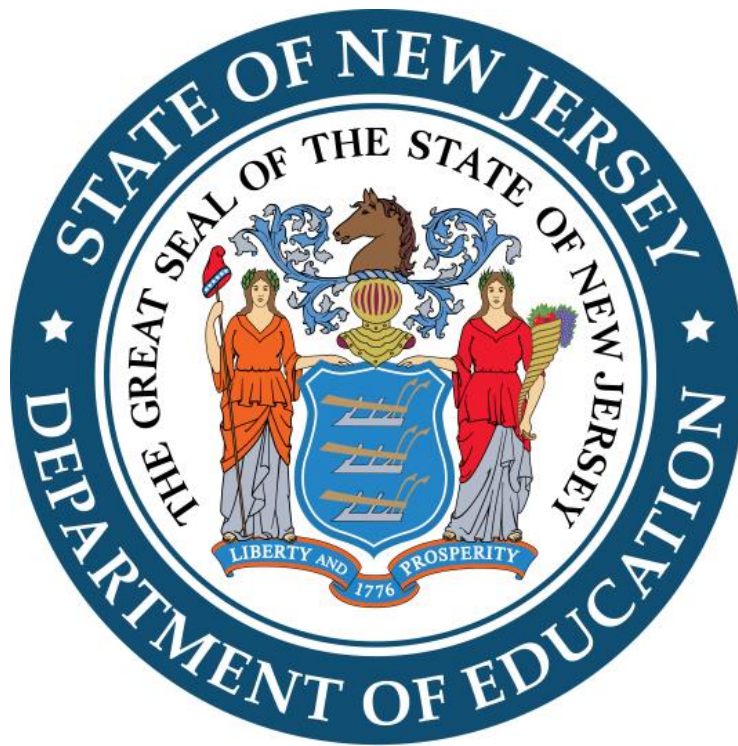


New Jersey Department of Education

Every Student Succeeds Act (ESSA)

Technical Guide to Summative Ratings and the
Identification of Schools in Need of Support



January 2018

Executive Summary

The New Jersey Department of Education (NJDOE) has developed a technical guide to describe the methodology for calculating the summative ratings used to identify schools for comprehensive and targeted support and improvement, as part of the state's school accountability system required under the *Every Student Succeeds Act (ESSA)*. This federal law's purpose is to ensure all students have equitable access to high-quality educational resources and opportunities, and to close educational achievement gaps.

New Jersey's *ESSA* accountability system was developed over the course of a year, during which the NJDOE sought feedback from stakeholders and technical experts to ensure the system would allow the NJDOE to identify the schools whose students are most in need of support. In particular, New Jersey parents, educators, students and community members determined that, within our school accountability system, we must place the greatest emphasis on student growth and the progress of all children, rather than overall averages.

The key element of New Jersey's accountability system, which underlies the technical procedures described in the technical guide, is a focus on student growth and a focus on equity for all children.

New Jersey's School Accountability Indicators: A Focus on Growth

The following five indicators are incorporated into the *ESSA* school accountability system:

Academic Progress

New Jersey has reported schools' performance using Student Growth Percentiles (SGP) since the 2011-2012 school year. This measure shows how much students have learned compared to other students across the state with similar prior academic achievement. SGPs are calculated by comparing scores from the Partnership for Assessment of Readiness for College and Careers (PARCC) assessments for grades 4-8 in English Language Arts/Literacy (ELA/L) and grades 4-7 in Math over multiple years. Looking at students' progress from year to year, regardless of their starting point, provides a deeper picture of student needs when compared to the previous accountability system, which focused on proficiency, or whether or not students met a particular standard.

Graduation Rate

For high schools, graduation rate is the measure with the highest weight in the calculation of summative scores. Stakeholders consistently provided feedback that, as many students often require additional years of support and services, the accountability system should reflect more than a 4-year graduation rate. As a result, the NJDOE also, for the first time, is including the 5-year graduation rate in the accountability system.

Academic Achievement

As required under *ESSA*, New Jersey's accountability system incorporates schools' ELA/L and Math proficiency rates on the PARCC and Dynamic Learning Maps (DLM) assessments.

Rate of Chronic Absenteeism

ESSA provided states the opportunity to incorporate into their accountability system additional indicators related to school quality or student success. The additional indicator New Jersey included in its accountability system is the rate of chronic absenteeism—that is, the rate of students absent for more than 10% of the school year. Chronic absenteeism was chosen as the additional measure because high rates of absenteeism in schools have been linked to low achievement in reading, lower graduation rates and higher dropout rates. In collaboration with stakeholders, the NJDOE is continuing to investigate whether other measures should be incorporated into New Jersey's accountability system in the future.

Progress Toward English Language Proficiency

Progress toward English Language Proficiency was not included in the identification of schools in the 2016-17 data because growth data on the ACCESS for ELLs 2.0 assessment was not yet available. It will be incorporated into New Jersey's *ESSA* accountability system following the 2017-18 school year.

Focus on equity

In keeping with the NJDOE's focus on ensuring that each and every child receives a high quality education, New Jersey's *ESSA* accountability system incorporates the performance of student subgroups to represent 50% of a school's performance. Additionally, based on feedback from many stakeholders, New Jersey now considers a student subgroup, for the purposes of accountability, with a minimum size of 20 students. Previously, the minimum size was 30 students. This change ensures that the accountability system will not mask a student subgroup's performance simply because it is small.

Using the Technical Guide

The rest of this document focuses on the technical procedures used to calculate the indicator and summative scores that are, in turn, used to identify schools in need of comprehensive and targeted support and improvement under New Jersey's *ESSA* accountability system.

Readers may review the technical guide to obtain an in-depth understanding of the measures and calculations used to identify those schools. Analysis of the data used in these calculations will enable schools to identify areas of strength as well as areas where innovative and evidence-based interventions are needed.

As part of the NJDOE's commitment to full transparency, the public will have access to all the data necessary to calculate a school's summative rating and its ranking relative to other schools in the state. This technical guide walks users through exactly that process.

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Introduction

The *Every Student Succeeds Act (ESSA)* was passed in December 2015 with bipartisan congressional support. It replaced the *No Child Left behind Act (NCLB) of 2001* and reauthorized the *Elementary and Secondary Education Act (ESEA) of 1965*. Despite some key changes in the law, the purpose remains the same: to ensure all students have equitable access to high-quality educational resources and opportunities, and to close educational achievement gaps.

As part of the reauthorization, all states were required to develop a state plan. [New Jersey's ESSA State Plan](#) and its [overview](#) describe how the state will identify which schools need the most comprehensive and targeted support and how the state would then provide the support in a differentiated manner. As part of this process, *ESSA* requires states to meaningfully differentiate how schools are performing and to identify schools in need of support and improvement.

Throughout the 2016-17 school year, the New Jersey Department of Education (NJDOE) collaborated with stakeholders from across the state to develop, within the legal confines of *ESSA*, the *ESSA* accountability system. Through this collaboration, the NJDOE developed its process for meaningful differentiation based on stakeholder input about indicators, weights, and desired outcomes. Additionally, NJDOE's technical advisory committee provided technical guidance.

The [Accountability Profiles Companion Guide](#) and this guide provide schools, districts and the public a transparent explanation of the methodology used to identify schools in need of comprehensive or targeted support and improvement. This guide contains separate sections for each type of support and each section contains an overview and a methodology section. The methodology section was written so that a data specialist can follow the steps and replicate the results using specialized software. Each step is followed by a "Looking at the Data" section that walks the reader through the accompanying [accountability worksheet files](#), allowing nontechnical readers to understand the identification process.

The accountability worksheet files include school and subgroup-level data that is released by the NJDOE annually in the [Title I Accountability Profiles](#). The data is also released to parents, community members, and other stakeholders through the [New Jersey School Performance Reports](#). Data in the accountability worksheet files is limited to include data for regular schools and full-time vocational schools that are currently operational.¹ Values in the chronic absenteeism data columns differ from the data in the Accountability Profiles because the worksheets reflect non-chronic absenteeism rates (i.e., the chronic absenteeism rate subtracted from 100). This was necessary to align chronic absenteeism with the other data elements, in which a higher number reflects higher performance.

¹ The U.S. Department of Education defines a regular school as "a public elementary/secondary school that does not focus primarily on vocational, special, or alternative education, although it may provide these programs in addition to a regular curriculum," including charter schools. A vocational school is defined as "a school that focuses primarily on providing secondary students with an occupationally relevant or career-related curriculum, including formal preparation for vocational, technical, or professional occupations."

Identifying schools in need of the most support is just one of many steps in ensuring New Jersey students are receiving the high-quality education they deserve. For more information, see the New Jersey Department of Education's [ESSA webpage](#) or email essa@doe.nj.state.us.

Schools in Need of Comprehensive Support and Improvement

Comprehensive Support and Improvement

Schools are identified for comprehensive support and improvement if any of the following three criteria apply to the school:

1. A school's overall performance is at or below the fifth percentile of all Title I schools (i.e., the cut score).²
2. A high school has a four-year graduation rate at or below 67 percent.
3. A Title I school is identified as in need of targeted support and improvement for three or more consecutive years (i.e., the school has a chronically low performing subgroup).

Schools are identified for comprehensive support every three years using the methodology outlined in the following section.

Methodology

The methodology by which schools are identified for comprehensive support and improvement is as follows:

1. **Determine School Configuration.** Each school configuration type has unique requirements. School configuration is derived based on the following criteria:
 - a. Mixed Configuration Schools will have at least five of the following six data elements: Four-year Graduation Rate, Five-year Graduation Rate, English Language Arts/Literacy (ELA) Proficiency, Math Proficiency, ELA Growth, and Math Growth.
 - b. Elementary Schools will not have a Four-year Graduation Rate or Five-year Graduation Rate. Elementary Schools will have at least three of the following four data elements: ELA Proficiency, Math Proficiency, ELA Growth, and Math Growth.
 - c. High Schools will not have ELA Growth or Math Growth. High Schools will have at least three of the following four data elements: ELA Proficiency, Math Proficiency, Four-year Graduation Rate, and Five-year Graduation Rate.
 - d. Schools with fewer than three data elements are removed from the dataset. They do not have sufficient data to receive a summative score.

² Schools are identified for comprehensive support and improvement based on their performance relative to the performance of the fifth percentile of Title I schools. Schools are identified to receive support regardless of whether they receive Title I funding.

Looking at the data: In the comprehensive file, *Summative* worksheet, Columns A through C contain school identifiers. Columns D through J contain schools' data for the total student group from the Title I Accountability Profiles. The data in columns D through J was used to derive the school configuration based on the criteria detailed above in Step 1. The school configuration is reflected in Column K.

2. **Convert scores to z-scores, within configuration.** This includes 10 variables (one at the school level for the total student group and one for each of nine student subgroups) for each of seven data points: Chronic Absenteeism, Four-year Graduation Rate, Five-year Graduation Rate, ELA Proficiency, Math Proficiency, ELA Growth, and Math Growth. If a school is missing a data point, the missing value is disregarded when the values are converted to z-scores.³

Looking at the data: In the *comprehensive* file, there are separate worksheets for each of the seven indicators. On each worksheet, columns A through C contain school identifiers and column D contains the school's configuration (from step 1). Columns E through N contain the schools' data from the Title I Accountability Profiles for each of the nine student subgroups and the total student group. Columns O through X contain the z-score conversions of the data from columns E through N.

3. **Calculate indicator scores.** For each indicator:
 - a. Calculate the average subgroup z-score for each indicator by totaling the nine student subgroup z-scores and dividing by the number of subgroups.
 - b. Average the z-score for the total student group with the average subgroup z-score.
 - c. Replace the indicator score with the z-score for the total student group if there is no average subgroup z-score.
 - d. Convert the indicator score to a percentile ranking, by configuration. Round to the nearest tenth. This is the final indicator score.

Looking at the data: On each indicator worksheet in the comprehensive file, columns O through X contain the z-score conversions of the data for the respective indicator. Column Y contains the sum of the student subgroup z-scores from columns O through W. Column Z contains the count of student subgroups. Column AA contains the average student subgroup z-score. Column AB contains the average of the average student subgroup z-score (column AA) and the total student group z-score (column X). Column AC reflects column AB converted to a percentile ranking, by configuration.

³ A z-score indicates how many standard deviations an element is from the mean.

4. **Generate values (i.e., weights) for each indicator.** (Note: The 2016-17 values differ from the values in the State Plan because Progress toward English Language Proficiency data is not yet available.)
- a. Define the values and weights for the indicators in each school type

Table 1: Elementary School Values

Indicator	Value
ELA Growth	0.25
Math Growth	0.25
ELA Proficiency	0.175
Math Proficiency	0.175
Chronic Absenteeism	0.15

Table 2: High School Values

Indicator	Value
ELA Proficiency	0.175
Math Proficiency	0.175
Four-Year Graduation Rate	0.25
Five-Year Graduation Rate	0.25
Chronic Absenteeism	0.15

Table 3: Mixed Configuration School Values

Indicator	Value
ELA Growth	0.15
Math Growth	0.15
ELA Proficiency	0.125
Math Proficiency	0.125
Four-Year Graduation Rate	0.15
Five-Year Graduation Rate	0.15
Chronic Absenteeism	0.15

- b. Replace the indicator weight value to missing if the school is missing the respective indicator score.

Looking at the data: Look at the *Summative* worksheet. The indicator scores from column AC in the indicator worksheets have been copied to columns L through R on the *Summative* worksheet. Columns S through Y contain the weight values for each indicator (some weights were adjusted; see next step).

5. Adjust indicator weights.

- a. Generate the academic denominator by totaling the weight values for the academic indicators (ELA Growth, Math Growth, ELA Proficiency, Math Proficiency, Four-Year Graduation rate, Five-Year Graduation rate).
- b. If the value is below .85, divide the weight of each academic indicator (ELA Growth, Math Growth, ELA Proficiency, Math Proficiency, Four-Year Graduation rate, Five-Year Graduation rate) by the academic denominator and multiply it by .85. (This addresses missing data by evenly redistributing the weight of the missing data to the other academic indicators.)
- c. If the chronic absenteeism data is missing, divide the weight of each academic indicator (ELA Growth, Math Growth, ELA Proficiency, Math Proficiency, Four-Year Graduation rate, Five-Year Graduation rate) by .85. (This addresses missing data by evenly redistributing the weight of the chronic absenteeism indicator to the other indicators.)

Looking at the data: On the *Summative* worksheet, there is a weight-adjustment flag in column Z. This indicates that there is a missing indicator score. The weights in columns S through Y were adjusted according to the rules above.

6. Generate summative scores.

- a. Multiply each indicator by its respective weight.
- b. Add them together. This number represents the school's summative score out of 100 points.

Looking at the data: On the *Summative* worksheet, the values obtained by multiplying each indicator by its respective weight are contained in columns AA through AG. Adding these values generates the summative score in column AH.

7. Determine the fifth percentile for Title I Schools, by configuration.

- a. Convert the summative scores for Title I schools to percentile rankings, by configuration.
 - i. Identify the summative score of the elementary school at the fifth percentile. This is the elementary school cut score.
 - ii. Identify the summative score of the high school at the fifth percentile. This is the high school cut score.
 - iii. Identify the summative score of the mixed configuration school at the fifth percentile. This is the mixed configuration school cut score.

Looking at the data: On the *Summative* worksheet, column AI indicates whether a school receives Title I funding. In the 2017 dataset, there were 1,274 elementary schools, 227 high schools, and 38 mixed configuration schools receiving Title I funds. The following steps will help easily identify the bottom 5 percent in the Excel file:

- Filter the dataset to include only Title I schools
- Filter the dataset to include only one configuration (column K)
- Sort by summative score

- Scroll down the number of rows that equals 5 percent of the Title I schools by configuration (64 for elementary schools, 12 for high schools, 2 for mixed configuration).
- This identifies the school at the fifth percentile. Its summative score defines the cut score for all schools of that configuration.

The cut score for each configuration is in column AJ.

8. Identify schools in need of comprehensive support and improvement.

- All elementary schools, regardless of Title I status, with summative scores at or below the elementary school cut score require comprehensive support and improvement.
- All high schools, regardless of Title I status, with summative scores at or below the high school cut score require comprehensive support and improvement.
- All mixed configuration schools, regardless of Title I status, with summative scores at or below the mixed configuration school cut score require comprehensive support and improvement.
- All high schools and mixed configuration schools, regardless of Title I status, with Four-year Graduation Rates below 67 percent require comprehensive support and improvement.

Looking at the data: On the *Summative* worksheet, column AH contains the summative score. Column AJ contains the cut score. If the value in AH is less than or equal to the value in AJ, the school is identified as in need of comprehensive support and improvement. Column E contains the schools' graduation rates. If the value in column E is less than or equal to 67, the school is identified as in need of comprehensive support and improvement. Schools requiring comprehensive support and improvement are indicated in the column AK, *ESSA Status*.

9. Calculate Summative Determinations.

- Convert summative scores to percentile rankings, by configuration. Round to the nearest tenth.

Looking at the data: On the *Summative* worksheet, column AL contains the summative determination.

Schools in Need of Targeted Support and Improvement

Targeted Support and Improvement

Schools are identified for targeted support and improvement if the school has a student subgroup with an overall performance at or below the fifth percentile of Title I schools (i.e., if the subgroup were its own school, its cut score would qualify the subgroup for comprehensive support).

Schools are identified for targeted support every three years using the methodology outlined in the following section.

Methodology

The following is the methodology by which schools are identified for targeted support and improvement:

1. **Determine school configuration for each student subgroup.** Each school configuration type has unique requirements. School configuration is derived for each student subgroup based on the following criteria:⁴
 - a. Subgroups in Mixed Configuration Schools will have at least five of the following six data elements: Four-year Graduation Rate, Five-year Graduation Rate, ELA Proficiency, Math Proficiency, ELA Growth, and Math Growth.
 - b. Subgroups in Elementary Schools will not have four-year graduation rate or five-year graduation rate, and they will have three or more of the following four data elements: ELA Proficiency, Math Proficiency, ELA Growth, and Math Growth.
 - c. Subgroups in High Schools will not have ELA Growth or Math Growth, and they will have at least three of the following four data elements: ELA Proficiency, Math Proficiency, Four-year Graduation Rate, and Five-year Graduation Rate.
 - d. Subgroups with fewer than three data elements should be removed from the dataset. They do not have sufficient data to receive a subgroups score.

Looking at the data: In the *targeted* file, there are separate worksheets for each student subgroup. Look at any worksheet. Columns A through C contain school identifiers. Columns D through J contain data for the student subgroup referenced in the worksheet title. The data comes from the Title I Accountability Profiles. The data in columns D through J was used to derive the school configuration based on the criteria detailed above in Step 1. The student subgroup's school configuration is reflected in Column K. Schools with insufficient data for a student subgroup are removed from the dataset for that student subgroup.

⁴ School configurations are redefined for each subgroup. In most cases, subgroups will have the same configuration as their school. However, this step is necessary to ensure that underperforming subgroups in mixed configuration schools are identified for support. For example, if a subgroup in a mixed configuration school has both proficiency data elements and both growth data elements, but does not have graduation rate data, this subgroup's performance is considered among the performance of elementary schools because they have similar data elements available (i.e., if the subgroup were its own school, it would be an elementary school).

2. Calculate subgroup indicator scores.

- a. Convert the scores for each of the seven indicator items (Chronic Absenteeism, Four-year Graduation Rate, Five-year Graduation Rate, ELA Proficiency, Math Proficiency, ELA Growth, and Math Growth) to percentile rankings, within subgroup and configuration.
- b. Round it to the nearest tenth.

Looking at the data: On each worksheet in the targeted file, columns D through J contain the schools' data from the Title I Accountability Profiles for each of the nine student subgroups and the total student group. Columns L through R contain the percentile rankings of the data from columns D through J, by configuration (column K).

3. Generate values (i.e., weights) for each indicator, by subgroup and configuration. (Note: The 2016-17 values differ from the values in the State Plan because Progress toward English Language Proficiency Data is not yet available.)

- a. Identify the values and weights for the indicators in each school type.

Table 4: Elementary School Values

Indicator	Value
ELA Growth	.25
Math Growth	.25
ELA Proficiency	.175
Math Proficiency	.175
Chronic Absenteeism	.15

Table 5: High School Values

Indicator	Value
ELA Proficiency	.175
Math Proficiency	.175
Four-Year Graduation Rate	.25
Five-Year Graduation Rate	.25
Chronic Absenteeism	.15

Table 6: Mixed Configuration School Values

Indicator	Value
ELA Growth	.15
Math Growth	.15
ELA Proficiency	.125
Math Proficiency	.125
Four-Year Graduation Rate	.15
Five-Year Graduation Rate	.15
Chronic Absenteeism	.15

- b. Replace the indicator weight value to “missing” if the subgroup is missing the respective indicator score.

Looking at the data: On the worksheets in the targeted file, Columns S through Y contain the weight values for each indicator (some weights were adjusted; see next step).

4. Adjust indicator weights.

- a. Generate the academic denominator by totaling the weight values for the academic indicators (ELA Growth, Math Growth, ELA Proficiency, Math Proficiency, Four-Year Graduation Rate, and Five-Year Graduation Rate).
- b. If the value is below .85, divide the weight of each academic indicator (ELA Growth, Math Growth, ELA Proficiency, Math Proficiency, Four-Year Graduation Rate, and Five-Year Graduation Rate) by the academic denominator and multiply it by .85. (This addresses missing data by evenly redistributing the weight of the missing data to the other academic indicators.)
- c. If the chronic absenteeism data is missing, divide the weight of each academic indicator (ELA Growth, Math Growth, ELA Proficiency, Math Proficiency, Four-Year Graduation Rate, and Five-Year Graduation Rate) by .85. (This addresses missing data by evenly redistributing the weight of the chronic absenteeism indicator to the other indicators.)

Looking at the data: On the worksheets in the targeted file, there is a weight adjustment flag in column Z. This indicates that there is a missing indicator score. The weights in columns S through Y were adjusted according to the rules above.

5. Generate subgroup summative scores. For each subgroup:

- a. Multiply each indicator by its respective weight.
- b. Add them together. This number represents the subgroup’s summative score out of 100 points.

Looking at the data: On the worksheets in the targeted file, the values obtained by multiplying each indicator by its respective weight are contained in columns AA through AG. Adding these values generates the student subgroup score in column AH.

6. Identify schools in need of targeted support and improvement. If a school has one or more subgroups with a summative score below the configuration-specific cut score, the school is in need of support. (Cut scores were calculated based on the fifth percentile of Title I schools while identifying schools for comprehensive support and improvement.)

Looking at the data: On the worksheets in the targeted file, the value of the cut score in column AI is based on the student subgroup configuration. If the value in column AH is less than or equal to the value in column AI, the student subgroup is identified for targeted support and improvement (column AJ).

Schools in Need of Targeted Support and Improvement for Consistently Underperforming Subgroups

Targeted Support for Consistently Underperforming Subgroups

Annually, schools are identified for targeted support and improvement for consistently underperforming subgroups if the school has a student subgroup that has missed its interim targets for all indicators for two consecutive years. Schools will be identified for targeted support and improvement for consistently underperforming subgroups beginning in January 2019, when two years of data are available.

Schools are identified as “at risk” of needing targeted support and improvement for consistently underperforming subgroups on the School Performance Report if a student subgroup misses all of its available targets and performs below the state average for one year.

Similar to the methodology used to calculate school and subgroup scores, the NJDOE will only review a subgroup for “at risk” status if there is sufficient data for review.

- Subgroups in Mixed Configuration Schools must have at least six of the following seven data elements: Four-year Graduation Rate, Five-year Graduation Rate, ELA Proficiency, Math Proficiency, ELA Growth, Math Growth, and Chronic Absenteeism. If the subgroup misses its targets and is below the state average for all data points for which the subgroup has data, it is considered “at risk.”
- Subgroups in Elementary Schools will not have a Four-year Graduation Rate or Five-year Graduation Rate, and they will have at least four of the following five data elements: ELA Proficiency, Math Proficiency, ELA Growth, Math Growth, and Chronic Absenteeism. If the subgroup misses its targets and is below the state average for all data points for which the subgroup has data, it is considered “at risk.”

Subgroups in High Schools will not have ELA Growth or Math Growth, and they will have four or more of the following five data elements: ELA Proficiency, Math Proficiency, Four-year Graduation Rate, Five-year Graduation Rate, and Chronic Absenteeism. If the subgroup misses its targets and is below the state average for all data points for which the subgroup has data, it is considered “at risk.”

For more information, please refer to the New Jersey Department of Education’s [ESSA webpage](#).