Afterschool Programs' Effect on Poverty-Adjusted Performance

April 12th, 2016

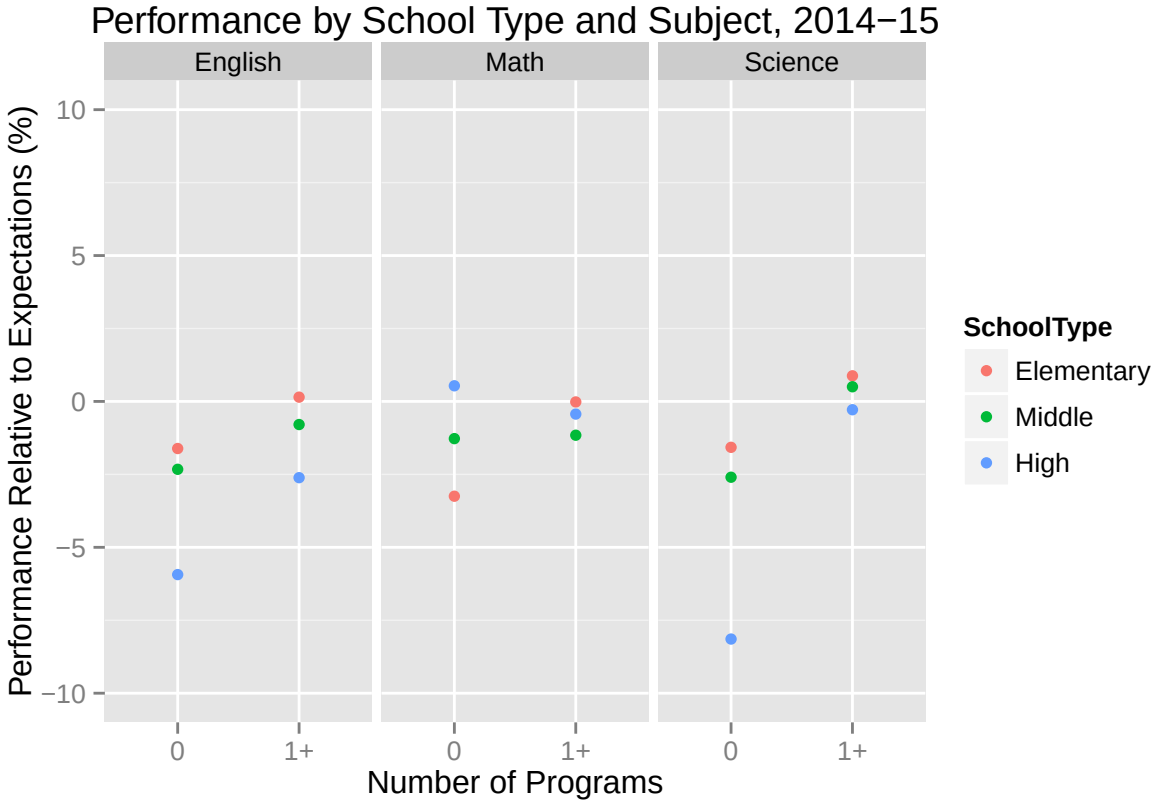
Abstract

Afterschool programs can serve low income kids, working to lower the achievement gap and level the playing field. These programs are chronically under-funded in Oregon; low-income programs are often publicly funded and are unable to sustain themselves without this stream of funding.

We look at the effects of summer and afterschool programs on the English, Math, and Science performance of Oregon schools. After controlling for the general effects of poverty, we find that presence of programs has a strong positive correlation with school performance.

Summary

We compared the performance of a total of 993 schools across three subjects (English, Math, Science) and three school types (Elementary, Middle, and High Schools). The key results are summarized below.



The diagram above shows that for each of the three subjects, the average performance of a given school type (e.g. Elementary) is higher for the schools that have afterschool and summer programs.

There are several caveats that must be acknowledged along with this analysis:

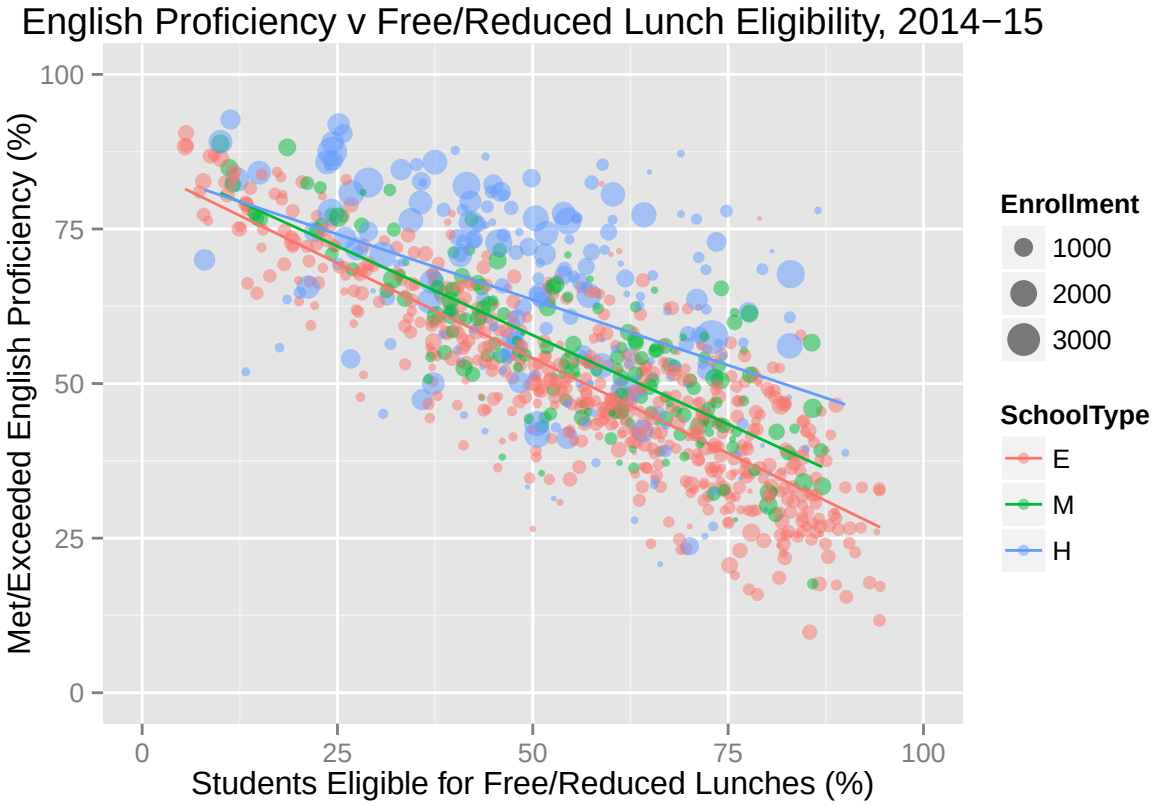
- We do not have complete data on the majority of the 2869 schools in Oregon

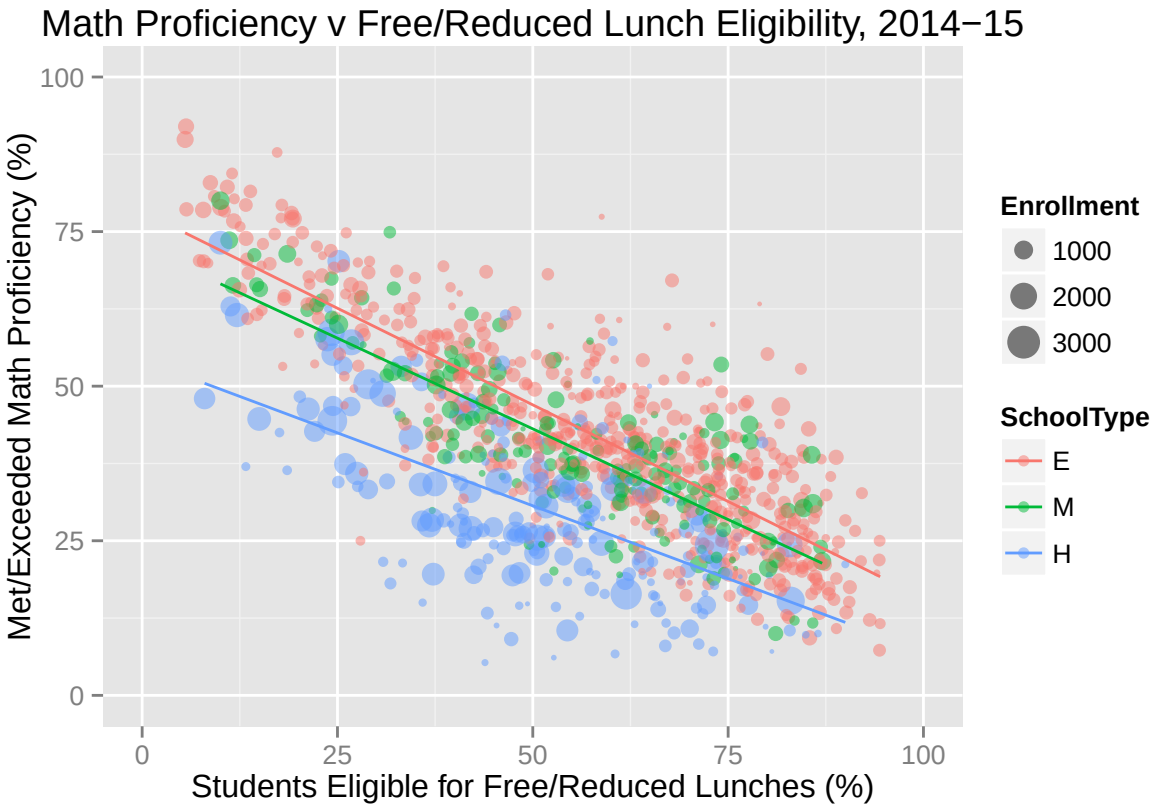
- We have much more data on elementary schools than on middle or high schools
- Most of the schools with complete data also host programs

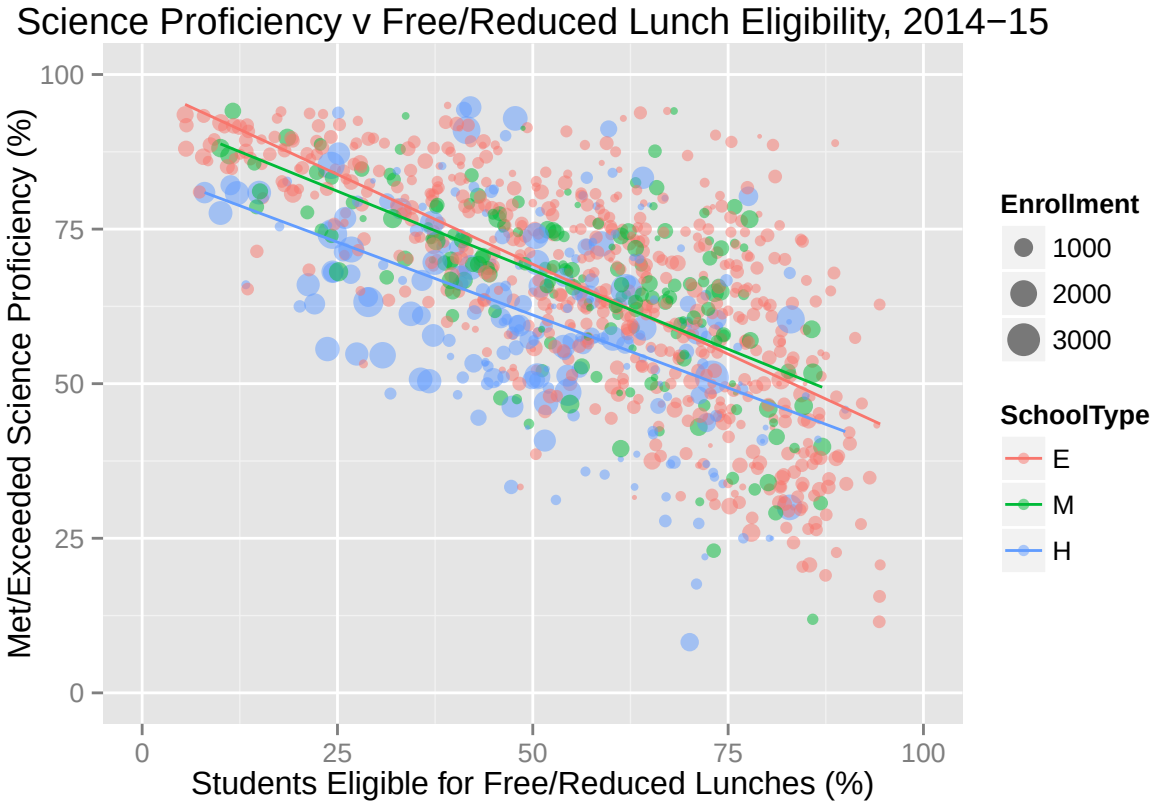
Methodology

First, we describe the data analyzed in this report. We start by combining enrollment, free or reduced lunch eligibility (FRLE), and standardized test performance on the schools for which complete data exists. Using FRLE rates as a metric of poverty, we first model the effect of poverty on school performance so that we may focus instead on the effect of afterschool programs.

In the following charts, we show the percent of students that met or exceeded the standard in a subject (English, Math, Science) as a function of the FRLE rate. The size of each dot reflects the school's enrollment, and the color reflects its grade level. We have also added lines of best fit.

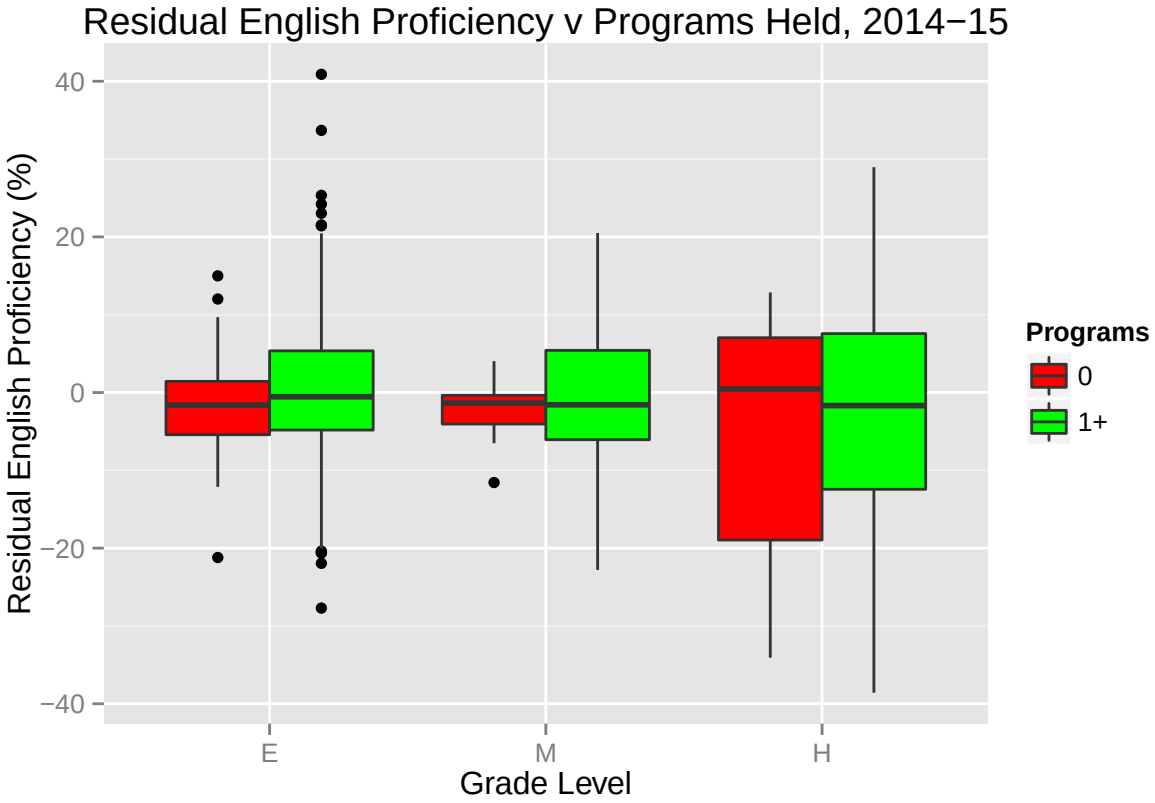


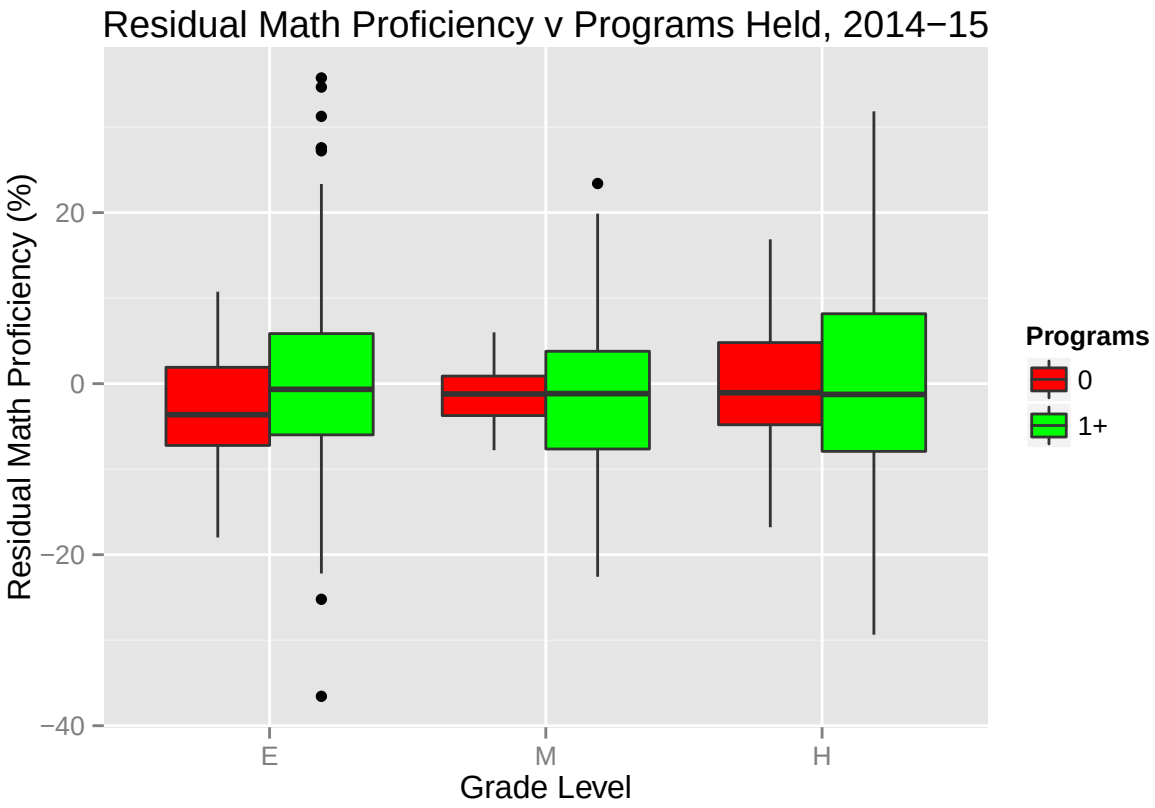


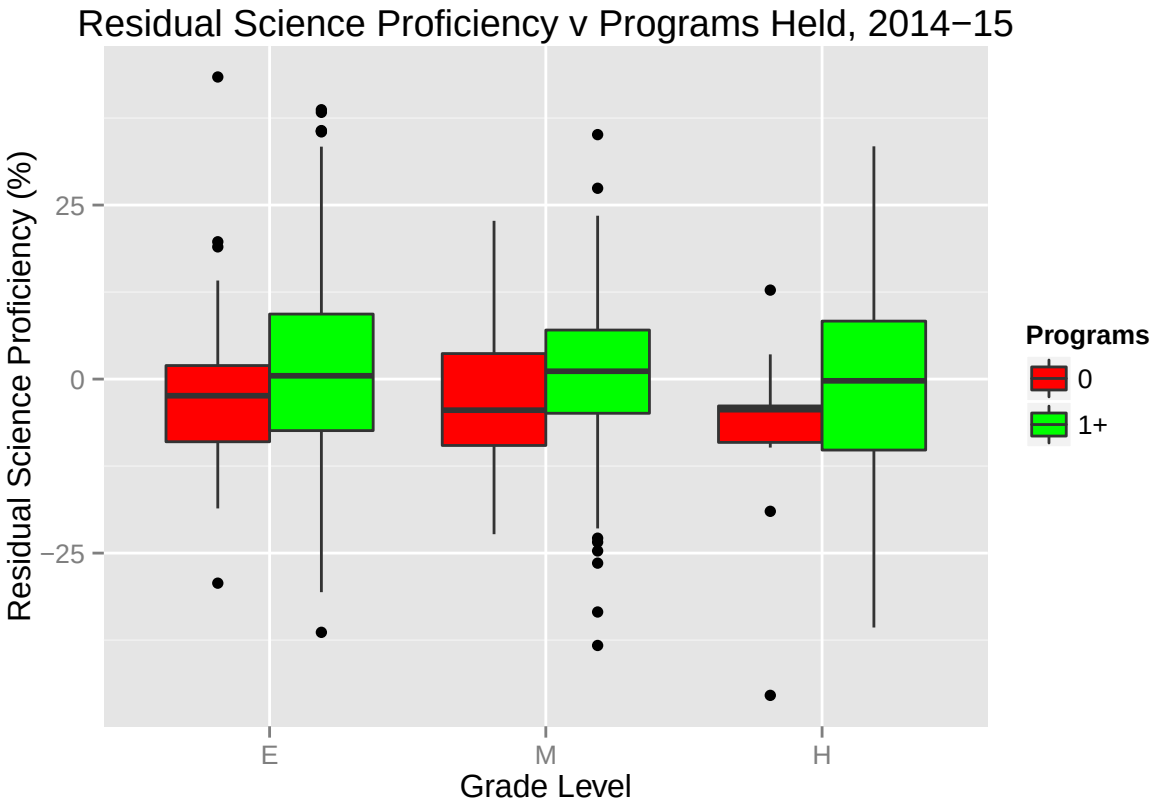


To focus on the effect of afterschool programs, we compute the difference between a school's percentage of students that meet or exceed the standard in each subject and the expected percentage based on FRLE rate. The result is a residual performance rating for each school, where a rating of 3 would suggest that the school

exceeded its expected performance in a subject by 3 percentage points.






Residual Science Proficiency v Programs Held, 2014−15
Residual Science Proficiency (%)
25
0
−25
E
M
H
Grade Level
Programs
0
1+