The Role of Growth Scores in Annual Performance Reviews

As part of the Annual Professional Performance Review (APPR) process pursuant to Education Law §3012-d, New York State teachers of mathematics and English Language Arts (ELA) in grades 4–8 and their principals will receive State-provided growth scores based on 2017-18 State tests **for advisory purposes only** pursuant to Section 30-3.17 of the Rules of the Board of Regents. These growth scores describe how much students are growing academically in mathematics and ELA (as measured by the New York State tests) compared to similar students statewide.

During the 2016-17 through 2018-19 school years, teachers and principals who receive a State-provided growth score (i.e., grades 4–8 ELA and mathematics teachers and principals of schools that include grades 4–8 or all of grades 9–12) will receive two sets of scores and ratings: original scores and ratings and transition scores and ratings. The State-provided growth score shall be excluded from the scores and ratings used to calculate the overall transition rating. Only the transition score and rating will be used for purposes of employment decisions, including tenure determinations and for purposes of proceedings under Education Laws §§3020-a and 3020-b and teacher and principal improvement plans and the individual's employment record. During the 2016-17 through 2018-19 school years, such principals' or original overall rating will be used for advisory purposes only.

State-provided growth scores are just **one** of the **multiple** measures that make up the annual performance reviews. For APPRs completed pursuant to Education Law §3012-d, an educator's overall composite rating is determined using a matrix that combines a rating based on one or more measures of student growth as well as a rating based on principal/school visits.

Where and when will data be available?
State-provided growth scores for 2017-18 are expected to be distributed to districts in early September 2018

Where can I get more information?

Why Growth?

All students enter their teachers' classrooms at differing levels of academic proficiency or achievement. One way to measure proficiency is student performance on standardized assessments. By measuring the amount of progress, or "academic growth" a student makes during a given school year, on these assessments, we can begin to understand the influence of that particular school year experience on student learning.[2] By measuring academic growth rather than proficiency, we can identify strengths and gaps in student progress and help principals to better support students who have a wide range of academic needs.

Growth measures for principals in grades 4-8 provide information on the growth of students for which they are responsible compared to students with similar characteristics across the state. This information can inform principals' understanding of how, on average, these students grew compared to their peers.

How Does New York State Measure Student Growth?

The simplest way to measure growth would be to subtract a student's test score in a prior year from his or her test score in the current year (e.g., test score in spring 2018 minus test score in spring 2017). However, New York State's tests are not designed to allow for this kind of calculation because the test scores are not comparable across grade levels. Nor would this approach account for a student's starting point and other background characteristics. Instead, New York State's approach is to compare the current year scores of similar students—that is, of students who had the same prior test scores and other characteristics— in order to measure growth while accounting for students' starting levels of achievement.[3]

This method, illustrated in **Figure 1**, shows Student A (red student) with an ELA score of 320 in 2017.[4] Compared to other students (solid blue students) who also had scores of 320 in 2017, Student A's ELA test score in 2018 was in the middle range when compared to those same students. We can describe Student A's growth re3 (0)8 (17))1ecels ooPe f0 0 0 6704507036n17)es

Factors Used to Define "Similar Students" in the Growth Model for 2017-18

For educator evaluation, we further refine the definition of similar students to include additional factors known to impact student performance in order to better isolate the impact of a student's teacher on his or her performance. In the State growth model, the term "similar students" means not only students with the same academic history, but also students with the same English Language Learner (ELL), economic disadvantage, or disability statuses at both the student and classroom levels. Table 1 displays specific factors for each of these categories. We account for whether a student is an ELL, for example: we also account for the percentage of ELL students in a student's ELA or mathematics course. This type of factor is intended to address peer effects, as knowing in that it may be a different experience for a student to be in a class or course with many ELL students (and a different job for an educator with many ELL students) than it is to be in a course with fewer ELL students.

Table 1. Factors Used to define "Similar Students" in 2017-18*

	Up to three years of student State exam scores, same subject Prior-year test score, different subject Retained in grade Average prior achievement and range (round average prior score in student's course (same subject)) New to school in non-articulation year (e.g., entered middle school in grade, the grader)
	New York State English as a Second Language Achievement Test (NYSESLAT) scores Percentage of ELLs in student's course ELL Status (yes or no)
	Percentage of economically disadvantaged students in student's course Student economic disadvantage status (yes or no)
Disabilities	Students with disabilities spending less than 40 percent of time in a general education setting Percentage of students with disabilities in student's course Student with disabilities status (yes or no)

* In the future, additional characteristics may be added, or other changes may be made to the growth model, as approved by the Board of Regents

How is Student Growth Used for 4-8 Principal Evaluation?

A school's or principal's State-provided growth rating (the HEDI rating) and a growth score (0–20) are based on the **"mean growth percentile"** or **MGP**, the aggregate measure of student growth in the principal's school. An MGP is calculated by finding the average of all the SGPs for students attributed to a school or principal, across grades and subjects.

Table 2 illustrates how an MGP is calculated for a school or principal by averaging SGPs of students. Students who do not meet the continuous enrollment requirement (i.e., those who were not enrolled on BEDS day and on the first day of the State assessment administration) are not included in a school's or principal's MGP[5] **Finally, an MGP is reported only if it is based on at least 16 SGPs.**

Table 2. Example of Students Who Count in a School's or Principal's MGP: Sample Data

			MGP Calculation	
	-	Yes	Yes	4
	Grade			

All statistical calculations contain some uncertainty. Although the reported MGP is the best estimate for a teacher or principal, we can also quantify a range where n we can expect that the true answer lies. The upper- and lower-limit MGPs define a set of scores where n an educator's true MGP lies 95 percent of the time. Reporting upper- and lower-limit MGPs is similar to the way other statistical calculations, such as political polls, are reported (e.g., a candidate can be ahead in the polls by 6 points, plus or minus 3 points). The width of the confidence range (that is, the distance between the upper and lower limits) is affected by such factors as the number of students included in generating the score, the spread of student scores, and characteristics of the tests students take.

We report the upper- and lower-limit MGPs because we want to be transparent about the data. We also use upper- and lower-limit MGPs to assign educator ratings in a way that factors uncertainty in MGPs into account. We use the overall adjusted MGP (that is, the MGP that combines information across all applicable grade levels and subjects) and upper- and lower-limit MGPs to determine growth ratings, as shown in **Figure 3**. The rules for assigning growth ratings are the same for schools, principals, and teachers of grades 4–8 students.

A growth score of 0–20 points is then assigned with an each growth rating category or (HEDI) using the scoring bands pre-

Growth Ratings for Schools or Principals Serving Grades 4-8 & 9-12

To determine a final, State-provided growth rating for schools or principals who serve grades 4–8 and grades 9–12, growth ratings and scores are determined for grades 4–8 and grades 9–12 separately and then combined.[7] The grades 4–8 measure growth rating is determined using the process shown in **Figure 3**. Because multiple grades 9–12 measures exist, growth scores for each grades 9–12 measure are averaged together and then weighted by the number of students in each measure to determine an overall grades 9–12 growth rating and score. An overall growth subcomponent rating that includes results for both grades 4–8 and grades 9–12 students is then computed in the same manner by averaging grades 4–8 and grades 9–12 growth scores by the number of students in each measure and finding the final rating. **Figure 4** shows an example of this process.

Figure 4. Determining Growth Ratings for Schools & Principals with Grades 4-8 & 9-12 Growth Measures

	Rating					
Rating/Growth Score	Effective	16	435	18%	16 x 0.18	2.9
Rating/Growth Score	Effective	15	1,970	82%	15 x 0.82	12.3
Rating/Growth Score	**Effective**		**2,405**	**100%**		**15**

Information Available in District Files

State-provided growth scores are made available to districts by September each school year, or as soon as practicable thereafter. Results are provided in separate files for teachers, principals, and schools. These files contain the following information:

- **Number of Student Scores:** The number of SGPs included in an MGP
- **Percent of Students Above the State Median:** Percentage of students above the State median SGP in the relevant subject and grade, using adjusted student SGPs
- **Unadjusted MGP (Principal or School):** The mean of the SGPs for students linked to a principal (or school) based on prior achievement scores only, without taking into consideration ELL, students with disabilities, or economic student characteristics
- **Unadjusted MGP (Teacher):** The weighted mean of the SGPs for students who are attributed to a teacher, based on prior achievement scores only, without taking into consideration ELL, students with disabilities, or economic disadvantage student characteristics. The weighted mean is calculated based on the amount of time students were enrolled in and attended a course with a teacher

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Questions for Consideration

Following are some questions to consider as you review your State-provided growth score information.

- How much did my students grow, on average, compared to similar students? Is this higher, lower, or about what I would have expected? Why?
- How does this information about student growth align with information about my leadership practice received through observations or other measures? Why might this be?
- How do my MGPs in these subjects compare? Why might they be similar or different?
- How do my MGPs compare across grade levels? Why might they be similar or different?

Information or Additional Questions

If you have questions about your data, what the scores are used for, or why you received the score that you did, please contact your school's superintendent or district data personnel for assistance. If unable to obtain answers to questions, contact educatorreview1@nysed.gov

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If any discrepancies exist between the language in these materials and the Statute, Regulations, or APPR Guidance, the Statute, Regulations, or APPR Guidance prevail.