For this analysis a merged database was created containing school size and budget along with the math and reading scores of students for the district.

Analysis was done to obtain the following information for the entire district. There are 15 schools in the district teaching 39170 students with a budget of $24,649,428. The district average math score is 78.99 and the average reading score is 81.88. Resulting in 74.98% of students passing math (based on a greater than 70 point score) and 85.81% of students passing reading with 65.17% passing both. District information was then analyzed based on: school type (District vs Charter), number of students, school size, school budget, and spending per student. These criteria were then compared to the math and reading test scores. Furthermore, these criteria were then used to analyze each individual school within the district.

Analyzing individual school characteristics and comparing these to test scores produced the following summary. The top five schools were all charter schools with a range of $578 to $638 spending per student and between 962 and 2283 students per school. The bottom five schools were all district schools with a range of $637 to $655 spending per student and between 2917 and 4761 students per school. Within a school, math and reading scores were essentially constant from 9th thru 12th grade. Reading scores showed a small decrease (84% dropping to 81%) as spending and/or school size increased. Math scores showed a more significant decrease (84% dropping to 77%) as spending and/or school size increased.

Several conclusions can be drawn from this analysis.

1) Simply increasing spending per student is not supported as a path to improve test scores. The schools in this district with the greatest amount spent per student also have the lowest test scores.

2) Since test scores are essentially constant from 9th thru 12th grade, this study needs to be extended to earlier grades to identify if the most effective age for intervention is prior to 9th grade.

3) In this district, Charter schools are producing higher test scores than District schools. The top 7 schools in the district are all Charter schools and the bottom 7 are all District schools. This difference does not relate to increased spending since Charter schools spend less per student. This difference might relate to the size of the school since Charter schools are smaller than District schools. However, the best performing District school (Bailey High School) is also the largest school in the district with 4976 students. Although its students still had worse test scores than any of the charter schools. Additionally, the smallest Charter school (Holden High School) with 427 students is the worse performing charter school. Indicating need of further analysis on what factors associated with school size is impacting test scores.

4) Further analysis is needed beyond the parameters of school size, school budget, and spending per student to indicate what impacts test scores from District schools compared to Charter schools. For example, a household putting in the effort to select a Charter school may indicate attitudes towards education that affect test score outcomes. Factors such as that would not have been captured by this analysis.