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**Py City Schools Written Report**

After looking analyzing the Py City School and District data, the biggest trend I saw was that there was a negative correlation **between budget and pass rate.** This is interesting because normally organizations and schools ask for more budget to increase scores/performance.

I first went down this rabbit hole when I saw that Charter Schools have much better scores than District Schools **(see image).**

A screenshot of a graph

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This made sense, since I assumed that Charter Schools had a lot more money or budget than district schools. More money leads to more resources, more resources lead to better optimization of talent (students).

To confirm this hypothesis, I performed a groupby **with “School Type” and “Budget Per Student”.** The reason I chose “Budget Per Student” vs. the total budget was the fact that District Schools are usually much bigger. I felt like an average would be a better representation of the funding each type of school was receiving.

**The results were surprising (see image): A screenshot of a computer

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District schools are average were receiving close to $50 more in **budget per student** than Charter schools. To verify this conclusion, I looked at my **spending\_summary** table and noticed that schools that had a higher budget per student had lower test scores **(see image below)**. It seems like money is not leading to performance.

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The next question was: **What is leading to the discrepancy in overall pass rate?**

My Next two hypotheses were: **1. Student to teacher ratio 2. How funds are used**

There is not enough data to make a solid conclusion on either, but we can get an idea about number 1 based on total students. The next thing would be to find out the number of teachers and calculate student to teacher ratio.

I performed a groupby with **“School Type” and “Total Students”** and found that District Schools have over twice as many students as Charter **Schools (see image below).** Thus, to have the same student to teacher ratio, they would need 2.5x as many teachers.

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**My conclusions for my hypotheses above:**

* 1. There are probably **not 2.5x** as many teachers in District Schools, so each student in the District Schools is not getting as much attention and slipping through the cracks (leading to failure).
  2. “Budget” might not encompass all the money that a school is receiving. Charter schools might receive tuition that can be used more freely. When there is a lot of rep tape around money, it is tough to spend it on what is needed. Typically, there is some red tape on money that you receive for your “Budget”. To delve deeper into this, we would have to analyze total teachers at all the schools and total money received **(budget, tuition, grants, donations etc.).**