**Module 4 Challenge:**

**Written Report**

***Local Government Area Summary:***

This report provides a summary of the education performance and statistics for a local government area. Including factors such as the total number of schools, total number of students, total budget, average math and reading scores, and the percentage of students passing in reading, math and overall. According to the data, a total of 39,170 students attend the 15 schools in this area. The total budget allocated for education is $24.649,428.00. The findings offer valuable insights into the performance of this local government area. The average scores for math and reading indicate high percentages that pass those subjects, meeting proficiency requirements. However, it seems that there needs improvement with students passing in both subjects, as the findings show in the overall percentage column, with a result of students passing stands at roughly 72%. The local government can work towards improving the overall education for students by allocating resources or more resources, and implementing strategies.

***School Summary:***

This report provides an overall summary based on performance metrics for different schools. Including factors such as the total number of schools, total number of students, total budget, average math and reading scores, and the percentage of students passing in reading, math and overall. The analysis provides a clear insight that there is variation in the performance of different schools based on various factors. For example, we can see there are variations in academic achievement and passing rates among schools of different types. Government schools generally have higher student populations, larger budgets, and lower per student budgets compared to independent schools. Independent schools tend to have higher average math and reading scores, as well as higher passing rates in math, reading, and overall.

***Top Performing Schools and Bottom Performing Schools:***

This summary is based on the percentage of overall passing grades. The top performance can be seen predominantly in Independent Schools. These Independent schools have shown strong academic performance and passing rates in the subjects highlighted by the table. We can see by the data that the independent schools typically have smaller student populations, and a higher student budget and higher education performance. The bottom performing schools are predominantly government schools and have faced challenges in implementing strategies to achieve high performance and passing rates.

***Math Scores by Year:***

This table provides math scores for different high schools across the four academic years, 9 through 12. Analyzing the data reveals some trends and patterns in math performance among the schools. We can see Cabrera High School and Bailey High School consistently perform well in math for the four academic years. The other schools generally maintain consistent math scores with small fluctuations.

***Reading Scores by Year:***

This table provides reading scores for different high schools across the four academic years, 9 through 12. Analyzing the data I found that Bailey high school and Holden High School has improved reading scores as students progressed through the academic years from 9 to 12. Cabrera High School performs well in reading scores in all years. The other schools maintain consistent reading scores with small fluctuations.

***Scores by School Spending:***

This data frame presents average scores, percentages of students passing, categorized by different spending ranges per student. Analyzing the data, we can see that generally higher average scores and passing rates in math and reading can be associate with increased spending per student. Although, the middle spending range of $630-$645 shows slightly lower scores than the other spending categories. Meaning that increasing spending may not necessarily mean higher grades, however it can indicate potentially there may need to be other strategies that can be used or put into place with the spending resources. Perhaps it is how those schools use the spending, and not how much.

***Scores by School Size:***

This data frame presents average math and reading scores, percentage of passing students, categorized by different school sizes. Analyzing the data, we can suggest that there is a trend of lower or declining performance academically as the school size increases. Smaller schools demonstrate a higher academic performance, while larger schools struggle to maintain similar levels of achievement. It could indicate or point to factors such as student and teach ratios, resulting in varying support and attention depending on the size of the school.

***Scores by School Type:***

This data frame presents average math and reading scores, percentage of passing students, categorized by different school types. Analyzing the data, we can suggest trends and differences between the performance of government and independent schools. What we previously mentioned in our “School Summary” analysis from above, still applies for this “Scores by School Type” analysis. However, we can see it clearer as this table is a better breakdown with contrasting the school types and summary of scores. Based on the data provided, we can suggest that the school type can influence academic performance. Independent schools demonstrate an advantage in terms of average scores and passing rates compared to the government schools.