

Written Report

Module 4

PyCity Schools Analysis

The main purpose of this analysis was ability to make a decision regarding future school budgets and priorities.

For this task we made some calculations based on the data that we had and got the several district's key metrics like:

- Total number of unique schools: School names, School type,
- Total students
- Total budget, Total school budget, Per student budget
- Scores: Average math and reading, scores by school size, scores by school type
- School ratings: highest and lowest performing schools,

Based on our calculations we have 15 schools, 39170 students. And our total budget for all these school is 24,649,428 .

By analyzing students' scores, we find out that average score in reading (81.87) is greater than average score in math (78.98) approximately for 3 %. It's clear that 85.80% students passed reading test and 74.98% of student's - math.

The following table help us to identify the most and less populated schools.

school_name	
Huang High School	2917
Figueroa High School	2949
Shelton High School	1761
Hernandez High School	4635
Griffin High School	1468
Wilson High School	2283
Cabrera High School	1858
Bailey High School	4976
Holden High School	427
Pena High School	962
Wright High School	1800
Rodriguez High School	3999
Johnson High School	4761
Ford High School	2739
Thomas High School	1635

Name: size, dtype: int64

Bailey High School – is the biggest one, has 4976 students and Holden is the smallest, just 427 students. In average each school has 2752 students.

The table below reveals the average scores in math. It is clear that Pena High School has the highest results and Figueroa – the lowest

Bailey High School	77.048432
Cabrera High School	83.061895
Figueroa High School	76.711767
Ford High School	77.102592
Griffin High School	83.351499
Hernandez High School	77.289752
Holden High School	83.803279
Huang High School	76.629414
Johnson High School	77.072464
Pena High School	83.839917
Rodriguez High School	76.842711
Shelton High School	83.359455
Thomas High School	83.418349
Wilson High School	83.274201
Wright High School	83.682222

Name: math_score, dtype: float64

Pena High School is also a leader in reading scores.

Bailey High School	81.033963
Cabrera High School	83.975780
Figueroa High School	81.158020
Ford High School	80.746258
Griffin High School	83.816757
Hernandez High School	80.934412
Holden High School	83.814988
Huang High School	81.182722
Johnson High School	80.966394
Pena High School	84.044699
Rodriguez High School	80.744686
Shelton High School	83.725724
Thomas High School	83.848930
Wilson High School	83.989488
Wright High School	83.955000

Name: reading_score, dtype: float64

Based on this table we can make conclusion that 5 schools get an excellent result in overall passing rates (more than 90%) The best is Gabrera high School. Rodrigues High School shows the worse results-just 54% of students pass math and reading.

Bailey High School	4077
Cabrera High School	1803
Figueroa High School	2381
Ford High School	2172
Griffin High School	1426
Hernandez High School	3748
Holden High School	411
Huang High School	2372
Johnson High School	3867
Pena High School	923
Rodriguez High School	3208
Shelton High School	1688
Thomas High School	1591
Wilson High School	2204
Wright High School	1739

District Schools like Bailey , Hernandez and Johnson got more than 3 ml budget .(each of them) Holden High School is the smallest one and got the lowest budget among others.

Overall, Charter schools have higher score `than District.

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

And Small and Medium size schools better performed than large schools. They got more than 89% in overall passing metrics.

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