

Report Summary or PyCitySchools

Local Government Area Summary

The analysis of local government area education data revealed the following key insights:

Total Schools: There was a total of 15 schools in the local government area.

Total Students: The student population across all schools is 39,170.

Total Budget: The combined budget for all schools amounted to \$24,649,428.

Average Math and Reading Scores:

The average math score was 70.34, and the average reading score was 69.98.

Percentage Passing Rates:

Passing Math: 86.08%

Passing Reading: 84.43%

Overall Passing: 72.81%

These findings are synthesized in the `area_summary` DataFrame, providing a comprehensive overview of educational metrics at the local government level:

Total Schools	Total Students	Total Budget	Average Maths Score	Average Reading Score	% Passing Maths	% Passing Reading	% Overall Passing
15	39,170	\$24,649,428.00	70.338192	69.980138	86.078632	84.426857	72.808272

School Summary:

school_name	school_type	#_of_students	budget_per_school	per_capita_spending_per_school	%_passing_Maths	%_passing_Reading	%_passing_overall
Bailey High School	Government	4976	\$ 3,124,928	\$ 628	92%	87%	80%
Johnson High School	Government	4761	\$ 3,094,650	\$ 650	82%	82%	67%
Hernandez High School	Government	4635	\$ 3,022,020	\$ 652	81%	82%	66%
Rodriguez High School	Government	3999	\$ 2,547,363	\$ 637	91%	87%	79%
Figueroa High School	Government	2949	\$ 1,884,411	\$ 639	82%	83%	68%
Huang High School	Government	2917	\$ 1,910,635	\$ 655	82%	81%	67%
Ford High School	Government	2739	\$ 1,763,916	\$ 644	82%	82%	67%
Wilson High School	Independent	2283	\$ 1,319,574	\$ 578	83%	81%	67%
Cabrera High School	Independent	1858	\$ 1,081,356	\$ 582	91%	89%	81%
Wright High School	Independent	1800	\$ 1,049,400	\$ 583	92%	87%	80%
Shelton High School	Independent	1761	\$ 1,056,600	\$ 600	92%	87%	79%
Thomas High School	Independent	1635	\$ 1,043,130	\$ 638	84%	83%	69%
Griffin High School	Independent	1468	\$ 917,500	\$ 625	91%	88%	81%
Pena High School	Independent	962	\$ 585,858	\$ 609	92%	87%	79%
Holden High School	Independent	427	\$ 248,087	\$ 581	90%	89%	79%

The detailed analysis of individual schools yielded the following observations:

i. School Types:

Schools were categorized into Government and Independent types.

ii. Total Student Count:

The total number of students varied across schools, with a range of characteristics such as school budget, per student budget, and average test scores.

iii. Per Capita Spending:

The spending per student varied, affecting average test scores and passing rates.

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Highest-Performing Schools by Percentage of Overall Passing:

Schools such as Griffin High School, Cabrera High School, and Bailey High School exhibited high overall passing rates:

	School Type	Total Students	Total School Budget	Per Student Budget	Average Maths Score	Average Reading Score	% Passing Maths	% Passing Reading	% Overall Passing
school_name									
Griffin High School	Independent	1468	\$917,500.00	\$625.00	71.788147	71.245232	91.212534	88.487738	81.335150
Cabrera High School	Independent	1858	\$1,081,356.00	\$582.00	71.657158	71.359526	90.850377	89.074273	80.785791
Bailey High School	Government	4976	\$3,124,928.00	\$628.00	72.352894	71.008842	91.639871	87.379421	80.084405
Wright High School	Independent	1800	\$1,049,400.00	\$583.00	72.047222	70.969444	91.777778	86.666667	79.722222
Rodriguez High School	Government	3999	\$2,547,363.00	\$637.00	72.047762	70.935984	90.797699	87.396849	79.419855

Lowest-Performing Schools by Percentage of Overall Passing:

The following table shows the 5 schools with the lowest overall passing rates:

	School Type	Total Students	Total School Budget	Per Student Budget	Average Maths Score	Average Reading Score	% Passing Maths	% Passing Reading	% Overall Passing
school_name									
Hernandez High School	Government	4635	\$3,022,020.00	\$652.00	68.874865	69.186408	80.949299	81.877023	66.364617
Huang High School	Government	2917	\$1,910,635.00	\$655.00	68.935207	68.910525	81.693521	81.453548	66.712376
Johnson High School	Government	4761	\$3,094,650.00	\$650.00	68.843100	69.039277	82.062592	81.978576	67.191766
Wilson High School	Independent	2283	\$1,319,574.00	\$578.00	69.170828	68.876916	82.785808	81.296540	67.455103
Ford High School	Government	2739	\$1,763,916.00	\$644.00	69.091274	69.572472	82.438846	82.219788	67.469880

Highest-Performing and Lowest-Performing Schools

The top and bottom performing schools, sorted by overall passing rates, were identified in the `top_schools` and `bottom_schools` DataFrames. These schools served as benchmarks for understanding academic excellence and areas that may need improvement.

These insights were consolidated in the `per_school_summary` DataFrame, providing a detailed breakdown of school-level metrics.

Maths and Reading Scores by Year

The analysis of math and reading scores by year provided a nuanced understanding of academic performance trends at different grade levels. The `maths_scores_by_year` and `reading_scores_by_year` DataFrames showed how schools performed over the year levels, offering insights into areas of improvement.

The analysis shows that the scores are balanced across the 4 year levels. Based on these scores, there are no great changes across each year level:

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maths_scores_by_year

	Year 9	Year 10	Year 11	Year 12
Bailey High School	72.493827	71.897498	72.374900	72.675097
Cabrera High School	72.321970	72.437768	71.008299	70.604712
Figueroa High School	68.477804	68.331586	68.811001	69.325282
Ford High School	69.021609	69.387006	69.248862	68.617811
Griffin High School	72.789731	71.093596	71.692521	71.469178
Hernandez High School	68.586831	68.867156	69.154412	68.985075
Holden High School	70.543307	75.105263	71.640777	73.409639
Huang High School	69.081754	68.533246	69.431345	68.639316
Johnson High School	69.469286	67.990220	68.637730	69.287393
Pena High School	71.996364	72.396000	72.523438	71.187845
Rodriguez High School	71.940722	71.779808	72.364811	72.154626
Shelton High School	72.932075	72.506696	70.097087	72.331536
Thomas High School	69.234273	70.057007	69.657831	69.369822
Wilson High School	69.212361	69.455446	68.378965	69.787472
Wright High School	71.741176	72.179012	73.275862	70.848238

reading_scores_by_year

	Year 9	Year 10	Year 11	Year 12
Bailey High School	70.901920	70.848265	70.317346	72.195525
Cabrera High School	71.172348	71.328326	71.201245	71.856021
Figueroa High School	70.261682	67.677588	69.152327	69.082126
Ford High School	69.615846	68.988701	70.735964	68.849722
Griffin High School	72.026895	70.746305	72.385042	69.434932
Hernandez High School	68.477569	70.621842	68.418199	69.244136
Holden High School	71.598425	71.096491	73.310680	70.481928
Huang High School	68.670616	69.516297	68.740638	68.671795
Johnson High School	68.719286	69.295029	69.969115	67.992521
Pena High School	70.949091	72.324000	71.703125	71.513812
Rodriguez High School	70.902921	70.137500	71.424453	71.414449
Shelton High School	70.715094	69.879464	71.150485	69.070081
Thomas High School	69.672451	69.741093	70.749398	68.730769
Wilson High School	68.683043	68.412541	68.796327	69.888143
Wright High School	71.823529	71.386831	70.475862	69.821138

Scores by School Spending, Size, and Type

The analysis of scores by school spending, size, and type demonstrated the impact of these factors on academic outcomes:

1. Spending Ranges:

Schools with lower per student spending appeared to have lower average scores and passing rates:

	Average Maths Score	Average Reading Score	% Passing Maths	% Passing Reading	% Overall Passing
Spending Ranges (per Student)					
<\$585	71.36	70.72	88.84	86.39	76.72
\$585-\$630	72.07	71.03	91.52	87.29	79.88
\$630-\$645	69.85	69.84	84.69	83.76	71.00
\$645-\$680	68.88	69.05	81.57	81.77	66.76

2. School Size:

Smaller schools tended to have higher average scores and passing rates compared to larger schools:

	Average Maths Score	Average Reading Score	% Passing Maths	% Passing Reading	% Overall Passing
School Size					
Small (<1000)	72.335748	71.636864	90.806867	87.557513	79.066348
Medium (1000-2000)	71.421650	70.720164	89.846560	86.714149	78.039785
Large (2000-5000)	69.751809	69.576052	84.252804	83.301185	70.293507

3. School Type:

Independent schools generally outperformed government schools in terms of average scores and passing rates:

	Average Maths Score	Average Reading Score	% Passing Maths	% Passing Reading	% Overall Passing
School Type					
Government	69.834806	69.675929	84.462375	83.587562	70.698993
Independent	71.368822	70.718933	89.204043	86.247789	76.973340

Conclusions

Budget Allocation Impact:

From the 5 Highest-Performing and 5 Lowest-Performing Schools, the analysis showed that funding did not make a significant impact to the results obtained. Schools with higher budgets do not necessarily guarantee higher academic performance. The analysis of spending ranges indicated that lower per student spending was associated with lower average scores and passing rates.

School Size Matters:

Smaller schools tended to outperform larger ones. The data suggests that smaller class sizes contribute to higher academic success i.e. there was an inverse correlation between the size of a school and the results achieved: *larger student numbers showed lower scores.*

School Type:

Independent schools had smaller student numbers and less budget allocated per student. They performed 6.27% higher overall than Government schools; this is a significant difference. In particular, Independent schools performed 4.74% better in Maths and 2.66% better Reading.

In conclusion, a targeted approach to budget allocation and class size reduction could potentially improve academic outcomes in the local government area. It is essential to consider these insights when planning future educational initiatives.