Impact on Academic Achievement in Partner Schools, 2012-2018

PowerMyLearning is having a strong positive impact on academic achievement among the schools participating fully in our program (herein called “PowerMyLearning schools”).

As shown in the bar chart to the left, PowerMyLearning schools outperformed comparison schools in math proficiency by an average of 7.1 percentage points each year (4.7% average annual improvement in the percent of students at or above proficiency at PowerMyLearning schools, -2.4% change at comparison schools).

The study included 17 PowerMyLearning schools from four regions of the country (New York City, Los Angeles, Atlanta, and the San Francisco Bay Area) during 6 school years (2012-13, 2013-14, 2014-15, 2015-16, 2016-17 and 2017-18). At least 75% of the students at all of these schools qualify for free or reduced price lunch. Over the five school years, the PowerMyLearning program reached 5,730 students in these schools from grades four through eight.

Disaggregating these results by school size, we see that PowerMyLearning schools showed a greater increase in math proficiency as compared to their respective comparison schools regardless of school size. School size was determined by calculating the average grade-level enrollment. Schools with up to four classes per grade (assuming 30 students per class) were categorized as Small Schools; schools with up to eight classes per grade were categorized as Medium Schools; schools with more than eight classes per grade were categorized as Large Schools.

For the Spring 2018 exam, New York State revised the test with a new two-session design and performance standards. Per guidance from NYSED, 2018 Grades 3-8 math results cannot be compared with prior-year results. Thus, NYC partner schools’ 2017-18 data are not included in this analysis, but are included for prior years.
Services Delivered in PowerMyLearning Schools

PowerMyLearning schools in this study received the following services each school year:

- **Coaching for math teachers** on creating personalized learning environments through the effective implementation of blended instructional practices. Teachers received a minimum coaching dosage of 20 instructional days.
- **Workshops for educators** to introduce the program and the PowerMyLearning® Connect™ platform. All teachers in the building were invited to at least 2 educator workshops, each of which was approximately 90 minutes long.
- **Support for school leaders**, including meetings with Principals and other school leadership personnel. Meetings and other interactions typically took place on a biweekly basis.
- **Family Engagement Services** that support families in becoming learning partners with their students. Services can include providing families and students with hands-on learning workshops and providing teachers, families, and students with access to Family Playlists. Based on a proven intervention called TIPS from Johns Hopkins, Family Playlists are interactive home assignments in which students lead the learning process with their families, and the families provide valuable feedback to the teachers on their students’ experience.

Study Methodology

To determine PowerMyLearning’s impact on student achievement, we used a quasi-experimental study that compared the results of PowerMyLearning schools on the statewide math test with the results from comparison schools. PowerMyLearning consulted with MDRC, a nationally recognized research organization, to ensure the validity of the comparison-school selection process.

For each PowerMyLearning school, a comparison school was selected using a two-step process that included: (1) generating a pool of comparison schools to select from, and (2) using an index to select the actual comparison school from that pool. A pool of comparison schools was generated for each PowerMyLearning school based on proximity, poverty demographics, ethnic demographics, school size, and starting proficiency:

- **Proximity**: The schools included in the comparison pool were located in either the same school district/county as PowerMyLearning schools or neighboring counties (depending on the size of the locale). In New York City, only schools operating within the NYDOE were considered; in Los Angeles, only schools within Los Angeles County were considered; in Atlanta and the San Francisco Bay, schools in neighboring counties were considered.
- **Poverty Demographics**: The schools included in the comparison pool had populations wherein at least 75% of the student population received free or reduced price lunch, because PowerMyLearning used this same cutoff to select schools for its intensive program.
- **Ethnic Demographics**: The schools included in the comparison pool had a school-wide ethnicity profile such that the percentage of students in the most prevalent ethnic group was within 20% of the PowerMyLearning school’s percentage of students in the same ethnic group.
- **School Size**: The schools included in the comparison pool had grade-level enrollments within 60 students (or approximately 2 classes) of the PowerMyLearning school’s grade-level enrollment.
- **Starting Proficiency**: The incoming grade of the schools included in the comparison pool had a baseline proficiency level within 5% of that of the incoming grade in the PowerMyLearning school.

A composite score was then used to select each comparison school from the pool of schools identified. This composite score was created using an evenly-weighted average of the poverty demographic, the percentage of black students, the percentage of Hispanic students, school size, and starting proficiency. For New York City only, the percentage of school-wide enrollment of students with a disability was also included, as this information was publicly available and easy to obtain.

The average annual change in the percentage of students scoring at or above proficiency (as shown in the first chart in this document) was calculated by finding the average of this data for all the PowerMyLearning schools and for all the comparison schools.
At the individual school level, the annual average change for each PowerMyLearning school was determined by doing calculations first at the grade level and then rolling those calculations up to the school level. So for each grade where our program reached a minimum of 85% of the students, a grade-level average annual difference between a pre value and post value was calculated (as described below). These annual differences at the grade level were then combined into a school-wide annual difference by using a weighted average where the weighting depended on the number of years in which we worked with each grade.

The grade-level average annual difference was calculated by subtracting the pre value from the post value and dividing by the number of years of program implementation. The pre value for a PowerMyLearning grade was the percentage of students at or above proficiency in the year prior to that grade receiving any services. The post value was the percentage of students at or above proficiency at the end of the most recent year of program implementation.

To fully understand this process, we provide an example with School X. Let us assume that PowerMyLearning worked with School X for four years, serving the sixth grade for four years starting in 2012-13 and serving the seventh grade for three years starting in 2013-14. Starting with the sixth grade, the pre value would be the sixth grade proficiency in 2011-12 (the year immediately preceding PowerMyLearning’s implementation) and the post value would be the sixth grade proficiency in 2015-16 (the most recent year of program implementation). The average annual difference for this grade would be post value minus the pre value divided by four. Moving to the seventh grade, the pre value would be the seventh grade proficiency in 2012-13 and the post value would be the seventh grade proficiency in 2015-16. The average annual difference for this grade would be the post value minus the pre value divided by three. Moving to the school level, the average annual difference for School X would be the weighted average of sixth grade and seventh grade annual average differences whereby the sixth grade number receives four-thirds the weighting of the seventh grade number (since the sixth grade received services for four years and the seventh grade for three years).

In order to do our analysis, we needed to account for the roll out of Common-Core aligned tests, which occurred in New York, California and Georgia in spring 2013, spring 2014 and spring 2015 respectively. To account for the much higher proficiency in the year(s) prior to the rollout of the new exam, PowerMyLearning calculated an adjustment factor for each PowerMyLearning school and comparison school based on the reduction in proficiency for schools in the same statewide percentile year-over-year. The line chart to the right demonstrates the adjustment calculated for New York visually. In this instance, the 2011-12 proficiency results for a school in the 61st percentile would be adjusted by -43% (the drop in proficiency represented by the vertical red line).

California implemented statewide math tests in all of the years of this study except in the spring of 2013-14, which we refer to as the “gap year.” PowerMyLearning conducted its analysis prior to and subsequent to the gap year. For schools that PowerMyLearning began serving just prior to the gap year, their pre values were selected after the gap year (2014-15) and compared to post values from the 2015-16 school year.