



Using the Student Growth Measure for School and District Intervention

This report outlines the use of improvement in student academic achievement data to identify underperforming schools as well as plans to include this measure as one of the factors for identifying underperforming and chronically underperforming schools and districts for the 2011-2012 school year.

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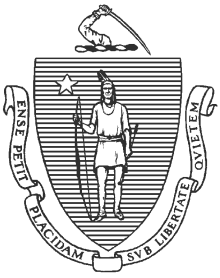
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Dear Members of the General Court:

I am pleased to submit this *Report to the Legislature: Using the Student Growth Measure for School and District Intervention* pursuant to Chapter 12 of the Acts of 2010, Section 14:

By January 1, 2011, the commissioner of elementary and secondary education shall make a report to the house and senate chairs of the joint committee on education on the department's plan to implement the inclusion of improvement in student academic achievement data, as required under sections 1J and 1K of chapter 69 of the General Laws.

This report outlines the use of improvement in student academic achievement data to identify underperforming schools as well as plans to include this measure as one of the factors for identifying underperforming and chronically underperforming schools and districts for the 2011-2012 school year. We continue to work with the Advisory Council on Accountability and Assistance established pursuant to statute as we refine our approach to incorporate lessons learned from past efforts, promising practices, and new state and federal policies.

This spring, after consultation with the Advisory Council, the Department will announce a new methodology, consistent with the law, to identify the lowest performing 20 percent of schools and 10 percent of districts using four years of MCAS data: 2008, 2009, 2010, and 2011. We have learned that in using measures of improvement to identify the schools and districts most in need of intervention, careful consideration must be used to ensure that limited Department resources are deployed where they are most needed. For example, relying too heavily on improvement (growth) over performance (MCAS CPI) will identify schools that are not the lowest performing. Similarly, relying too heavily on performance over improvement can lead to the Department intervening in schools that are already on a trajectory to turn around but in the context of an extremely challenging student population. Our approach is to consider growth and performance to identify the schools and districts where students are losing ground compared to their counterparts statewide – students whose academic attainment is low and whose year-to-year gains lag behind typical annual gains.

This report has provided background on the student growth percentile measure and examples of how it is currently being used. Later in the spring, I will submit an addendum to this Report that will include the details of the methodology the Department will use to incorporate the growth measure into 2011 eligibility determinations for schools and districts.

If you would like to discuss this report in greater detail or have questions, please feel free to contact me.

Sincerely,

Mitchell D. Chester, Ed.D.
Commissioner of Elementary and Secondary Education

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Introduction

The Department of Elementary and Secondary Education respectfully submits this Report to the Legislature pursuant to Chapter 12 of the Acts of 2010, Section 14:

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This report outlines the use of improvement in student academic achievement data to identify underperforming schools as well as plans to include this measure as one of the factors for identifying underperforming and chronically underperforming schools and districts for the 2011-2012 school year. We continue to work with the Advisory Council on Accountability and Assistance established pursuant to statute as we refine our approach to incorporate lessons learned from past efforts, promising practices, and new state and federal policies.

Determination of Student Growth Percentiles

In October 2009, the Department announced a new measure of student progress on statewide assessments (the MCAS) to track student scores from one year to the next. This measure of improvement in student academic achievement data, or “growth” measure, allows educators and policymakers to finally answer the question: “How much academic progress did a student or group of students make in one year as measured by MCAS?”

Each student with at least two consecutive years of MCAS scores receives a *student growth percentile*, which measures how much the student gained from one year to the next relative to other students statewide with similar prior achievement. Student growth percentiles range from 1 to 99, where higher numbers represent higher growth and lower numbers represent lower growth. All students, no matter the achievement scores they earned on past MCAS tests (from 200 to 280), have an equal chance to demonstrate growth at any of the 99 percentiles on the next year's test. Growth percentiles are calculated in ELA and mathematics for students in grades 4 through 8 and for grade 10.¹

Chapter 12 of the Acts of 2010, *An Act Relative to the Achievement Gap*, was signed into law on January 18, 2010 and took effect immediately. Among other things, the new law made sweeping changes to the statutes on underperforming schools and school districts, Mass. General Laws chapter 69, sections 1J and 1K. The law made reference to the student growth measure (“improvement in student academic achievement data”), but stated that its inclusion as a factor to identify the 20 percent of schools and 10 percent of districts eligible for underperforming and chronically underperforming designation should be delayed until July 1, 2011.

¹ For further information on the measurement of student growth see the Department's October 2009 Report on MCAS Student Growth Percentiles at <http://www.doe.mass.edu/mcas/growth/StateReport.doc>

During the first year of implementation of the new law, the student growth measure has been employed in several ways:

Identifying the most struggling (Level 4) schools from among the lowest performing 20 percent In accordance with Mass. General Laws Chapter 69, Section 1J (a), the Department did not include the student growth measure as part of the criteria for identifying the lowest performing 20 percent of schools. However, in determining which among those 366 (20 percent) schools were most in need of state intervention, the Department developed a methodology to identify the lowest performing and least improving schools.

This methodology included four years of student performance data including improvement trends – the growth measure being among the data used. More details about this methodology are included as an appendix to this report.

Assisting districts in diagnosing the reasons for low student performance in their underperforming schools

Each district with a Level 4 (“underperforming”) school underwent a ‘Turnaround Plan Interview’ process during which staff from the Department’s Division for Accountability, Partnership, and Assistance discussed the content of the Turnaround Plans in order to inform any modifications I would propose the superintendent make to the Plan. In preparation for each interview, Department staff conducted a rigorous analysis of the state-collected data for one or more Level 4 school(s) in each district and posed questions in response to some of the data findings. The median student growth percentile for grade levels, subgroups and the school as a whole served as valuable data in probing district and school leaders about their plans to address achievement gaps between subgroups of students. More information about this interview process is included as an appendix to this report.

Communicating to key stakeholders about reasons for underperformance

Some districts have begun making use of the student growth measure to inform district communication and strategies for intervening in their lowest performing schools. The growth model is allowing districts to ask important questions such as:

How many students are performing with low achievement and low growth? Are they attending particular schools or members of specific subgroups?

How many students are performing with low achievement but high growth? Are they attending particular schools or members of specific subgroups?

Are low growth students receiving high report card grades?

Answers to these questions are informing district decisions to target areas for improvement, identify and replicate pockets of success, and take informed steps to strengthen cultures of high expectations.

Use of Growth and Performance Data to Identify Districts In Need of Assistance

This spring, after consultation with the fifteen-member Advisory Council on Accountability and Assistance, the Department will announce new methodology, consistent with the law, to identify the lowest performing 20 percent of schools and 10 percent of districts using four years of MCAS data: 2008, 2009, 2010, and 2011. We have learned that in using measures of improvement to identify the schools and districts most in need of intervention, careful consideration must be used to ensure that limited Department resources are deployed where they are most needed. For example, relying too heavily on improvement (growth) over performance (MCAS CPI) will identify schools that are not the lowest

performing. Similarly, relying too heavily on performance over improvement can lead to the Department intervening in schools that are already on a trajectory to turn around but in the context of an extremely challenging student population. Our approach is to consider growth and performance to identify the schools and districts where students are losing ground compared to their counterparts statewide – students whose academic attainment is low and whose year-to-year gains lag behind typical annual gains.

This report has provided background on the student growth percentile measure and examples of how it is currently being used. Later in the spring, I will submit an addendum to this Report that will include the details of the methodology the Department will use to incorporate the growth measure into 2011 eligibility determinations for schools and districts.

Addendum

I: Process for Identifying Level 4 Candidate Schools

The *Framework for District Accountability and Assistance* calls for the use of multiple indicators to identify schools and districts as candidates for Level 4 accountability, assistance, and intervention activities. This document describes the methodology we used in identifying Level 4 candidate schools. We sought to identify schools that were both low performing on the Massachusetts Comprehensive Assessment System over a four year period and not showing signs of substantial improvement over that interval.

Methodology:

Our universe for Level 4 schools consisted of all 1,831 schools in the state. We produced percentile ranks (1-99) for all schools² based on several *performance* indicators:

2006 ELA Composite Performance Index (CPI)	2006 Math Composite Performance Index (CPI)
2007 ELA Composite Performance Index (CPI)	2007 Math Composite Performance Index (CPI)
2008 ELA Composite Performance Index (CPI)	2008 Math Composite Performance Index (CPI)
2009 ELA Composite Performance Index (CPI)	2009 Math Composite Performance Index (CPI)
2006 ELA MCAS percent Warning/Failing	2006 Math MCAS percent Warning/Failing
2007 ELA MCAS percent Warning/Failing	2007 Math MCAS percent Warning/Failing
2008 ELA MCAS percent Warning/Failing	2008 Math MCAS percent Warning/Failing
2009 ELA MCAS percent Warning/Failing	2009 Math MCAS percent Warning/Failing

We then generated a composite of those percentile ranks for each school and selected the lowest 65 schools based on that composite average. Then, of these 65 lowest *performing* schools, we sought to determine which of them exhibited the lowest amount of positive *movement* over the past four years. In other words, we tried to answer to the question: Of the lowest performing schools in the state, which are the most “stuck”? We used six indicators to determine movement:

The mean of 2008 and 2009 ELA CPI <i>minus</i> the mean of 2006 and 2007 CPI
The mean of 2008 and 2009 Math CPI <i>minus</i> the mean of 2006 and 2007 CPI
2008 Math Median Student Growth Percentile*
2008 ELA Median Student Growth Percentile*
2009 Math Median Student Growth Percentile
2009 ELA Median Student Growth Percentile

*Where a 2008 Median Student Growth Percentile was not able to be calculated, we used 50 (the state average) as a proxy.

We then generated percentile ranks for each movement indicator and created a composite of those ranks. Of the lowest performing 65 schools, we identified half (32.5 rounded up to 33) that exhibited the least amount of improvement and designated those schools as Level 4, thus giving us the lowest schools according to both achievement and growth.

² Schools that were missing performance data were filtered out of the calculation.

Handling Schools that Graduate Students

We included the following indicators of performance (in addition to the indicators listed above) specific to those schools that graduate students and ranked them separately:

2005-2006 Dropout Rate	2006 5-year graduation rate
2006-2007 Dropout Rate	2007 5-year graduation rate
2007-2008 Dropout Rate	2008 4-year graduation rate

Based on these rankings, a proportionate number of these schools (4) was included within the 33.

II: Level 4 School Turnaround Plan Interview Process

An Act Relative to the Achievement Gap requires that, for a period of up to 30 days, the commissioner may review a Level 4 School Turnaround Plan and propose modifications that the superintendent would consider in developing the final version of each Turnaround Plan. *ESE will propose modifications for each Level 4 School Turnaround Plan that: 1) ensure that all of the state requirements of the Plan are met; and 2) provide guidance for how the district can better position its schools to be successful in applying for a School Turnaround Grant in the winter.* In order to propose modifications that are contextual, useful and actionable, ESE will be interviewing each district about one of its Level 4 School Turnaround Plans. The following is a description of the interview process.

Interview Format: The interviews will be conducted at a location to be determined in each of the eight districts. Deputy Commissioner Karla Brooks Baehr will lead the interview discussion. The questions will be based on an analysis of applicable data related to the district and school (qualitative and quantitative data sources to be shared with each district) and how the proposed Turnaround Plan addresses those areas. While the interview will focus on a single Level 4 School in each district, leadership teams from the other Level 4 Schools may be asked questions about their Level 4 Turnaround plans.

Interview Participants: Deputy Commissioner Baehr and other ESE staff; Superintendent and other key central office staff as necessary; school committee chair or designee; local teachers union president; principal(s) of each Level 4 School with other school leadership team members.

Interview Content: The interview questions will focus on the three “dimensions” being used to assess Turnaround and Redesign Plans:

- 1) Capacity and Commitment: The extent to which the district and school(s) demonstrate the capacity and commitment to support and implement the proposed strategies;
- 2) Data Analysis and Selection of Supports: The extent to which the plans are based on a detailed analysis of current, accurate and precise data; and
- 3) Strategic and Actionable Approach: The extent to which the plans display a strategic and actionable approach that will lead to rapid and sustainable improvement in targeted schools.

Interview Data Analysis Sources: Prior to each interview, ESE will reference several sources of data to inform the analysis. ESE will identify key questions based on the context of each school/district and the content of the Turnaround Plan:

- Performance and Resource Data (quantitative): Education Data Warehouse, SIMS, and EPIMS
- District and School Resource Allocation (quantitative): district and school finance data
- District Policies and Practices (qualitative): student handbook, teacher contracts database
- Accountability and Assistance Reports and Agreements 2006-2010 (qualitative): ESE district and school reviews, Corrective Action Plans and reports, EQA reviews, MOU agreements, DPSI’s, TeLLS data, and Learning Walkthrough data

A detailed description of the expectations, areas of focus, data analyses, and logistics will be communicated prior to each district’s Turnaround Plan interview.