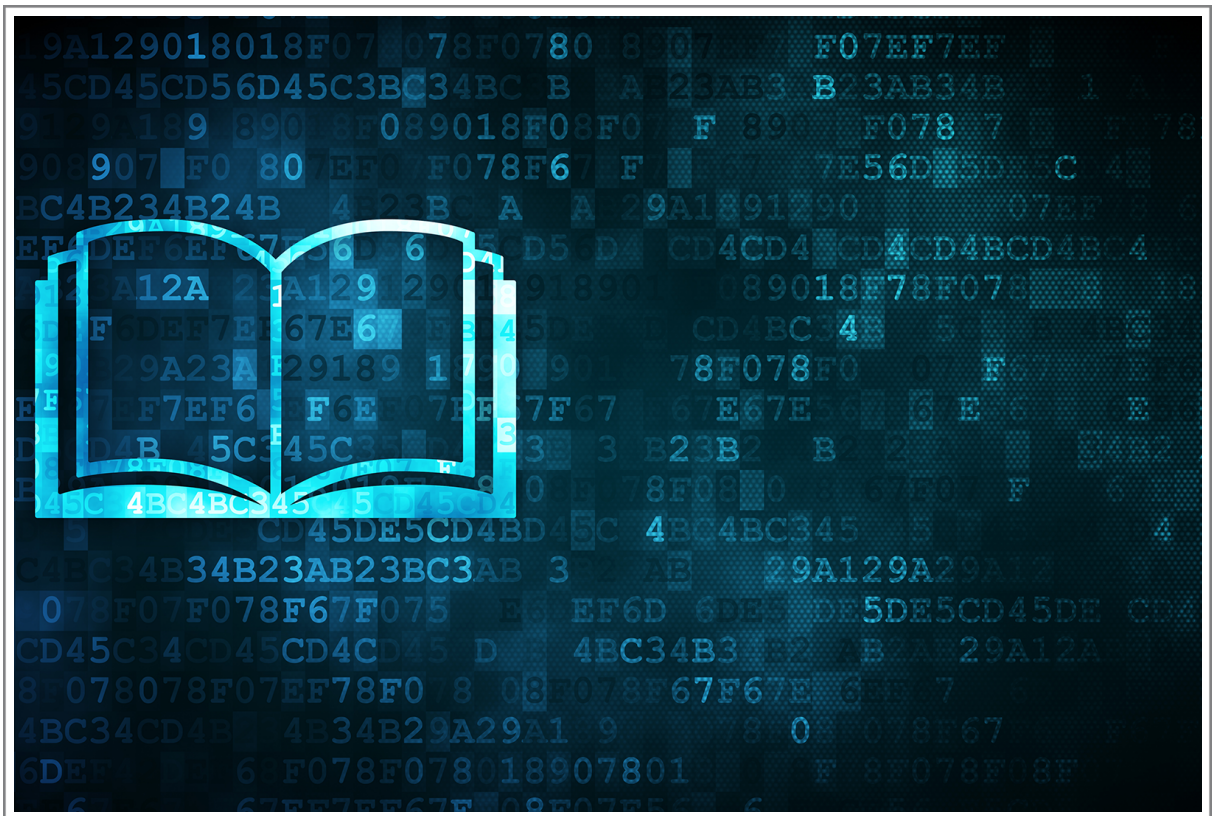


Significant trends in the district-wide school data

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City's school district performance data was provided for our analysis to identify any trends that might assist the school board and mayor, to make strategic decisions regarding future school budgets and priorities.

In this capacity, I have analysed the district-wide standardised test results at our Data Analytics department, to determine the performance of schools based on student's math and reading scores, as well as other relevant information on the schools such as school type, school size, and schools' annual budget.

Table 1: District Summary

Total Scho ols	Total Stude nts	Total Budge t	Ava Math Score	Avr Reading Score	% Passing maths	% Passing reading	% Overall passing
15	39170	2464942	78.9853	81.87784	74.980853	85.805463	65.172326

Even though, the overall district summary of school performance does not seem to be a problem; however, on closer inspection of the data and further analyses revealed a striking and significant insights.

- (1) Charter schools were at the top of the performance table (table 2) based on students' performance in maths and reading combined (>89% pass rate). This trend was independent of the budget allocated to spend per student. This trend coincided with the size of the school (within this type- Charter) being either small or medium sized.
- (2) On the other hand, district schools were at the bottom of the performance table (table 2) based on students' performance in maths and reading combined (pass rate of <55%). This trend was again independent of the

budget available to spend per student. There was a striking correlation of low performing district schools to being a large school size.

Table 2: Performance based of the type of the schools

	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	Overall Passing Rate
School Type					
Charter	83.473852	83.896421	93.620830	96.586489	90.432244
District	76.956733	80.966636	66.548453	80.799062	53.672208

- (3) The average math scores of students from large-sized district schools were of the lower level compared to the small/medium sized charter schools. Charter schools of small or medium size were at the top of the performance table (Table 3).

Table 3: Performance based of the size of the schools

	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	Overall Passing Rate
School size					
Small (<1000)	83.821598	83.929843	93.550225	96.099437	89.883853
Medium (1000-2000)	83.374684	83.864438	93.599695	96.790680	90.621535
Large (2000-5000)	77.746417	81.344493	69.963361	82.766634	58.286003

- (4) The average reading scores and its pass rate across different types and sizes of schools were similar (Tables 2& 3), indicating the resources available for English language seemed to be of an appropriate standard requiring minimum policy changes in this area. However, the strikingly large difference in the students performance in maths subject across various types and size of schools (Tables 2& 3) demands a review of the facilities and

resources available for teaching maths in large district schools. A review plan into the modes of improving maths education and taking necessary steps to improve are highly recommended for the district schools.

Table 4: Performance based on budget availability per student

	Average Math Score	Average Reading Score	% Passing Math	% Passing Reading	Overall Passing Rate
Spending ranges					
<\$599	83.45539	83.933814	93.460096	96.610877	90.369459
\$600-625	83.59968	83.885211	94.230858	95.900287	90.216324
\$626-649	79.07922	81.891436	75.668212	86.106569	66.112060
\$650-675	76.99721	81.027843	66.164813	81.133951	53.526855

- (5) The availability of budget per student was of a higher value in the low performing large district schools ('\$626-649' & '\$650-675') compared to high performing Charter schools ('<\$599' & '\$600-625'). This increased availability of budget per student needs to be utilised by the district schools more wisely in improving the maths education facilities and provisions.