

## Py City School Analysis – Reports and Observable Trends

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### Reports

#### District Summary

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##### District Summary

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Out[1936]:

Total Schools	Total Students	Total Budget	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing Rate	
0	15	39,170	\$24,649,428.00	78.99	81.88	92.45	96.2	94.32

Please [observable trends section](#) for details on findings.

## School Summary

### School Summary \*\*\*\*\*

		School Type	Total Students	Total School Budget	Per Student Budget	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing Rate
0	Huang High School	District	2917	\$1,910,635.00	\$655.00	76.629414	81.182722	88.86%	94.48%	91.67%
1	Figueroa High School	District	2949	\$1,884,411.00	\$639.00	76.711767	81.158020	88.44%	94.54%	91.49%
2	Shelton High School	Charter	1761	\$1,056,600.00	\$600.00	83.359455	83.725724	100.00%	100.00%	100.00%
3	Hernandez High School	District	4635	\$3,022,020.00	\$652.00	77.289752	80.934412	89.08%	94.61%	91.84%
4	Griffin High School	Charter	1468	\$917,500.00	\$625.00	83.351499	83.816757	100.00%	100.00%	100.00%
5	Wilson High School	Charter	2283	\$1,319,574.00	\$578.00	83.274201	83.989488	100.00%	100.00%	100.00%
6	Cabrera High School	Charter	1858	\$1,081,356.00	\$582.00	83.061895	83.975780	100.00%	100.00%	100.00%
7	Bailey High School	District	4976	\$3,124,928.00	\$628.00	77.048432	81.033963	89.53%	94.55%	92.04%
8	Holden High School	Charter	427	\$248,087.00	\$581.00	83.803279	83.814988	100.00%	100.00%	100.00%
9	Pena High School	Charter	962	\$585,858.00	\$609.00	83.839917	84.044699	100.00%	100.00%	100.00%
10	Wright High School	Charter	1800	\$1,049,400.00	\$583.00	83.682222	83.955000	100.00%	100.00%	100.00%
11	Rodriguez High School	District	3999	\$2,547,363.00	\$637.00	76.842711	80.744686	88.55%	94.62%	91.59%
12	Johnson High School	District	4761	\$3,094,650.00	\$650.00	77.072464	80.966394	89.18%	94.48%	91.83%
13	Ford High School	District	2739	\$1,763,916.00	\$644.00	77.102592	80.746258	89.30%	93.87%	91.58%
14	Thomas High School	Charter	1635	\$1,043,130.00	\$638.00	83.418349	83.848930	100.00%	100.00%	100.00%

### Top Performing Schools (By Passing Rate)

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	School Type	Total Students	Total School Budget	Per Student Budget	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing Rate
school									
Shelton High School	Charter	1761	\$1,056,600.00	\$600.00	83.36	83.73	100.0	100.0	100.0
Griffin High School	Charter	1468	\$917,500.00	\$625.00	83.35	83.82	100.0	100.0	100.0
Wilson High School	Charter	2283	\$1,319,574.00	\$578.00	83.27	83.99	100.0	100.0	100.0
Cabrera High School	Charter	1858	\$1,081,356.00	\$582.00	83.06	83.98	100.0	100.0	100.0
Holden High School	Charter	427	\$248,087.00	\$581.00	83.80	83.81	100.0	100.0	100.0

Bottom Performing Schools (By Passing Rate)

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	School Type	Total Students	Total School Budget	Per Student Budget	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing Rate
school									
Figueroa High School	District	2949	\$1,884,411.00	\$639.00	76.71	81.16	88.44	94.54	91.49
Ford High School	District	2739	\$1,763,916.00	\$644.00	77.10	80.75	89.30	93.87	91.58
Rodriguez High School	District	3999	\$2,547,363.00	\$637.00	76.84	80.74	88.55	94.62	91.59
Huang High School	District	2917	\$1,910,635.00	\$655.00	76.63	81.18	88.86	94.48	91.67
Johnson High School	District	4761	\$3,094,650.00	\$650.00	77.07	80.97	89.18	94.48	91.83

Please see [observable trend section](#) for the findings.

Math and Reading Scores by Grade

**Math Scores By Grade**

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		9th	10th	11th	12th
0	Bailey High School	77.083676	76.996772	77.515588	76.492218
1	Cabrera High School	83.094697	83.154506	82.765560	83.277487
2	Figueroa High School	76.403037	76.539974	76.884344	77.151369
3	Ford High School	77.361345	77.672316	76.918058	76.179963
4	Griffin High School	82.044010	84.229064	83.842105	83.356164
5	Hernandez High School	77.438495	77.337408	77.136029	77.186567
6	Holden High School	83.787402	83.429825	85.000000	82.855422
7	Huang High School	77.027251	75.908735	76.446602	77.225641
8	Johnson High School	77.187857	76.691117	77.491653	76.863248
9	Pena High School	83.625455	83.372000	84.328125	84.121547
10	Rodriguez High School	76.859966	76.612500	76.395626	77.690748
11	Shelton High School	83.420755	82.917411	83.383495	83.778976
12	Thomas High School	83.590022	83.087886	83.498795	83.497041
13	Wilson High School	83.085578	83.724422	83.195326	83.035794
14	Wright High School	83.264706	84.010288	83.836782	83.644986

## Reading Scores By Grade

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		9th	10th	11th	12th
0	Bailey High School	81.303155	80.907183	80.945643	80.912451
1	Cabrera High School	83.676136	84.253219	83.788382	84.287958
2	Figueroa High School	81.198598	81.408912	80.640339	81.384863
3	Ford High School	80.632653	81.262712	80.403642	80.662338
4	Griffin High School	83.369193	83.706897	84.288089	84.013699
5	Hernandez High School	80.866860	80.660147	81.396140	80.857143
6	Holden High School	83.677165	83.324561	83.815534	84.698795
7	Huang High School	81.290284	81.512386	81.417476	80.305983
8	Johnson High School	81.260714	80.773431	80.616027	81.227564
9	Pena High School	83.807273	83.612000	84.335938	84.591160
10	Rodriguez High School	80.993127	80.629808	80.864811	80.376426
11	Shelton High School	84.122642	83.441964	84.373786	82.781671
12	Thomas High School	83.728850	84.254157	83.585542	83.831361
13	Wilson High School	83.939778	84.021452	83.764608	84.317673
14	Wright High School	83.833333	83.812757	84.156322	84.073171

Please see [observable trends section](#) for findings.'

Scores by School Size, School Spending (per Student) and School Type

### Scores by School Spending

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	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing Rate
Spending Ranges (Per Student)					
< \$585	83.455399	83.933814	100.000000	100.000000	100.000000
\$585-615	83.599686	83.885211	100.000000	100.000000	100.000000
\$615-645	79.079225	81.891436	92.636050	96.264069	94.45006
\$645-675	76.997210	81.027843	89.041475	94.520946	91.78121

#### Scores by School Size

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	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing Rate
School Size					
Small (<1000)	83.821598	83.929843	100.000000	100.000000	100.000000
Medium (1000-2000)	83.374684	83.864438	100.000000	100.000000	100.000000
Large (2000-5000)	77.746417	81.344493	90.367591	95.143406	92.755499

#### Scores by School Type

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	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing Rate
School Type					
Charter	83.473852	83.896421	100.000000	100.000000	100.000000
District	76.956733	80.966636	88.991533	94.449607	91.72057

Please see [observable trends section](#) for details on findings.

#### Observable Trends

1. Charter schools seem to be at the Top 5 performing schools from a pass rate perspective and generally at the top, irrespective of the size and the spending. District schools are the bottom 5 and seem to have universally a huger school sizes compared to charter school sizes.
2. In general, the average reading scores and reading pass rates seems to be better or slightly better in all schools over the average math scores and % math pass rates.
3. Counter to expectation, higher spending per Student did not mean better performance rates – It seems that specifically for this data set, spending per student that from \$500 to \$615 per Student yielded better pass rates than for higher spending. This would be ironic as we may have believed that more spending per student, we may have expected a better result.

**As next step**, we may need to check if teacher quality based on years of experience, college degrees' vs experiences did matter or not.

4. Although some schools have done really well, we can see that the overall districts averages in Math and Reading, seem to be pulled down due to a few non-performing schools.

#### Next Steps:

1. We need to see how much of a factor does Teacher quality, in terms of years of experiences, college degree, kids engagement score (based on satisfaction from student and parents, etc.) pay a role in the performances of the kids academically.

2. We also need to measure on non-academic aspects like art activity, sports activity to see if the overall personal development of the child is taken into consideration.
3. We also need to check if diversity of the schools has any effect on overall academic performances. We also need to consider if average earning income of the district population matters.