Analyzing Student and School Data

Two data files were provided for this challenge. The first focused on student data with the reading and math scores of each respective student, as well as their grade, and school of attendance. The second data file had data pertaining to school specific information, such as the number of students in each school, and the budget. From this data, a few different calculations were made.

First, an overall district summary was generated which contained data pertaining to all schools. The overall passing rate across the district was found to be 65.17%. Afterwards, a more detailed summary was created that focused on the scores and budget of each school, allowing a better understanding of what may be prompting overall success or failure in the schools. It was from this school summary, that the top 5 schools in terms of overall performance were determined, as well as the 5 performing the most poorly. Further data frames were generated by sorting the schools based on size, and on budget, and looking at the overall performance rates.

From the data, we find a few trends. The last table created looked at overall performance rates based on the type of school: charter or district. It showed that overall, the district schools had much weaker scores, with an overall passing rate of 53% compared to the 90% of charter schools. This correlates with the results of the spending ranges per student summary, that depicts that in those schools where the budget per student is smaller, the overall passing rate is higher. Charter schools tend to receive less funding than district schools. As for the size, schools with a large student population produced low passing rates. This would be expected as with more students, the teachers have less time to dedicate attention and help to each one.