

East Windsor Public Schools

Longitudinal Study of Student Test Data

East Windsor Board of Education

Timothy S. Howes
Superintendent of Schools
October 30, 2009

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The contents of this briefing are arranged as follows:

- Introduction 3
- Sixth Grade Cohort Trends, Overview and Recommendations4
- Sixth Grade Cohort Mathematics Score Trends.....5
- Sixth Grade Cohort Reading Score Trends.....6
- Sixth Grade Cohort Writing Score Trends.....7
- Ninth Grade Cohort Trends, Overview and Recommendations.....8
- Ninth Grade Cohort Mathematics Score Trends.....9
- Ninth Grade Cohort Reading Score Trends.....10
- Ninth Grade Cohort Writing Score Trends.....11
- Eleventh Grade Cohort Trends, Overview and Recommendations.....12
- Eleventh Grade Cohort Mathematics Score Trends.....13
- Eleventh Grade Cohort Reading Score Trends.....14
- Eleventh Grade Cohort Writing Score Trends.....15
- District Performance Goals.....16

Introduction.

This study has been performed to determine the efficacy of instruction of the East Windsor Public Schools for those students who have been able to benefit from positive, continued instruction for an extended period of time. It is therefore necessary that some student test scores have been eliminated from the averages presented herein. The averages reported here are for students who have been a member of the East Windsor Schools community and have taken standardized assessments with their peers for at least the past three years, and who are still enrolled in our public schools.

It is also important to note the importance of demographic information. Students are reported in subgroups, and with one exception, students may be reported in multiple subgroups (i.e. one student may be reported in any or all of the Special Education, Minority, and Low Income subgroups). Students who fall into no other subgroup are reported in the Non-Disadvantaged subgroup.

It should be noted that the Minority subgroup is comprised of students who do not describe themselves as Asian or Caucasian. The Minority subgroup exists to monitor the achievement gap between students from an Asian or Caucasian background and students from other ethnic or racial backgrounds, and is considered a “disadvantage” pursuant to United States Department of Education guidelines providing for the reporting of affirmative action and desegregation information. Certainly, the disadvantage described is only a statistical one and fortunately is negligible in East Windsor’s scores.

Similarly, it should be noted that the “Low Income” designation originates from information provided by either the parent/guardian or the State of Connecticut, and is derived by students’ eligibility for free or reduced meals.

Finally, a word on CMT and CAPT tests, and the accommodations available for each:

MAS is the Modified Assessment System and is administered to students whose disabilities preclude them from attaining grade level goals as presented on a standard CMT or CAPT test. MAS tests are distributed to students with mild disabilities. MAS tests serve to determine areas where students are functionally competent and areas in which students need additional support to become functionally competent.

Skills Checklist tests are used to assess students with the most severe disabilities. These students would ordinarily be exempted from any CMT or CAPT testing. Skills Checklist tests measure students’ abilities in life skills, and focus on practical applications of the subject areas instead of abstract concepts. They are not tests, per se, but are assessments of the ability level of the student as determined by the teacher. In East Windsor, all of our Special Education teachers are certified to complete Skills Checklists assessments and our scoring is done in-house, with results reported directly to the State Department of Education.

Accommodations may be made available to students taking the regular or MAS CMT or CAPT test(s). Accommodations may include a reader to read questions, answers, instructions, etc.; a bubbler (to fill in multiple-choice bubbles if a student’s disability limits mobility or fine motor skills), and so on. The availability of accommodations vary by each test. If the student qualifies for the Skills Checklist, accommodations are not noted on the test form, but the student may use any reasonable learning accommodations that have been designated on the student’s IEP.

A note on reading the charts:

Aggregate Average is the average score of all students in the cohort, regardless of their representation in other subgroups.

Class Average is the average of **all** students in the grade level who took the test, regardless of their representation in other subgroups *or whether they were a member of the cohort* (for example, a student who was present for only one year of the four years studied will appear in the Class Average in the year they took the test, but will *not* appear in *any* of the other data, *even if* they were a member of another subgroup).

Special Education includes students receiving Special Education services under an IEP, regardless of the test taken or accommodations given or whether the student is also represented in another subgroup.

Low Income includes students who receive free or reduced meals, regardless of their representation in another subgroup.

Minority includes students whose parents have identified them as African-American, Hispanic/Latin, Pacific Islander/Alaskan Native, or South American Aboriginal. This subgroup may include students represented in other subgroups. This subgroup does **not** include students whose parents have identified them as Asian or Caucasian.

Non-Disadvantaged is a chart abbreviation for Non-Disadvantaged Non-Minority and includes students who are a member of the cohort, and who are not identified in any subgroups.

Significance is a statistical difference greater than one standard deviation (in this case, .225 of one ability level in each subtest).

Grade 6 Cohort.

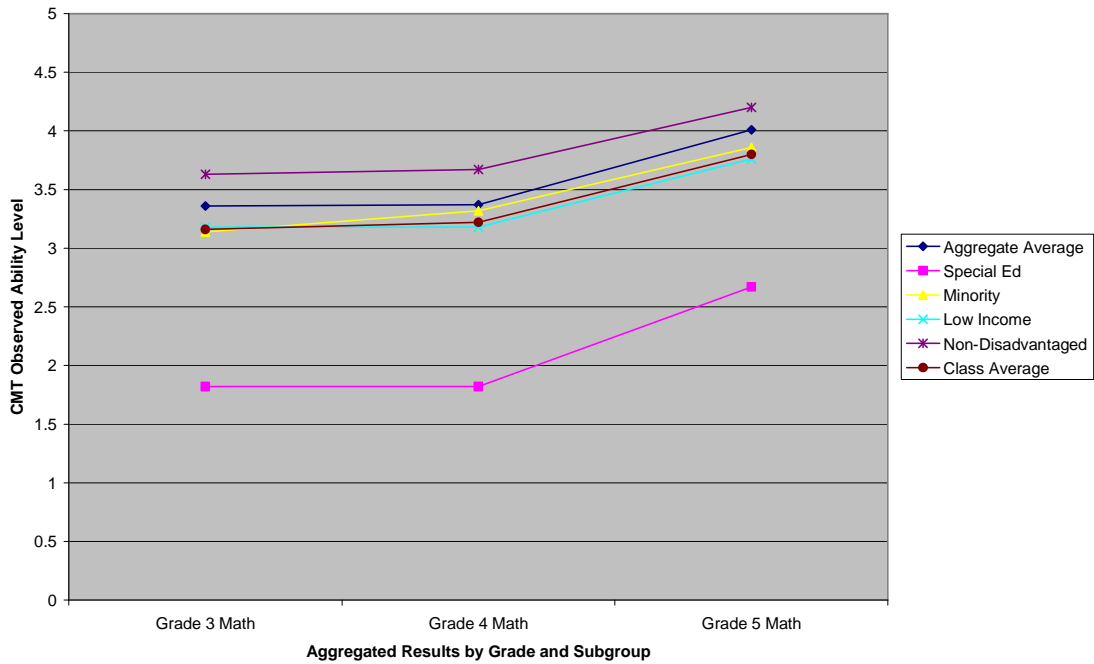
All students in the Grade 6 cohort have been in the East Windsor Public Schools for a minimum of three school years preceding the current year, and are currently enrolled. There are ninety-three students in the cohort. Of these students, 23.7% are minorities; 7.5% are low-income; and 12.9% receive some form of Special Education services.

In Mathematics, from Grade 3 to Grade 5, impressive progress has been made. In Grade 3, 20 students from the cohort scored at Basic or Below Basic (with 12 scoring in the Below Basic range alone). An additional eighteen students scored in the Proficient range, with only 58.1% scoring at or above goal and 69.9% scoring at or above proficiency. By Grade 5, this had improved to only one student in the cohort scoring at Below Basic and an additional two students scoring at Basic level. 70% of students scored at or above goal, with a truly impressive 84.9% of students in the cohort scoring at or above proficiency. This was a jump of 12% and 15%, respectively, from results of only two years earlier.

In Reading, results were mixed. However, the trendlines remain positive, with an overall increase in the number of students falling into the Proficiency and Goal ranges (from 48.4% of the cohort meeting Goal requirements and 66.7% meeting Proficiency requirements in Grade 3, to 59.1% meeting Goal and 68% meeting Proficiency in Grade 5).

Writing scores showed decidedly mixed results, with an improvement in the lowest quartile, but regression at the highest. Students performing at a below-basic level fell from nine to seven; however the number of students performing below goal level rose slightly, and students performing at/above goal also fell.

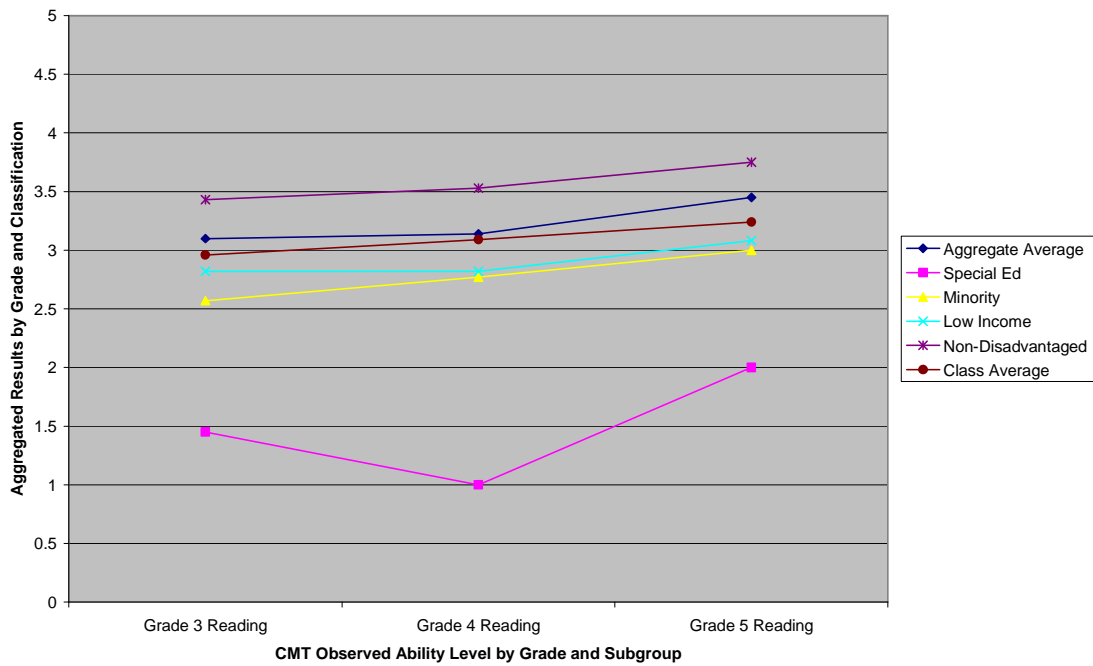
Grade 6 Cohort CMT Math Scores



Student CMT math scores rose for all subgroups over the two year period. While most were flat in the first year, minority students surpassed low income students by year two and made one of the highest gains overall. Special Education students, on average, made significant gains, from below basic into the upper basic range. The aggregate average, meanwhile, rose from the proficient range for the cohort to the goal standard within two years.

Students in minority and low-income groups performed roughly as well as all students (the “class average”) in all years, while non-disadvantaged students as well as the cohort average were significantly higher.

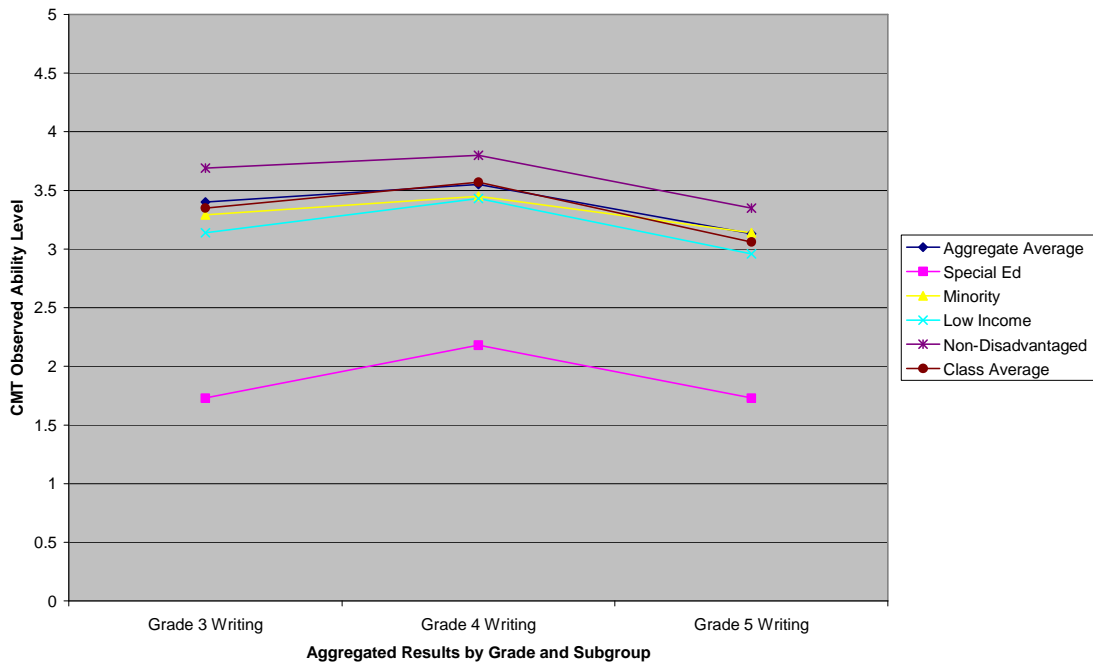
Grade 6 Cohort CMT Reading Scores



The sixth grade cohort’s reading scores showed gains in all areas over the two year period. Although Special Education students showed fluctuations, it should be noted that the subgroup size for Special Education was reduced in this area due to a number of students taking MAS or Skills Checklist tests. The aggregate improved by nearly one-half point, from just above the Proficient range to the middle of the Proficient area. (Please see Page 3 for an overview of the MAS/Skills Checklist testing guidelines.)

Students in minority and low-income groups performed slightly below the level attained by all students (the “class average”) in all years, while non-disadvantaged students as well as the cohort average were significantly higher. The class average, however, remained relatively flat as compared to significant gains in all other groups.

Grade 6 Cohort CMT Writing Scores



Unfortunately, CMT writing scores suffered a downturn over the last two years. However, in the minority and low-income subgroups, the regressions were not statistically significant; in Special Education, already a very small subgroup, a small number of students who previously took MAS/Checklist tests were reintroduced to the testing pool. The aggregate average remains in the Proficient range for this group. (Again, please see Page 3 for an overview of MAS/Skills Checklist assessments.)

In Writing, the Class Average was near the Aggregate Average, and; both were well below the Non-Disadvantaged subgroup, and on par with Low Income and Minority subgroups.

Grade 9 Cohort.

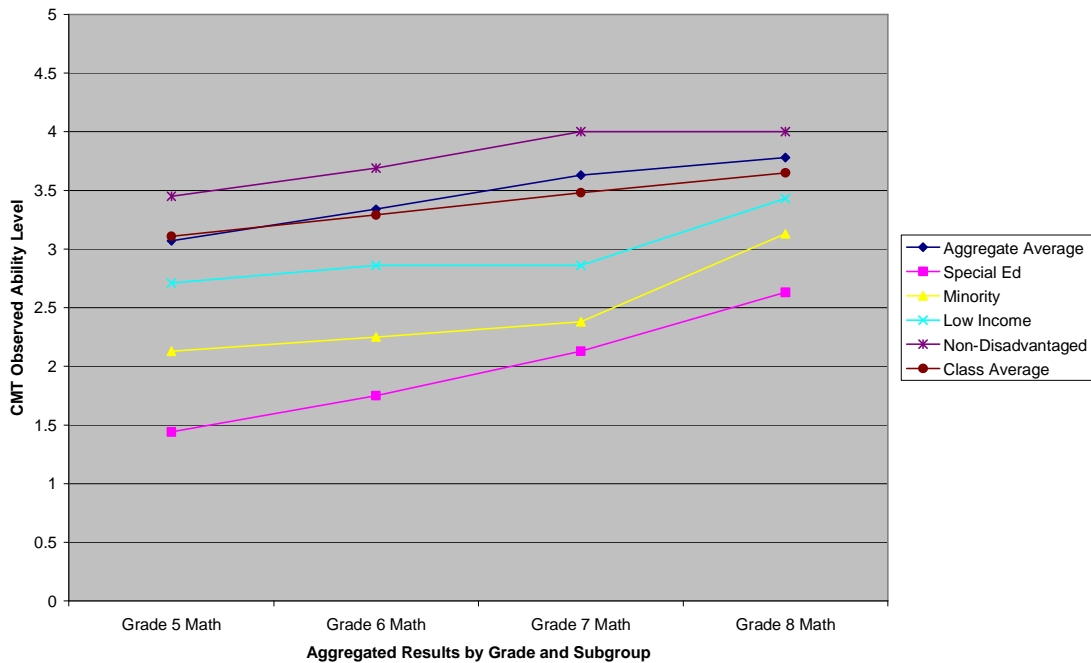
The ninth grade cohort is comprised of students who have been in East Windsor Schools since the fifth grade; who have taken CMT tests in our district for the past four years; and who are currently enrolled in our district. There are fifty-nine students in the cohort. Of these, 15.3% are receiving special education services; 13.6% are from a minority background; and 11.9% are low income.

In Mathematics, 62.7% of fifth graders scored at a Proficient or better level; 42.4% were at or above goal. This rose to 76.3% at or above Proficient, and 61% at or above goal, within three years – an impressive performance.

Reading scores were even more impressive, with 52.5% of students at or above proficient level in fifth grade and 76.3% of students at or above proficiency three years later. The percentage of students at goal level or higher also increased during this time, from 39% to 52.5% at or above goal. The number of students exceeding goal level doubled, from 5.1% to 10.2%.

Writing scores were mixed, with a limited increase in the lower quartile but the number of students exceeding goal nearly quadrupling. The three year results were promising, with 67.8% of students at or above proficiency and 44.1% of students at or above goal in grade five increasing to 76.3% of students at or above proficiency and 61% of students at or above goal in grade eight.

Grade 9 Cohort CMT Math Scores

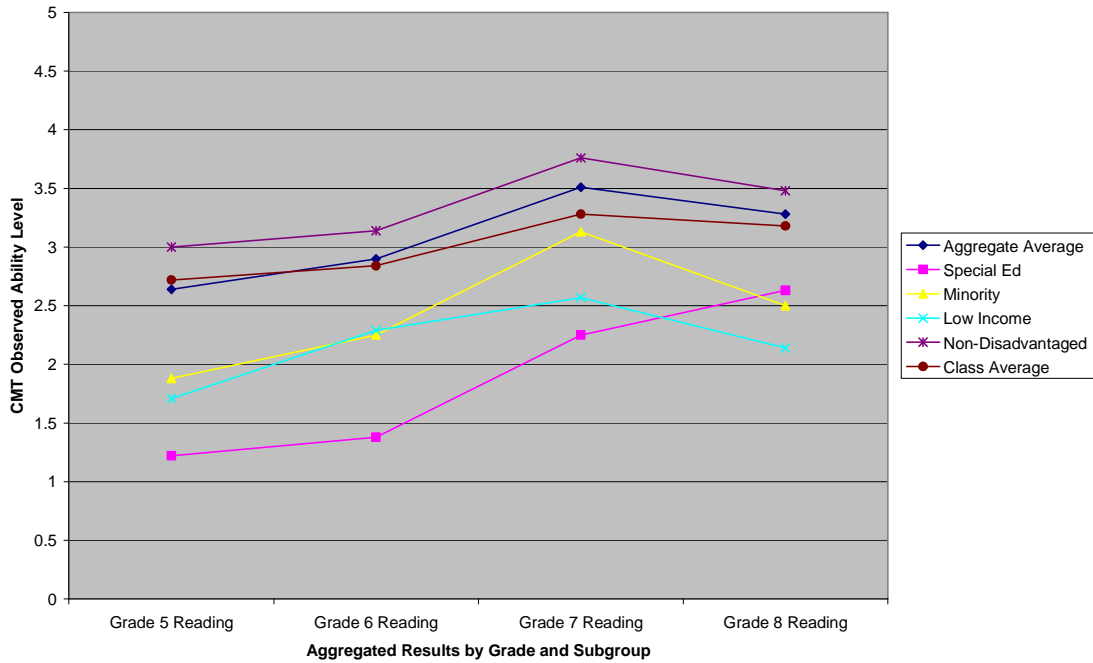


As indicated in the chart above, student performance in Mathematics has been steadily increasing. Attributing to the success of our students are the partnerships created with math consultants as they have facilitated curriculum alignment and revision. Additionally, students in grade 8 for 2008-2009 performing at the basic or below-basic levels and demonstrating limited proficiency in the classroom benefited from targeted supports. Students performing at the high end of the proficiency range into the goal levels maintained or improved their scores over the period by utilizing knowledge learned from both language arts and mathematics teachers.

Of particular note, our Aggregate Average score is on the high proficient range, and our Special Education and Minority subgroups have increased their performance in mathematics by at least one full level over the past four years – the equivalent of advancing by five full grade levels in four years’ time.

While the Class Average score was indiscernible from the Aggregate Average in the Grade 5 CAPT, there is a difference of roughly one-fourth ability level between the Class Average and Aggregate Average after four years.

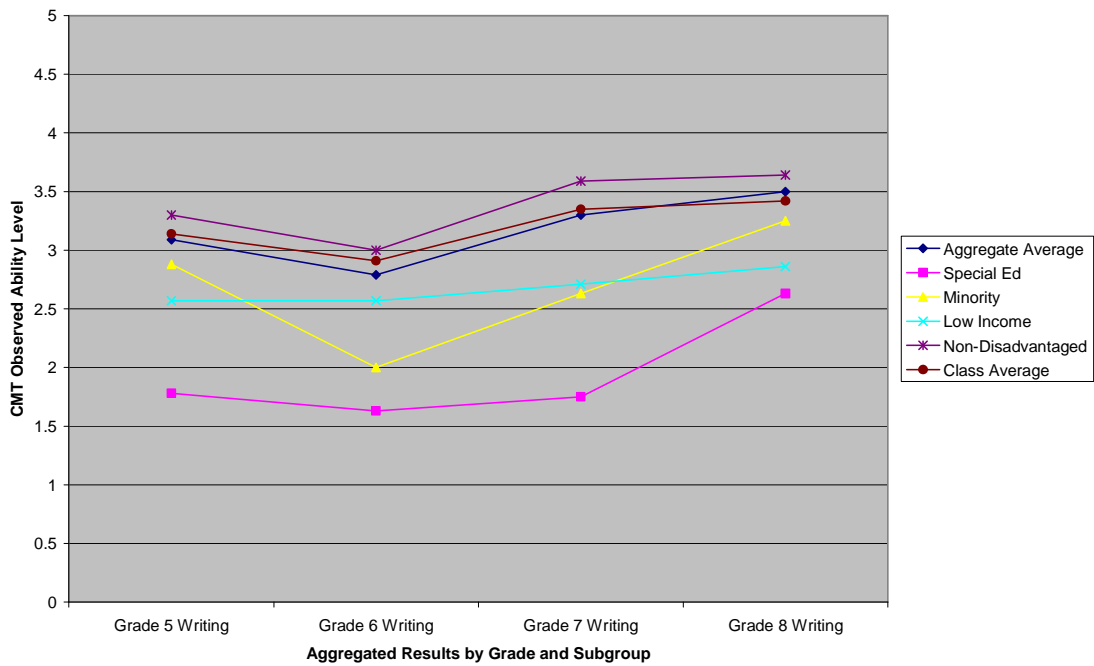
Grade 9 Cohort CMT Reading Scores



Student performance on the Reading subtest increased overall for the four years studied in the cohort. Students received advanced tutoring in their eighth grade year if need was demonstrated in the classroom and on the previous year’s CMT results. Although minor declines in all subgroups except Special Education were observed in the Grade 8 reading tests, the four-year average shows marked improvement for all subgroups. Special Education, meanwhile, has jumped from an average of below basic to the high end of the basic scale (an increase of nearly two levels).

While the Class Average actually exceeded the Aggregate Average in Grade 5, the cohort benefited from continuity of curriculum and is now one-quarter ability level higher, on average, than the Class Average in grade eight. The gap was reversed in Grade 6 and has widened since.

Grade 9 Cohort CMT Writing Scores



Student performance in Writing has been trending upward since our current ninth graders were in Grade 6 (during the 2006-07 school year). Our Average Aggregate scores are well within the Proficient range, and students in the lower end of the achievement range have benefited from the same interventions and curriculum alignments that have boosted scores in Mathematics and Reading.

The non-cohort Class Average was higher than the Cohort Average in three of the four years studied. However, during the last year of tests the Cohort Average exceeded the Class Average, and at no point was the Class Average significantly higher than the Cohort Average.

Grade 11 Cohort.

While the CAPT test battery is given in grade 10 and reported as a high school test result, the CAPT test truly measures the performance of the students based on their Kindergarten through Grade 10 education – not just the preparation of the student in the spring of the 10th grade year. The curriculum and skills covered on the CAPT are too broad to be covered in a single year – for example, the Science CAPT covers such a broad range of subject material – life science, physical science and earth science – that it takes three years, between grades 8 and 10, to cover all the material tested on the CAPT. Therefore, it is important to look at the CAPT results disaggregated by some measure of the preparation level of the student upon entering high school.

All students in the Grade 11 Cohort have attended East Windsor Schools for a minimum of four years; have taken their Grade 7 and Grade 8 CMT tests and their CAPT tests in East Windsor; and are presently enrolled here. There are fifty-nine students in the cohort, and of these, 8.5% are receiving special education services; 16.9% are members of a non-Asian minority group; and 20.3% are low income.

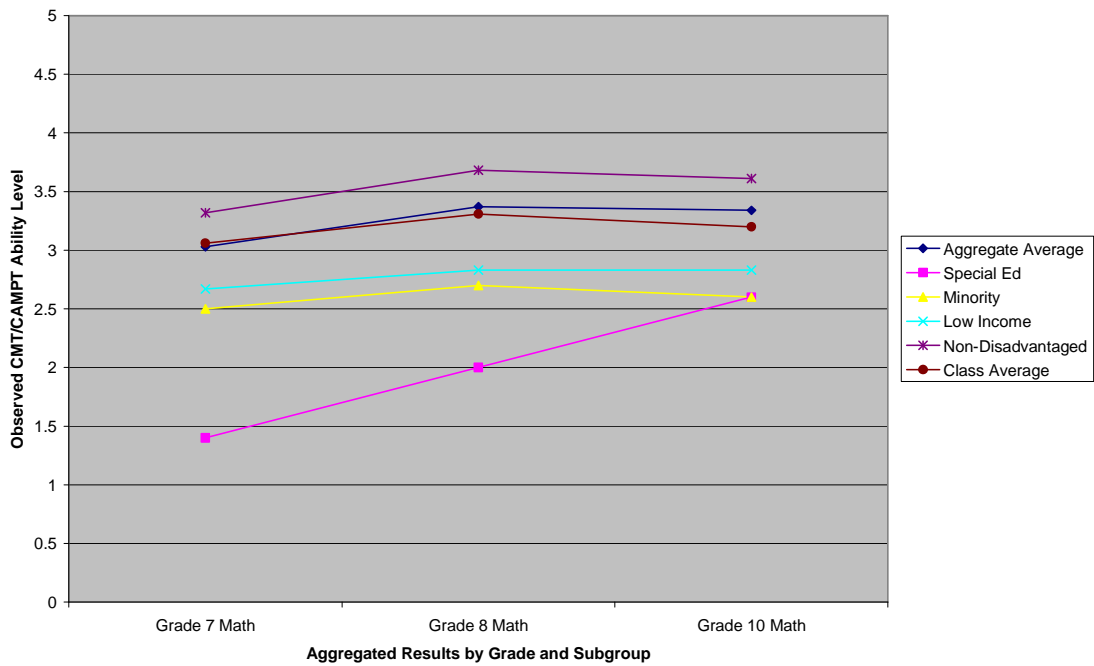
Since CAPT scores and CMT scores use different criteria for goal-level scores, the two tests are not directly comparable. However, there were improvements across the board in year-over CMT test results in all subject areas and all subgroups.

In Mathematics, the year-over improvements included a marked increase in the number and percentage of students at or above proficiency, from 69.5% to 81.4%; and in the number and percentage of students at or above goal, from 39% to 50.8%.

In Reading, the results were mirrored; student performance rose from 66.1% at or above proficiency to 81.4% the year following. Students at or above goal rose from 55.9% to 74.6% on a year-over basis.

Finally, in Writing, the number of students at or above proficiency rose from 66.1% in grade 7 to 89.8% in grade 8.

Grade 11 CMT/CAPT Math Scores

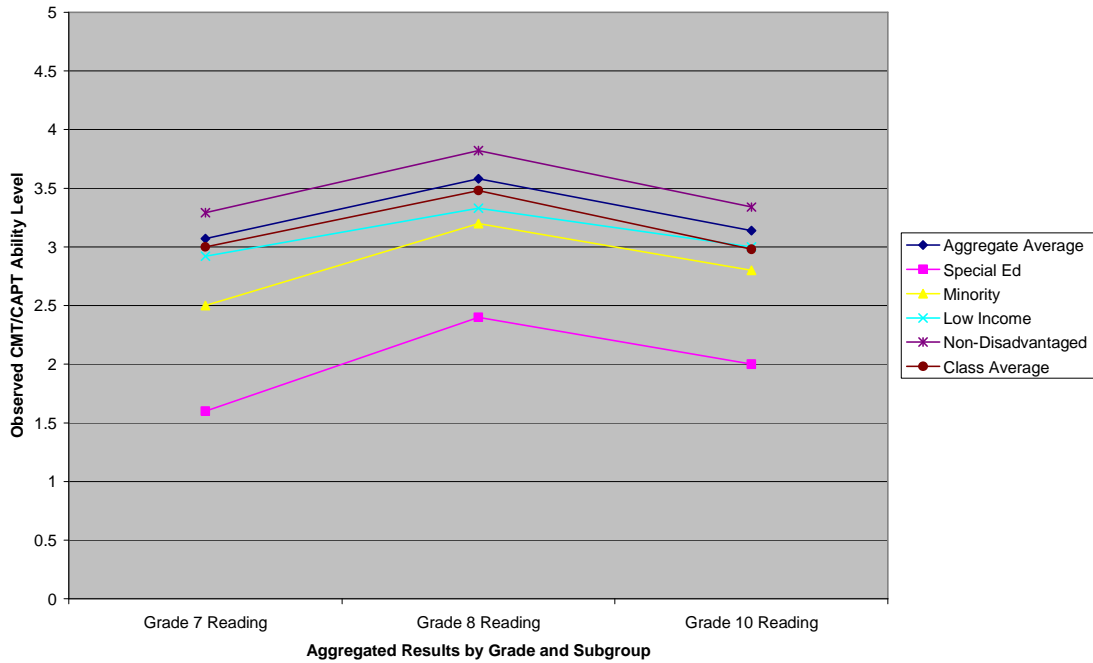


Students showed a moderate improvement from grade 7 to grade 8 in overall CMT scores. From grade 8 to grade 10, scores are not directly comparable, as noted above; however, students maintained progress overall, with any declines in each subgroup falling well within the statistical margin of error (in this graph, approximately 8%, or .23 of one level). Most notably, Special Education students are performing significantly* better now than in the last four years, with many students falling into the Proficient and Goal ranges and the overall average just below Proficiency.

The Class Average has continued to fall against the Cohort Average, and declined more sharply from Grade 8 to Grade 10 than did the Cohort Average.

* Significance indicates an increase of at least one half-level in the time period studied; in this case, the Special Education subgroup has achieved nearly three times the threshold level of significance (~1.2 level increase).

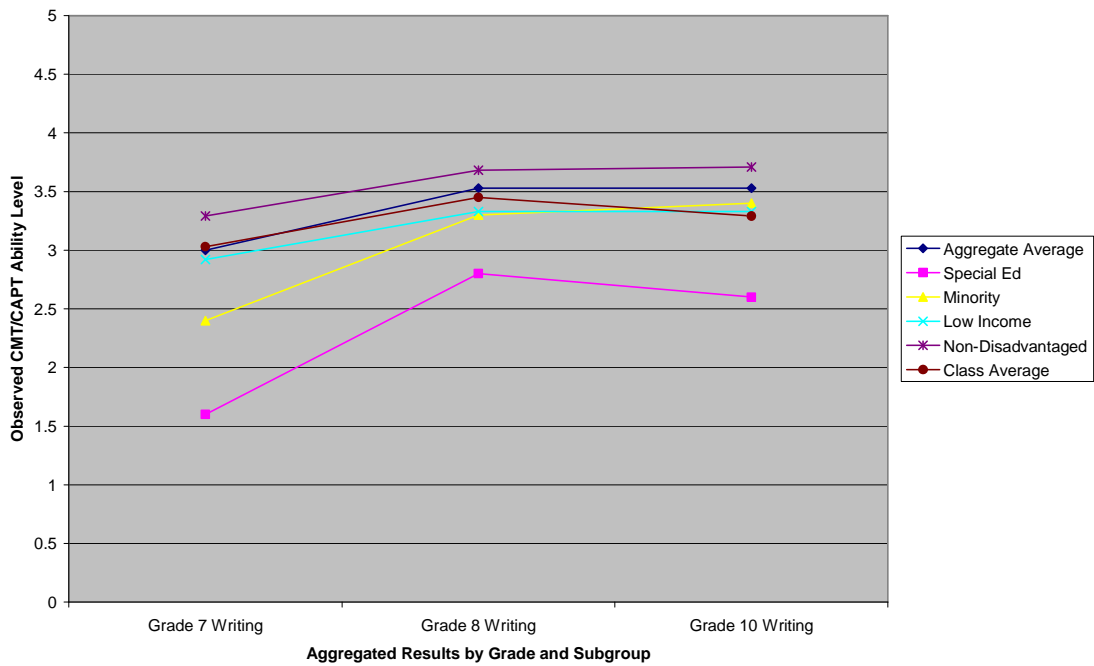
Grade 11 Cohort CMT/CAPT Reading Scores



Student performance increased in all subgroups (by as much as one full level in the case of Special Education students). Overall, student achievement on eighth-grade CMTs improved by one-half level as compared to the grade 7 results. 10th-grade CAPT score achievement levels were roughly equivalent to the grade 7 CMT achievement benchmarks, with the exception of Special Education and Minority student subgroups, which remained above the grade 7 levels.

As with the Mathematics scores, the Class Average score has declined steeply from Grade 8 to Grade 10 at a higher rate than the Cohort Average. While these scores are not directly comparable, the steeper rate of descent indicates that students who are not a member of the cohort have a greater need of catch-up tutoring.

Grade 11 Cohort CMT/CAPT Writing Scores



Grade 8 CMT scores in the Writing subtest showed significant improvement over grade 7 results, with students advancing from the low range to the middle range of the Proficiency level, on average. Special Education students, meanwhile, advanced from Below Basic to near proficient levels. CAPT ability levels were roughly equivalent to grade 8 achievement on CMTs for all subgroups except Special Education, which suffered a slight decline. (However, the Special Education decline can be attributed to the inclusion of several students who had previously taken a Skills Checklist instead of a standard CMT, and who were mainstreamed into CAPT testing.)

Grade 10 Class Average results showed one of only two declines, the other being in the Special Education subgroup. Other subgroups, as well as the Cohort Average, maintained or increased their ability levels during this time.

District Performance Goals

As indicated in the District Strategic Plan binder, each school has identified the percentage of students they want to support and move from performance levels 1, 2 & 3.

To support this goal, each school has planned to build team capacity in order to collaboratively monitor student progress and develop instructional practices to support each student. Additional professional development opportunities will be provided to support teachers in the data team process and implementing effective teaching strategies. To continually monitor progress, collaborative teams will continue to develop formative and summative assessments modeled after the CMT and CAPT to support students in mastery the academic language and tested strands.

Teachers will also collaboratively create performance tasks that will assess the students' application of multiple objectives. Using inquiry based learning and self-directed activities, students will build stamina and use higher level thinking in order to be successful in the given task.

Ultimately, teachers will use all data collected from various resources in order to make informed decisions about their planning, instruction and assessment, as these decisions directly impact student achievement.