Module 4 Assignment- School Data Analysis Report

District Summary:
- There are 15 schools in the district with 39,170 students and all the schools receive a total funding budget of $24,649,428.
- Overall, the students have a higher score in reading compared to math. The passing rate in reading is 85.81% while math passing rate is 74.98%. The overall passing rate in the district is 65.17%

School Summary:
- There are two types of schools: district and charter.
- Among all the schools Bailey High School had the highest number of students (4,976) and Holden High School had the lowest (427). The per capita spending of all the schools ranged from $578 to $655.
- In all the schools the passing rate for reading was higher than that of math.
- Cabrera High School had the highest overall passing rate of 91.33% while Rodriguez High School had the lowest overall passing rate of 52.99%

Top five schools:
- Cabrera High School, Thomas High School, Griffin High School, Wilson High School, and Pena High School were the top five schools with overall passing rate greater than 90%

Bottom five schools:
- Rodriguez High School, Figueroa High School, Huang High School, Hernandez High School, and Johnson High School were the bottom five schools with overall passing rate less than 55%

Reading and math score based on grade:
- Overall students enrolled in grade 9, 10, 11, and 12th had average math scores between 76 to 85% and reading score between 80 to 85%

Score based on school spending:
- Schools that spent less than $585 per student had over 90% overall passing while schools that spent $645 to $680 had the lowest overall passing rate of 54%

Score based on school size:
- The medium sized schools with student capacity between 1000 to 2000 had the highest overall passing rate followed by small schools (<1000).

- The large schools (2000 - 5000) had the lowest overall passing rate as resources were not evenly distributed among students.

Score based on school type:
- The charter schools performed better in both math and reading compared to district schools.

Conclusions:
- Based on all the data across schools and grades, it can be concluded that students score a better grade in reading (85%) compared to math (75%). This may be because language skills are easier to develop over the years compared to math concepts that are harder to understand in high schools and need more practice.
- The school dataset shows that higher resources doesn't lead to better outcomes. Medium to small sized schools with spending budgets less than $585 outperformed the large schools with a higher spending budget in overall passing rate. For example, Cabrera High School, a medium sized school was the top school in terms of overall passing rate and had a spending budget less than $585. On the other hand, large schools like Rodriguez High School was the lowest in terms of overall passing rate.
- All the top performing schools were charter schools while the bottom performing ones were district schools. The Charter schools performed better as these have stricter performance standards and can have specialized curriculum like STEM to enhance student learning.