

PyCity Schools Analysis of District-wide Standardized Test Results

The most striking trend of the school analysis is that beginning in the 9th grade, Charter School students have significantly higher test scores than do District School students in both math and reading. The test score disparity between the two student populations continues throughout the 4 grade years analyzed. The gap in test scores beginning in the 9th grade between Charter and District schools is not sufficiently explained with this data set. Questions such as ‘Do students enrolling in Charter Schools already have significantly higher baseline test score averages than those enrolling in District Schools?’ are not addressed.

To level this unknown, additional comparisons were run to more objectively analyze school performance from grades 9 through 12. Did student averages improve over the 4 years, remain static or decrease.

When the data is analyzed in this manner, the numbers tell a different story as to the best performing schools. District Schools as a group slightly outperform Charter Schools in terms of improvement in student averages in both math and reading over the course of 4 years.

Top Performing Schools – Percentage Math Score Improvement Over 4 Years

	9th Grade Math	10th change	11th change	12th change	% Performance Change	School Type
Ford High School	77.361345	0.995996	1.009806	1.009689	1.015508	District
Holden High School	83.787402	1.004286	0.981527	1.025883	1.011248	Charter
Bailey High School	77.083676	1.001129	0.993307	1.013379	1.007732	District
Johnson High School	77.187857	1.006477	0.989669	1.008176	1.004223	District
Hernandez High School	77.438495	1.001307	1.002611	0.999345	1.003264	District

Worst Performing Schools – Percentage Reading Score Improvement Over 4 Years

	9th Grade Math	10th change	11th change	12th change	% Performance Change	School Type
Griffin High School	82.044010	0.974058	1.004615	1.005830	0.984258	Charter
Rodriguez High School	76.859966	1.003230	1.002839	0.983330	0.989307	District
Figueroa High School	76.403037	0.998211	0.995521	0.996539	0.990300	District
Pena High School	83.625455	1.003040	0.988662	1.002456	0.994103	Charter
Wright High School	83.264706	0.991125	1.002070	1.002293	0.995454	Charter

Top Performing Schools – Percentage Reading Score Improvement Over 4 Years

	9th Grade Reading	10th Grade Reading	11th Grade Reading	12th Grade Reading	Total Change	School Type
Shelton High School	84.122642	83.441964	84.373786	82.781671	1.016199	Charter
Huang High School	81.290284	81.512386	81.417476	80.305983	1.012257	District
Rodriguez High School	80.993127	80.629808	80.864811	80.376426	1.007673	District
Bailey High School	81.303155	80.907183	80.945643	80.912451	1.004829	District
Johnson High School	81.260714	80.773431	80.616027	81.227564	1.000408	District

Worst Performing Schools – Percentage Reading Score Improvement Over 4 Years

	9th Grade Reading	10th Grade Reading	11th Grade Reading	12th Grade Reading	Total Change	School Type
Holden High School	83.677165	83.324561	83.815534	84.698795	0.987938	Charter
Pena High School	83.807273	83.612000	84.335938	84.591160	0.990733	Charter
Griffin High School	83.369193	83.706897	84.288089	84.013699	0.992329	Charter
Cabrera High School	83.676136	84.253219	83.788382	84.287958	0.992741	Charter
Wilson High School	83.939778	84.021452	83.764608	84.317673	0.995518	Charter

On the surface, it would appear that budgets do not have a significant impact on school performance, but larger schools, by nature of their size typically allocate a significantly larger portion of budgets to administrative and overhead costs. Parsing budget numbers by dividing total school budgets by the number of students may not provide a true representation of budget per student, in terms of teaching impact per student in the classroom.

Output:

	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	Overall Passing Rate
Total Budget Per Student					
<\$585	83.455399	83.933814	93.460096	93.460096	93.460096
\$585-615	83.599686	83.885211	94.230858	94.230858	94.230858
\$615-645	79.079225	81.891436	75.668212	75.668212	75.668212
\$645-675	76.997210	81.027843	66.164813	66.164813	66.164813

Student performance is significantly different by school size overall, with smaller schools achieving significantly higher test results, but again, if performance is measured by student performance change over the course of 4 years, school size does not significantly impact performance gains.