

School Quality Reports: Using “Comparison Group” Results To Better Understand a School’s Performance

What are Comparison Group results?

- They are performance results (such as test scores or graduation rates) achieved by a group of students from other schools throughout the city who were very similar to the students at the school—based on their prior test scores and factors such as disability status, English Language Learner (“ELL”) status, and economic need.
- They can be interpreted as an estimate of how the students at the school might have performed if they had attended other schools throughout the city.

Why does the DOE show Comparison Group results?

- To understand how effectively a school is helping its students, it is important to take into account students’ starting points and challenges that they face.
 - **Example:** A school whose students scored slightly below the city average may be very effective if those students started out far below the city average when they entered the school.
- The Comparison Group takes into account the student population served by the school, and allows the reader to zero in on the school’s effectiveness at helping its students improve.
- The Comparison Group helps to avoid the common pitfall of mischaracterizing schools as ineffective simply because they serve higher-need students.

How are Comparison Groups (and their results) created?

- Each student at the school is matched to the 50 most similar students from other schools throughout the city.
- The similar students identified for each student at the school are grouped together into a large Comparison Group.
 - **Example:** If a school has 300 students and each student has 50 similar students, the Comparison Group will have $300 \times 50 = 15,000$ students in it.
- The DOE then calculates the performance results of the Comparison Group.
 - **Example:** A school with 300 students had an average score of 2.6 on the state math test, slightly below the city average—but the school’s comparison group of 15,000 students had an average test score of 2.2.
- The Comparison Group results can be interpreted as the performance results of a very large, hypothetical school with a group of students similar to the students at the main school.

What factors are used to match students, and how are matches made?

- The process of matching each student with the 50 most similar students involves two main steps.
- **Step 1:** For each student, the DOE identifies a large group of students who are exact matches on the following student characteristics:

Elementary School (K-5)	Middle School (6-8)	High School (9+)
-Grade Level -ELL category -Disability category -Temporary housing or eligibility for public assistance	-Grade Level -ELL category -Disability category -Temporary housing or eligibility for public assistance	-Graduation Cohort -Overage/under-credited or history of incarceration -Disability category -Temporary housing or eligibility for public assistance

- **Example:** If a student is in 4th grade, is not an ELL, is in a self-contained disability setting, and was in temporary housing, the first step is to identify all other students from other schools who were in 4th grade,

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were not ELLs, were in self-contained disability settings, and were in temporary housing or eligible for public assistance.

- **Step 2:** Within the group of students identified in Step 1, the DOE finds the 50 students who are the most similar to the main student based on the following factors:

Elementary School (K-5)	Middle School (6-8)	High School (9+)
Primary Factors¹ -Grade 3 ELA score -Grade 3 Math score	Primary Factors -Grade 5 ELA score -Grade 5 Math score	Primary Factors -Grade 8 ELA score -Grade 8 Math score
Secondary Factors -School’s % students with disabilities -School’s Economic Need -School’s % ELL	Secondary Factors -School’s % students with disabilities -School’s Economic Need -School’s % overage -School’s % ELL	Secondary Factors - School’s % students with disabilities -School’s Economic Need -School’s % overage/undercredited or history of incarceration -School’s % ELL

- To find the 50 most similar students from the group, the primary factors are weighed more heavily than the secondary factors.
 - **Example:** Alisha is a 7th grader. Her group of Step 1 matches includes Brian and Carlos. Alisha scored 2.8 on both her Grade 5 ELA and Math exams, Brian scored 2.1, and Carlos scored 2.9. Alisha is more likely to be matched with Carlos than Brian.
 - **Example:** David is a 5th grader. His group of Step 1 matches includes Emily and Frank. All three students scored 2.7 on both their Grade 3 ELA and Math exams. David’s school has 25% students with disabilities, Emily’s school has 23% students with disabilities, and Frank’s school has 2% students with disabilities. David is more likely to be matched with Emily than Frank.
- In addition to the primary factors based on the student’s own characteristics, the secondary factors about school characteristics are also taken into account because the school’s population can have “peer effects” on the student.

How can the Comparison Group be used to interpret a school’s results?

- Comparing a school’s result to its Comparison Group sheds light on how well the school’s students are performing compared to similar students throughout the city.
- A school result that is substantially higher than the Comparison Group suggests that the school has been effective at helping its students improve; a school result that is substantially lower suggests the opposite.
 - **Example:** A school’s Snapshot shows that 28% of students met State standards on the State English test, which was slightly below the city average of 30%. But only 15% of the school’s Comparison Group met State standards on the State English test. This shows that, although the school’s results were slightly below average, it has been effective at helping students improve.

¹ For third graders (who do not yet have state test scores), Grade 2 attendance is used as a matching factor.

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Appendix

- **ELL Category:** Students are placed in different ELL categories based on their latest score on the NYSESLAT.
- **Disability Category:** Students are placed into different disability categories based on the amount of time that they spend with general-education peers. This factor looks at the student’s most restrictive disability category during the past four years.
- **Temporary Housing / Eligible for Public Assistance:** This factor looks at whether a student was in temporary housing or eligible for public assistance during the past four years.
- **School’s % Students with Disabilities:** For elementary and middle schools, this factor looks at students’ most restrictive disability category during the past four years. For high schools, the look back extends five years.
- **School’s Economic Need:** The school’s Economic Need is defined by its Economic Need Index (ENI), which determines the likelihood that students at the school are in poverty. The ENI is calculated as follows:
 - If the student is HRA-eligible or living in temporary housing, the student’s Economic Need Value will be 1.0.
 - Otherwise, the student’s Economic Need Value will be based on the percentage of families (with school-age children) in the student’s Census tract whose income is below the poverty level, as estimated by the American Community Survey 5-Year Estimate. The student’s Economic Need Value will equal this percentage divided by 100.
 - The school’s Economic Need Index will be the average of its students’ Economic Need Values.
- **Overage / undercredited:** Any student who meets the criteria below at the time he or she first enrolled in the school under consideration will be considered overage/undercredited:

Age on December 31 of entry school year	Credits prior to entry school year
16	Less than 11 credits
17	Less than 22 credits
18	Less than 33 credits
19-21	Less than 44 credits

A statistical adjustment is made to 8th grade proficiency ratings to account for changes in State exams over time. The adjustment has the effect of treating all students’ proficiency ratings as if they were determined using exams from the same year