Analysis of PyCity Schools

All of the five top performing schools are charter schools, and all of the five bottom performing schools are District schools. There is a noticeable gap in passing rate between these two categories: all of the charter schools have a passing rate above 94%, whereas no district school has a passing rate above 75%. There is no noticeable gap in the number of students, but nevertheless, the largest charter school, Wilson, with 2283 students, is smaller than the smallest District school, Ford, with 2739 students. The per-student budget does not correlate with any of these factors, and indeed shows comparatively little variation, ranging from a low of $578 at Wilson to a high of $655 at Huang, a difference of only $77.

School performance is fairly uniform across grades, i.e. no one grade stands out from the others at any one school. Interestingly, reading scores vary less than math scores. Both scores are in the 83-84% range at charter schools, but at District schools, math scores are a full four percentage points lower than reading scores.

It is clear that spending more per student will not solve the problem. The best performing schools have the lowest average per-student budget. The highest spending school, Huang High School, is one of the five lowest performing schools, whereas the highest performing school, Cabrera Charter High School, is one of the lower spenders.

In this analysis, we see two possible factors in school performance, which, however, are confounded. Charter schools outperformed district schools, and the small and medium-sized schools outperformed the largest schools. But all charter schools in PyCity are smaller than district schools; do they perform best because of the charter model, or because of their small size? To answer this question, we must compare size vs. performance within categories. The smallest school, Holden Charter High School, with only 427 students, turns out to be the lowest performing charter school, although its per-student budget is only $1 less than top-performing Cabrera, the second-largest charter school. Likewise, among District schools, Bailey, with 4976 students, is the top performer, although it has the lowest per-student budget and largest number of students among District schools. It would seem, then, that neither number of students nor spending per student is the most important factor in school performance, but that the charter model, itself, is the key to charter schools’ high performance.

There is definitely a serious problem in the PyCity school system. A Huang High School student with the prefix Dr. in his name is in the 12th grade, and is failing both reading and math. This student should not have been issued a doctorate. Huang High School is one of the worst-performing schools in the district, which may not be a coincidence. This circumstance should be investigated.