**Summary of the Analysis**

District Summary

* Total Number of Unique Schools: 15 unique schools are in the district.
* Total Students: There are 39,170 students in the district.
* Total Budget: The total budget for all schools combined is $24,649,428.
* Average Math Score: The average math score across all students is 78.99.
* Average Reading Score: The average reading score across all students is 81.88.
* % Passing Math: 74.98% of students passed math.
* % Passing Reading: 85.81% of students passed reading.
* % Overall Passing: 65.17% of students passed both math and reading.

School Summary

* School Name: Each school is identified by name.
* School Type: Schools are categorized as either Charter or District.
* Total Students: The student population at each school varies.
* Total School Budget: Each school's budget is different.
* Per Student Budget: The budget allocated per student.
* Average Math Score: Average math scores differ across schools.
* Average Reading Score: Average reading scores differ across schools.
* % Passing Math: The percentage of students passing math varies.
* % Passing Reading: The percentage of students passing reading varies.
* % Overall Passing: The percentage of students passing both subjects varies.

Highest-Performing Schools

The top 5 schools with the highest overall passing rates were identified. These schools have the highest percentages of students passing both math and reading.

Lowest-Performing Schools

The bottom 5 schools with the lowest overall passing rates were identified. These schools have the lowest percentages of students passing both math and reading.

Math Scores by Grade

Averages for math scores were calculated for each grade level (9th, 10th, 11th, 12th) at each school.

Reading Scores by Grade

Averages for reading scores were calculated for each grade level (9th, 10th, 11th, 12th) at each school.

Scores by School Spending

Schools were categorized into spending ranges based on their per-student budget. The performance metrics (average math score, average reading score, % passing math, % passing reading, % overall passing) were calculated for each spending range.

Scores by School Size

Schools were categorized by size (Small: <1000, Medium: 1000-2000, Large: 2000-5000). Performance metrics were calculated for each size category.

Scores by School Type

Schools were categorized by type (Charter, District). Performance metrics were calculated for each type.

**Conclusions and Comparisons**

Conclusion on School Type:

Charter schools generally outperformed district schools in both math and reading scores as well as overall passing rates. For instance, the top 5 highest-performing schools by overall passing rate were predominantly charter schools. This suggests that charter schools may have more flexibility and innovative teaching methods that contribute to better student outcomes. The average overall passing rate for charter schools was higher compared to district schools, indicating a potential advantage in the charter school model.

Conclusion on Spending Ranges:

Schools with a per-student budget in the range of $585-$630 demonstrated the highest average math and reading scores compared to other spending ranges. This suggests there is an optimal spending range where resources are used most effectively to enhance student performance. Beyond this range, increased spending did not correlate with higher performance, indicating that efficient allocation and use of resources are more critical than simply the amount of money spent. Schools in the $585-$630 range had better overall passing rates compared to those in both lower and higher spending ranges.

By summarizing the analysis and drawing these conclusions, the analysis highlights key factors impacting school performance and offers insights into how different variables such as school type and spending levels affect student outcomes.

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