**Challenge #4 - Written Report**

The analysis of the provided data reveals several key insights about the performance of schools and students based on school type and spending ranges per student.

**School Type Analysis:**

Charter schools outperform district schools in both math and reading scores, with average math scores of 83.47 compared to 76.96 for district schools and average reading scores of 83.90 compared to 80.97 for district schools.

Charter schools also have significantly higher passing rates, with 93.62% of students passing math and 96.59% passing reading, while district schools have lower passing rates of 66.55% for math and 80.80% for reading.

The overall passing rate, which considers both math and reading, is notably higher for charter schools (90.43%) compared to district schools (53.67%).

**Grade Level Analysis:**

Across all schools, there is relatively consistent performance among different grade levels, with minimal variations in average math and reading scores.

The small differences observed suggest that schools generally maintain consistent academic standards across grade levels, as indicated by the relatively stable math and reading scores.

**Spending Range Analysis:**

Schools with a per-student spending range of less than $585 have the highest average math and reading scores (83.46 and 83.93, respectively) and the highest passing rates in both math (93.46%) and reading (96.61%).

As spending per student increases, average scores and passing rates tend to decrease. Schools in the highest spending range ($645-680) have the lowest average math score (76.99) and the lowest overall passing rate (53.53%).

In summary, charter schools outperform district schools in terms of both average scores and passing rates. Additionally, schools with lower per-student spending tend to achieve better academic outcomes compared to those with higher spending. This suggests that educational quality and efficient resource allocation are crucial factors in student success.