Summary of Massachusetts’ District and School Accountability System

# Introduction

In 2018, the Massachusetts Department of Elementary and Secondary Education (DESE) began reporting accountability results under its new framework for district and school accountability and assistance, which was approved by the Board of Elementary and Secondary Education (Board) in June 2018.

# Background

State and federal laws require that DESE implement a system of district and school accountability. Prior to 2012, the Commonwealth’s schools and districts were assessed based on both the state’s five-level framework for accountability and assistance and the requirements of the federal No Child Left Behind Act. From 2012 to 2017, Massachusetts operated under a flexibility waiver from the U.S. Department of Education, which permitted us to implement a single, unified accountability system that maintained our state’s high standards and expectations and met both federal and state requirements. The enactment of the federal Every Student Succeeds Act (ESSA) in 2015 and the state’s transition to a Next-Generation MCAS assessment gave us the opportunity to rethink the design of our accountability system.

# System Highlights

The purpose of the accountability system is to provide clear, actionable information to families, community members, and the public about district and school performance. Additionally, the accountability system helps DESE to direct resources and assistance. The framework for the accountability system allows DESE to identify schools that require assistance or intervention, as well as schools that are demonstrating success. It maintains a single statewide accountability system that aligns with the Commonwealth’s priorities while meeting federal education requirements. Highlights of the system include:

* The inclusion of accountability indicators that provide information about school performance and student opportunities beyond test scores;
* A focus on raising the performance of each district’s or school’s lowest performing students in addition to the performance of the district or school as a whole; and
* The use of accountability categories that define the progress that districts and schools are making and the type of support or assistance they may receive from DESE.

# Accountability System Elements

A description of each of the key elements of the Massachusetts district and school accountability system is included below.

## Accountability Indicators

Annual performance determinations for districts and schools are calculated using the following accountability indicators:

| Indicator  | Measure |
| --- | --- |
| Achievement | * English language arts (ELA) achievement
* Mathematics achievement
* Science achievement
 |
| Student Growth | * ELA mean student growth percentile (SGP)
* Mathematics mean SGP
 |
| High School Completion | * Four-year cohort graduation rate
* Extended engagement rate (five-year cohort graduation rate plus the percentage of students from the cohort who are still enrolled)
* Annual dropout rate
 |
| English Language Proficiency | * Progress made by students towards attaining English language proficiency (percentage of students meeting annual targets calculated to attain English proficiency in six years)
 |
| Additional Indicator(s) | * Chronic absenteeism (percentage of students missing 10 percent or more of their days in membership)
* Percentage of 11th & 12th graders completing advanced coursework (Advanced Placement, International Baccalaureate, Project Lead the Way, dual enrollment courses, Chapter 74-approved vocational/technical secondary cooperative education programs and articulation agreement courses, and other selected rigorous courses)
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## Weighting of Accountability Indicators

Federal law requires that substantial weight be given to the achievement, growth, English language proficiency, and graduation rate indicators, and that when taken together, these indicators should have much greater weight than the additional indicators.

In June 2018, the Board approved DESE’s proposal to use a 3 to 1 ratio of achievement to growth, consistent with the weightings shown in the tables below. By using this approach, DESE can ensure that the ratio of achievement to growth remains consistent, but allow for flexibility in the actual percentages where necessary (e.g., to accommodate districts and schools that have data for the English language proficiency indicator and those that do not). For 2020 reporting, DESE intends to apply the same indicator weightings within the accountability calculations. Note that at the high school level, the high school completion indicators are considered part of achievement when calculating the ratio of achievement to growth.

**Accountability Indicator Weightings – Schools Serving Non-High School Grades**

|  |  |  |
| --- | --- | --- |
| **Indicator** | **Measures** | **Weighting (3:1)** |
| **With EL** | **No EL** |
| Achievement | * ELA, math, & science achievement
 | 60% | 67.5% |
| Student Growth | * ELA & math SGP
 | 20% | 22.5% |
| English Language Proficiency | * Progress made by students towards attaining English language proficiency
 | 10% | -- |
| Additional Indicators | * Chronic absenteeism
 | 10% | 10% |

**Accountability Indicator Weightings – Schools Serving High School Grades**

|  |  |  |
| --- | --- | --- |
| **Indicator** | **Measures** | **Weighting (3:1)** |
| **With EL** | **No EL** |
| Achievement | * ELA, math, & science achievement
 | 40% | 47.5% |
| Student Growth | * ELA & math SGP
 | 20% | 22.5% |
| High School Completion | * Four-year cohort graduation rate
* Extended engagement rate
* Annual dropout rate
 | 20% | 20% |
| English Language Proficiency | * Progress made by students towards attaining English language proficiency
 | 10% | -- |
| Additional Indicators | * Chronic absenteeism
* Advanced coursework completion
 | 10% | 10% |

## Reported Measures

Accountability determinations consist of a normative component and a criterion-referenced component, which are used to classify districts and schools.

### Normative Component

The normative component, or accountability percentile, measures the performance of all students in a school compared to other schools in the state. This measure is reported as a percentile, from 1 to 99, which is calculated using all available accountability indicators for a school. Schools are grouped together based on the statewide assessments that they administer: *non-high schools*, serving a combination of grades 3 through 8; *middle-high and K-12 schools*, serving one or more grades 3 through 8 and grade 10; and *high schools*, where the only tested grade is grade 10. Within each grouping, each school’s performance on each indicator is ranked and weighted according to the weighting rules described above. The resulting accountability percentile provides information about how a school is doing compared to other schools administering similar assessments.

For the purposes of accountability reporting, the accountability percentile is calculated only at the school level, for the all students group; it is not calculated at the district level.

In the calculation of the 2020 accountability percentile, DESE uses three years of data where available (e.g., 2018, 2019, and 2020). Data from each year is weighted in the overall percentile calculation, placing more weight on data from the most recent year (e.g., 20 percent for 2018, 30 percent for 2019, and 50 percent for 2020).

### Criterion-Referenced Component

The criterion-referenced component measures a district’s or school’s progress towards improvement targets. In the accountability system, DESE uses data from all students in the district or school and the lowest performing students in the district or school to determine overall progress towards targets.

#### Lowest Performing Students Group

In an effort to control for student transiency, DESE measures the performance of each district’s and school’s lowest performing students who have been enrolled for multiple years. Districts and schools are still responsible for the annual performance of all students, as aggregate and subgroup results include all students enrolled in the school since the beginning of the school year. However, results for the lowest performing students group include only those students who have been enrolled in the same district or school for two consecutive years.

If a district or school does not have test results for enough students to establish a reportable lowest performing students group, the district’s or school’s accountability determination is based on the performance of all students.

#### Target-Setting

For each district or school as a whole and for the lowest performing students group, improvement targets are set for each of the accountability indicators as shown in the table below.

|  |  |  |
| --- | --- | --- |
| **Indicator** | **Non-high schools** | **High schools & middle/high/K-12 schools** |
| **All** **students** | **Lowest performing students** | **All** **students** | **Lowest performing students** |
| ELA achievement | ✔ | ✔ | ✔ | ✔ |
| Math achievement | ✔ | ✔ | ✔ | ✔ |
| Science achievement | ✔ | - | ✔ | ✔ |
| ELA SGP | ✔ | ✔ | ✔ | ✔ |
| Math SGP | ✔ | ✔ | ✔ | ✔ |
| Four-year cohort graduation rate | - | - | ✔ | - |
| Extended engagement rate | - | - | ✔ | - |
| Annual dropout rate | - | - | ✔ | - |
| EL progress | ✔ | - | ✔ | - |
| Chronic absenteeism | ✔ | ✔ | ✔ | ✔ |
| Advanced coursework completion | - | - | ✔ | - |

In 2020, achievement targets have been set only for one year, using 2019 data as the baseline. By grouping schools together based on historical school percentile ranges (e.g., schools with 2019 accountability percentiles 1-25) and looking at changes made by only those schools in the group that demonstrated improvement, DESE used a statistical approach to apply the same expectation of improvement when setting 2020 targets for all schools within the group. Long-term targets will be set in the future, once there are multiple years of Next-Generation MCAS data in all tested grades to analyze.

Targets for the non-assessment indicators are set by analyzing past trends using data that DESE has been collecting and reporting for several years.

#### Criterion-Referenced Component Calculation

Based on each target and actual performance, DESE assigns points for each indicator as shown in the table below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Declined** | **No change** | **Improved** | **Met target** | **Exceeded target** |
| 0 | 1 | 2 | 3 | 4 |

For the district or school as a whole, the actual points earned and the total possible points are reported for each indicator. The points earned are combined, weighted according to the weightings described above, and calculated into a percentage of possible points for the all students group. The same is done for the lowest performing students group. The two percentages of possible points values are then averaged, resulting in the district’s or school’s annual criterion-referenced target percentage. The goal is to earn 75 percent or higher, which represents meeting or exceeding targets. An example of this annual calculation for a non-high school is displayed in the table below.

|  |  |  |
| --- | --- | --- |
|  **Indicator**  | **All students** (50%) | **Lowest performing students** (50%) |
| **Points****earned** | **Total possible points** | **Weight** | **Points****earned** | **Total possible points** | **Weight** |
| ELA scaled score  | 3 | 4 | - | 2 | 4 | **-** |
| Math scaled score  | 2 | 4 | - | 2 | 4 | **-** |
| Science achievement | 2 | 4 | - | - | - | **-** |
| **Achievement total** | **7** | 12 | 60% | **4** | 8 | 67.5% |
| ELA SGP | 4 | 4 | - | 4 | 4 | - |
| Math SGP | 3 | 4 | - | 4 | 4 | - |
| **Growth total** | **7** | 8 | 20% | **8** | 8 | 22.5% |
| **EL progress** | **2** | 4 | 10% | **-** | - | - |
| **Chronic absenteeism**  | **3** | 4 | 10% | **4** | 4 | 10% |
| **Weighted total** | **6.1** | 9.6 | - | **4.9** | 7.6 | - |
| **Percentage of possible points** | **63.5%** | - | **64.5%** | - |
| **Annual criterion-referenced target percentage** | **64%** |

At the high school and district levels, similar calculations are done using all available indicators (e.g., the indicators above, plus high school completion and advanced coursework completion) and the related indicator weightings.

For 2020 reporting, the calculation of the criterion-referenced component includes multiple years of data. By combining the 2018 annual criterion-referenced target percentage (which measures performance from 2017 to 2018), the 2019 annual criterion-referenced target percentage (which measures performance from 2018 to 2019), and the 2020 annual criterion-referenced target percentage (which measures performance from 2019 to 2020), DESE will produce a single, final percentage that represents overall progress towards targets. Within this calculation, the annual percentages are weighted according to the same rules as the percentile, giving more weight to the most recent year (e.g., 20 percent for 2018, 30 percent for 2019, and 50 percent for 2020).

## Subgroup Reporting

While a district’s or school’s accountability determination is primarily based on the performance of the district or school as a whole and its lowest performing students, DESE also reports accountability results at the subgroup level.

### Accountability Subgroups

In addition to reporting results for each district or school as a whole, accountability results are reported for the following 11 subgroups: American Indian or Alaska Native; Asian; African American or Black; Hispanic or Latino; Multi-race, non-Hispanic or Latino; Native Hawaiian or Pacific Islander; White; economically disadvantaged students; students with disabilities; current and former English learners (ELs); and high needs students (an unduplicated count of students who are economically disadvantaged, students with disabilities, and/or ELs and former ELs). In order to report data for a subgroup, there must be results for at least 20 students.

### Subgroup Results

For each subgroup in a district or school, performance against improvement targets is reported using the criterion-referenced component described above. The overall accountability determination for a subgroup is reported as the degree to which targets have been met.

In addition to the criterion-referenced component, each subgroup also receives a subgroup percentile. The subgroup percentile measures the subgroup’s relative standing compared to like subgroups in the same gradespan grouping statewide (e.g., by comparing results from the students with disabilities subgroup in one high school to all other students with disabilities subgroups in high schools statewide). The subgroup percentile is calculated using the same process as the normative accountability percentile described above: by ranking data from all available accountability indicators for each subgroup and combining them into a single, final percentile value, from 1 to 99. This allows DESE to identify schools in which the performance of the school as a whole may be masking the performance of one or more low performing subgroups.

## Assessment Participation

State and federal laws require high levels of student participation in statewide assessments. For each district and school as a whole, assessment participation rates are calculated separately for ELA, mathematics, and science. At the subgroup level, assessment participation is calculated for the group as a whole, with all subjects combined (e.g., measuring the percentage of individual ELA, math, and science tests combined taken by the group). This approach minimizes the effect of a small number of non-participants in small subgroups.

Regardless of the reporting level (e.g., overall district or school rates or subgroup rates), participation is calculated two ways for use in accountability determinations. First, the 2020 participation rate is calculated. If the actual 2020 participation rate is lower than 95 percent, that rate will be compared to most recent two-year of assessment participation rate for the group or subject. The higher of the two resulting rates will be factored into the district’s or school’s overall accountability determination. This two-step approach further minimizes the impact of a small number of non-participants in small subgroups.

## Graduation Rates

Federal law requires states to identify any school that does not graduate two-thirds of its students. Therefore, any district or school in which the most recent four-year cohort graduation rate is below 66.7 percent is identified as requiring assistance or intervention.

## Categorization of Schools

Overall school results are reported in two categories: schools requiring assistance or intervention, and schools not requiring assistance or intervention.

### Schools Requiring Assistance or Intervention

Schools requiring assistance or intervention are identified as:

* In need of broad/comprehensive support, if they are designated underperforming or chronically underperforming, at the discretion of the Commissioner of Elementary and Secondary Education, or
* In need of focused/targeted support, if they have not been identified as in need of broad/comprehensive support, and:
	+ Are among the lowest 10 percent of schools statewide, as measured by the accountability percentile,
	+ Have one or more low performing subgroups, as measured by the subgroup percentile,[[1]](#footnote-1)
	+ Have low graduation rates (below 66.7 percent), and/or
	+ Have low assessment participation (below 95 percent) in the aggregate or for one or more subgroups.

### Schools Not Requiring Assistance or Intervention

A school that does not meet the criteria listed above is identified as not requiring assistance or intervention. The Department reports results for these schools based on their overall performance against improvement targets, using the criterion-referenced component of the system. In 2020, schools are reported as either *meeting or exceeding targets*, if they have an overall criterion-referenced target percentage of 75 percent or higher, *substantial progress towards targets* if they have an overall criterion-referenced target percentage from 50 to 74 percent, *moderate progress towards targets* if they have an overall criterion-referenced target percentage from 25 to 49 percent, or *limited or no progress towards targets* if they have an overall criterion-referenced target percentage below 25 percent.

### Schools of Recognition

A subset of schools that are classified as not requiring assistance or intervention are recognized for their academic accomplishments. Schools of recognition are identified for demonstrating success or improvement in achievement, growth, and other areas, based on criteria established by DESE.

The table below shows how schools are placed into accountability categories.

|  |  |
| --- | --- |
| **Schools without required assistance or intervention** **(approximately 85%)** | **Schools requiring assistance or intervention (approximately 15%)** |
| **Schools of recognition**Schools demonstrating high achievement, significant improvement, or high growth | **Meeting or exceeding****targets**Criterion-referencedtarget percentage75-100 | **Substantial progress toward****targets**Criterion-referencedtarget percentage50-74 | **Moderate progress** **toward** **targets**Criterion-referenced target percentage 25-49 | **Limited or no progress toward** **targets**Criterion-referencedtarget percentage0-24 | **Focused/****targeted** **support*** Schools with percentiles 1-10 not already identified for broad/ comprehensive support
* Schools with low graduation rate
* Schools with low performing subgroups
* Schools with low participation
 | **Broad/****comprehensive support*** Underperforming schools
* Chronically underperforming schools
 |

## Categorization of Districts

Each district is classified based on the results of the district as a whole and its lowest performing students, essentially treating the district like one large school. Overall district results are reported in two categories: districts requiring assistance or intervention, and districts not requiring assistance or intervention.

### Districts Requiring Assistance or Intervention

A district requiring assistance or intervention is identified as:

* In need of broad/comprehensive support, if it is designated underperforming or chronically underperforming, at the discretion of the Board of Elementary and Secondary Education, or
* In need of focused/targeted support, if it has not been identified as in need of broad/comprehensive support, and has:
	+ Low graduation rates (below 66.7 percent), and/or
	+ Low assessment participation (below 95 percent) in the aggregate or for one or more subgroups.

### Districts Not Requiring Assistance or Intervention

A district that does not meet the criteria listed above is identified as not requiring assistance or intervention. The Department reports results for these districts based on their overall performance against improvement targets, using the criterion-referenced component of the system. In 2020, districts are reported as either *meeting or exceeding targets*, if they have an overall criterion-referenced target percentage of 75 percent or higher, *substantial progress towards targets* if they have an overall criterion-referenced target percentage from 50 to 74 percent, *moderate progress towards targets* if they have an overall criterion-referenced target percentage from 25 to 49 percent, or *limited or no progress towards targets* if they have an overall criterion-referenced target percentage below 25 percent.

The table below shows how districts are placed into accountability categories.

|  |  |
| --- | --- |
| **Districts without required assistance or** **intervention** | **Districts requiring assistance or intervention** |
| **Meeting or exceeding****targets**Criterion-referencedtarget percentage75-100 | **Substantial progress****towards****targets**Criterion-referencedtarget percentage50-74 | **Moderate progress** **towards** **targets**Criterion-referenced target percentage 25-49 | **Limited or no progress towards****targets**Criterion-referencedtarget percentage0-24 | **Focused/****targeted** **support*** Districts with low graduation rate
* Districts with low participation
 | **Broad/****comprehensive support*** Underperforming districts
* Chronically underperforming districts
 |

1. A low performing subgroup is defined as a group that is among the lowest performing 5 percent of like subgroups statewide that also demonstrates performance below that of all students in the same school. [↑](#footnote-ref-1)