ESSA Topic: Weighting of Indicators

Relevant Requirements of ESSA law:

Establish a system of meaningfully differentiating, on an annual basis, all public schools in the State, which shall afford—
(I) substantial weight to each indicator used to measure language arts and math performance, acquisition of English proficiency and graduation rate;
and
(II) in the aggregate, much greater weight to those indicators than to measures of school quality and student success.

Relevant High Concept Ideas, if any:

1. To ensure that schools focus on students with low performance in ELA and math, we will give schools "full credit" for students who are proficient (Level 3 and 4 scores on Grade 3-8 assessments and Levels 4 and 5 on Regents) and "partial credit" for students who are partially proficient (Level 2 scores on grade 3-8 assessments and Level 3 on Regents).
2. To ensure that students are able to meet assessment requirements for graduation, we will give schools credit for a student's best score on state exams within four years of the student entering high school.
3. To ensure that all schools value student proficiency, student growth, and improving student outcomes, we will hold schools accountable for percentages of students who are proficient and partially proficient in ELA and math; progress in increasing the percentage of proficient students over time; and growth of students in ELA and math from year to year.
4. To ensure that schools support students until they graduate, we will use 4-, 5-, and 6- year graduation rates to determine how well schools are doing in getting students to graduate.
5. To ensure that students have access to a well-rounded curriculum, we will differentiate school performance by using student results on Grades 4 and 8 Science exams; Science and Social Studies Regents; and approved graduation pathway examinations.

Department Recommendations, if any:

The Department is awaiting further feedback from Winter Regional meetings. At this time, the Department recommends:

- At the Elementary and Middle School level: achievement in ELA and math be weighted the most, followed by growth in ELA and math, with other indicators provided less weight.
- At the High School Level: graduation rates be weighted more heavily than other indicators, followed by achievement in ELA and math, with other indicators given no more weight than ELA and math.

Questions for Consideration by Board of Regents:
- Do the Regents support the measures of achievement, growth and progress, and graduation

rate recommended by the Department?
- What weight should be given to measures of achievement, growth and/or progress, acquisition of English proficiency, and measures of School Quality and Student Success at the Elementary and Middle School Levels?
- What weight should be given to measures of achievement, progress, acquisition of English proficiency, graduation rate, and measures of School Quality and Student Success at the high school level?

Background Information on the Recommendations and/or Questions for Consideration:

The Department recommends that the following indicators be included in New York's system of differentiation:

Elementary and Middle Level:
Grade 3-8 English language arts achievement results
Grade 3-8 Mathematics achievement results
Grade 4 and 8 Science achievement results
Grade 4-8 Student growth in language arts
Grade 4-8 Student growth in math
Grade 3-8 English language arts progress
Grade 3-8 math progress
Grade 3-8 Progress towards proficiency in English for English language learners.
Measure(s) of School Quality and Student Success to be Determined by the Board of Regents.

High School Level:
High School English language arts achievement results
High School Mathematics achievement results
High School Science achievement results
High School Social Studies achievement results
High School English language progress
High School Math progress
4 year high school graduation rate
5 year high school graduation rate
6 year high school graduation rate
Progress towards proficiency in English for English language learners in high school.
High School Success Index (a measure of School Quality and Student Success)[1]
Completion of and Success in Advanced Coursework (a measure of School Quality and Student Success)
Other Measure(s) of School Quality and Student Success to be Determined By the Board of Regents.

In the above, achievement is defined as the percentage of students who achieve proficiency or partial proficiency as measured by a Performance Index. Growth is based upon the change in performance

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[1] Currently the High School Success Index is defined as "an index (to be created) that gives school partial credit for students who earn a high school equivalency diploma and extra credit for students who earn a Regents diplomas with advanced designation, CTE endorsements, or a Seal of Biliteracy." The Department is considering expanding this definition to give credit to schools for students with severe disabilities who are determined to have completed high school successfully.

of a student between two points in time. Progress is defined as the change in a school's Performance Index over time. Graduation rate is the percentage of students earning a regular high school diploma within a specified period of time (e.g., four, five or six years) after the student's first entry into grade 9. Progress for English language learners is measured by students achieving specified scores of the New York State English as a Second Language Achievement test.

ESSA Topic: Aggregating Indicators and Producing Overall Scores

Relevant Requirements of ESSA law:

Each State shall establish a system of meaningfully differentiating, on an annual basis, all public schools in the State, which shall afford—
(I) substantial weight to each indicator used to measure language arts and math performance, acquisition of English proficiency and graduation rate;
and
(II) in the aggregate, much greater weight to those indicators than to measures of school quality and student success.

Relevant High Concept Ideas, if any:

NA

Department Recommendations, if any:

None

Questions for Consideration:
   4.   How should the Department use the results from indicators to differentiate among schools?
         a.   Create a summative score based on individual indicator results and use the summative score to differentiate among schools.
         b.   Create decision rules based on individual indicator results and use these rules to differentiate among schools.
         c.   Other

Background Information on the Recommendations and/or Questions for Consideration:

A single summative score has the advantage of being transparent and straight forward. However, it can be very challenging to create an algorithm that makes appropriate determinations under all circumstances.
Decision rules can add complexity to the system but can also be more nuanced in the way that they differentiate among schools.
For example, if a state always desire to identify for support and improvement a school that is among the lowest performing 10% in the state for both achievement and growth, regardless of other factors, it may be hard to achieve that outcome using a summative index but can be built into a system of decision rules. However, the more indicators that a system uses, the more complex the decision rules may need to become to handle all circumstances.
As an analogy, a single summative score is similar to a test in which each question answered correctly

earns the test taker a number of points and the sum of all points earned determines the test taker's score. A decision rule system might be one in which the test taker scores on different parts of a test are combined to determine the test taker's score.

For example, one teacher might assign 1, 2, or 3 points to each question correct on a test, then add up the points, and assign a grade, while another teacher might establish rules whereby students will only be able to earn an A if they answer a certain number of questions correct in Section A, a certain number correct in Section B, a certain number of questions correct in Section C and D combined, and have an overall score of X. The latter approach might be taken, for example, by a teacher of a world language who wishes to ensure that students reach a specific level in listening, speaking, reading, and writing, and also achieve a certain overall level of performance before assigning that student an A. Below are examples of how the two systems might work:

Indicator	Performance	Weighting	Score
A	50	20	100
B	60	20	120
C	40	20	80
D	30	10	30
E	70	10	70
F	80	10	80
G	90	10	90
Total			570

In this example, each indicator is weighted and a single summative score is created, which for this school is a score of 570. That single summative score determines the accountability status for this school. For example, if the cutoff for a school to be identified as a Comprehensive Support and Improvement were a score of 500, this school would not be so identified.

Indicator	Performance	Percentile Rank
A	50	70
B	60	80
Subtotal 1		75
C	40	70
D	30	25
E	70	60
Subtotal 2		40
F	80	90
G	90	90

In this approach, no summative score is created for a school. Instead a set of rules are applied to a school's performance on indicators and these rules determine the status of a school. In this example subtotals are created by summing the results for Indicators 1 and 2 and Indicators 3, 4, and 5. Then decision rules are applied so that a school could be identified for comprehensive support and improvement in three ways:

- The school's Subtotal 1 is below 10% and the school's Subtotal 2 is also below 10%; or
- The school's Subtotal 1 is below 20%, the school's Subtotal 2 Is below 50%, and the school's performance on Indicator F is below 10%; or

- The school's Subtotal 1 is below 20%, the school's Subtotal 2 Is below 50%, and the school's performance on Indicator G is below 10%.

While this example is more complex, it can used to ensure that, for example, schools that have levels of achievement and growth that are below specified levels will always be identified for Comprehensive Support and Improvement regardless of the school's performance on other indicators.