**PyCitySchools Analysis**

The dataset analyzed 15 schools, including 7 district schools and 8 charter schools, with a total of 39,170 students. District schools generally had more students due to their larger geographical coverage. On average, students scored higher in reading (81.87) than in math (78.98). This trend is reflected in the passing rates, with 85.80% of students passing reading compared to 74.98% passing math. Overall, the combined passing rate for both subjects is 65.17%. These results suggest a stronger performance in reading than in math among the students in this dataset.

Regarding performance by school, charter schools outperformed district schools in both reading and math scores across all metrics. For example, Pena High, a charter school, excelled in math and reading, while Huang High, a district school, struggled in both subjects. Thomas High, a charter school, had the highest reading passing rate, and Cabrera High, also a charter school, had the highest overall passing rate. Rodriguez High, a district school, had the lowest reading and overall passing rates.

Despite having the largest overall budget, Bailey High School underperformed. Similarly, Huang High School, which had the highest per-student budget, also did not perform well. Charter schools, while having smaller total budgets, allocated comparable per-student funds to district schools, a factor likely influenced by their smaller student populations. This analysis suggests that as the budget per student increases, student performance, as measured by average math and reading scores and passing rates, tends to decrease. This counterintuitive result suggests that increasing funding alone may not be the sole source of academic success. Further research is needed to explore the underlying factors influencing student achievement, beyond simple budgetary considerations.

The data indicates a negative correlation between school size and student performance. As the number of students in a school increases, the average scores in math and reading, as well as the passing rates in both subjects, tend to decline. This suggests that larger schools may have a detrimental impact on student achievement. Consequently, schools, districts, and charter organizations should consider strategies to reduce class and school sizes, as this could have a positive influence on student outcomes.

