

Iowa Math Outcomes Analysis 2013/14

Grade Levels: 3, 4, 5
ST Math Program: Gen-4
Analysis Type: One-Year
Treatment-Year: 2013/14
Baseline-Year: 2012/13

Sepehr Akhavan
MIND Research Institute
2014-12-01

Abstract

This analysis covers all grades using ST Math in Iowa in 2013/14 for the first time. 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 16 grades 3, 4, and 5 at 6 schools. They were matched to 32 similar, randomly selected control grades at 31 schools never using ST Math. Grade-wise growth in math proficiency was evaluated (i.e. growth in same grade, same school, from 2012/13 to 2013/14) on the NSS proficiency levels and scale scores. Grades 3, 4, and 5 aggregated showed a significant 6.3 points of growth in NSS Level 2 or above for ST Math users, compared to 1.1 points for comparison grades.

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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 1-year changes in grade-mean NSS Level 2 or above percentages. The treatment grades used the ST Math program for 1 year, beginning in the 2013/14 school year. The control grades were selected to have similar math attributes to the treatment grades during the baseline year (2012/13), and did not use ST Math in 2013/14. The treatment grades' selection pool was all schools using ST Math in grades 3, 4, and 5 in Iowa. The control grades' pool was all schools not using ST Math in grades 3, 4, and 5 in Iowa.

1.2 Program Description

The ST Math program is a supplemental math program covering grade-level Iowa math standards. The ST Math content consists of visual representations of math standards, concepts, and procedures, presented to students as "Puzzles" of virtual manipulatives, with which they interact to pose solutions. Each time the student poses a solution, the computer visually animates the Puzzle, diagram, or symbols to show why the posed solution correctly solves, or why it does not solve, the math problem (puzzle). The Puzzles are arranged into sequential groups, called "Levels". To proceed to the next Level in sequence, the student needs to master his/her current Level. Mastering a Level requires solving 100% of the math problems, or Puzzles correctly. In this way, the program is self-paced. Students must correctly solve approximately 4-12 Puzzles, with only 1 failure and retry allowed, to proceed. Levels are sequenced together into Games and, again, the student must master each Game to get to the next Game in sequence. Games are sequenced into "Learning Objectives" (e.g. 'Fractions Concepts'). The ST Math curriculum of approximately 20-25 Learning Objectives can be rearranged in a year-long, grade-level syllabus to match district math pacing through the school year.

The Puzzles typically start with concrete representations of the math, without abstract symbols, math vocabulary, or even English words. Gradually, through subsequent Levels or Games, abstractions are introduced. For example, a Puzzle might start with "n" green blocks on the screen, and then at a subsequent Level may represent the quantity with the numeral for "n" (no green blocks anymore). In this way, three things 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.

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.

To achieve nominal progress through the program, there is a time-on-task requirement. MIND Research Institute has found that application of adequate time-on-task is generally sufficient to get virtually all students to make sufficient progress through the program. Students are recommended to use the program in school for at least two 45-minute sessions per week, or 90 minutes per week, over about 35 weeks. Analyses of ST Math usage have shown that consistently following this schedule throughout the school year is usually sufficient to achieve 50% or more Progress through

ST Math content. Progress is a percentage of ST Math content coverage, and is defined as Levels completed by the student, divided by the total number of Levels in the curriculum. In addition, MIND’s historical analyses have shown that it is necessary to complete at least 50% of the program in order to expect significantly higher performance compared to non-users.

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). When school-level demographic data is also readily available from the state website, it is also collected. 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 Proficiency Levels Definition

The following (Table 1) are Iowa’s proficiency level descriptions:

| Proficiency Level | State Proficiency Level Name |
|-------------------|------------------------------|
| L1 | Level 1 |
| L2 | Level 2 |
| L3 | Level 3 |

Table 1: Proficiency Level Naming

2.2 Treatment Grades Pool and Selection

The Treatment grades pool originated with all schools and grades using ST Math in Iowa. From these schools, every grade that had used the ST Math program only for the year 2013/14 was identified. They comprise the Treatment grades pool for this evaluation of 1 year usage.

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 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 Iowa’s 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%.

Furthermore, the outcomes measure is a summative year-end test, i.e. Iowa’s standardized math assessment (NSS). 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 Iowa 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 50% by year-end.

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 50% 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.

2.3 Control Grades Pool and Selection

The control grades are randomly selected from a control pool of schools in Iowa. Though they are randomly selected, they are also matched to be similar to the Treatment grades' math attributes during the baseline 2012/13 year. The matched math attributes include scale score and student percentages at each math proficiency level.

In order to mitigate the risk of randomly picking an outlier set of Control grades, 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.

Dozens, or up to hundreds, of randomly matched picks are made and sets of matched control grades are generated. For each set, 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.

3 Data Analysis

The set of all schools and grades using ST Math in Iowa is evaluated for Enrollment percentage and Progress percentage parameters. A filtered Treatment set (TRT) of all ST Math grades with $\geq 85\%$ Enrollment and $\geq 50\%$ 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, after all this analysis has been performed on a grade-aggregated basis, a grade-by-grade disaggregation is performed.

3.1 Final Treatment and Control

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

ST Math Percent Grade Mean Progress Distribution – 2013/14

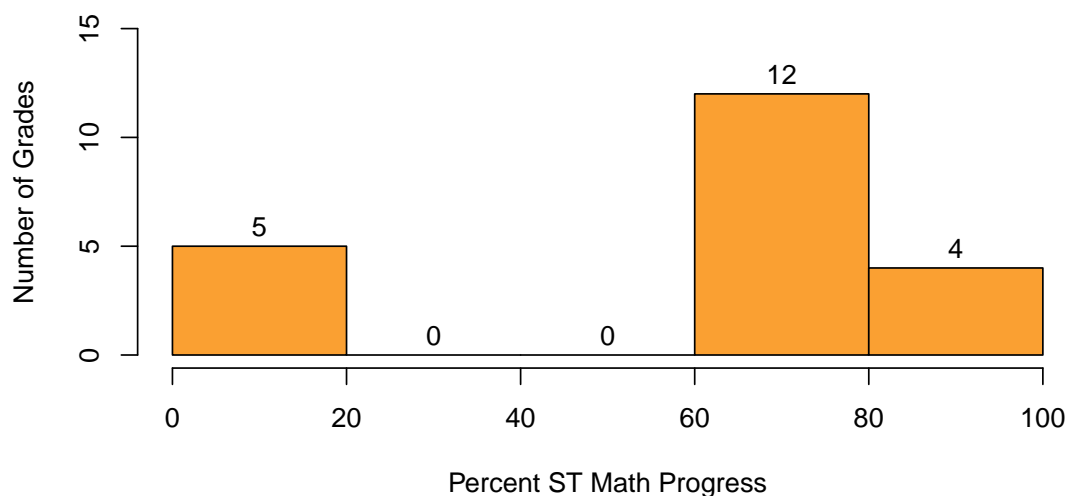


Figure 1: Histogram of ST Math Percent Progress for $\geq 85\%$ Enrollment Grades 2013/14

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 $\geq 50\%$ Progress as the Treatment Group.

Table 2 provides some descriptive statistics of the Progress distribution. Table 3 shows the number of remaining treatment grades after applying enrollment and progress filters.

| | Min. | Max. | Average | S.D. |
|--------------------|------|------|---------|------|
| ST Math % Progress | 2.6 | 93.2 | 58.1 | 32.0 |

Table 2: Descriptive Statistics of ST Math Percent Progress for $\geq 85\%$ Enrollment Grades

| | |
|---|----|
| Grades with $\geq 85\%$ Enrollment: | 16 |
| Grades with in addition $\geq 50\%$ Progress: | 16 |

Table 3: Number of ST Math Grades with $\geq 85\%$ Enrollment and with $\geq 50\%$ percent progress

3.1.2 Filtering Treatment and Controls

Table 4 shows the total number of grades in the Treatment pool, the number of grades that exceeded the 85% Enrollment figure, and also the 50% Progress filter. Other rows in the table indicate counts of numbers of students (2013/14 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 | 6 | 9 | 6 | 21 |
| ST Math Using Schools | 6 | 9 | 6 | 10 |
| ST Math Students | 340 | 438 | 325 | 1103 |
| ST Math Grades (Enroll \geq 85%) | 6 | 5 | 5 | 16 |
| TRT Grades (Enroll \geq 85% & Prog \geq 50%) | 6 | 5 | 5 | 16 |
| TRT Schools (Enroll \geq 85% & Prog \geq 50%) | 6 | 5 | 5 | 6 |
| TRT Students (Enroll \geq 85% & Prog \geq 50%) | 340 | 242 | 282 | 864 |
| CTRL Grades | 12 | 10 | 10 | 32 |
| CTRL Schools | 12 | 10 | 10 | 31 |
| CTRL Students | 453 | 369 | 564 | 1386 |

Table 4: Treatment Pool Filtering and Controls: Counts of Grades, Schools, and Students

3.1.3 Match of Controls to Treatment

Figure 2 shows the density plot of the baseline NSS Math scale scores (left plot) and baseline percent students at NSS Level 2 or above (right plot) for treatment grades overlaid on control grades, showing the closeness of the match obtained between Treatment and Control sets of grades in the baseline year, 2012/13.

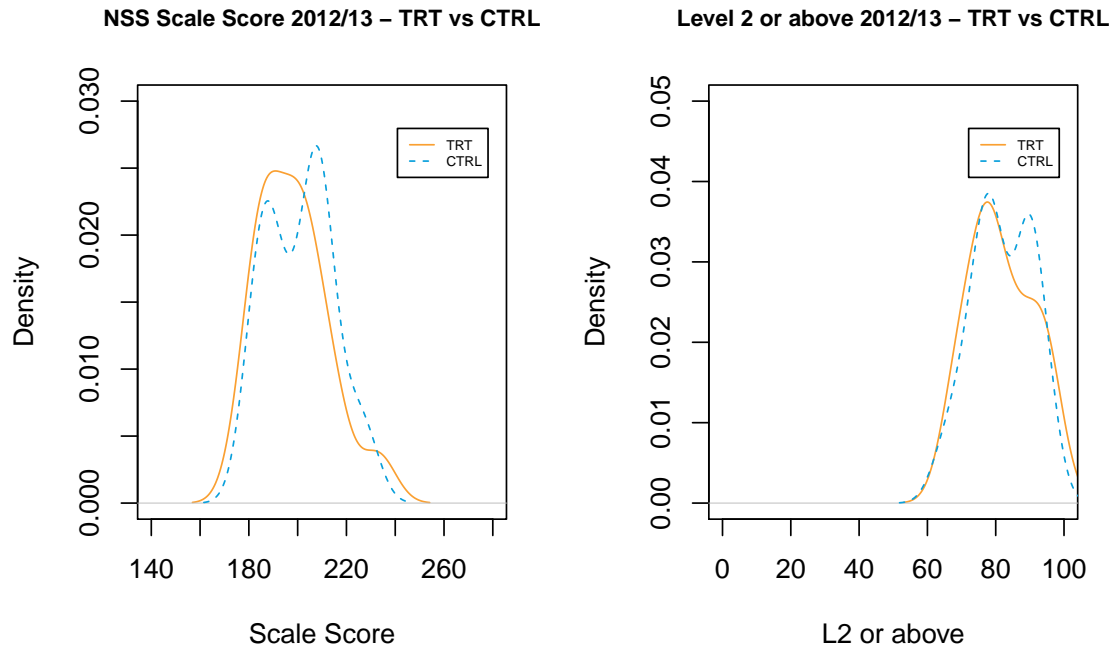


Figure 2: Baseline Year Density Plot Showing Match between TRT and CTRL - 2012/13

3.2 Grade-Aggregated Analysis

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

| | # Grades | # Schools | # Students | Scale Score | L1 | L2 | L3 | L2_or_above | ST Math Per Prog. |
|------------|----------|-----------|------------|-------------|-------|-------|-------|-------------|-------------------|
| TRT.12.13 | 16 | 6 | 914 | 198.1 | 18.36 | 55.47 | 26.17 | 81.64 | - |
| TRT.13.14 | - | - | 864 | 203.7 | 12.09 | 49.99 | 37.92 | 87.91 | 75 |
| TRT.Delta | - | - | - | 5.6 | -6.27 | -5.47 | 11.74 | 6.27 | - |
| CTRL.12.13 | 32 | 31 | 1397 | 201.1 | 18.09 | 58.68 | 23.23 | 81.91 | - |
| CTRL.13.14 | - | - | 1386 | 202.3 | 17.00 | 56.47 | 26.53 | 83.00 | - |
| CTRL.Delta | - | - | - | 1.2 | -1.09 | -2.21 | 3.29 | 1.09 | - |

Table 5: Yearly Math Proficiency and Counts for TRT and CTRL Grade-Aggregated Datasets

The following chart (Figure 3) shows the changes in percentage of students at each math proficiency level for the grade-aggregated Treatment and Control sets (TRT.delta and CTRL.delta).

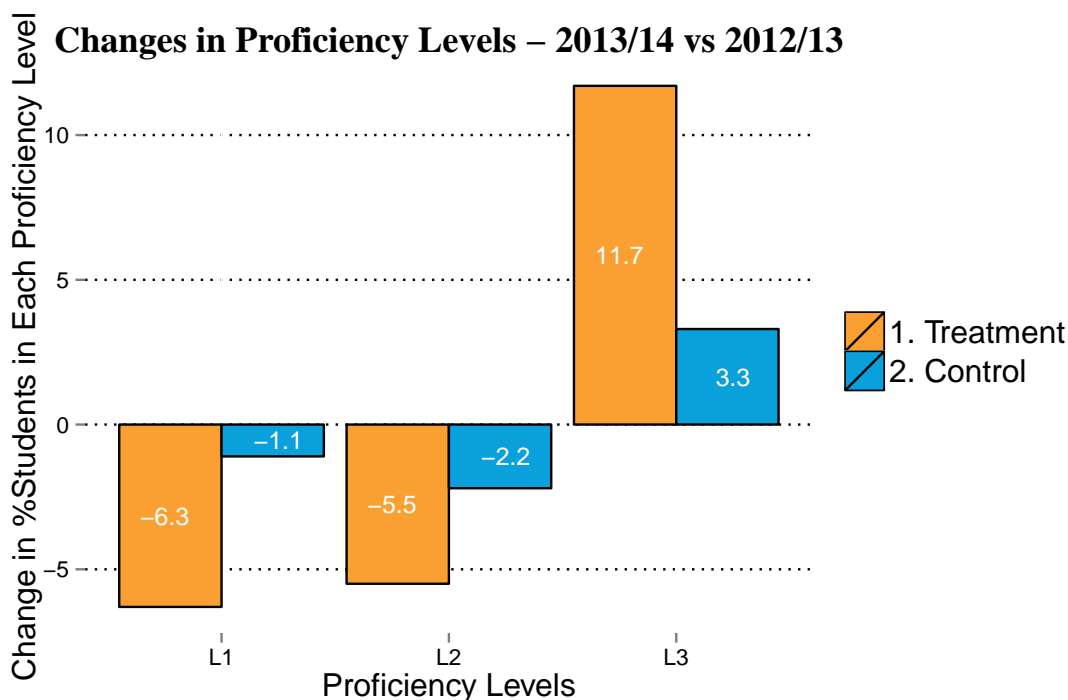


Figure 3: Change between 2012/13 and 2013/14 at each Proficiency Level for Grade-Aggregated TRT and CTRL Datasets

Similarly, Figure 4 shows the changes in NSS Math Scale Scores and changes in percent of students at NSS Level 2 or above for the grade-aggregated Treatment and Control sets.

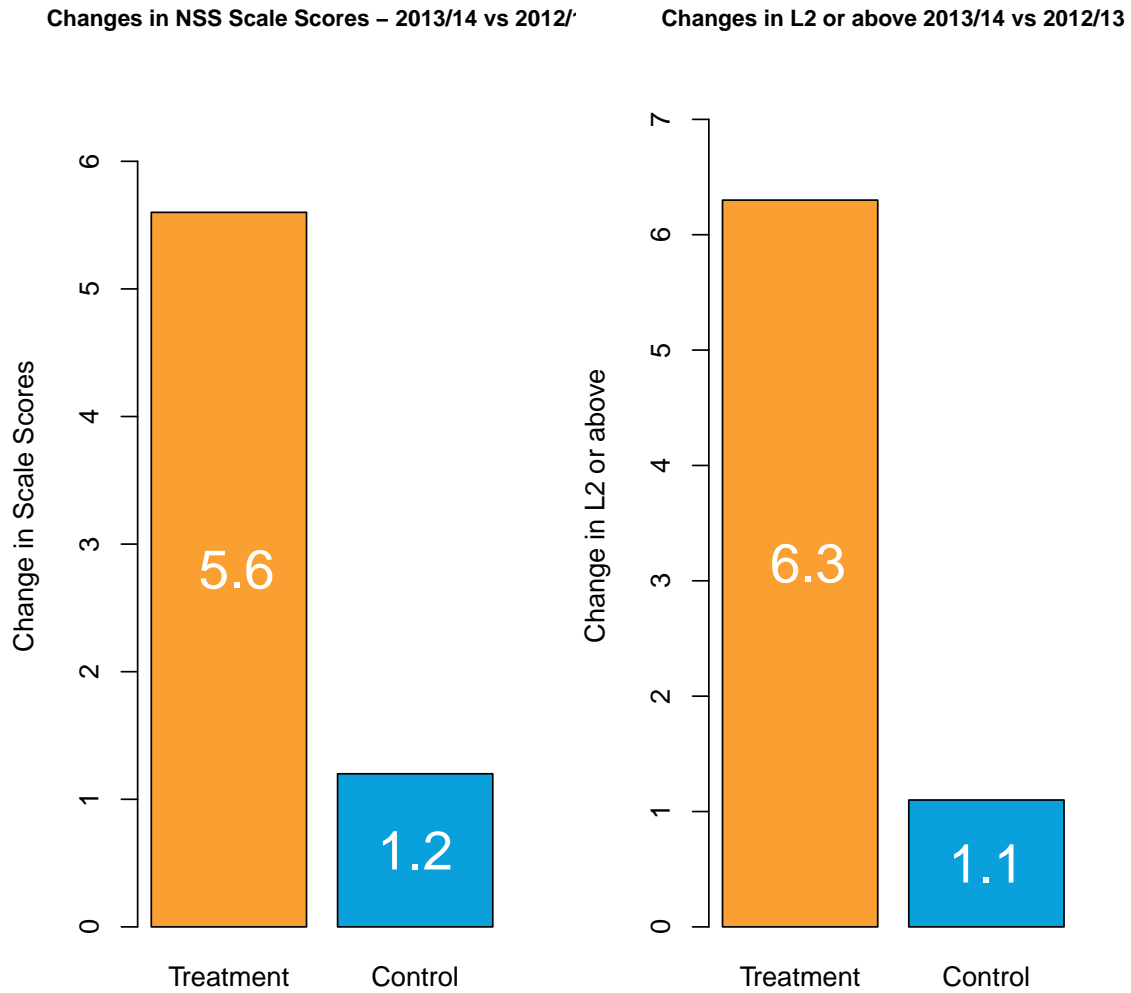


Figure 4: Changes in NSS Math Scale Scores and Level 2 or above for Grade-Aggregated TRT and CTRL datasets between 2012/13 and 2013/14

Finally, Table 6 shows the statistics for the *differences* in changes between TRT and CTRL (Treatment - Control) for these same NSS math proficiency and scale score changes as in the above figures.

| | Estimate | P-Value | Int.Low | Int.High |
|-------------|----------|---------|---------|----------|
| L2_or_above | 5.18 | 0.04 | 0.13 | 10.23 |
| Scale Score | 4.39 | 0.01 | 1.11 | 7.68 |
| L1 | -5.18 | 0.04 | -10.23 | -0.13 |
| L2 | -3.27 | 0.36 | -10.46 | 3.92 |
| L3 | 8.45 | 0.03 | 0.99 | 15.91 |

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

3.3 Grade-Level Analysis

3.3.1 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 | Scale Score | L1 | L2 | L3 | L2_or_above | ST Math Per Prog. |
|------------|----------|-----------|------------|-------------|--------|-------|-------|-------------|-------------------|
| TRT.12.13 | 6 | 6 | 321 | 185.8 | 15.99 | 53.27 | 30.74 | 84.01 | - |
| TRT.13.14 | - | - | 340 | 192.7 | 5.98 | 46.32 | 47.70 | 94.02 | 71.52 |
| TRT.Delta | - | - | - | 7.0 | -10.02 | -6.95 | 16.97 | 10.02 | - |
| CTRL.12.13 | 12 | 12 | 465 | 186.8 | 15.99 | 63.54 | 20.47 | 84.01 | - |
| CTRL.13.14 | - | - | 453 | 187.8 | 14.21 | 61.89 | 23.90 | 85.79 | - |
| CTRL.Delta | - | - | - | 1.0 | -1.78 | -1.65 | 3.43 | 1.78 | - |

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

| | # Grades | # Schools | # Students | Scale Score | L1 | L2 | L3 | L2_or_above | ST Math Per Prog. |
|------------|----------|-----------|------------|-------------|-------|-------|-------|-------------|-------------------|
| TRT.12.13 | 5 | 5 | 292 | 200.4 | 17.35 | 57.21 | 25.44 | 82.65 | - |
| TRT.13.14 | - | - | 242 | 203.6 | 13.78 | 53.49 | 32.73 | 86.22 | 75.23 |
| TRT.Delta | - | - | - | 3.2 | -3.58 | -3.72 | 7.30 | 3.58 | - |
| CTRL.12.13 | 10 | 10 | 386 | 203.9 | 15.64 | 58.63 | 25.73 | 84.36 | - |
| CTRL.13.14 | - | - | 369 | 204.0 | 14.93 | 56.81 | 28.26 | 85.07 | - |
| CTRL.Delta | - | - | - | 0.1 | -0.71 | -1.82 | 2.52 | 0.71 | - |

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

| | # Grades | # Schools | # Students | Scale Score | L1 | L2 | L3 | L2_or_above | ST Math Per Prog. |
|------------|----------|-----------|------------|-------------|-------|-------|-------|-------------|-------------------|
| TRT.12.13 | 5 | 5 | 301 | 210.7 | 22.21 | 56.37 | 21.43 | 77.79 | - |
| TRT.13.14 | - | - | 282 | 217.1 | 17.75 | 50.90 | 31.35 | 82.25 | 78.94 |
| TRT.Delta | - | - | - | 6.4 | -4.46 | -5.46 | 9.92 | 4.46 | - |
| CTRL.12.13 | 10 | 10 | 546 | 215.3 | 23.06 | 52.89 | 24.05 | 76.94 | - |
| CTRL.13.14 | - | - | 564 | 217.9 | 22.42 | 49.63 | 27.95 | 77.58 | - |
| CTRL.Delta | - | - | - | 2.6 | -0.64 | -3.26 | 3.90 | 0.64 | - |

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

3.3.2 Grade-Level Analysis of Changes in NSS Math Level 2 or above

Figure 5 shows the difference in the growth of percentages of students at NSS math Level 2 or above, for the TRT and CTRL datasets, disaggregated by grade:

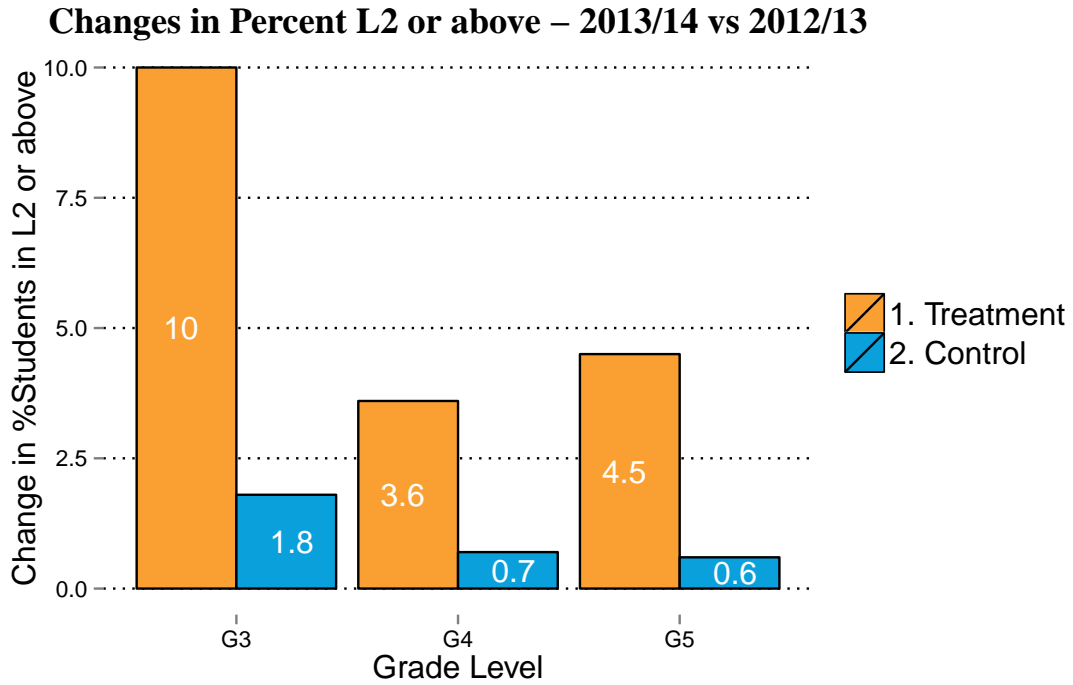


Figure 5: Changes in Percent of Students at NSS L2 or above for TRT and CTRL Datasets between 2012/13 and 2013/14

Table 10 shows the statistics for the *differences* in changes between TRT and CTRL (Treatment - Control) for these same NSS Level 2 or above math proficiency changes as shown in Figure 5.

| | Estimate | P-Value | Int.Low | Int.High |
|---------|----------|---------|---------|----------|
| Grade 3 | 8.23 | 0.09 | -1.41 | 17.87 |
| Grade 4 | 2.87 | 0.58 | -8.13 | 13.88 |
| Grade 5 | 3.82 | 0.26 | -3.18 | 10.83 |

Table 10: Statistics for the Differential Changes in NSS L2 or above , TRT - CTRL

3.3.3 Grade-Level Analysis of Changes in NSS Math Scale Scores

Figure 6 shows the changes in the grade-mean math scale scores of students for the TRT and CTRL datasets, disaggregated by grade:

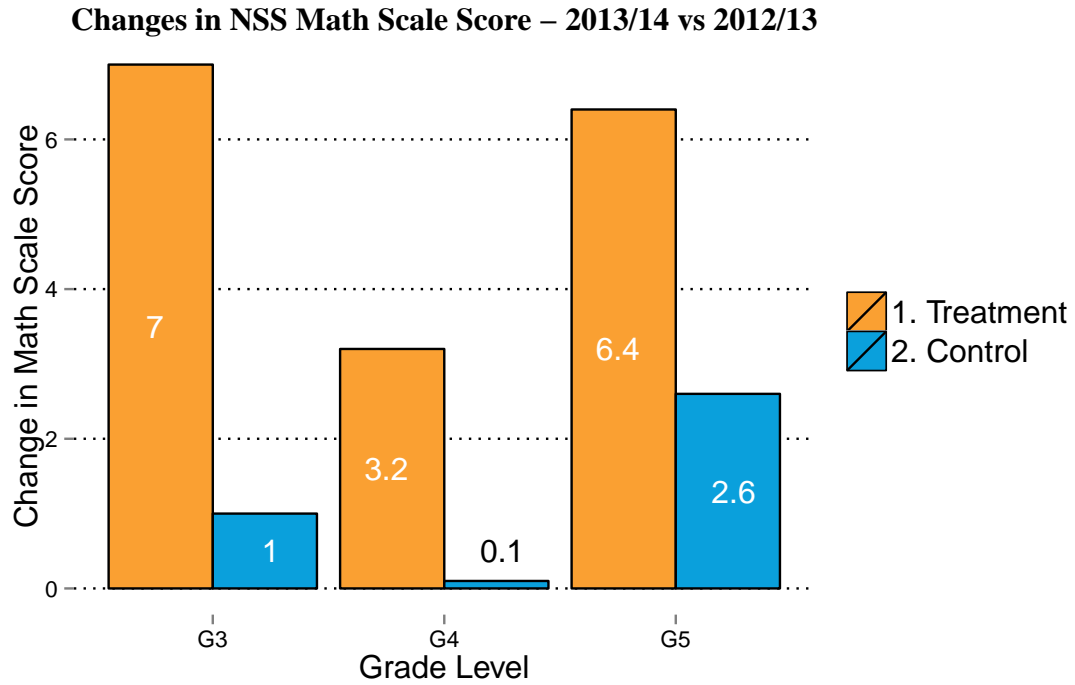


Figure 6: Changes in Grade-Mean NSS Math Scale Score for TRT and CTRL Datasets between 2012/13 and 2013/14

Table 11 shows the statistics for the differences between TRT and CTRL (Treatment - Control) for these same NSS math scale score changes as shown in Figure 6.

| | Estimate | P-Value | Int.Low | Int.High |
|---------|----------|---------|---------|----------|
| Grade 3 | 5.99 | 0.03 | 0.49 | 11.49 |
| Grade 4 | 3.06 | 0.40 | -4.61 | 10.72 |
| Grade 5 | 3.82 | 0.12 | -1.12 | 8.75 |

Table 11: Statistics for the Differential Changes in NSS Math Scale Scores Growth, TRT - CTRL

4 Findings Summary

Iowa grades 3, 4, and 5 using ST Math for the first year in 2013/14 averaged 58.1% ST Math Progress. 16/21 grades (76%) averaged covering more than 50% of ST Math content (see Table 4). These ST Math grades (aggregated) increased their math scores more than similar comparison grades did at NSS Level 2 or above by 5.2 points, and also decreased at NSS Level 1 by 5.2 points. The ST Math grades also increased their scale scores 4.4 points more than similar comparison grades (see Figures 3 & 4 and Tables 5 & 6). Evaluation of disaggregated, individual grade-levels, with “n” ranging from 5 to 6 (see Tables 7, 8 and 9) showed that only ST Math grade 3 showed statistically significant, higher growth than comparison grade 3’s of almost 6 points in NSS scale score (see Figure 5 and Figure 6 and Table 11).

5 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 | Scale Score | L1 | L2 | L3 | L2_or_above | ST Math Per Prog. |
|--------------------|----------|-----------|------------|-------------|-------|-------|-------|-------------|-------------------|
| Grade 3 (12.13) | 6 | 6 | 321 | 185.8 | 15.99 | 53.27 | 30.74 | 84.01 | - |
| Grade 4 (12.13) | 5 | 5 | 292 | 200.4 | 17.35 | 57.21 | 25.44 | 82.65 | - |
| Grade 5 (12.13) | 5 | 5 | 301 | 210.7 | 22.21 | 56.37 | 21.43 | 77.79 | - |
| All Grades (12.13) | 16 | 6 | 914 | 198.1 | 18.36 | 55.47 | 26.17 | 81.64 | - |
| Grade 3 (13.14) | 6 | 6 | 340 | 192.7 | 5.98 | 46.32 | 47.70 | 94.02 | 71.52 |
| Grade 4 (13.14) | 5 | 5 | 242 | 203.6 | 13.78 | 53.49 | 32.73 | 86.22 | 75.23 |
| Grade 5 (13.14) | 5 | 5 | 282 | 217.1 | 17.75 | 50.90 | 31.35 | 82.25 | 78.94 |
| All Grades (13.14) | 16 | 6 | 864 | 203.7 | 12.09 | 49.99 | 37.92 | 87.91 | 75 |

Table 12: TRT Grades Detail Sorted by Year

| | # Grades | # Schools | # Students | Scale Score | L1 | L2 | L3 | L2_or_above | ST Math Per Prog. |
|--------------------|----------|-----------|------------|-------------|-------|-------|-------|-------------|-------------------|
| Grade 3 (12.13) | 12 | 12 | 465 | 186.8 | 15.99 | 63.54 | 20.47 | 84.01 | - |
| Grade 4 (12.13) | 10 | 10 | 386 | 203.9 | 15.64 | 58.63 | 25.73 | 84.36 | - |
| Grade 5 (12.13) | 10 | 10 | 546 | 215.3 | 23.06 | 52.89 | 24.05 | 76.94 | - |
| All Grades (12.13) | 32 | 31 | 1397 | 201.1 | 18.09 | 58.68 | 23.23 | 81.91 | - |
| Grade 3 (13.14) | 12 | 12 | 453 | 187.8 | 14.21 | 61.89 | 23.90 | 85.79 | - |
| Grade 4 (13.14) | 10 | 10 | 369 | 204.0 | 14.93 | 56.81 | 28.26 | 85.07 | - |
| Grade 5 (13.14) | 10 | 10 | 564 | 217.9 | 22.42 | 49.63 | 27.95 | 77.58 | - |
| All Grades (13.14) | 32 | 31 | 1386 | 202.3 | 17.00 | 56.47 | 26.53 | 83.00 | - |

Table 13: CTRL Grades Detail Sorted by Year

6 Lists of Schools

6.1 Treatment Schools

Table 14 shows the list of treatment schools and grades (after 85% enrollment and 50% progress filtering) used in the analysis.

| | District | School Name | GRADE |
|---|---------------------------------|--------------------------------------|---------|
| 1 | BELLEVUE COMM SCHOOL DISTRICT | Bellevue Elementary School | 3, 4, 5 |
| 2 | CLINTON COMM SCHOOL DISTRICT | Bluff Elementary School | 3, 4, 5 |
| 3 | CLINTON COMM SCHOOL DISTRICT | Eagle Heights Elementary School | 3, 4, 5 |
| 4 | BETTENDORF COMM SCHOOL DISTRICT | Herbert Hoover Elementary School | 3 |
| 5 | CLINTON COMM SCHOOL DISTRICT | Jefferson Elementary School | 3, 4, 5 |
| 6 | CLINTON COMM SCHOOL DISTRICT | Whittier Elementary School - Clinton | 3, 4, 5 |

Table 14: Treatment Schools (TRT Dataset)

6.2 Control Schools

Table 6.2 shows the control schools and grades (matched control grades to treatment grades) used in the analysis.

| | District | School Name | GRADE |
|----|--|---|-------|
| 1 | Ar-We-Va Community School District | Ar-We-Va Elementary Community School | 5 |
| 2 | Denison Community School District | Broadway Elementary School | 5 |
| 3 | CAM Community School District | CAM South Elementary School | 3 |
| 4 | Central Springs Community School District | Central Springs Elementary Manly Campus | 4 |
| 5 | Sioux City Community School District | Crescent Park Elementary School | 5 |
| 6 | Ottumwa Community School District | Eisenhower Elementary School | 5 |
| 7 | Glidden-Ralston Community School District | Glidden-Ralston Elementary School | 3 |
| 8 | Harlan Community School District | Harlan Community Intermediate School | 5 |
| 9 | Hartley-Melvin-Sanborn Community School District | Hartley-Melvin-Sanborn Elementary School | 4 |
| 10 | West Sioux Community School District | Hawarden Elementary School | 3 |
| 11 | Dubuque Community School District | Hoover Elementary School | 5 |
| 12 | Waterloo Community School District | Kittrell Elementary School | 5 |
| 13 | Union Community School District | La Porte City Elementary School | 3 |
| 14 | Algona Community School District | Lucia Wallace Elementary School | 3 |
| 15 | Muscatine Community School District | Madison Elementary School | 3 |
| 16 | Madrid Community School District | Madrid Elementary School | 4 |
| 17 | Monticello Community School District | Monticello Middle School | 5 |
| 18 | North Butler Community School District | North Butler Elementary Allison Building | 3 |
| 19 | North Winneshiek Community School District | North Winneshiek Elementary School | 4 |
| 20 | Marshalltown Community School District | Rogers Elementary School | 3, 4 |
| 21 | Sidney Community School District | Sidney Elementary School | 4 |
| 22 | South O'Brien Community School District | South O'Brien Elementary School Primghar Center | 4 |
| 23 | Springville Community School District | Springville Elementary School | 3 |
| 24 | Urbandale Community School District | Valerius Elementary School | 5 |
| 25 | Ventura Community School District | Ventura Elementary School | 5 |
| 26 | Waverly-Shell Rock Community School District | West Cedar Elementary School | 4 |
| 27 | West Central Community School District | West Central K - 8 School | 3 |
| 28 | Emmetsburg Community School District | West Elementary School | 3 |
| 29 | West Marshall Community School District | West Marshall Elementary School | 4 |
| 30 | Indianola Community School District | Whittier Elementary School | 4 |
| 31 | Wilton Community School District | Wilton Elementary School | 3 |