

PYCITYSCHOOLS ANALYSIS REPORT

SUMMARY

- The PyCitySchools analysis report is based on the 2 CSV files provided (student and schools).
- Analysis conducted on 15 schools having a total of 39170 students. The school types considered for this analysis include District and Charter schools.
- Analysis based on school type conducted involves comparing both the school types. Charter school type have the highest percentage score in both Math and Reading. Thereby, Charter schools outperforms the District type schools by scoring the overall highest passing percentage.
- Depending on the school's strength, the school is classified as small if the strength is less than 1000, medium if the strength is between 1000 and 2000, and large if the strength is greater than 2000.
- On an average, small and medium-sized schools have the highest passing percentage in both Math and Reading. Small sized school scored 89.88% and medium sized school scored 90.62%. Whereas large sized school scored 58.28%.
- Cabrera High School defied the usual norm, despite receiving the lowest budget allocation per school, it excelled over other schools in overall passing rate. It is a large charter school type and has an overall pass percentage of 91%.
- We could see that as the budget per student increases the overall passing percentage decreases. Math and Reading pass percentage decreases with the increase in budget. This proves that the money spent cannot be correlated with the pass percentage of students or there is an additional unknown attribute such as spending on other dimensions of students' development. This unknown attribute can be impacting the students' studies and hence the pass percentage. With the given data, we cannot infer a direct dependency between Students' performance and the budget spent per student.
- Grade-wise score for math is less in comparison to the reading score. Analysis is performed over the average Math and Reading scores of 9th grade, 10th grade, 11th grade, and 12th grade of all 15 schools. In each school, the average score across grades is not significantly different. However, a stark difference is observed in Math when the grade scores across different schools are compared. Overall, the Reading scores among grades are better compared to Math scores.
- Bottom performing schools: All the 5 bottom performing schools are district type large schools with students greater than 2000. Overall pass percentage is low. However, these schools have better average reading scores compared to average math scores.
- Top performing schools: All the top performing 5 schools are charter type schools with student count less than 2000 except for one school that has student count of 2283.
- % Passing rate in Reading is higher than % Passing rate in Math. This pulls down the overall pass percentage.
- Overall, all the students in all schools are performing well in reading hence the average score in reading is high compared to the average score in math.

DISTRICT SUMMARY

- There are 15 schools with 39170 students in total.
- A total of \$24,649,428.00 is allocated to the school district.
- 78.985 is the average Math score and 81.877 is the average Reading score.
- Overall, 74.98% of students in the district passed Math and 85.80% of students passed Reading.
- 65.172% of students passed in the district.

Total Schools	Total Students	Total Budget	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing	
0	15	39,170	\$24,649,428.00	78.985371	81.87784	74.980853	85.805463	65.172326

SCHOOL SUMMARY

- Out of 15 schools, 7 schools are District type, and 8 schools are Charter type schools.
- Students count range from 427 to 4976.
- Score of 70 and above is considered pass in Math and Reading.
- % Passing Reading - ranges from 79.29% to 97.30%
- % Passing Math - ranges from 65.68% to 94.59%
- Average Math score ranges from 76.62 to 83.83
- Average Reading score ranges from 80.74 to 84.04
- Thomas High School excels in Reading with 97.30%. Out of 1635 students, 1591 students scored above 70.
- Pena High School excels in Math with 94.59%. Out of 962 students, 910 students scored above 70.

Per School Summary

school_name	School Type	Total Students	Total School Budget	Per Student Budget	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing
Bailey High School	District	4976	\$3,124,928.00	\$628.00	77.048432	81.033963	66.680064	81.933280	54.642283
Cabrera High School	Charter	1858	\$1,081,356.00	\$582.00	83.061895	83.975780	94.133477	97.039828	91.334769
Figueroa High School	District	2949	\$1,884,411.00	\$639.00	76.711767	81.158020	65.988471	80.739234	53.204476
Ford High School	District	2739	\$1,763,916.00	\$644.00	77.102592	80.746258	68.309602	79.299014	54.289887
Griffin High School	Charter	1468	\$917,500.00	\$625.00	83.351499	83.816757	93.392371	97.138965	90.599455

Top 2 schools in Reading with highest pass percentage

school_name	School Type	Total Students	Total School Budget	Per Student Budget	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing
Thomas High School	Charter	1635	\$1,043,130.00	\$638.00	83.418349	83.848930	93.272171	97.308869	90.948012
Griffin High School	Charter	1468	\$917,500.00	\$625.00	83.351499	83.816757	93.392371	97.138965	90.599455

Top 2 schools in Math with highest pass percentage

school_name	School Type	Total Students	Total School Budget	Per Student Budget	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing
Pena High School	Charter	962	\$585,858.00	\$609.00	83.839917	84.044699	94.594595	95.945946	90.540541
Cabrera High School	Charter	1858	\$1,081,356.00	\$582.00	83.061895	83.975780	94.133477	97.039828	91.334769

HIGHEST PERFORMING SCHOOLS

- The top 5 highly performing schools are all Charter type schools.
- Cabrera High School takes the first place with 91.33% passing rate. Math pass percentage is 94.13 and Reading pass percentage is 97.03%. The school has 1858 students.
- The top 5 schools have 90% students passing both Math and Reading scoring 70 and above in both Math and Reading.

- Total budget spent for these schools ranged from \$585,858 to \$1,319,574.

	School Type	Total Students	Total School Budget	Per Student Budget	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing
school_name									
Cabrera High School	Charter	1858	\$1,081,356.00	\$582.00	83.061895	83.975780	94.133477	97.039828	91.334769
Thomas High School	Charter	1635	\$1,043,130.00	\$638.00	83.418349	83.848930	93.272171	97.308869	90.948012
Griffin High School	Charter	1468	\$917,500.00	\$625.00	83.351499	83.816757	93.392371	97.138965	90.599455
Wilson High School	Charter	2283	\$1,319,574.00	\$578.00	83.274201	83.989488	93.867718	96.539641	90.582567
Pena High School	Charter	962	\$585,858.00	\$609.00	83.839917	84.044699	94.594595	95.945946	90.540541

LOWEST PERFORMING SCHOOLS

- The bottom performing 5 schools are all District type schools.
- Rodriguez High School have 52.988% pass percentage with 66.36% pass rate in Math and 80.22% pass rate in Reading. The school has 3999 students.
- The bottom 5 performing schools have 53% students passing both Math and Reading scoring 70 and above in both Math and Reading.
- Total budget spent for these schools ranged from \$1,884,411 to \$3,094,650.

	School Type	Total Students	Total School Budget	Per Student Budget	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing
school_name									
Rodriguez High School	District	3999	\$2,547,363.00	\$637.00	76.842711	80.744686	66.366592	80.220055	52.988247
Figueroa High School	District	2949	\$1,884,411.00	\$639.00	76.711767	81.158020	65.988471	80.739234	53.204476
Huang High School	District	2917	\$1,910,635.00	\$655.00	76.629414	81.182722	65.683922	81.316421	53.513884
Hernandez High School	District	4635	\$3,022,020.00	\$652.00	77.289752	80.934412	66.752967	80.862999	53.527508
Johnson High School	District	4761	\$3,094,650.00	\$650.00	77.072464	80.966394	66.057551	81.222432	53.539172

MATH SCORES BY GRADE

- Overall, we could see that the Math scores range the same among the 9th, 10th, 11th, and 12th graders.
- 9th Grade Math score range between – 76.40 to 83.78
- 10th Grade Math score range between – 75.90 to 84.22
- 11th Grade Math score range between – 76.39 to 85.0
- 12th Grade Math score range between – 76.17 to 84.12

READING SCORES BY GRADE

- Overall, we could see that the Reading scores range the same among the 9th, 10th, 11th, and 12th graders.
- 9th Grade Reading score range between – 80.63 to 84.12
- 10th Grade Reading score range between – 80.62 to 84.25
- 11th Grade Reading score range between – 80.40 to 84.37
- 12th Grade Reading score range between – 80.30 to 84.69

SCORES BY SCHOOL SPENDING

- Performance of the students is not related to the budget spent by the schools.
- Schools with Lowest budget allocated have 90% pass rate whereas, highest budget allocated schools have scored 53.52% pass rate. Budget spent and performance have zero correlation.

	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing
Spending Ranges (Per Student)					
<\$585	83.455399	83.933814	93.460096	96.610877	90.369459
\$585-630	81.899826	83.155286	87.133538	92.718205	81.418596
\$630-645	78.518855	81.624473	73.484209	84.391793	62.857656
\$645-680	76.997210	81.027843	66.164813	81.133951	53.526855

SCORES BY SCHOOL SIZE

- From the table below, it is very clear that small sized (less than 1000) and medium sized schools (1000 to 2000) have higher overall pass rate compared to the large sized schools with students between 2000 and 5000. However, given the amount of data it is difficult to draw direct relationship between the school size and the students' performance.

	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing
School Size					
Small (<1000)	83.821598	83.929843	93.550225	96.099437	89.883853
Medium (1000-2000)	83.374684	83.864438	93.599695	96.790680	90.621535
Large (2000-5000)	77.746417	81.344493	69.963361	82.766634	58.286003

SCORES BY SCHOOL TYPE

- Charter school students excelled in both Math and Reading. Charter school secured 93.62% pass percentage in Math and 96.58% pass rate in Reading. 90% students scored above 70 in both Math and Reading.
- District school students have better performance in Reading a pass rate of 80.79%. In Math the pass rate is 66.54%. Overall, 53% students scored 70 and above marks in both Math and Reading.

	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	% Overall Passing
School Type					
Charter	83.473852	83.896421	93.620830	96.586489	90.432244
District	76.956733	80.966636	66.548453	80.799062	53.672208