PyCity Schools Analysis

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Trend 1

One rather non-intuitive trend is revealed when displaying the average math and reading scores and percentages of students passing math, reading, and overall per spending range per student. Expectation would lead someone to hypothesize with more money spent per student, there would be a higher percentage of students passing both reading and math. In fact, the reverse appears in this data. The schools that spend in the highest range have the poorest outcomes, and all figures increase (average scores and percentages passing) as spending per student drops.

A subsequent assumption might be that the total budget has a better ability to predict higher averages and passing rates, but a glance at the School Summary table shows that that is not true either. Baily High School and Hernandez High School both have budgets over $3 million, yet both have overall passing rates of 54% and 53% , respectively. What we can take away is that the absolute spending as well as the spending per student do not have the greatest ability to predict educational outcomes.

Trend 2

Of course, looking at the overall passing rates neglects to consider where in the curriculum students may be falling behind. When looking at the Scores by School Size and Scores by School Type tables, a new trend appears. Where overall passing percentages are higher, there is less discrepancy between reading and math outcomes. Reading outcomes are always higher than math outcomes in all groups in these tables, but as schools get bigger, or if a school is a district vs a charter school, math scores drop and subsequently pull the overall passing rates down. This is particularly pronounced for large schools, and, unsurprisingly, all district schools are large, whereas only two charter schools fall into that category.

What this hints at is that as school size increases, there may be a greater number of students who are unable to access resources to help them keep up in math classes, which increases the gap between reading and math outcomes and pulls the overall passing rates down. It is important to recognize that the overall passing rate does not reflect poor outcomes in BOTH reading and math, but support in ONE subject can increase the percentage of students that pass both overall. This means a targeted solution is a better way to address this trend, vs the assumption that students in large, district schools are just “overall” performing more poorly. They are not; they simply need greater support to bolster their math performance, which should, in turn, improve the overall passing percentages.