Natalie Lollin

Data Science Bootcamp

Module 4 Challenge

3/18/2023

School District Data Analysis

In this district (which includes 15 schools and a total of 39,170 students) with a budget of $24,649,429, the average math score was approximately a 79 (≈ 75% of students passed math) and the average reading score was approximately an 82 (≈ 86% of students passed reading). Overall, in the district, roughly 65% of students passed both math and reading. Cabrera High School had the highest overall passing rate of 91.33% and Rodriguez High School had the lowest overall passing rate of 52.99% (although Rodriguez High School had a budget that was more than twice that of Cabrera High School.

At a quick glance, it appears that that there was more variation in the average math scores between each school than there was in the average reading scores. Additionally, when separating the average scores by grade level, while there was variation between schools, the success rates did not vary much between grade levels within any individual school.

When grouping the schools by budget per student, the average math score was lower, rather than higher, for schools with less spending per student rather than more spending per student.

When grouping the schools by size, the “large” schools had a drastically lower overall passing rate than both the small and medium-sized schools (both the small and medium schools had overall passing rates of approximately 90%, while the large schools had an average overall passing rate of less than 60%). This difference was more evident in the math scores than the reading scores; on average, 83% of students in large schools passed reading while only 70% passed math).

Finally, when comparing charter schools to district schools, the passing rates once again differed (with charter schools having higher passing rates across the board than district schools). The average overall passing rate at charter high schools was 90.4%, while at district schools it was only 53.7%. And, once again, this difference was greater in the subject of math than that of reading. In the charter schools more than 90% of students passed math and reading, while on average, 81% of district students passed reading and only 67% passed math.

There does appear to be strong associations between both school type and scores, as well as between school size and score.