Written Summary – Week 5 Module – PyCitySchools

The School District, hereafter referred to as District 2 has undertaken a review of the results reported by all schools in the district regarding their maths and reading scores for all students.

There were several outputs from this project that will provide valuable insight into the performance of schools in the district.

Outputs:

Area Summary: This table shows the overall statistics and results for the district summarised into a single table. A total of $24.6m funding is provided to the district for the 39,170 students that are enrolled. The math results in the district are overall positive with over 84% of students passing math and 82% passing reading, however under 70% are passing both math and reading.

School Summary: This table breaks down the results of all 15 schools in the district providing a number of figures:

- School Name
- Type of School: Budget/Independent
- Number of Students
- Budget($)
- Average Reading Score
- Average Maths Score
- Per student budget ($)
- Passing Math(%)
- Passing Reading(%)
- Passing Overall(%)

Top Performing Schools: This table provides the top 5 schools based on percentage of students passing both reading and math and shows:

- School Name
- Type of School: Budget/Independent
- Number of Students
- Budget($)
- Average Reading Score
- Average Maths Score
- Per student budget ($)
- Passing Math(%)
- Passing Reading(%)
- Passing Overall(%)

Bottom Performing Schools: This table provides the bottom 5 schools based on percentage of students passing both reading and math and shows:

- School Name
- Type of School: Budget/Independent
- Number of Students

- Budget($)
- Average Reading Score
- Average Maths Score
- Per student budget ($)
- Passing Math(%)
- Passing Reading(%)
- Passing Overall(%)

Maths Scores by Year: This table provides a breakdown of average math scores per school faceted by years 9, 10, 11 and 12.

Reading Scores by Year: This table provides a breakdown of average math scores per school faceted by years 9, 10, 11 and 12.

Scores by School Spending: This table categorises the schools based on the amount of funding the receive per student. The categories are:

- <$585
- $585-630
- $630-645
- $645-680

The included data averaged across these categories is:

- Average Maths Score
- Average Reading Score
- % Passing Maths
- % Passing Reading
- Overall Passing Rate (Average of the above two)

Scores by School Size: This table categorises the schools based on the amount of enrolled students. The categories are:

- Small (<1000)
- Medium (1000-2000)
- Large (2000-5000)

The included data averaged across these categories is:

- Average Maths Score
- Average Reading Score
- % Passing Maths
- % Passing Reading
- Overall Passing Rate (Average of the above two)

Scores by School Type: This table categorises the schools based on the type of school. The categories are:

- Independent
- Government

The included data averaged across these categories is:

- Average Maths Score
- Average Reading Score
- % Passing Maths
- % Passing Reading
- Overall Passing Rate (Average of the above two)

Trend Analysis

Based on the results we see in the outputs from this study there is a few noticeable trends:

Discrepancy between Independent and Government Schools:

Four of the top 5 performing schools by percentage of students passing both reading and maths are Independent School. 4 out the 5 worst performing schools are government schools. The same results are reflected when looking at the Scores by School type table as well. Independent schools score on average 1% higher in reading and 5% higher on math, and nearly 6% higher on students passing both reading and math. Comparing to the District averages in the Area Summary table, the Independent Schools score higher and the Government schools score under the average in each area The data does not enable us to dig further than this, however further investigation is warranted to discover what the tangible differences are between the Government and Independent Schools and if these gaps can be decrease.

High spending is not an indicator of improved performance, school size is a much better indicator:

Looking into the Scores by School Spending the higher spending categories ($630 – 645, $645-680) actually perform lower when looking at the percentage of students passing both reading and math. This does not mean that lowering spending would increase the results of students, however there is a better indicator of success: School size. Small schools (<1000) students show significantly better results, especially when looking at math scores and percentage of students passing math, as well as overall student success. Almost 10% more students are passing both math and reading in small schools (76%) compared to large schools (67%), when comparing to the average for the District (69.94%), the two fall clearly on either side. Our instructions did not direct us to look into the spending per student for small and large schools, however this would be a worthy analysis to undertake to see if a pattern was observable.