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Data Analytics Bootcamp

Module 4

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School Funding Report

With the data given, were assigned the task of processing the raw data into multiple tables that would allow us to extract quantifiable conclusions. To that end, we created summary tables of the processed data, based on school size, type, spending, math and reading aptitude, and an overall passing percentage based on the previously mentioned math and reading scores. Based on my findings, I can say with confidence that:

1. The most significant factor for a students’ grades, based on this dataset, is the type of school a given student. With average math and reading scores 7 and 3 points respectively than their counterparts, the advantage gained by going to a Charter school as opposed to a District school is staggering. To add to these scores, the percentages of students passing, that is to say the students whose scored above 70% on these tests, were 27% higher when looking at the math scores, and 16% higher when looking at reading. The largest discrepancy comes up when looking at the percentage of students who passed by both math and reading (column “% Overall Passing). This number was 90.43% amongst the Charter school type and a dismal 53.67% for the District school type. This comes out to a massive difference of 37% between the 2 school types.
2. Surprisingly, it appears as though the budget of these has little to no impact on the grades of the students. Huang and Johnson high schools are the two schools with the highest funding per student and yet both have just 53% of their populations passing both the math and reading tests. In stark contrast, Wilson and Holden high schools are the two least funded schools and their students sport 90% and 89% scores respectively.
3. What had an interesting impact was the overall size of the schools. It makes sense that the smaller schools would have higher scores as the students to teacher ratio would be lower compared to the larger schools and therefore students would have more personal time with their instructors. We did see this play out in that the small school, schools with less than 1000 students, had much higher scores than schools with more than 2000 students, 89.88% of small school students passing both tests versus just 58% of large school students. What is more surprising is that schools sized 1000-2000 students did just as well as the small schools, with an overall passing percentage of 90.62%. What could be gleaned from this is that while school size plays a role in the overall grade a student earned, its impact loses significance once the student population reaches an upper bound threshold of roughly 2000 students in this case.

In conclusion, the most important factor in determining a given student’s overall passing grade is the type of school they went to, followed then by the school’s size. Budget and Budget spent per student seem to have no impact at all.