

Preliminary Analysis of MCAS Growth Model Data for the Junior High School

The Massachusetts Department of Elementary & Secondary Education (DESE) released Growth Model data to the general public on October 27, 2009. The Model produces a Student Growth Percentage (SGP) for each student. DESE released Model data by test (English Language Arts (ELA) and Mathematics) by grade, by school, by subgroup, and by district provided there are at least 20 students in the group. A group's SGP score of 65 means that 65% of students with a similar test score in prior years scored below the group in the most recent test. SGP measures a student's progress in comparison with other students with similar scores. In order for a group (say a school) to excel its students must do better than similar students. DESE publications suggest that a SGP of 40-60 is average performance with SGP scores higher or lower indicating superior or inferior performance.

R. J. Grey Special Education Student Performance

- Special education students' progress (SGP) at R. J. Grey was at or below the state average in both 7th and 8th grade ELA and Math.
- Math (7th grade) and ELA (8th grade) special education students progress was in the bottom 15% in the state (151 and 156 out of 176 and 178 districts, respectively).
- A-B's special education subgroup showed the lowest growth in both grades and both subjects in comparison with a four-district peer group (Concord, Lexington, and Westford districts).
- A-B's special education subgroup achievement scores (CPI, % Proficient or better) are substantially better than the state average.
- A-B's special education subgroup's achievement scores are lower than its peer group in all grades and subjects (except 7th grade Math vs. Concord).
- School districts with special education subgroup SGP scores similar to A-B's junior high school scores are demographically quite different from school districts with similar achievement rankings measuring MCAS proficiency.
- Two school districts – Lexington and Marblehead – demonstrated high growth in the special education subgroup in three of the four junior high tests (ELA and Math, 7th and 8th grade) by ranking in the Top 25 districts. The Belmont, Sudbury, Wayland, Westford, and 18 other districts achieved a Top 25 ranking in two tests.

See the tables below for specific details.

Special Education Subgroup

STUDENT GROWTH PERCENTILE

Acton Score Higher (Lower) Than:

<u>Grade</u>	<u>Subject</u>	<u>A-B Score</u>	<u>Concord</u>	<u>Lexington</u>	<u>Westford</u>	<u>State</u>
7	ELA	43.0	-3.5	-9.0	-26.0	2.0
7	MATH	32.0	-24.0	-32.0	-28.5	-11.0
8	ELA	30.0	-12.0	-36.0	-38.0	-13.0
8	MATH	42.0	-5.5	-26.0	-11.0	-3.0

Special Education Subgroup

CPI SCORE

Acton Score Higher (Lower) Than:

<u>Grade</u>	<u>Subject</u>	<u>A-B Score</u>	<u>Concord</u>	<u>Lexington</u>	<u>Westford</u>	<u>State</u>
7	ELA	81.3	-1.3	-7.7	-9.4	12.3
7	MATH	59.5	1.2	-16.7	-8.6	10.2
8	ELA	83.3	-7.0	-9.7	-10.8	9.7
8	MATH	64.4	-5.9	-17.2	-10.1	17.0

Special Education Subgroup

% PROFICIENT OR BETTER

Acton Score Higher (Lower) Than:

<u>Grade</u>	<u>Subject</u>	<u>A-B Score</u>	<u>Concord</u>	<u>Lexington</u>	<u>Westford</u>	<u>State</u>
7	ELA	58.0	-9.0	-14.0	-9.0	30.0
7	MATH	27.0	3.0	-23.0	-6.0	14.0
8	ELA	64.0	-13.0	-15.0	-12.0	24.0
8	MATH	33.0	-9.0	-20.0	-4.0	21.0

**Student Growth Percentage - Ranked vs. Other Districts
Special Education Subgroup (176-180 reporting districts)**

ENGLISH LANGUAGE ARTS

	7th Grade			8th Grade		
	<u>Score</u>	<u>Rank</u>	<u>Percentile</u>	<u>Score</u>	<u>Rank</u>	<u>Percentile</u>
A-B	43.0	85	0.53	30.0	156	0.13
Concord	46.5	74	0.59	42.0	98	0.45
Lexington	52.0	51	0.72	66.0	5	0.97
Westford	69.0	11	0.94	68.0	3	0.98

MATH

	7th Grade			8th Grade		
	<u>Score</u>	<u>Rank</u>	<u>Percentile</u>	<u>Score</u>	<u>Rank</u>	<u>Percentile</u>
A-B	32.0	151	0.14	42.0	112	0.37
Concord	56.0	44	0.75	47.5	90	0.49
Lexington	64.0	19	0.89	68.0	11	0.94
Westford	60.5	26	0.85	53.0	57	0.68

**Student Growth Percentage - Score Similar to A-B
Special Education Subgroup**

<u>Test</u>	<u>A-B Score</u>	<u>Districts with Similar Scores (Scores in brackets)</u>
ELA - 7th Grade	43.0	Danvers [44.0], Milton [43.5], Amesbury [43.0], Burlington [43.0]
ELA - 8th Grade	30.0	Woburn [32.0], Weston [31.5], Bedford [30.0], Mansfield [30.0]
Math - 7th Grade	32.0	Westborough [34.0], Worcester [33.0], Bedford [32.0], Brockton [32.0]
Math - 8th Grade	42.0	Framingham [44.0], Lawrence [44.0], Worcester [42.0], Somerville [41.5]

R. J. Grey Aggregate Student Performance

- On a total, or aggregate basis, R. J. Grey’s students progressed at a slower pace than the statewide average in three of four categories (exception is 7th grade ELA).
- Compared to its peer group (Concord, Lexington, and Westford) R.J. Grey’s students in the aggregate progressed at a slower pace, sometimes by a large margin.
- In relation to 277 – 279 reporting districts, R.J. Grey ranked in the bottom quarter in three of four categories (again exception is 7th grade ELA).

- School districts with aggregate SGP scores similar to A-B’s junior high school scores are demographically quite different from school districts with similar achievement rankings measuring MCAS proficiency.
- Charter school districts performed at the top of the SGP rankings. Only one school, Excel Academy Charter was in the top 25 school districts in all four junior high tests (ELA and Math, 7th and 8th grade). Two of four school districts making the Top 25 in three tests were charter schools. Seven of 11 school districts achieving a Top 25 in two tests were charter schools.
- The Carlisle and Lexington school districts achieved Top 25 rankings in two tests.

See the tables below for specific details.

Aggregate

STUDENT GROWTH PERCENTILE

Acton Score Higher (Lower) Than:

<u>Grade</u>	<u>Subject</u>	A-B	Acton Score Higher (Lower) Than:			
		<u>Score</u>	<u>Concord</u>	<u>Lexington</u>	<u>Westford</u>	<u>State</u>
7	ELA	52.5	-13.0	-13.5	-13.0	2.5
7	MATH	44.0	-17.0	-23.0	-13.0	-6.0
8	ELA	38.0	-6.5	-30.5	-34.0	-12.0
8	MATH	44.0	-5.0	-27.0	-17.0	-6.0

Aggregate

CPI SCORE

Acton Score Higher (Lower) Than:

<u>Grade</u>	<u>Subject</u>	A-B	Acton Score Higher (Lower) Than:			
		<u>Score</u>	<u>Concord</u>	<u>Lexington</u>	<u>Westford</u>	<u>State</u>
7	ELA	96.2	-0.5	-0.9	-2.0	8.1
7	MATH	88.9	-0.5	-2.9	-2.8	15.1
8	ELA	97.0	-0.5	-1.6	-2.1	5.9
8	MATH	92.1	6.7	-2.9	-1.8	19.3

Aggregate

% PROFICIENT OR BETTER

Acton Score Higher (Lower) Than:

<u>Grade</u>	<u>Subject</u>	A-B	Acton Score Higher (Lower) Than:			
		<u>Score</u>	<u>Concord</u>	<u>Lexington</u>	<u>Westford</u>	<u>State</u>
7	ELA	90.0	-3.0	-7.1	-3.0	20.0
7	MATH	74.0	-1.0	-17.8	-6.0	25.0
8	ELA	93.0	-1.0	-5.6	-4.0	15.0
8	MATH	83.0	15.0	-12.0	-1.0	35.0

Student Growth Percentage - Ranked vs. Other Districts
Aggregate (277 - 279 reporting districts)

ENGLISH LANGUAGE ARTS

	7th Grade			8th Grade		
	<u>Score</u>	<u>Rank</u>	<u>Percentile</u>	<u>Score</u>	<u>Rank</u>	<u>Percentile</u>
A-B	52.5	119	0.57	38.0	218	0.22
Concord	65.5	33	0.88	44.5	186	0.33
Lexington	66.0	28	0.90	67.0	21	0.92
Westford	65.5	36	0.87	72.0	15	0.95

MATH

	7th Grade			8th Grade		
	<u>Score</u>	<u>Rank</u>	<u>Percentile</u>	<u>Score</u>	<u>Rank</u>	<u>Percentile</u>
A-B	44.0	212	0.24	44.0	208	0.25
Concord	61.0	65	0.77	49.0	169	0.39
Lexington	68.5	34	0.88	71.0	23	0.92
Westford	57.0	98	0.65	61.0	70	0.75

Student Growth Percentage - Sample of Scores Similar to A-B
Aggregate

<u>Test</u>	<u>A-B Score</u>	<u>Districts with Similar Scores (Scores in brackets)</u>
ELA - 7th Grade	52.5	Worcester [53.5], Belmont [53.0], Methuen [52.5], Brockton [52.0]
ELA - 8th Grade	38.0	Woburn [40.0], Stoughton [38.5], Marlborough [38.0], Methuen [38.0]
Math - 7th Grade	44.0	Attleboro [45.0], Watertown [45.0], Holyoke [44.0], Maynard [43.5]
Math - 8th Grade	44.0	Taunton [45.0], Winchester [45.0], Andover [44.0], Cambridge [44.0]

Progression Analysis

One way to arrange data is in a Class Year/Grade matrix, which allows readers to scan how a particular class (say the graduating Class of 2013) performed over time as well as scan a particular grade. The state has provided two years of Student Growth Percentile (SGP) scores for the Aggregate student population so we can perform a regression analysis for that student population. However, only one year of SGP data has been provided for the Special Education subgroup so it is not possible to perform this analysis for that group of students at this time. A progression analysis of aggregate student growth performance for the district shows the following trends.

- A-B's eighth grade student growth scores (SGP) in English for the Class of 2013 dropped 18 percentage points between the 7th and 8th grade.
- Both A-B's seventh and eighth grade Math scores declined in 2009. The Class of 2013's eighth grade SGP was 16 percentage points below its seventh grade score. In addition, the Class of 2014's seventh grade SGP was 19 percentage points below Acton's sixth grade scores (Boxborough not included).

ACTON & A-B ELA Aggregate		STUDENT GROWTH PERCENTILE SCORES					
Class of	Grade	Grade					
		<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>	<u>10th</u>
2017		59.0					
2016		59.0	59.0				
2015			59.5	56.5			
2014				59.0	52.5		
2013					56.0	38.0	
2012						37.0	
2011							45.0

ACTON & A-B MATH Aggregate		STUDENT GROWTH PERCENTILE SCORES					
Class of	Grade	Grade					
		<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>	<u>10th</u>
2017		66.0					
2016		65.0	58.0				
2015			61.0	67.5			
2014				63.0	44.0		
2013					60.0	44.0	
2012						51.0	
2011							54.5