had been completed or that the completion of recommended professional development or its impact on instruction had been followed up on.
- Surveys are sent to staff about professional development activities, but the district does not have a process to assess the impact of professional development on classroom performance.

The district has a very low turnover in personnel. Many employees and school committee members have long-term connections with the district. In the judgment of the review team, the district should develop a transformational change strategy and make sure that that strategy is reflected in the district's human resource systems. The review team regards this as an opportune time to take these steps, for the following reasons:

- The language in the current teachers' collective bargaining agreement is, according to the teachers' association and management representatives, decades old and needs modernization.
- A new collective bargaining agreement is currently under negotiation.
- Friction between the administration and the teachers' association was evident to the team.
- The school committee is currently rewriting its policy manual.
- As a participant in the Race to the Top grant program, the district is required to implement a new evaluation system for administrators and instructors during the 2012-2013 school year that is consistent with the new ESE evaluation system.¹⁰
- The School Improvement Plan ends in 2012.
- The district has embarked on an ambitious path to have curriculum, instruction, and assessment become more student-centered.

The district should take advantage of these circumstances to create a unified system of expectations for recruitment and hiring, supervision/evaluation, and training that are linked with each other and aligned with the district's priorities.¹¹ To succeed, change must be purposeful,

¹⁰ In June 2011 the Board of Elementary and Secondary Education (BESE) adopted new educator evaluation regulations to replace the previous ones, at 603 CMR 35.00.

¹¹ The new ESE system presents opportunities to develop and implement systems to ensure that district goals are aligned with administrator goals, as well as to develop and implement professional development for educators that prioritizes educator needs identified through the goal-setting and evaluation process. Another opportunity it presents is more frequent supervisory visits to classrooms. The district can use these opportunities to align its human resource processes with each other and with district priorities.

understood, and built into the district's existing systems of operation. The district should include and consolidate these three previously independent human capital processes in its strategic plan. A transparent, multi-year strategic plan, carefully constructed and thoughtfully implemented, will guide the district over the long term in raising student achievement, with the interconnected human capital processes exerting a continuous influence on teaching and leadership in the district.

Student Support

See second Curriculum and Instruction recommendation above.

Financial and Asset Management

The district school committee should create a facilities subcommittee including additional representatives of its member communities as well as internal stakeholders, and charge this committee with the development of a five-year capital plan that would incorporate the feasibility study's recommendations and projected costs.

The school is 40 years old and has not had any significant infrastructure improvements during this period. The building was designed to accommodate 2400 students (year round) using a curriculum based on individualized instruction. Current enrollment and capacity is approximately 2000 students.

The member communities have not been involved in hiring the architectural firm for the feasibility report at a cost of \$528,000 from the district's "reserve for special purpose account." With the anticipated renovation and the uncertainty of state and local funding, stakeholders should make a unified effort to prepare for the process of working with MSBA to secure the required funding. MSBA has indicated it will fund 80 percent of the project.

The district should obtain preliminary approval for the project from the district towns and the Lowell city council. The school committee should appoint a facilities committee consisting of town and city officials, school committee members, instructors, teachers' association leaders, the administration, school committee advisory members, the school council, and the general public to review the proposed project and the funding and other associated costs already estimated at 50 million dollars. The district should also consider designating a communication/public relation person to provide timely information to the public as the project evolves. The member communities are already experiencing increased costs due to new school buildings and increasing healthcare and other costs. Debt for a new building, and other increasing costs resulting from the renovation, may require additional funds above the communities' current contribution amount, and therefore needs approval for the incurred debt from selectmen, the city council, and town meetings.

Appendix A: Review Team Members

The review of the Greater Lowell Regional Vocational Technical School District was conducted from January 9–12, 2012, by the following team of educators, independent consultants to the Massachusetts Department of Elementary and Secondary Education.

Rena Shea, Leadership and Governance

Alenor Williams, Ed. D., Curriculum and Instruction

Linda L. Greyser, Ed. D., Assessment and Review team coordinator

Tom Johnson, Ed. D., Human Resources and Professional Development

Katherine Lopez Natale, Ed. D., Student Support

Stratos Dukakis, Financial and Asset Management

Appendix B: Review Activities and Site Visit Schedule

District Review Activities

The following activities were conducted as part of the review of the Greater Lowell Regional Vocational Technical School District.

- The review team conducted interviews with the chief financial officers of the city of Lowell and the towns of Dracut, Dunstable, and Tyngsborough.
- The review team conducted interviews with the following members of the Greater Lowell Regional Vocational Technical School District School Committee: chair, vice-chair, secretary, five school committee members, and one former school committee member who had served through calendar year 2011.
- The review team conducted interviews with the following representatives of the Greater Lowell Teachers Organization: president, vice-president, secretary-treasurer, and eight members of the executive board.
- The review team conducted interviews and focus groups with the following representatives from central office administration of the Greater Lowell Regional Vocational Technical School District: superintendent, assistant-superintendent/principal, director of media/professional development and social studies cluster chair, director of plant services, director of special education, school business administrator, cluster chair of technology, director of curriculum and instruction, coordinator of school information/school foundation, Title I director, director of guidance and counseling services, director of technical studies, director of human resources, and director of assessment.
- The review team visited the Greater Lowell Regional Vocational Technical School, the only school in the Greater Lowell Regional Vocational Technical School District:
 - During school visits, the review team conducted interviews with the school principal, instructors, and others including directors, coordinators, cluster chairs, counselors, and managers. The team interviewed 40 academic and technical instructors.
 - The review team conducted 77 classroom visits that included 42 academic classrooms and 35 technical classrooms or shops for grades 9–12.
- The review team analyzed multiple sets of data and reviewed numerous documents before and during the site visit, including:
 - Data on student and school performance, including achievement and growth data and enrollment, graduation, dropout, retention, suspension, and attendance rates.
 - Data on the district's staffing and finances.

- Published educational reports on the district by the Department of Elementary and Secondary Education (ESE), the New England Association of Schools and Colleges (NEASC), and the former Office of Educational Quality and Accountability (EQA).
- District documents such as district and school improvement plans, school committee policies, curriculum documents, summaries of student assessments, job descriptions, collective bargaining agreements, evaluation tools for staff, handbooks for students/families and faculty, school schedules, and the district's end-of-the-year financial reports.
- All completed program and administrator evaluations, and a random selection of completed teacher evaluations.

Site Visit Schedule

The following is the schedule for the on-site portion of the district review of the Greater Lowell Regional Vocational Technical School District, conducted from January 9–12, 2012.

Monday	Tuesday	Wednesday	Thursday
January 9 Orientation with district leaders and principal and assistant principal; interviews with district and school staff and principal; review of documents and personnel files; interview with teachers' organization officers and executive board.	January 10 Interviews with district and school staff, principal and assistant principal; school visit; classroom observations; review of personnel files; teacher focus group; focus group with parents; meeting with teachers' organization officers; meeting with city and town financial personnel.	January 11 Interviews with district and school leaders and instructors; school visit; classroom observations; school committee interviews.	January 12 School visit and classroom observations; meeting with superintendent and assistant superintendent; meeting with district and school leaders; follow-up interviews; team meeting; emerging themes meeting with district and school leaders.

Appendix C: Student Performance Data¹² from 2009-2011

**Table C1: Greater Lowell RVTSD and State
Proficiency Rates, Median Student Growth Percentiles (SGPs),
and Composite Performance Index (CPI)
2009–2011 English Language Arts**

	2009			2010			2011		
Grade	Percent Proficient	Median SGP	CPI	Percent Proficient	Median SGP	CPI	Percent Proficient	Median SGP	CPI
Grade 10—District	65	44	87.3	51	38	81.7	68	44	89.0
Grade 10—State	81	50	92.2	78	50	91.9	84	50	93.9
Note: The number of students included in the calculation of proficiency rate differs from the number of students included in the calculation of median SGP. Source: School/District Profiles on ESE website									

**Table C2: Greater Lowell RVTSD and State
Proficiency Rates, Median Student Growth Percentiles (SGPs),
and Composite Performance Index (CPI)
2009–2011 Mathematics**

	2009			2010			2011		
Grade	Percent Advanced/Proficient	Median SGP	CPI	Percent Advanced/Proficient	Median SGP	CPI	Percent Advanced/Proficient	Median SGP	CPI
Grade 10—District	60	47	83.9	55	45	79.9	59	50	82.7
Grade 10—State	75	50	88.1	75	50	88.8	77	50	89.4
Note: The number of students included in the calculation of proficiency rate differs from the number of students included in the calculation of median SGP. Source: School/District Profiles on ESE website									

¹² Data derived from ESE’s website, ESE’s Education Data Warehouse, or other ESE sources. In discussions of student performance, the school is compared to the state’s grade 10 performance data. Since grade 10 performs higher across the state than other grades, comparing a high school district to the state’s overall figures can be misleading.

**Table C3: Greater Lowell RVTSD and State Grade 10
Proficiency Rates, Composite Performance Index (CPI),
and Median Student Growth Percentiles (SGPs)
for Selected Subgroups
2011 English Language Arts**

		Greater Lowell RVTSD			State		
	<i>Number of Students Included</i>	Percent Proficient	CPI	<i>Median SGP</i>	Percent Proficient	CPI	<i>Median SGP</i>
All Students	519	68	89	44	84	87.2	50
African-American/Black	18	61	81.9	---	69	77.4	47
Asian	87	62	85.9	39	87	90.2	59
Hispanic/Latino	125	68	87.6	45	64	74.2	46
White	274	71	91.1	45	89	90.9	51
ELL	22	45	75	64	28	59.4	48
FELL	69	49	79.7	39	65	81.7	54
Special Education	109	28	72.9	50	49	68.3	42
Low-Income	302	62	85.7	43	69	77.1	46
<p>Note: 1. Numbers of students included are the numbers of district students included for the purpose of calculating the CPI. Numbers included for the calculation of the median SGP are different.</p> <p>2. Median SGP is calculated for grades 4-8 and 10 and is only reported for groups of 20 or more students. CPI is only reported for groups of 10 or more students.</p> <p>3. "ELL" students are English language learners.</p> <p>4. "FELL" students are former ELLs.</p> <p>Source: School/District Profiles on ESE website</p>							

**Table C4: Greater Lowell RVTSD and State Grade 10
Proficiency Rates, Composite Performance Index (CPI),
and Median Student Growth Percentiles (SGPs)
for Selected Subgroups
2011 Mathematics**

		Greater Lowell RVTSD			State		
	<i>Number of Students Included</i>	Percent Proficient	CPI	<i>Median SGP</i>	Percent Proficient	CPI	<i>Median SGP</i>
All Students	513	59	82.7	50	77	79.9	50
African- American/Black	18	45	79.2	---	56	65	47
Asian	83	56	81	48	88	89.5	64
Hispanic/Latino	124	52	79	52	52	64.4	48
White	273	63	85.1	52	83	84.3	50
ELL	22	46	72.7	36	35	56.3	52
FELL	68	36	71.3	48	57	75.1	53
Special Education	109	32	67.2	60	39	57.7	43
Low-Income	297	55	79.9	53	58	67.3	46
<p>Note: 1. Numbers of students included are the numbers of district students included for the purpose of calculating the CPI. Numbers included for the calculation of the median SGP are different.</p> <p>2. Median SGP is calculated for grades 4-8 and 10 and is only reported for groups of 20 or more students. CPI is only reported for groups of 10 or more students.</p> <p>3. "ELL" students are English language learners.</p> <p>4. "FELL" students are former ELLs.</p> <p>Source: School/District Profiles on ESE website</p>							

**Table C5: Proficiency Rates and Median SGPs
Greater Lowell RVTSD
and Comparison Districts
ELA and Mathematics 2011**

District	Percent Proficient or Above		Median Student Growth Percentiles	
	ELA	Mathematics	ELA	Mathematics
Assabet Valley RVT	82	77	51	56
Blue Hills RVT	89	78	50	55
Cape Cod RVT	84	72	49	57
Greater Lawrence RVT	65	48	51	57
Greater Lowell RVT	68	59	44	50
Northampton-Smith VAS	72	52	47.5	48
Northeast Metropolitan RVT	78	70	51	61
South Middlesex RVT	70	62	50	55
Southeastern Regional RVT	69	65	33	42
Southern Worcester County RVT	84	74	59	63
Whittier RVT	88	81	58	60
Source: ESE's Education Data Warehouse				

Appendix D: Finding and Recommendation Statements

Finding Statements:

Student Performance

1. The percentage of students in Greater Lowell who were proficient or advanced in ELA was higher in 2011 than in 2009 although the district had a substantial drop in performance in 2010; gains were likely due to the district's focus on inclusion, literacy and extra help.
2. From 2009 to 2011, Greater Lowell's overall mathematics MCAS proficiency rate showed no improvement and lagged substantially behind those of the state and most vocational-technical schools in a comparison group. The math proficiency rate for students with disabilities, however, improved in 2011 by 5 percentage points over 2009 and 9 percentage points over 2010.

Leadership and Governance

3. The leadership team had set in motion a number of initiatives aimed at increasing achievement for all students, which, for the most part, were not widely understood or broadly implemented across the district.
4. The district did not have an updated strategic plan for long-term planning.
5. At the time of the review the school committee had not evaluated the current superintendent, was not engaged in long-range planning, and had not taken an active role in budget development.

Curriculum and Instruction

6. Administrative leaders have established a comprehensive process to align and improve curriculum documents and to improve the rigor of the academic program.
7. Although there was an overall positive classroom climate reflecting order and mutual respect between staff and students, observed instruction did not yet reflect the vision or expectations described by the district's administrative leaders with respect to high expectations, higher-order thinking skills, clearly communicated learning objectives, and differentiated instruction.

Assessment

8. Greater Lowell is developing and implementing a more balanced and data-based assessment system. At the time of the review application of the new assessment system was inconsistent and uneven across academic and technical programs.
9. Greater Lowell increasingly relies on the collection, analysis, and use of data to inform decision making, but there were missed opportunities in the district's identification, collection, and use of data both in improving instruction and in planning, budget development, and policy.

Human Resources and Professional Development

10. Several important components of the district's human resources system operate relatively independently; this absence of connection may weaken the district's efforts to recruit and hire qualified and effective professional staff who will help the district accomplish its priorities for improving student achievement..
11. Negotiations for a successor collective bargaining agreement with teachers were in mediation at the time of the review, a year and a half after the expiration of the old agreement. Concern about this issue was clear among all levels, especially with some faculty members wearing pins supporting the teachers' association and some dressing all in black. Tensions between the administration and the association ran deep.

Student Support

12. The district has created systems to support students' behavioral, social, and emotional needs.
13. The district has many academic supports for its high-needs population; however, the teaching staff, particularly on the academic side, do not routinely employ instructional strategies that give all students access to the complete curriculum and encourage development of 21st century skills and skills emphasized in Common Core standards.

Financial and Asset Management

14. The finances of the district are adequate to support existing programs; the budget process within the district is basically transparent and includes consultation with various members of the school community, including instructors, but the budget is not developed in the context of a strategic plan that accounts for long-term needs.
15. The school facility needs an upgrade and possible expansion.

Recommendation Statements:

Leadership and Governance

1. The leadership team and the school committee should collaborate to develop a multiyear strategic plan for the district.
2. The leadership team should review all of the recent improvement initiatives to ensure that relevant stakeholders understand them; it should also assess the need for additional professional development to enable all professional staff to meet school improvement goals.
3. The district should take steps to develop a more productive working relationship between staff and the teachers' association.

Curriculum and Instruction

4. To help instructors communicate high expectations and clear learning objectives, engage students in higher- order thinking and use differentiated and tiered instruction to meet students' diverse needs, the district should

provide more opportunities for instructors to participate in relevant professional development and ongoing small-group discussions,

develop rubrics for successful instructional practices, and

develop a protocol for walkthroughs that will be more useful tools in improving instruction.
5. The district should ensure that all staff members understand the need to adopt instructional strategies that meet the diverse needs of the student population. It is recommended that the school offer substantial professional development in the area of differentiated and sheltered English immersion instruction and hold staff accountable for implementing these strategies in all classrooms.

Assessment

6. The district should continue to develop a comprehensive and balanced assessment system and build instructors' capacity to align assessments to teaching and learning goals. It should also continue to expand and deepen how it defines, collects, analyzes, and uses data in decision-making.

Human Resources and Professional Development

7. It is recommended that the district add a human capital component to the strategic plan recommended above, linking recruitment and hiring, supervision/evaluation, and professional development with each other and with district priorities.

Student Support

8. See second Curriculum and Instruction recommendation above.

Financial and Asset Management

9. The district school committee should create a facilities subcommittee including additional representatives of its member communities as well as internal stakeholders, and charge this committee with the development of a five-year capital plan that would incorporate the feasibility study's recommendations and projected costs.