**PyCitySchools Summary Report**

In this analysis, I have calculated number of students, total school budget, budget per student and average math and reading scores for 15 schools to investigate trends. Below are some observations and conclusions from the data:

* Students score higher on average in reading than in math and thus the % of students passing reading exceeds the % of students passing math for all schools, irrespective of type, budget, or size.
* For grades 9 to 12, differences in achievement per school grade are very small and could therefore be considered insignificant. This is the case for both math and reading.
* Though we would expect that a higher budget per student would lead to higher pass rates, in this dataset the opposite appears to be true. As the budget per student increases, the % of students passing both math and reading decrease. This poses the question as to where the schools with higher budgets per student are investing their money and other factors involved.
* In terms of school size, small (<1000 total students) and medium (1000-2000 total students) sized schools outperform larger schools in average math and reading scores and have significantly higher percentages of students passing math and reading.
* The most significant trend in this dataset is that charter schools significantly outperform district schools in every category (average math score, average reading score, % passing math, % passing reading, and % passing overall). This is further demonstrated by the fact that when schools are ranked by % passing overall, the 5 highest performing schools are all charter schools and the 5 lowest performing schools are all district schools.

In summary, charter schools seem to provide better education in math and reading than district schools, despite having less funding and a smaller budget per student. Due to their autonomous nature, charter schools can set their own curriculum and it is possible that this influences their higher average scores and pass rates. This would need investigating further to confirm. Charter schools also appear to take in less students so tend to be smaller in size than district schools. This may be another contributing factor to their higher achievement as having smaller class sizes/staff:student ratios may lead to more focused support for students. These are also factors to investigate further.

Though we have measured the quality of education using only math and reading scores, it would be valuable to compare results across all subjects offered. The number and types of subjects offered would provide a better understanding of differences in curriculum. This dataset is also limited to just 15 schools with a grade specific focus on just 4 grades – a larger analysis would be more insightful. Finally, other factors that influence a school’s performance such as the location (state/district) and socioeconomic factors should be considered.