USA Math Outcomes Analysis 2017/18

Grade Levels: 3, 4, 5
ST Math Program: Gen-4
Analysis Type: Z-score of math proficiency
Treatment-Years: 2016/17, 2017/18
Baseline-Year: 2015/16
Subgroup: All

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Abstract

This analysis evaluates grades using ST Math in the USA in 2017/18. It identifies those grades with nominal or better implementation of the ST Math program, and matches them to randomly selected, similar math-performance comparison grades. The nominal ST Math users are an aggregation of 235 grades, consisting of grades 3, 4, and 5 at 137 schools, with an average baseline z-score of 0.17. Refer to Figures 2 and 3 for the math performance and demographic distributions. They were matched to 235 similar, randomly selected control grades at 228 schools that never used ST Math. Grade-wise growth in math proficiency was evaluated (i.e. growth in same grade, same school, from 2015/16 to 2017/18) on the mean z-scores of percent Proficient or Advanced (see Section 3.1). Grades 3, 4, and 5 aggregated showed an ST Math effect of 0.22 z-score points.

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1 Introduction

1.1 Background

This is a quasi-experimental analysis at the grade-mean level. Entire grades represent the units of analysis, and outcome measures are the 2-year changes in grade-mean z-score of Proficient or Advanced. The treatment grades used the ST Math program for 2 years, beginning in the 2016/17 school year. The study hypothesis is treatment grades using ST Math will outperform similar matched control grades, using their "business as usual" conditions of instructional content and professional development. The control grades were selected to have similar demographic and math attributes (See Figures 2 and 3) to the treatment grades during the baseline year (2015/16), and did not use ST Math in 2016/17 or 2017/18. The treatment grades' selection pool was all schools using ST Math in grades 3, 4, and 5 in the USA. The control grades' pool was all schools not using ST Math in grades 3, 4, and 5 in the USA. This study method measures effectiveness of the ST Math program when nominally implemented.

1.2 Program Description

Spatial-Temporal Math (ST Math) is game-based, instructional software for K–12 students, created by the MIND Research Institute (MIND). The purpose of the program is to boost math comprehension through visual learning. The ST Math software games begin without language or symbol abstractions by posing math problems as purely visual puzzles. In this way, three objectives are accomplished: i) language proficiency prerequisites to engage with the program are minimal, ii) non-mathematical distractions (e.g. back-stories for word problems) are minimized or eliminated – thereby reducing load on working memory, and iii) the actual math in the problem can be represented clearly, simply, and unambiguously. Interactive, animated visual manipulatives provide informative feedback on student solutions. A score of 100 percent on a game level comprised of 4-12 puzzles is required for progression through the levels. Failure requires a re-play of the level, via a new quasi-random set of puzzles. In this way, progression is self-paced.

Besides the self-paced progress made by students in their one-to-one environment, the program is designed to be referenced by teachers during their regular math instruction. It is supplemental to core or basal math instruction and instructional materials. As the great majority of grade-level math standards are covered in the ST Math digital curriculum, completion of 100% of the entire ST Math curriculum (i.e. completing every Game) is required to cover all grade-level math standards. Teachers receive initial training, either face to face or through self-guided online instruction. The training covers account startup, as well as math learning and growth mindset goals, the pedagogical approach to learning in a visual experiential game, monitoring and intervention of the student 1:1 game play, and connecting of ST Math content to classroom content and pacing.

For students to achieve nominal progress through the program, there is a recommended time-on-task requirement of 90 minutes per week over about 30 weeks. Consistent application of 90 minutes per week throughout the school year is normally sufficient to result in a grade's average ST Math content coverage exceeding 50% by year-end. In this study, we include grades that have achieved 40% or more content coverage (Progress) by April 15th.

This is a passive study with no experimental setup or extraordinary communications to any schools. All schools in this study therefore received normal program implementation support through the year from MIND support managers. This support includes bundled startup services of approximately 2-4 hours of training either in-person or online, access to live webinars, regular online and push reports on usage and progress, email/phone helpdesk, and proactive monitoring for gaps or issues by MIND support representatives.

MIND Research Institute initiated, funded, and exercised editorial control over this study.

2 Data Collection

Since this analysis uses grades as the unit of analysis, and states publish grade-mean state standardized test scores, the data for student math outcomes is collected from each state education agency's research files (retrieved from state websites). The treatment students use ST Math student accounts served by MIND. Student ST Math usage data is aggregated to grade-level means by MIND.

2.1 Treatment Grades Pool and Selection

The Treatment grades pool originated with all schools and grades using ST Math in the USA. From these schools, every grade that had used the ST Math program only for the year 2017/18 was identified. They comprise the Treatment grades pool for this evaluation of 2-year usage.

2.1.1 Enrollment Filter

Because the analysis uses grade-mean data, such as grade-mean scale scores or grade-mean proficiency level percentages, it is necessary that the program also be a grade-wide treatment, with the great majority of students in each grade receiving treatment. Otherwise, the grade-means reported by the state of 100% of *tested* students would not be valid measures of a smaller fraction of *treatment* students. MIND's site implementation requirement is that an entire grade, including all teachers and all classes within that grade, use the ST Math program. We validate how closely this is the case for each individual treatment grade by comparing the number of ST Math student accounts at a grade level to the reported enrollment at that grade level. We discard from the Treatment pool any grade with a ratio of ST Math student accounts to reported grade enrollment lower than 85%.

2.1.2 Content Coverage Filter

Furthermore, the outcomes measure is a summative year-end test, i.e. the standardized math assessment of that state. The math assessment thus covers all the math standards for that entire grade level. Meanwhile, the ST Math program curriculum (arranged into Learning Objectives) is also aligned to each state's math standards. To infer that the ST Math content is having a valid effect on student outcomes on the summative assessment, we discard any grade with grade-mean of ST Math Progress for its students lower than 40% by April.

Progress is a percentage, and is defined as Levels completed by the student, divided by the total number of Levels in the grade-level curriculum. Note that student achievement of at least 40% progress in ST Math is accomplished primarily by teacher assignment of computer session time to students. With sufficient time on task, students make progress. The program helps them self-pace through providing real-time informative feedback for each puzzle.

2.2 Control Grades Pool and Selection

The control grades are randomly selected from a control pool of schools in the USA. Though they are randomly selected, they are also matched to be similar to the Treatment grades' math attributes and demographics during the baseline 2015/16 year. The matched attributes include:

- z-score of percent Proficient or Advanced

- percentage of students receiving free or reduced lunch (using the demographic data from MDR).

To mitigate the risk of randomly picking a set of Control grades that generates an outlier for effect, a Monte Carlo approach is used to perform many random picks. The control pool's size is large enough that there are many possible "picks" of closely matched control grades.

One hundred randomly matched picks are made and sets of matched control grades are generated. For each set, the quality of the match as well as the math growth of the potential control set is evaluated. Some picked sets have high average math growth, some have low average math growth. From the set of all picks, a median pick is chosen. This avoids either an unlikely overestimate, or underestimate, of the Control grades' growth. When multiple median picks exist, the control set with the minimal math score differences in the baseline year is chosen.

3   Data Analysis

The set of all schools and grades using ST Math in the USA is evaluated for Enrollment percentage and Progress percentage parameters. A filtered Treatment set (TRT) of all ST Math grades with $\geq 85\%$ Enrollment and $\geq 40\%$ Progress is identified. State math assessment data is tabulated. A matching set of Control grades based on baseline year state math assessment is selected.

Changes in math performance, i.e. the difference in math performance of a grade from a baseline year to the final year, are evaluated and tabulated. Statistical tests of the significance of the difference in math performance changes between Treatment grades and Control grades are performed. Finally, a grade-by-grade disaggregation is performed.

3.1   Z-scores

In order to analyze across all states with different math assessments, a new z-score of that test's math proficiency is calculated. For each year being analyzed, by grade, a z-score takes the difference of the grade mean percent proficient and the mean of all percent proficient statewide for that year, and then divides it by the standard deviation of all percent proficient statewide for that year. Here is a fictional example to illustrate the calculation of a z-score for the 2015/16 exam:

School A, Grade 3, Percent Proficient: 70
Average across all schools statewide, Grade 3: 50
Standard deviation across all schools statewide, Grade 3: 20
Z-score=((School A, Grade 3, Percent Proficient)-(Average across all schools, Grade 3))/(Standard deviation across all schools, Grade 3)

$$\text{Z-score}=\frac{70-50}{20}=1$$

The z-score is calculated for every grade across all years being analyzed, using the full state data set of schools for the averages and standard deviations. The use of z-scores is a valid statistical method to normalize any dataset and to enable analysis across otherwise uncomparable exams. In this report, we only analyze z-scores.

3.2   Percentile Ranking

These newly calculated z-scores can then be converted into a percentile ranking. Each percentile ranking shows the grade's performance relative to the others in that year and grade. For example, for a specific grade 3, a percentile ranking of 50 shows that this grade 3 performed at the average of all third grades in the state for that testing year.

3.3 Final Treatment and Control

3.3.1 ST Math Grade-Aggregated Implementation ($\geq$ 85% Enrollment Grades Only)

ST Math Percent Grade Mean Progress Distribution – 2017/18
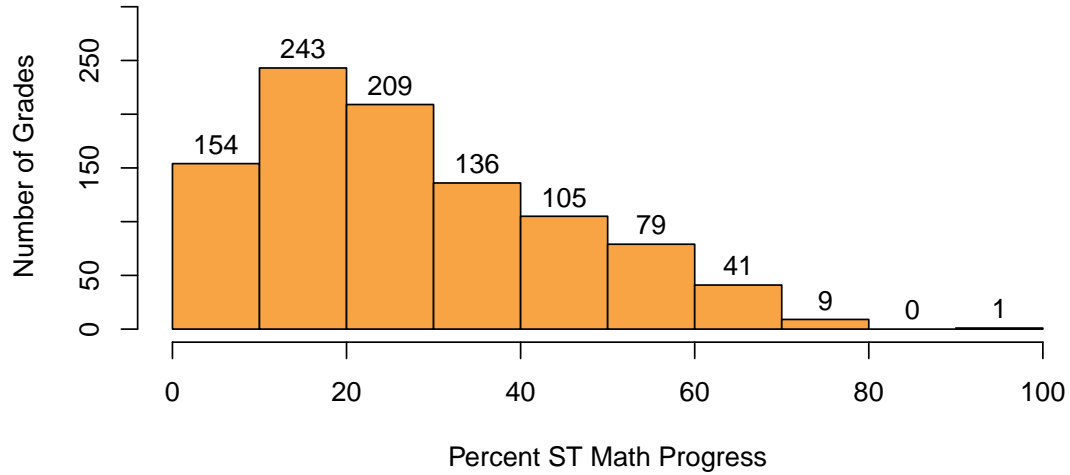
Figure 1: Histogram of ST Math Percent Progress for $\geq$ 85% Enrollment Grades 2017/18

For all ST Math grades with Enrollment $\geq$ 85%, Figure 1 shows the frequency distribution of grade-average Progress percentage through the program. Note that we will only be using grades with $\geq$ 40% Progress as the Treatment Group.

Table 1 provides descriptive statistics of the Progress distribution. Table 2 shows the number of remaining treatment grades after applying enrollment and progress filters.

	Min.	Max.	Average	S.D.
ST Math % Progress	0.0	96.3	27.5	17.2

Table 1: Descriptive Statistics of ST Math Percent Progress for >= 85 percent Enrollment Grades

Grades with >= 85% Enrollment:	977
Grades with in addition >= 40% Progress:	235

Table 2: Number of ST Math Grades with >= 85 percent Enrollment and with >= 40 percent progress

3.3.2 Filtering Treatment and Controls

Table 3 shows the total number of grades in the Treatment pool, the number of grades that exceeded the 85% Enrollment figure, and also the 40% Progress filter. Other rows in the table indicate counts of numbers of students (2017/18 from state testing count) and counts of number of schools represented. The number of matched Control (CTRL) grades, students, and schools is also shown.

	Grade 3	Grade 4	Grade 5	Total
ST Math Using Grades	447	440	419	1306
ST Math Using Schools	447	440	419	543
ST Math Students	34243	34925	33765	102933
ST Math Grades (Enroll >= 85%)	345	330	302	977
TRT Grades (Enroll >= 85% & Prog >= 40%)	85	78	72	235
TRT Schools (Enroll >= 85% & Prog >= 40%)	83	78	72	137
TRT Students (Enroll >= 85% & Prog >= 40%)	7314	6756	5817	19887
CTRL Grades	85	78	72	235
CTRL Schools	85	78	72	228
CTRL Students	6670	6136	5430	18236

Table 3: Treatment Pool Filtering and Controls: Counts of Grades, Schools, and Students

3.3.3 Match of Controls to Treatment

Figure 2 shows the density plots of the baseline z-score of percent students at state assessment Proficient or Advanced (left plot) and the percentage of students needing free or reduced lunch (right plot) for treatment grades overlayed on control grades, showing the closeness of the match obtained between Treatment and Control sets of grades in the baseline year, 2015/16.
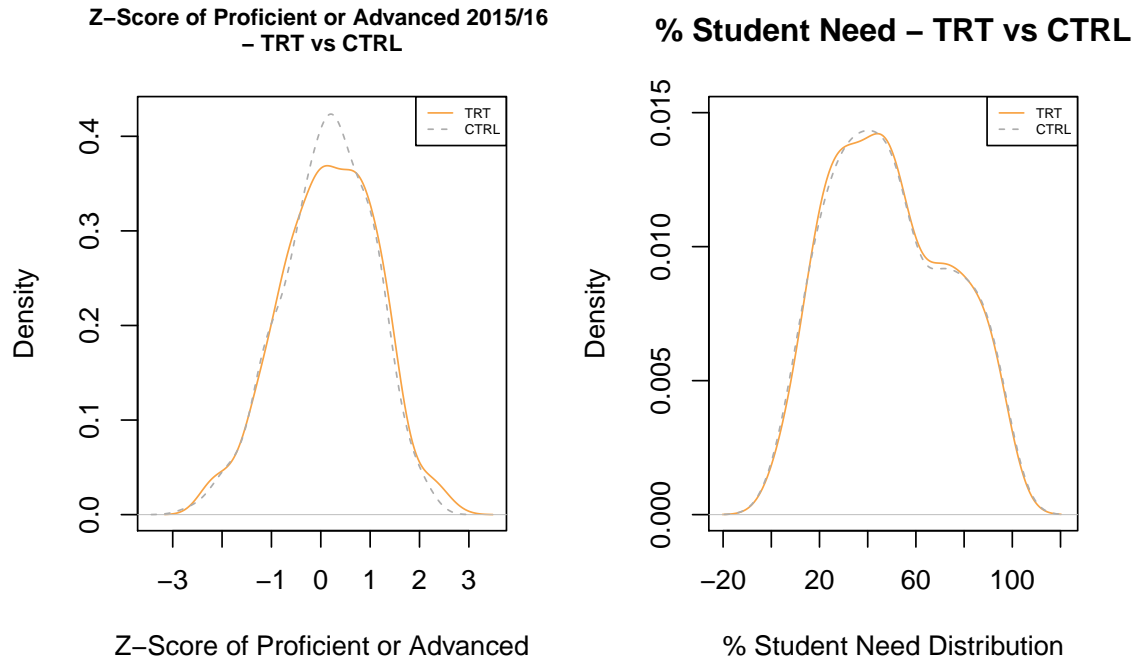
Figure 2: Baseline Year Density Plots Showing Math Scores and Percent Student Need Match between TRT and CTRL - 2015/16

Table 4 shows the difference of the means of Treatment versus Control in the baseline year, with accompanying p-values, for mean z-score of percent Proficient or Advanced and for percent of students receiving free or reduced lunch. The large p-values show the differences between the Treatment and Control grades are not statistically significant.

	Mean(TRT)	SD(TRT)	Mean(CTRL)	SD(CTRL)	Estimate	P-Value	Effect Size
Z-Score of Proficient or Advanced - 2015/16	0.17	0.96	0.13	0.91	0.04	0.64	0.04
Percent Free or Reduced Lunch	49.26	24.56	49.25	24.78	0.02	0.99	0.00

Table 4: Matching TRT and CTRL

3.4 Grade-Aggregated Analysis

Table 5 shows for both Treatment (TRT) and Control (CTRL) aggregation across grades of z-score distributions. The far right column also shows the average ST Math Progress for the TRT set.

	# Grades	# Schools	# Students	Z-Score	Percentile	ST Math Per Comp.
TRT.15.16	235	137	18298	0.17	55.22	–
TRT.17.18	235	137	18114.8	0.32	60.20	52.73
TRT.Delta	–	–	–	0.15	4.97	–
CTRL.15.16	235	228	19040	0.13	54.38	–
CTRL.17.18	235	228	18236.4	0.06	52.75	–
CTRL.Delta	–	–	–	-0.06	-1.63	–

Table 5: All Grades Together Growth

Figure 3 shows the changes in mean z-scores of percent Proficient or Advanced for the grade-aggregated Treatment and Control sets.

Changes in Z–scores – 2017/18 vs 2015/16
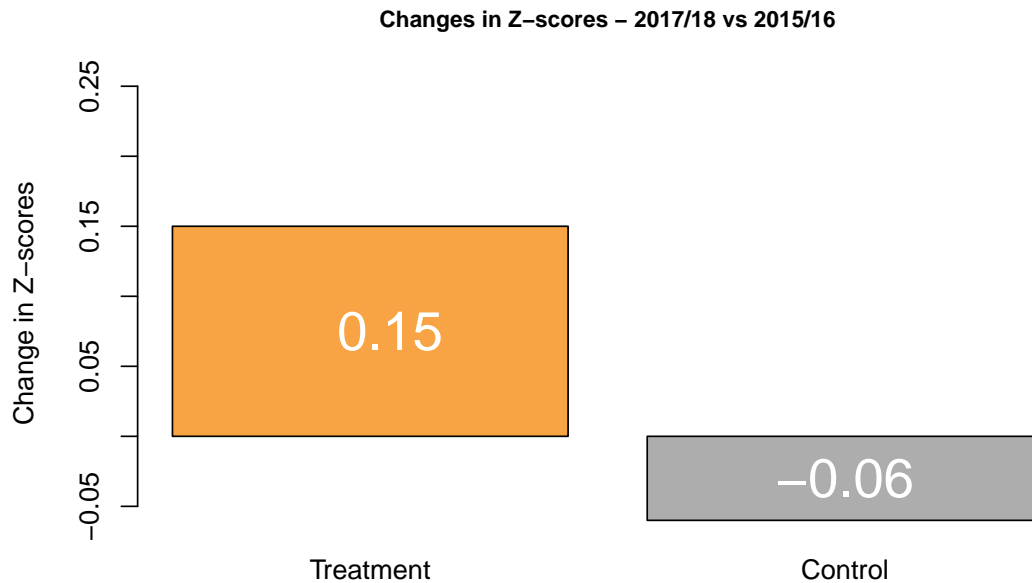
Figure 3: Changes in z-scores (See Section 3.1) for Grade-Aggregated TRT and CTRL datasets between 2015/16 and 2017/18

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Further, Table 6 shows the statistics for the *differences* in changes between TRT and CTRL (Treatment - Control) for these same z-score changes as in the above figure. [1]

	Estimate	P-Value	Int.Low	Int.High
Z-Score	0.22	0.00*	0.11	0.33

Table 6: Statistics for the Differential Changes in Math Scores Growth (TRT - CTRL)

Finally, Figure 4 shows the changes in mean percentile ranking between TRT and CTRL.

Mean Percentile Plot – TRT vs CTRL
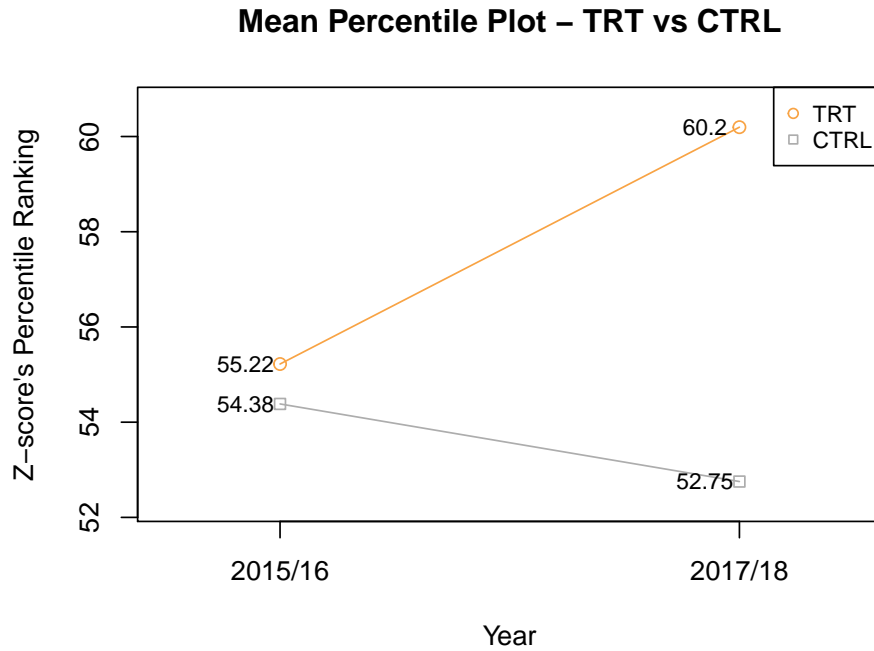
Figure 4: Changes in Percentile Ranking for TRT and CTRL Datasets between 2015/16 and 2017/18

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[1]* statistically significant p<0.05

3.5 Grade-Level Analysis

3.5.1 Grade Level Result Tables

The following tables (Table 7, 8, and 9) present a disaggregation of results by grade level. The far right column in each table also shows the average ST Math Progress for the TRT set.

	# Grades	# Schools	# Students	Z-Score	Percentile	ST Math Per Prog.
TRT.15.16	85	83	6883	0.14	54.96	–
TRT.17.18	85	83	6576	0.30	59.89	52.79
TRT.Delta	–	–	–	0.16	4.93	–
CTRL.15.16	85	85	6872	0.16	55.21	–
CTRL.17.18	85	85	6670	0.06	53.00	–
CTRL.Delta	–	–	–	-0.10	-2.21	–

Table 7: Grade 3 - Yearly Math Performance and Counts for TRT and CTRL Datasets

	# Grades	# Schools	# Students	Z-Score	Percentile	ST Math Per Prog.
TRT.15.16	78	78	6177	0.34	60.63	–
TRT.17.18	78	78	6179.55	0.44	64.01	53.19
TRT.Delta	–	–	–	0.11	3.38	–
CTRL.15.16	78	78	6260	0.25	58.45	–
CTRL.17.18	78	78	6136	0.16	56.29	–
CTRL.Delta	–	–	–	-0.09	-2.15	–

Table 8: Grade 4 - Yearly Math Performance and Counts for TRT and CTRL Datasets

	# Grades	# Schools	# Students	Z-Score	Percentile	ST Math Per Prog.
TRT.15.16	72	72	5238	0.01	49.67	–
TRT.17.18	72	72	5359.25	0.21	56.42	52.18
TRT.Delta	–	–	–	0.20	6.75	–
CTRL.15.16	72	72	5908	-0.04	49.00	–
CTRL.17.18	72	72	5430.4	-0.04	48.62	–
CTRL.Delta	–	–	–	-0.00	-0.38	–

Table 9: Grade 5 - Yearly Math Performance and Counts for TRT and CTRL Datasets

3.5.2 Grade-Level Analysis of Changes in Z-scores of Proficient or Advanced

Figure 5 shows the changes in the grade-mean z-scores of students for the TRT and CTRL datasets, disaggregated by grade:
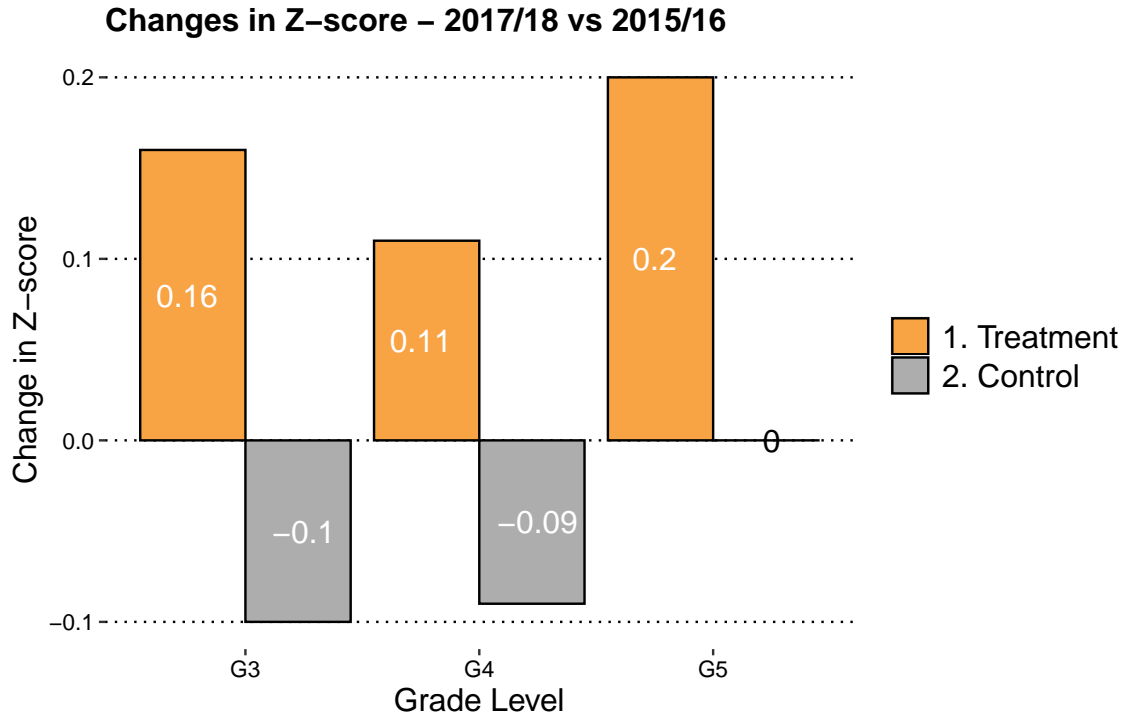
Figure 5: Changes in Grade-Mean Z-score (See Section 3.1) for TRT and CTRL Datasets between 2015/16 and 2017/18

Table 10 shows the statistics for the differences between TRT and CTRL (Treatment - Control) for these same z-score changes as shown in Figure 5.

	Estimate	P-Value	Int.Low	Int.High
Grade 3	0.26	0.01*	0.05	0.46
Grade 4	0.19	0.03*	0.02	0.37
Grade 5	0.20	0.06	-0.01	0.41

Table 10: Statistics for the Differential Changes in Z-scores (See Section 3.1) Growth, (TRT - CTRL)

4 Effect Size

The following table shows the effect sizes for z-score of Proficient or Advanced.

	Z-Score of Proficient or Advanced Effect Size
Grade 3	0.30
Grade 4	0.20
Grade 5	0.22
All Grades	0.24

Table 11: Cohen's d Effect Size

5 Findings Summary

USA grades 3, 4, and 5 using ST Math for the year 2017/18 averaged 25.2% ST Math Progress. 279/1306 grades (21%) averaged covering more than 40% of ST Math content. Statistically significant differences were found in this analysis for both grade-aggregated and individual grade levels. Looking at Table 6, a statistically significant difference was found for grade-aggregated z-score, with an estimate of 0.22 points favorable for the ST Math treatment set. Looking at Table 10, grades 3 and 4 ST math treatment sets outperformed their matched controls for state assessment z-scores with statistically significant differences of 0.26 and 0.19, respectively.

6 Confounders

Despite best efforts in minimizing confounders to the results of this analysis, there still remain a few input variables that could be significant in affecting differences of state test score outcomes between the Treatment and Control sets. One issue is the lack of randomization of grades chosen to receive the ST Math treatment. Instead of randomized selection, Treatment grades are self-selected. Self-selection can be an indication of districts or schools with a focus on math, an appetite for change, and with a spotlight on math training. Furthermore, not all grades using the ST Math program are chosen for analysis. Each grade must pass two specific filters to be considered for the Treatment set: the first being an enrollment filter of at least 85% of students in each grade using the program, and the second being a progress filter of at least 40% of the program completed on average by students in that grade. These filters might indicate relatively high-functioning schools with a team of relatively effective teachers in that grade, thus resulting in better instruction overall. A mitigation of this possible confounder is our selection of treatment groups on the grade level, rather than the teacher level, so there is no cherry picking of teachers: the full range of teachers in each grade is included. Moreover, the specific teachers may often be the same in the baseline year as in the current year, so the Treatment growth is not due to teacher differences. Finally, a possible confounder lies in the "business as usual" conditions at the matched control grades chosen for each analysis. It's unknown whether these control grades used other programs that could affect the comparison of the two sets of grades. The Monte Carlo Method is used to mitigate the possibility of control picks being favorable or unfavorable (see Section 2.3).

7 Reference Tables Grouped By School Year

The following tables show grade-level details, grouped by school year and for treatment (Table 12) and controls (Table 13) separately.

	# Grades	# Schools	# Students	Z-Score	Percentile	ST Math Per Comp.
Grade 3 (15.16)	85	83	6883	0.14	54.96	–
Grade 4 (15.16)	78	78	6177	0.34	60.63	–
Grade 5 (15.16)	72	72	5238	0.01	49.67	–
All Grades (15.16)	235	137	18298	0.17	55.22	–
Grade 3 (17.18)	85	83	6576	0.30	59.89	52.79
Grade 4 (17.18)	78	78	6179.55	0.44	64.01	53.19
Grade 5 (17.18)	72	72	5359.25	0.21	56.42	52.18
All Grades (17.18)	235	137	18114.8	0.32	60.20	52.73

Table 12: TRT Grades Detail Sorted by Year

	# Grades	# Schools	# Students	Z-Score	Percentile	ST Math Per Comp.
Grade 3 (15.16)	85	85	6872	0.16	55.21	–
Grade 4 (15.16)	78	78	6260	0.25	58.45	–
Grade 5 (15.16)	72	72	5908	-0.04	49.00	–
All Grades (15.16)	235	228	19040	0.13	54.38	–
Grade 3 (17.18)	85	85	6670	0.06	53.00	–
Grade 4 (17.18)	78	78	6136	0.16	56.29	–
Grade 5 (17.18)	72	72	5430.4	-0.04	48.62	–
All Grades (17.18)	235	228	18236.4	0.06	52.75	–

Table 13: CTRL Grades Detail Sorted by Year

8 Lists of Schools

8.1 Treatment Schools

The following tables list the treatment schools and grades (after 85% enrollment and 40% progress filtering) used in the analysis.

State	PID	IID	District	School Name	GRADE
CO	142854	HIL66Y	ADAMS 12 FIVE STAR SCHOOLS	HILLCREST ELEMENTARY SCHOOL	3, 4
PA	917582	ANN1B8	ANNVILLE-CLEONA SD	ANNVILLE EL SCH	3, 4, 5
CA	10016651	ACH7EK	Achieve Charter School Of Paradise Inc.	Achieve Charter School Of Paradise Inc.	4, 3
VA	1068926	CRO1RP	Albemarle County	Crozet Elementary	3, 4, 5
NM	1523469	DOL6PY	Albuquerque Public Schools	Dolores Gonzales Elementary School	5
NM	704012	LON6PY	Albuquerque Public Schools	Longfellow Elementary School	3
NM	704074	NAV6PY	Albuquerque Public Schools	Navajo Elementary School	5
CA	5341718	BRO746	Beaumont Unified	Brookside Elementary	3, 5, 4
KY	380850	GRA363	Bellevue Independent	Grandview Elementary School	3
MA	421129	AYE05B	Beverly	Ayers/Ryal Side School	4, 3
MA	421026	CEN05B	Beverly	Centerville Elementary	3
MA	421040	COV05B	Beverly	Cove Elementary	5, 3, 4
MA	421064	HAN05B	Beverly	Hannah Elementary	5, 4, 3
MA	421105	NOR05B	Beverly	North Beverly Elementary	3
NH	2045197	BOW097	Bow	Bow Elementary School	3, 4
MO	556205	MID514	COLUMBIA 93	MIDWAY HEIGHTS ELEM.	5
IA	234744	CAM42H	Camanche Community School District	Camanche Elementary	4, 3
IA	234720	CAM42I	Camanche Community School District	Camanche Middle School	5
CA	120741	CAY77J	Cayucos Elementary	Cayucos Elementary	4, 3
IA	11814810	EKS42I	Central DeWitt School District	Central DeWitt Intermediate School	4
CA	95263	BUE6ZT	Centralia Elementary	Buena Terra Elementary	3
CA	95299	GEO6ZQ	Centralia Elementary	George B. Miller Elementary	4, 5
CA	95304	GHD6ZQ	Centralia Elementary	Glen H. Dysinger Sr. Elementary	4
CA	95316	LOS6ZQ	Centralia Elementary	Los Coyotes Elementary	5
CA	95354	SAN6ZQ	Centralia Elementary	San Marino Elementary	3, 4
CA	110693	PAR73B	Chula Vista Elementary	Parkview Elementary	4
IL	280561	PEI4OI	City of Chicago SD 299	Peirce Elem Intl Studies School	3, 4, 5
NV	4919934	JOH6VR	Clark	Bass ES	4, 5
NV	3328904	CHA6VK	Clark	Hill ES	3, 5
NV	5099472	MER6VM	Clark	Iverson ES	4
NV	4945505	LUC6VM	Clark	Rogers ES	4, 5, 3
NV	711986	ROB6V9	Clark	Taylor (Robert) ES	4, 5, 3
IA	233441	CLE3W2	Clear Lake Community School District	Clear Creek Elementary School	4, 3
CO	11718618	OAK66V	DENVER COUNTY 1	OAKLAND ELEMENTARY	5
IA	250475	BLU42G	Davenport Community School District	Blue Grass Elementary School	3, 4, 5
IA	250487	BUC42O	Davenport Community School District	Buchanan Elementary School	5, 4, 3
IA	250566	GAR42O	Davenport Community School District	Garfield Elementary School	3, 4, 5
IA	1529152	MCK42O	Davenport Community School District	McKinley Elementary School	5, 4, 3
IA	250695	HAR42O	Davenport Community School District	Truman Elementary School	3, 5, 4
IA	250786	WAS42O	Davenport Community School District	Washington Elementary School	5, 4, 3
UT	1063483	SOU6HE	Davis District	South Clearfield School	3
UT	1063603	WAS6HD	Davis District	Wasatch School	5
IA	236596	AUD40G	Dubuque Community School District	Audubon Elementary School	4
IA	236601	BRY40G	Dubuque Community School District	Bryant Elementary School	3, 5, 4
IA	236625	EIS40G	Dubuque Community School District	Eisenhower Elementary School	3
IA	236651	HOO40G	Dubuque Community School District	Hoover Elementary School	5, 3
IA	236716	MAR40G	Dubuque Community School District	Marshall Elementary School	5
IA	236728	PRE40G	Dubuque Community School District	Prescott Elementary School	3
IA	236730	SAG40G	Dubuque Community School District	Sageville Elementary School	4, 5
IA	230102	NEW40W	Eastern Allamakee Community School District	New Albin Elementary School	5, 4, 3
IA	246668	ESS3ZF	Essex Community School District	Essex Elementary School	4
IL	269359	DRB4MV	Evanston CCSD 65	Dr Bessie Rhodes Sch Global Studies	5
IL	269385	MAR4N8	Evanston CCSD 65	Dr ML King Jr Literary & Fine Arts Sch	5
IL	269476	WAL4N8	Evanston CCSD 65	Walker Elem School	5
CO	149618	EVA68R	FALCON 49	EVANS INTERNATIONAL ELEMENTARY SCHOOL	4, 5, 3

Table 14: Treatment Schools (TRT Dataset)

State	PID	IID	District	School Name	GRADE
GA	221890	LIV2BD	GRIFFIN	LIVINGSTON ELEMENTARY SCHOOL	3, 4
GA	4751718	MID2BD	GRIFFIN	MIDDLE RIDGE ELEMENTARY SCHOOL	5, 3, 4
IL	3388904	WES4MQ	Glencoe SD 35	West School	3
VA	1075321	BYR1S2	Goochland County	Byrd Elementary	3, 4, 5
VA	1075345	GOO1S3	Goochland County	Goochland Elementary	3, 4
VA	1075383	RAN1RZ	Goochland County	Randolph Elementary	3, 4, 5
UT	1064580	COT6HN	Granite District	Cottonwood School	4
UT	1065091	TWI6HN	Granite District	Twin Peaks School	4
NY	773570	VAN0WM	HALF HOLLOW HILLS CENTRAL SCHOOL DISTRICT	VANDERBILT ELEMENTARY SCHOOL	3
MO	3245546	HAN4VC	HANCOCK PLACE	HANCOCK PLACE ELEM.	3
VA	4029694	CAR1SS	Isle of Wight County	Carrollton Elementary	3
VA	1077252	CAR1SR	Isle of Wight County	Carrsville Elementary	4, 5
VA	10003680	WES1T3	Isle of Wight County	Westside Elementary	4
VA	1077290	WIN1T8	Isle of Wight County	Windsor Elementary	3, 4
VA, CA	1077264, 113190	HAR1T3, HAR73V	Isle of Wight County , San Diego Unified	Hardy Elementary	3, 5, 3
KY	389870	FTW35X	Kenton County	Ft Wright Elementary School	3, 4
KY	389909	RYL35X	Kenton County	Ryland Heights Elementary School	3
TX	995417	LYT60U	LYTLE ISD	LYTLE EL	5, 3, 4
CA	71554	GRO6ZZ	Long Beach Unified	Cleveland Elementary	5, 4, 3
CA	3248342	INT709	Long Beach Unified	Jenny Oropeza Elementary	5
CA	71841	ABR709	Long Beach Unified	Lincoln Elementary	4, 5, 3
CA	72120	MAR70A	Long Beach Unified	Twain Elementary	5, 4, 3
CA	72170	FRA709	Long Beach Unified	Willard Elementary	4, 5
CA	71877, 83179	HEN709, LON6ZO	Long Beach Unified, Whittier City Elementary	Longfellow Elementary	5, 4, 3, 3
CA	77998	TUL71Q	Los Angeles Unified	Tulsa Street Elementary	5, 4
CA	88648	SIE783	Madera Unified	Sierra Vista Elementary	5
TX	1019949	NIX612	NIXON-SMILEY CI	NIXON SMILEY EL	3
GA	211120	DAV2DF	NORTHWEST GEORGIA	DAVIS ELEMENTARY SCHOOL	5
NY	770932	HOW15A	ODESSA-MONTOUR CENTRAL SCHOOL DISTRICT	HOWARD A HANLON ELEMENTARY SCHOOL	4, 5
FL	3400045	CLA2IV	ORANGE	CLAY SPRINGS ELEMENTARY	5
NY	719782	OXF12G	OXFORD ACADEMY AND CENTRAL SCHOOL DISTRICT	OXFORD ACADEMY MIDDLE SCHOOL	5
CA	49862	BEL7AT	Oakland Unified	Bella Vista Elementary	5
CA	50160	BUR7AS	Oakland Unified	Burckhalter Elementary	5
CA	50196	CHA7AS	Oakland Unified	Howard Elementary	5
NJ	676087	OCE0MU	Ocean City	Ocean City Primary School	3
UT	11567677	TAY6IG	Ogden City District	Taylor Canyon School	3
AZ	40347	SOL6K5	Osborn Elementary District	Solano School	5
PA	918598	CET1EA	PARKLAND SD	CETRONIA SCH	3, 4
PA	918603	FOG1EA	PARKLAND SD	FOGELSVILLE SCH	3, 4
PA	11550430	JAI1E3	PARKLAND SD	FRED J JAINDL ES	3, 5, 4
PA	918615	IRO1E3	PARKLAND SD	IRONTON SCH	4, 3
PA	918627	KER1E6	PARKLAND SD	KERNSVILLE SCH	3, 5, 4
PA	918639	KRA1EA	PARKLAND SD	KRATZER SCH	3, 4
PA	918653	PAR1EA	PARKLAND SD	PARKWAY MANOR SCH	4, 3
PA	918665	SCH1E7	PARKLAND SD	SCHNECKSVILLE SCH	5, 4, 3
PA	903062	OSC1AA	PHILIPSBURG-OSCEOLA AREA SD	OSCEOLA MILLS EL SCH	3
MO	5279490	REE52P	REEDS SPRING R-IV	REEDS SPRING ELEM.	4, 3
VA	1088536	MON1UP	Roanoke City	Monterey Elementary	3
CA	81353	HUR72U	Rowland Unified	Hurley Elementary	3
PA	925307	ROY1I2	SPRING-FORD AREA SD	ROYERSFORD EL SCH	3
AR	4916906	BER5M4	SPRINGDALE SCHOOL DISTRICT	BERNICE YOUNG ELEMENTARY	5
AR	10908030	MON5M4	SPRINGDALE SCHOOL DISTRICT	MONITOR ELEMENTARY	4, 3
CA	94312	OLI75B	Saddleback Valley Unified	Olivewood Elementary	5
CA	94324	RAL75B	Saddleback Valley Unified	Ralph A. Gates Elementary	3
CA	94336	SAN75D	Saddleback Valley Unified	San Joaquin Elementary	5, 4, 3

Table 15: Treatment Schools (TRT Dataset)

State	PID	IID	District	School Name	GRADE
CA	94348	SAN75B	Saddleback Valley Unified	Santiago Elementary	3, 5
CA	112548	ADA73V	San Diego Unified	Adams Elementary	4
CA	112598	BAK73V	San Diego Unified	Baker Elementary	4, 5
CA	1824988	DOY73W	San Diego Unified	Doyle Elementary	3
CA	113073	FOS73W	San Diego Unified	Foster Elementary	4
CA	113217	HEA73W	San Diego Unified	Hearst Elementary	4
CA	113243	HOL73V	San Diego Unified	Holmes Elementary	4
CA	1824990	JER73X	San Diego Unified	Jerabek Elementary	4, 3, 5
CA	113463	LOM73U	San Diego Unified	Loma Portal Elementary	4
CA	113475	LON73V	San Diego Unified	Longfellow K-8	3
CA	113700	OCE73U	San Diego Unified	Ocean Beach Elementary	4
CA	113815	ROL73V	San Diego Unified	Rolando Park Elementary	3
CA	113841	ROW73U	San Diego Unified	Rowan Elementary	5
CA	113944	SPR73W	San Diego Unified	Spreckels Elementary	4
CA	1524047	BAY77G	San Luis Coastal Unified	Baywood Elementary	5
CA	121252	LIL77L	San Miguel Joint Union	Lillian Larsen Elementary	5
CA	128810	POM7C1	Santa Clara Unified	Pomeroy Elementary	4
MA	4143824	SIL053	Silver Hill Horace Mann Charter (District)	Silver Hill Horace Mann Charter School	3
CA	82424	EDI6ZE	Torrance Unified	Edison Elementary	5
IA	238001	TUR40X	Turkey Valley Community School District	Turkey Valley Elementary School	4, 3
GA	220834	MOU2GD	WEST GEORGIA	MOUNTAIN VIEW ELEMENTARY SCHOOL	5
GA	220822	UNI2C3	WEST GEORGIA	UNITY ELEMENTARY SCHOOL	3
WI	1134599	EIS43U	Wauwatosa	Eisenhower Elementary	5
WI	1134654	MAD43U	Wauwatosa	Madison Elementary	3, 4, 5
IA	236041	LAM40L	West Delaware County Community School District	Lambert Elementary School	3
CA	83193	LYD6ZO	Whittier City Elementary	Lydia Jackson Elementary	3, 4
CA	83222	ORA6ZO	Whittier City Elementary	Orange Grove Elementary	4, 5

Table 16: Treatment Schools (TRT Dataset)

8.2 Control Schools

The following tables list the control schools and grades (matched control grades to treatment grades) used in the analysis.

State	PID	District	School Name	GRADE
TX	4015344	ABILENE ISD	THOMAS EL	5
CO	1825023	ADAMS 12 FIVE STAR SCHOOLS	CHERRY DRIVE ELEMENTARY SCHOOL	4
CA	65452	Abc Unified	Carver (Charles J.) Elementary	4
IA	235463	Adel DeSoto Minburn Community School District	DeSoto Intermediate School	3
VA	1083720	Alexandria City	Charles Barrett Elementary	3
CA	100739	Alvord Unified	Allan Orrenmaa Elementary	4
IA	251924	Ames Community School District	Fellows Elementary School	4
NH	662828	Amherst	Clark-Wilkins School	4
KY	1395975	Anderson County	Emma B. Ward Elementary School	4
CA	102892	Arcohe Union Elementary	Arcohe Elementary	5
IA	4448272	Atlantic Community School District	Schuler Elementary School	4
CA	4356576	Auburn Union Elementary	Auburn Elementary	5
NY	771625	BATH CENTRAL SCHOOL DISTRICT	DANA L LYON MIDDLE SCHOOL	5
IA	1485726	BCLUW Community School District	BCLUW Elementary School	3
IA	239940	BCLUW Community School District	BCLUW Middle School	5
PA	926571	BETHLEHEM AREA SD	MILLER HEIGHTS EL SC	4
CA	62175	Bakersfield City	Longfellow Elementary	3
CA	62216	Bakersfield City	Myra A. Noble Elementary	4
IA	252033	Ballard Community School District	Ballard East Elementary	3
VA, IA	1070448, 248915	Bath County , Valley Community School District	Valley Elementary	3, 4
CA	4745836	Belmont-Redwood Shores Elementary	Sandpiper Elementary	5
CA	67113	Bonita Unified	Gladstone Elementary	3
VA	4918370	Botetourt County	Greenfield Elementary	4
VA	1070797	Botetourt County	Troutville Elementary	5
MA	425230	Brimfield	Brimfield Elementary	4
CA	121525	Brisbane Elementary	Panorama Elementary	4
CA	66975	Burbank Unified	Joaquin Miller Elementary	4
IA	238312	CAL Community School District	CAL Elementary School	3
PA	4919257	CENTRAL BUCKS SD	GROVELAND ELEMENTARY SCHOOL	3
PA	910833	CONNELLSVILLE AREA SD	BULLSKIN EL SCH	3
AR	31176	COSSATOT RIVER SCHOOL DISTRICT	WICKES ELEMENTARY SCHOOL	3
PA	897657	COUNCIL ROCK SD	CHURCHVILLE EL SCH	4
PA	897724	COUNCIL ROCK SD	ROLLING HILLS EL SCH	5
PA	904573	CUMBERLAND VALLEY SD	SILVER SPRING EL SCH	5
UT	1062752	Cache District	Lincoln School	5
UT	3008128	Canyons District	Lone Peak School	4
IA	4843660	Carroll Community School District	Adams Elementary School	4
IA	230798	Cedar Falls Community School District	Orchard Hill Elementary School	5
IA	243082	Cedar Rapids Community School District	Erskine Elementary School	3
IA	233879	Cherokee Community School District	Cherokee Middle School	5
IL	275750	City of Chicago SD 299	Grissom Elem School	3
IL	275944	City of Chicago SD 299	Kellogg Elem School	5
IA	255918	Clarion-Goldfield-Dows Community School District	Clarion-Goldfield-Dows Elementary School	3
NV	4747248	Clark	Cartwright ES	4
NV	3401623	Clark	Kahre ES	5
NV	1544671	Clark	Long ES	5
NV	4872336	Clark	Neal ES	5
NV	3328851	Clark	Perkins (Ute) ES	3
NV	1399050	Clark	Smith (Helen) ES	4
IA	240808	Clear Creek Amana Community School District	Amana Elementary School	4
CA	2225517	Clovis Unified	Mountain View Elementary	3
CA	3399202	Colton Joint Unified	Jurupa Vista Elementary	5
WI	1120110	Columbus	Columbus Elementary	3
IA	249373	Council Bluffs Community School District	Edison Elementary School	5
CA	95380	Cypress Elementary	A. E. Arnold Elementary	5

Table 17: Matched Control Schools (CTRL Dataset)

State	PID	District	School Name	GRADE
PA	926260	DANVILLE AREA SD	LIBERTY-VALLEY EL SC	4
AR	36281	DANVILLE SCHOOL DISTRICT	S.C. TUCKER ELEMENTARY SCHOOL	4
CO	147359	DENVER COUNTY 1	SWANSEA ELEMENTARY SCHOOL	5
CA	90835	Delhi Unified	El Capitan Elementary	5
IA	247715	Des Moines Independent Community School District	Capitol View Elementary School	3
IA	248070	Des Moines Independent Community School District	Lovejoy Elementary School	3
IA	248202	Des Moines Independent Community School District	Moulton Elementary School	5, 4
IA	248331	Des Moines Independent Community School District	Stowe Elementary School	4
IA	248343	Des Moines Independent Community School District	Studebaker Elementary School	3
CA	3399525	Dixon Unified	Tremont Elementary	3
MA	429377	Dracut	Brookside Elementary	5
UT	1065845	Duchesne District	East School	3
PA	918380	EAST PENN SD	JEFFERSON EL SCH	3
PA	918445	EAST PENN SD	SHOEMAKER EL SCH	3
NY	719275	ELMIRA CITY SCHOOL DISTRICT	HENDY AVENUE SCHOOL	4
IA	250334	East Sac County Community School District	East Sac County Elementary Wall Lake	4
CA	68777	East Whittier City Elementary	Orchard Dale Elementary	3
NV	712813	Elko	Carlin Elementary School	5
GA	3327235	FIRST DISTRICT	SCREVEN COUNTY ELEMENTARY SCHOOL	4
MA	416502	Falmouth	East Falmouth Elementary	4
KY	383462	Fayette County	Sandersville Elementary	3
CA	4937895	Folsom-Cordova Unified	Mather Heights Elementary	3
CA	107725	Fontana Unified	Juniper Elementary	5
IL	320771	Freeport SD 145	Center Elem School	4
CA	57443	Fresno Unified	Ericson Elementary	5
CO	150447	GARFIELD RE-2	RIVERSIDE SCHOOL	5
PA	10900818	GREAT VALLEY SD	SUGARTOWN ELEM SCHOOL	4
NM	4871734	Gallup-Mckinley Cty Schools	Tobe Turpen Elementary School	5
CA	96669	Garden Grove Unified	Sunnyside Elementary	4
MA	427501	Gateway	Littleville Elementary School	4
IA	238908	Gladbrook-Reinbeck Community School District	Gladbrook-Reinbeck Elementary School	5
AZ	2107238	Glendale Elementary District	Horizon School	5
CA	52455	Golden Feather Union Elementary	Concow Elementary	4
CA	62955	Greenfield Union	Plantation Elementary	5
NH	664840	Greenland	Greenland Central School	3
PA	907214	HAVERFORD TOWNSHIP SD	LYNNEWOOD EL SCH	3
GA	3329075	HEART OF GEORGIA	SOUTH DODGE ELEMENTARY SCHOOL	5
PA	940565	HEMPFIELD AREA SD	WEST POINT EL SCH	3, 4
CA	64472	Hanford Elementary	Joseph M. Simas	4
IA	252875	Harmony Community School District	Harmony Elementary School	5
CA	1169233	Hayward Unified	Treeview Elementary	5
VA	1076337	Henrico County	Seven Pines Elementary	4
CA	2110493	Hesperia Unified	Kingston Elementary	3
IL	290097	Hinsdale CCSD 181	The Lane Elem School	3
CO	152938	IGNACIO 11 JT	IGNACIO ELEMENTARY SCHOOL	3
CO	151386	JEFFERSON COUNTY R-1	DEANE ELEMENTARY SCHOOL	3
TX	11452280	JUDSON ISD	JAMES L MASTERS	3
CA	65127	Janesville Union Elementary	Janesville Elementary	5
PA	920527	LAKE-LEHMAN SD	LEHMAN-JACKSON EL SC	4
FL	194352	LEE	PINE ISLAND ELEMENTARY SCHOOL	5
CA	111568	La Mesa-Spring Valley	Fletcher Hills Elementary	5
CA	111647	La Mesa-Spring Valley	Lemon Avenue Elementary	4, 3
CA	111673	La Mesa-Spring Valley	Northmont Elementary	3
CA	4030825	Lake Elsinore Unified	Tuscany Hills Elementary	4
IA	254328	Lake Mills Community School District	Lake Mills Elementary School	3
NM	1171925	Las Cruces Public Schools	Booker T. Washington Elementary School	5
IA	254653	Lawton-Bronson Community School District	Bronson Elementary School	3
VA	1077707	Lee County	St. Charles Elementary	3
CA	1170074	Lodi Unified	George Washington Elementary	4, 5
CA	1170012	Lodi Unified	Victor Elementary	5

Table 18: Matched Control Schools (CTRL Dataset)

State	PID	District	School Name	GRADE
CA	1170270	Lodi Unified	Vinewood Elementary	4
CA	78136	Los Angeles Unified	Capistrano Avenue Elementary	3
CA	72651	Los Angeles Unified	Denker Avenue Elementary	5
CA	73332	Los Angeles Unified	Loma Vista Elementary	3
CA	76487	Los Angeles Unified	San Pascual Elementary Science Technology Engineer	4
CA	78497	Los Angeles Unified	Serrania Avenue Charter For Enriched Studies	4
VA	2110778	Loudoun County	Leesburg Elementary	3
VA	2896104	Louisa County	Trevilians Elementary	3
MA	425577	Ludlow	Chapin Street Elementary School	3
TX	1002245	MARATHON ISD	MARATHON INDEPE	3
GA	216417	METRO	CAMPBELL ELEMENTARY SCHOOL	5
GA	1528952	METRO	CEDAR GROVE ELEMENTARY SCHOOL	3
GA	5273159	METRO	KIPP SOUTH FULTON ACADEMY SCHOOL	5
GA	212291	METRO	ROCK CHAPEL ELEMENTARY SCHOOL	3
MO	554946	MEXICO 59	HAWTHORNE ELEM.	3
IA	231467	Madrid Community School District	Madrid Elementary School	4
CA	10002595	Manteca Unified	Veritas Elementary	4
CA	52558	Manzanita Elementary	Manzanita Elementary	3
KY	393285	Marshall County	Benton Elementary School	3
MA	431564	Melrose	Lincoln	3
CA	122294	Menlo Park City Elementary	Encinal Elementary	4
CA	135540	Modesto City Elementary	John Fremont Elementary	4
CA	3004330	Mother Lode Union Elementary	Indian Creek Elementary	4
IA	240250	Mount Pleasant Community School District	Van Allen Elementary School	4
IA	246008	Muscatine Community School District	Jefferson Elementary School	3
NY	749971	NEW YORK CITY GEOGRAPHIC DISTRICT #31	STEPHANIE A VIERNO SCHOOL (THE)	5
PA	924781	NORTH PENN SD	KNAPP EL SCH	5
GA	218570	NORTHWEST GEORGIA	BUCHANAN ELEMENTARY SCHOOL	3
UT	1876955	Nebo District	Barnett School	3
KY	394447	Nelson County	The New Haven School	3
WI	1147429	New Berlin	Poplar Creek Elementary	5
IL	271778	Niles ESD 71	Clarence E Culver School	5
MA	4282183	North Middlesex	Spaulding Memorial	3
MA	1171195	Northampton	Jackson Street	3
CA	2896142	Norwalk-La Mirada Unified	Cesar Chavez Elementary	3
CA	79831	Norwalk-La Mirada Unified	La Pluma Elementary	5
NV	3006352	Nye	Johnson ES	3
TX	1007752	OGLESBY ISD	OGLESBY SCHOOL	4
WI	1137814	Oconto Falls Public	Abrams Elementary	4
IA	11931652	Ottumwa Community School District	Liberty Elementary School	3
MO	579362	PARKWAY C-2	RIVER BEND ELEM.	5
PA	916590	PENN MANOR SD	LETORT EL SCH	3
PA	898089	PENNRIDGE SD	DEIBLER SCHOOL	3
PA	898156	PENNRIDGE SD	SELLERSVILLE SCHOOL	4
PA	901703	PHOENIXVILLE AREA SD	SCHUYLKILL EL SCH	5
NY	738166	PORT WASHINGTON UNION FREE SCHOOL DISTRICT	GUGGENHEIM ELEMENTARY SCHOOL	3
CA	52766	Paradise Unified	Ponderosa Elementary	5
CA	80969	Pomona Unified	Armstrong Elementary	5
PA	10005080	QUAKERTOWN COMMUNITY SD	LOUIS F PFAFF ELEM SCHOOL	4
AR	11918791	RESPONSIVE ED SOLUTIONS NW ARK CLASSICAL ACADEMY	NORTHWEST ARKANSAS CLASSICAL ACA	5
PA	893273	RIVERSIDE BEAVER COUNTY SD	RIVERSIDE EL SCH	3
CA	4754253	Redlands Unified	Cram Elementary	4
CA	10001498	Redlands Unified	Highland Grove Elementary	3
CA	4752279	Redwood City Elementary	Adelante Spanish Immersion	4
CA	122579	Redwood City Elementary	Clifford Elementary	3
CA	122610	Redwood City Elementary	Henry Ford Elementary	5, 4
CA	2879156	Ripon Unified	Weston Elementary	4
CA	135916	Riverbank Unified	California Avenue Elementary	5
VA	1080895	Roanoke County	Oak Grove Elementary	4
CA	4873304	Rocklin Unified	Twin Oaks Elementary	4

Table 19: Matched Control Schools (CTRL Dataset)

State	PID	District	School Name	GRADE
IL	301880	Round Lake CUSD 116	Indian Hill Elem School	5
VA	1081409	Russell County	Belfast Elk Garden Elementary	4, 5
PA	917386	SHENANGO AREA SD	SHENANGO EL SCH	3
PA	11917539	SOUTH FAYETTE TOWNSHIP SD	SOUTH FAYETTE INTERMEDIATE SCH	4
GA	217576	SOUTHWEST GEORGIA	SHIVER ELEMENTARY SCHOOL	4
MO	555275	SOUTHWEST R-V	SOUTHWEST ELEM.	4
CO	145569	ST VRAIN VALLEY RE 1J	NORTHRIDGE ELEMENTARY SCHOOL	4
CA	104761	Sacramento City Unified	Mark Twain Elementary	4
CA	117263	San Francisco Unified	King (Thomas Starr) Elementary	3
CA	117407	San Francisco Unified	San Francisco Community Alternative	3
CA	128236	San Jose Unified	Graystone Elementary	3
CA	139003	San Jose Unified	River Glen	5
NM	709919	Santa Fe Public Schools	Kearny Elementary School	3
CA	123755	Santa Maria-Bonita	Bonita Elementary	5
CA	99001	Savanna Elementary	Hansen Elementary	4
MA	419669	Seekonk	George R Martin	3
IL	310726	Sherrard CUSD 200	Matherville Intermediate School	5
IA	254885	Sioux City Community School District	Hunt Elementary School	4
IA	254902	Sioux City Community School District	Spalding Park Elementary	4
VA	1082295	Stafford County	Ferry Farm Elementary	4
VA	2126258	Stafford County	Garrisonville Elementary	5
VA	1088770	Staunton City	Arthur R. Ware Elementary	3
WI	1121970	Sun Prairie Area	Northside Elementary	5
CA	136099	Sylvan Union Elementary	Sherwood Elementary	5
VA	1082740	Tazewell County	Tazewell Elementary	5
IA	248733	Urbandale Community School District	Jensen Elementary School	4
CA	10002600	Val Verde Unified	Avalon Elementary	4
CA	5279830	Val Verde Unified	Sierra Vista Elementary	5
CA	3006596	Valley Center-Pauma Unified	Valley Center Elementary	3
VA	1882124	Virginia Beach City	Indian Lakes Elementary	4
VA	3012313	Virginia Beach City	Rosemont Forest Elementary	3
VA	1528536	Virginia Beach City	Salem Elementary	4
NV	713697	WCSD	Peavine ES	4
NV	713829	WCSD	Stead ES	4
NV	4285836	WCSD	Winnemucca ES	3
MO	564666	WEAUBLEAU R-III	WEAUBLEAU ELEM.	3
PA	901911	WEST CHESTER AREA SD	EAST GOSHEN EL SCH	3
MA	433172	Waltham	Douglas MacArthur Elementary School	3
CA	5098818	Washington Unified	Bridgeway Island Elementary	3
IA	231168	Waterloo Community School District	Kittrell Elementary School	5
IA	231170	Waterloo Community School District	Lincoln Elementary School	5
IA	231156	Waterloo Community School District	Lou Henry Elementary School	4
IA	231895	Waverly-Shell Rock Community School District	Waverly-Shell Rock Middle School	5
IA	253855	Wayne Community School District	Wayne Elementary School	5
UT	2222838	Weber District	Midland School	4
IA	239110	West Central Valley Community School District	Stuart Elementary School	3
IA	244268	West Lyon Community School District	West Lyon Elementary School	5
IA	240975	Williamsburg Community School District	Mary Welsh Elementary	3
IA	246163	Wilton Community School District	Wilton Elementary School	4
MA	434085	Woburn	Linscott-Rumford	3
NJ	690643	Woodbridge Twp	Port Reading School	3
CA	1530840	Woodland Joint Unified	Zamora Elementary	5
VA	1083586	York County	Dare Elementary	3

Table 20: Matched Control Schools (CTRL Dataset)