

WriteSteps

Helping Students Succeed with Teacher-Friendly Common Core Writing Lessons

With teachers and administrators increasingly focused on Common Core writing, many schools are finding little margin for error when it comes to preparation.

Results for the WriteSteps program in several schools demonstrated significant improvement in writing and grammar, showing great promise for meeting and exceeding the future Common Core testing goals.

Classrooms that used WriteSteps



47
out of 48

showed significant improvement in writing



98%



of teachers who have used WriteSteps recommend us to others.

www.WriteStepsWriting.com

Before and After using WriteSteps

Students who reported they "always" or "almost always" enjoy writing!

23.5%
Before

71%
After



WriteSteps is the only electronic-based Common Core writing & grammar system that has proven results!



For the Classroom

WriteSteps Progress Study Summary

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During the school year of 2011-2012, WriteSteps conducted a scientific analysis of its program. The study's main conclusions were that students' writing skills improved significantly during the year when their teachers used WriteSteps, that teachers were very satisfied with the program's utility, and that students gained confidence in their writing and increased their enjoyment of writing as they completed more WriteSteps units.

Participants. Data was collected from 48 classrooms (K-5) in four Michigan schools. Two were charter schools and two were traditional public schools. The schools ranged in size from 250 to 650 students. Three of the four schools were Title I schools. In these three schools more than 70% of the students were eligible for free and reduced lunch.

Writing Performance. Analyses from writing pre- and post-tests showed impressively that almost all of the classes exhibited significant improvement in writing ability during the academic year. (For an example from one of our schools, see Table 1 below.)

Teacher Satisfaction. Importantly, teacher surveys revealed high satisfaction with the program (see Table 2 below). Specifically, more than 80% of teachers were highly satisfied with the emphasis of the National Common Core Standards within the WriteSteps lessons, with the clarity and organization of WriteSteps lessons, and with the appropriateness of the lessons for use with the whole class.

Furthermore, a strong majority felt the student samples were helpful for demonstrating the teaching points, that there was a beneficial mix of free choice and prompt writing, that there were adequate opportunities for assessment, and that WriteSteps had all the components they needed in order to teach writing.

Student Satisfaction. It follows that as students' writing improved in quality and as they completed more units of WriteSteps, they gained confidence as writers and increasingly enjoyed writing. (For specific survey results, see complete report.) This pattern is exhibited well in one first grade classroom where the pre-test survey showed that only 24% of students reported they "always" or "almost always" enjoyed writing. After just two units, 79% endorsed this level of enjoyment, and after unit 6 (near the end of the school year), this level of enjoyment was nearly maintained. Additionally, in most classes 70% of students stated they felt proud of their writing

(and in two classes 100% of students reported this level of pride). Lastly, in 26 of 34 post-unit surveys, at least 71% of the students assessed their writing as “good” or “excellent” with 5 of those classes reaching 100%.

The 25-page full report can be viewed at:

http://writesteps.com/Portals/0/PDFs/WriteSteps_Progress_Study.pdf

Table 1. Initial raw scores and score improvements by grade at School A.

	Initial Score for School A	Improvement for School A
K	4.84*	7.05*
1	8.78*	8.25*
2	12.92*	5.76*
3	15.54*	7.39*
4	18.71*	0.88
5	21.26*	2.23*

* Indicates significant ($P < 0.05$) result.

Table 2. Teacher satisfaction survey results.

Question	% saying Agree/Strongly Agree	Question	% saying Agree/Strongly Agree
1. easy time getting started	67.3	12. applicable for students not at grade level	62.5
2. lesson steps clear and organized	81.2	13. convenient & easy to use	70.2
3. visual aids helpful	73.5	14. has all components I need	75.6
4. student samples helpful	67.3	15. I know how to contact WriteSteps	77.6
5. independent practice matches teaching pts	80.0	16. I know I am encouraged to contact	69.6
6. good mix of free choice & prompt writing	71.4	17. thorough & helpful grammar	61.2
7. sufficient opportunities for assessment	72.3	18. adequate teaching of grammar	54.2
8. rubrics assess writing quality	66.7	19. meets National Common Core Standards	85.7
9. good demonstration of quality writing	61.2	20. I see the Nat’l Common Core Standards	83.7
10. rubrics help score writing objectively	57.4	21. students enjoy writing with WriteSteps	65.3
11. lessons appropriate for whole group	80.9	22. students are progressing	75.5

WriteSteps Progress Study Final Report

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Abstract

Data was collected on student writing performance from classrooms (K-5) in four Michigan schools (three of them, school-wide Title I schools) using the WriteSteps program. In addition, students and teachers were surveyed about their experiences using the program. The aims of the study were: (1) to measure students' writing development during the WriteSteps program and (2) to measure students' and teachers' satisfaction with the WriteSteps program.

With the exception of grade 4 in one school, all classes showed significant improvement in writing ability during an academic year, as measured by a pre- and post-test writing sample (minimum possible score of 5, maximum possible score of 30). Students in grades K-3 improved, on average (depending on grade), by 5.8-8.2 points (school A), 12.0-14.5 points (school J), 4.0-6.5 points (school O), and 11.9-14.4 points (school Y) in the raw score. Students in grades 4-5 had more modest, though still significant, improvements (except school O, grade 4).

Surveys showed that more than 80% of the teachers were highly satisfied with the emphasis of the National Common Core Standards within the WriteSteps lessons, with the clarity and organization of WriteSteps lessons, and with the appropriateness of the lessons for use with the whole group. The number of students who gained confidence in their writing and increased their enjoyment of writing grew as more units were completed.

1. Methods

1.1. Study population and writing sample scoring.

Teachers from grades K-5 from four Michigan schools were invited to participate in the current study. Of the four schools, three are Title I schools with a majority of African American students and a minority of mainly Caucasian students. Hispanic, Arab, and a few other ethnic groups are represented in the student sample, also. In these three schools more than 70% of the students are eligible for free and reduced lunch. Two of the four schools are charter schools. The schools range in size. School A has 350 students; School J has 355; School Y has 550; and School O is the largest with 650 students. (See more specific demographic information in the Appendix.)

Approximately 48 teachers submitted surveys and/or pre/post tests. Of the kindergarten-2nd grade students who participated in the pre/post tests, approximately 20 were from school J, 32 from school Y, 66 from school A, and 131 from school O. Of the 3rd-5th grade students who participated in the pre/post tests, approximately 1 was from school J, 53 were from school A, 96 were from school Y, and 153 were from school O.

Teachers were asked to assign a writing sample to students at two times: at the beginning of the school year (beginning of study – pre-test) and near the end of the school year (end of the study – post-test). These papers were collected at the end of the school year and an independent scoring group was asked to rate the papers. (The scorers were trained in scoring for Pearson and/or Michigan Education Assessment Program.) The samples were scored on six indices: Ideas, Organization, Voice, Word Choice, Sentence Fluency, and Conventions.

A score of 1-5 (5 being the best possible score) was assigned for each of the six categories, and the sum of these scores became the raw score (maximum of $6 \times 5 = 30$ points possible). Since the scoring rubrics were grade-dependent, it is meaningless to compare scores from different grades.

Another independent party input the scores into a spreadsheet, with school and student names converted to ID variables (one letter for a school, and the first three letters from the name of the student). During analysis, a unique ID number was assigned for each student.

1.2. Teacher survey

Near the end of the school year, teachers were given a survey to report their satisfaction with WriteSteps. Teachers were asked about the ease of use, convenience, and effectiveness of WriteSteps, as well as the individual components, support services, compliance to National Core standards and student outcomes. Teachers responded to a statement by selecting one of five choices numbered 1 to 5 with 1 denoting strongly disagree and 5 strongly agree (survey is included in the appendix). Not all teachers answered every question. Available data is reported. Higher scores indicated greater satisfaction with WriteSteps.

1.3. Student survey

At the end of a WriteSteps unit, students were asked to fill out a survey reporting whether they enjoyed writing (Q. 1), whether they felt proud of their writing (Q. 2), and how they rated their writing (Q. 3, survey is included in the appendix). For questions 1 and 2, there were four choices of Never, Sometimes, Almost Always, and Always. For question 3, the four choices were Poor, Average, Good, and Excellent. Not all students participated, and not all grades and schools were represented.

1.4. Covariates

Data on school and grade was available for each student, as well as the raw writing sample score (outcome #1) and six index scores (outcome #2). In addition, we had available the time of the composition of the writing sample (month), and an indicator of the initial (pre) writing sample / final (post) writing sample.

1.5. Statistical analysis

We began by comparing the raw scores at the beginning and end of the study, using pairwise t-tests. Strong improvements were seen for the early grades (K-3), while grades 4 and 5 showed modest improvement. However, there was significant variability by class. If either a pre-test or a post-test score was unavailable, that observation was dropped.

Exploratory plots showed that additional stratification by school was necessary; students of the same grade at different schools started at different levels of writing ability. Thus, for the raw scores, we decided to employ a random-intercept, mixed effects linear regression model, to account for within-student correlation and different initial scores. An unstructured covariance matrix was used. All covariates were treated as fixed effects to report differences by school (A as reference) and grade (5 as reference). Exploratory analysis showed strong association of score improvements with grade and with school, so we added two interaction terms: grade by time and school by time.

Similarly, a mixed effects linear regression model was used to study the scores by each index (type), covariate-adjusted. Again, grade by time and school by time interactions were included after preliminary analysis showed strong associations between these. However, we also included a score index by time interaction to show individual score adjustments (with "conventions" as reference), but the differences from the reference score category were not found to be statistically significant.

In all of our analyses, a 2-sided P value <0.05 was considered statistically significant. All of the analyses were carried out using R (version 2.14); we used the "nlme" package for the mixed-model regression.

2. Results

2.1. Baseline characteristics

Baseline characteristics of the student participants were limited, and further studies should include more detailed information. Available data is shown in Tables 1 and 2. Schools A and O are better represented than schools J and Y. Most students composed the first writing sample later in the first half of the academic year, and the second sample near the end of the academic year.

2.2. Raw score improvements

Table 3 shows the regression coefficients and confidence intervals from the linear mixed effects model. For a clearer picture we created Table 4, which shows the initial raw score averages and their improvement over the study time, by grade, and adds the differences by school. The initial scores (intercepts) increase by grade, with grade 5 students already scoring at 21.26 out of 30 on average in school A (and over 25 in school O). Scores show statistically significant improvement at all grades and schools, except grade 4 where data showed much variability between students. Grade 1 students showed the highest increases (+8.25 for school A, +14.45 for school J, + 6.50 for school O, and +14.34 for school Y, all statistically significant). School O had more modest increases, but its students had higher initial scores (by 4.31 points on average).

2.3. Individual category score improvements

Table 5 shows the regression coefficients and confidence intervals from the second linear mixed effects model. Again, for a clearer comparison we created Table 6 showing the individual category score improvements by grade, and the school differences. The pattern of the raw score repeats here: initial scores were higher for students in later grades, as well as for students in school O. All score improvements were significant (however, school O did have a decrease, on average, for grade 4 students). Students in grades K-3 and in schools J and Y made stronger gains, on average.

2.4. Teacher survey results

Figures 1a-1c show the results of the survey by school. School O has lower mean averages than schools A and J; school Y has less data and is more difficult to generalize.

Table 7 shows the percentage of teachers who agreed or strongly agreed (A/SA) to each survey statement. A strong majority of the teachers A/SA, i.e. rated WriteSteps highly, on most elements of the program. Specifically, they endorsed items such as: I am "satisfied with the emphasis of the National Common Core Standards within the WriteSteps lessons" (Q.19, 86%); "the Lesson Steps are clear and organized" and I can "follow them without difficulty" (Q. 2, 81.2%); "the lessons are appropriate to present to the whole group" (Q.11, 80.9%); "the student samples [WriteSteps component] are helpful for demonstrating the teaching points" (Q. 4, 73.5%); and "there is a beneficial mix of free choice and prompt writing" (Q. 6, 71.4). Teachers also indicated that there are enough opportunities for assessment (Q. 7, 72.3%) and that WriteSteps has "all the components they need" to teach writing (Q. 14, 75.6%).

Lower proportions, but still a majority of teachers, agreed or strongly agreed (A/SA) to statements such as: "the rubrics [a WriteSteps component] help me score student writing objectively" (Q. 10, 57.4%), "the lessons can be effectively used with students above or below grade level" (Q. 12, 62.5%), and "the grammar that is taught throughout the lessons is thorough and helpful" (Q. 17, 61.2%).

2.5. Student survey results

The results of the student satisfaction survey (classes which have completed at least unit 2a) are presented in Table 8 (sorted by school and grade). Schools O and Y had the best response, but it should be noted that, due to teachers' flexibility in using the program, not all units were completed. However, we can see that very few students "never enjoy writing" (often, zero students in the class), and their number usually decreased as more units were completed. In one case (grade 1, school Y, data not shown), only 23.5% of students reported they "always" or "almost always" (A/AA) enjoy writing, but this quickly rose to 78.5% after unit 2b, and ended at close to 71% after unit 6 (near the end of the school year). All students in a grade 4 class in school Y, after completing unit 6, reported that they A/AA enjoy writing.

Most classes had at least 70% reporting that they "felt proud of the writing I do," and two classes had 100% of students reporting it. Many classes had zero students saying they "never" felt proud of their writing.

Students regarded their own writing quite highly. Twenty-six of 34 post-unit class surveys had at least 71% of the students assessing their writing as "good" or "excellent". Five classes had 100% of students considering their writing "good" or "excellent" near the end of the school year. One class reported 19% of students rating their writing "poor", but most classes had less than 10% rating their writing as such, and many had zero students rate their writing poorly, especially as more units were completed.

3. Discussion

The current study found that students made significant gains using the WriteSteps program, that their enjoyment of writing increased, and that a majority of teachers liked using the program. One important finding was that students made significant gains using the WriteSteps program in grades K-3, and modest gains in grades 4-5 (though initial performance and magnitude of improvement varied by school). One interpretation of this result is that younger students who have had less writing instruction will improve more dramatically than older students. Another is that upper grade teachers may have a more difficult time teaching a new program to its fullest effectiveness because their students do not have the background knowledge and experience expected for the lessons. Increasing the number of writing samples for each student, as well as increased teacher adherence to guidelines (teachers had some flexibility in implementing the program, which primarily resulted in wide differences in the amount of material covered), could minimize this variability.

There were also wide differences in writing performance by school. School O had the highest initial scores, and also made slightly smaller gains than the other schools. School A had lower initial scores than O, followed by J, then Y. The two schools with the lowest initial scores made the strongest gains. One possibility for this pattern is that when a student starts with a low score, there is more room for improvement. The availability of coaching may have positively affected student progress as well. For example, school O, who had smaller gains than the rest, had no additional professional development provided by WriteSteps staff. In contrast, school J had the most gains and the most support - three professional development days provided by the WriteSteps coach. The type of product used may also have affected the score differences by school. School O (who showed the least amount of gains) only had access to the software version of the program, whereas schools A, J,

and Y had both software and printed versions. Lastly, score differences might be affected by the demographics of the schools, and the amount of experience individual teachers had with WriteSteps.

Teacher survey results showed high satisfaction with WriteSteps. Over three-quarters said their students were making recognizable progress as they taught using WriteSteps. Similarly, students responded well to the program and gained confidence, especially as additional units were added. For example, after having used WriteSteps for a full school year, all students in a grade 4 class in school Y reported that they A/AA enjoy writing.

The results of the current study are applicable to a large range of students, given analysis of children of different races, socio-economic statuses, and school type. Caution should be used, however, in generalizing the current findings to fifth graders; the grade 5 cohort in this study was small. Further studies should specify more precise dates for the writing samples (there was significant variability in this study) or adjust for the date of the writing sample. Additional demographic statistics and teacher background information could improve the analysis of confounding variables. (Also, these factors could be controlled for in future research.) Lastly, more equal distribution of students by grade and school, as well as tighter adherence by teachers to the WriteSteps program, will benefit future analyses.

Tables and Figures

Table 1: Number of participating students by grade and school.

Grade	School				Sum
	A	J	O	Y	
K	34	0	56	8	98
1	3	21	25	4	53
2	25	0	48	0	73
3	38	0	45	47	130
4	11	1	78	26	116
5	6	1	32	0	39
Sum	117	23	284	85	509

Table 2: Median writing sample composition month (standard deviation, in months) by grade and school. All data from the same academic year.

	First Writing Sample (Pre)				Second Writing Sample (Post)			
	A	J	O	Y	A	J	O	Y
K	Dec (0.73)	n/a	Dec (0.00)	Jan (0.00)	May (0.72)	n/a	May (0.00)	May (0.00)
1	Sept (0.00)	Oct (0.54)	Jan (1.39)	Jan (0.00)	Mar (0.00)	May (0.38)	May (0.48)	May (0.00)
2	Oct (0.51)	n/a	Jan (0.33)	n/a	May (0.00)	n/a	May (0.48)	n/a
3	Sept (1.47)	n/a	Dec (0.00)	Oct (0.00)	Apr (0.49)	n/a	Apr (0.50)	May (0.00)
4	Dec (1.57)	Sept (0.00)	Jan (0.41)	Dec (0.00)	Mar (1.04)	Apr (0.00)	May (0.00)	Jun (0.00)
5	Sept (0.00)	Dec (0.00)	Jan (0.42)	n/a	May (0.00)	May (0.00)	May (0.00)	n/a

Table 3: Regression coefficients and confidence intervals for raw scores.

	95% Confidence Interval		Beta	P
	lower	upper		
(Intercept)	19.10	23.42	21.26	<0.001
Time2 ^a	0.02	4.44	2.23	0.048
Grade1 ^b	-15.17	-9.79	-12.48	<0.001
Grade2 ^b	-10.65	-6.04	-8.34	<0.001
Grade3 ^b	-7.92	-3.52	-5.72	<0.001
Grade4 ^b	-4.71	-0.38	-2.55	0.021
GradeK ^b	-18.63	-14.21	-16.42	<0.001
SchoolJ ^c	-3.38	3.08	-0.15	0.929
SchoolO ^c	3.00	5.63	4.31	<0.001
SchoolY ^c	-5.51	-2.05	-3.78	<0.001
Time2:Grade1	3.27	8.77	6.02	<0.001
Time2:Grade2	1.17	5.89	3.53	0.003
Time2:Grade3	2.91	7.42	5.16	<0.001
Time2:Grade4	-3.56	0.87	-1.35	0.233
Time2:GradeK	2.56	7.08	4.82	<0.001
Time2:SchoolJ	2.90	9.51	6.20	<0.001
Time2:SchoolO	-3.10	-0.41	-1.75	0.011
Time2:SchoolY	4.32	7.86	6.09	<0.001

^a Time2 is the second writing sample indicator. Time1 (first writing sample) is reference.

^b Grade 5 as reference.^c School A as reference.

Table 4: Initial raw scores and score improvements by grade, with school differences.

	Initial Score for School A	Improvement for School A	Initial Score Adjustment by School	Additional Improvement by School
K	4.84*	7.05*		
1	8.78*	8.25*		
2	12.92*	5.76*		
3	15.54*	7.39*		
4	18.71*	0.88		
5	21.26*	2.23*		
School A			ref	ref
School J			-0.15	6.20*
School O			4.31*	-1.75*
School Y			-3.78*	6.09*

* Indicates significant ($P < 0.05$) result. "ref" = reference. See Table 3 for details.

Table 5: Regression coefficients and confidence intervals for individual category scores.

	95% Confidence Interval		Beta	P
	lower	upper		
(Intercept)	3.18	3.82	3.50	<0.001
Time	0.29	0.59	0.44	<0.001
Grade1	-2.40	-1.61	-2.01	<0.001
Grade2	-1.65	-0.98	-1.31	<0.001
Grade3	-1.20	-0.55	-0.87	<0.001
Grade4	-0.66	-0.03	-0.35	0.032
GradeK	-2.98	-2.34	-2.66	<0.001
SchoolJ	-0.50	0.45	-0.02	0.923
SchoolO	0.52	0.91	0.71	<0.001
SchoolY	-0.89	-0.38	-0.63	<0.001
typefluency	-0.10	0.06	-0.02	0.621
typeideas	-0.07	0.09	0.01	0.767
typeorg	-0.11	0.04	-0.04	0.374
typevoice	-0.16	0.00	-0.08	0.054
typeword	-0.15	0.01	-0.07	0.084
Time:Grade1	0.77	1.11	0.94	<0.001
Time:Grade2	0.42	0.71	0.57	<0.001
Time:Grade3	0.65	0.92	0.78	<0.001
Time:Grade4	-0.43	-0.17	-0.30	<0.001
Time:GradeK	0.59	0.87	0.73	<0.001
Time:SchoolJ	0.83	1.23	1.03	<0.001
Time:SchoolO	-0.36	-0.20	-0.28	<0.001
Time:SchoolY	0.91	1.13	1.02	<0.001

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	95% Confidence Interval		Beta	P
	lower	upper		
Time:typeword	-0.13	0.09	-0.02	0.753
Time:typevoice	-0.10	0.12	0.01	0.807
Time:typeorg	-0.11	0.11	-0.00	0.972
Time:typeideas	-0.09	0.13	0.02	0.753
Time:typefluency	-0.15	0.07	-0.04	0.442

Table 6: Initial scores and score improvements by category and grade, with school differences.

	Grade K			
	Initial Score for School A	Improvement for School A	Initial Score Adjustment by School	Additional Improvement by School
Conventions	0.84*	1.17 ^a		
Fluency	0.82	1.13 ^a		
Ideas	0.85	1.19 ^a		
Organization	0.80	1.17 ^a		
Voice	0.76*	1.18 ^a		
Word Choice	0.77*	1.15 ^a		
School A			ref*	ref*
School J			-0.02	+1.03*
School O			+0.71*	-0.28*
School Y			-0.63*	+1.02*
	Grade 1			
	Initial Score for School A	Improvement for School A	Initial Score Adjustment by School	Additional Improvement by School
Conventions	1.50*	1.38 ^a		
Fluency	1.48	1.34 ^a		
Ideas	1.51	1.40 ^a		
Organization	1.46	1.38 ^a		
Voice	1.42*	1.39 ^a		
Word Choice	1.43*	1.36 ^a		
School A			ref*	ref*
School J			-0.02	+1.03*
School O			+0.71*	-0.28*
School Y			-0.63*	+1.02*
	Grade 2			
	Initial Score for School A	Improvement for School A	Initial Score Adjustment by School	Additional Improvement by School
Conventions	2.19*	1.01 ^a		
Fluency	2.17	0.97 ^a		
Ideas	2.20	1.03 ^a		

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	Grade K			
	Initial Score for School A	Improvement for School A	Initial Score Adjustment by School	Additional Improvement by School
Organization	2.15	1.01 ^a		
Voice	2.11*	1.02 ^a		
Word Choice	2.12*	0.99 ^a		
School A			ref*	ref*
School J			-0.02	+1.03*
School O			+0.71*	-0.28*
School Y			-0.63*	+1.02*
	Grade 3			
	Initial Score for School A	Improvement for School A	Initial Score Adjustment by School	Additional Improvement by School
Conventions	2.63*	1.22 ^a		
Fluency	2.61	1.18 ^a		
Ideas	2.64	1.24 ^a		
Organization	2.59	1.22 ^a		
Voice	2.55*	1.23 ^a		
Word Choice	2.56*	1.20 ^a		
School A			ref*	ref*
School J			-0.02	+1.03*
School O			+0.71*	-0.28*
School Y			-0.63*	+1.02*
	Grade 4			
	Initial Score for School A	Improvement for School A	Initial Score Adjustment by School	Additional Improvement by School
Conventions	3.15*	0.14 ^a		
Fluency	3.13	0.10 ^a		
Ideas	3.16	0.16 ^a		
Organization	3.11	0.14 ^a		
Voice	3.07*	0.15 ^a		
Word Choice	3.08*	0.12 ^a		
School A			ref*	ref*
School J			-0.02	+1.03*
School O			+0.71*	-0.28*
School Y			-0.63*	+1.02*
	Grade 5			
	Initial Score for School A	Improvement for School A	Initial Score Adjustment by School	Additional Improvement by School
Conventions	3.50*	0.44 ^a		
Fluency	3.48	0.40 ^a		

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	Grade K			
	Initial Score for School A	Improvement for School A	Initial Score Adjustment by School	Additional Improvement by School
Ideas	3.51	0.46 ^a		
Organization	3.46	0.44 ^a		
Voice	3.42*	0.45 ^a		
Word Choice	3.43*	0.42 ^a		
School A			ref*	ref*
School J			-0.02	+1.03*
School O			+0.71*	-0.28*
School Y			-0.63*	+1.02*

* Indicates significant ($P < 0.05$) result. "ref" = reference. See Table 5 for details.

^a Score improvements were found to be statistically significant ($P < 0.05$), but were not found to be significantly different from each other in the same grade and school. See Table 3 for details.

Note: for all figures, boxplots are shown: the white box extends from the 25th percentile to the 75th percentile, and the horizontal bar inside each is the median (50th percentile). When there is little variability or little data, no box may appear.

Figure 1a: Teacher satisfaction survey results, questions 1 through 7, by school.

WriteSteps Report

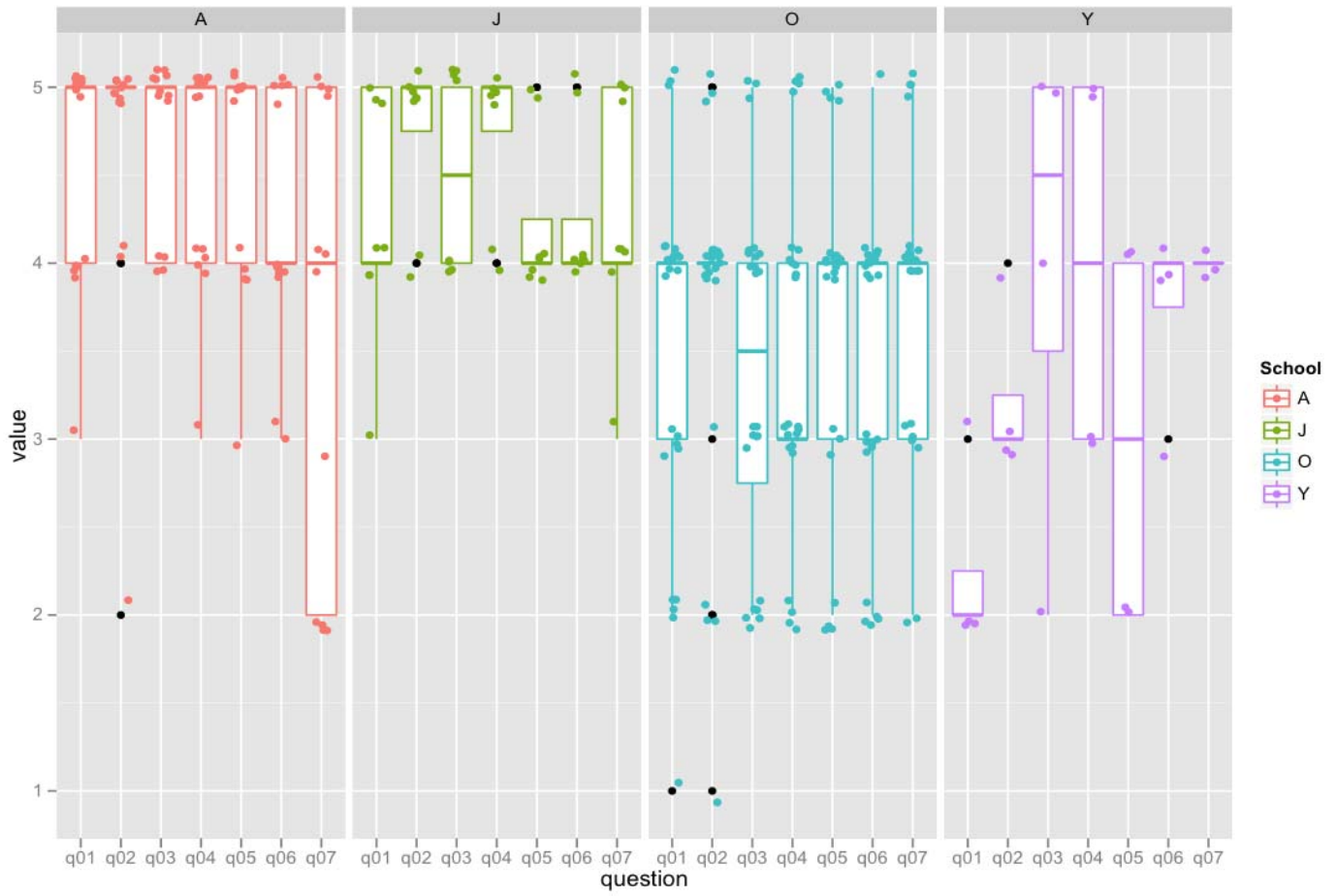


Figure 1b: Teacher satisfaction survey results, questions 8 through 14, by school.

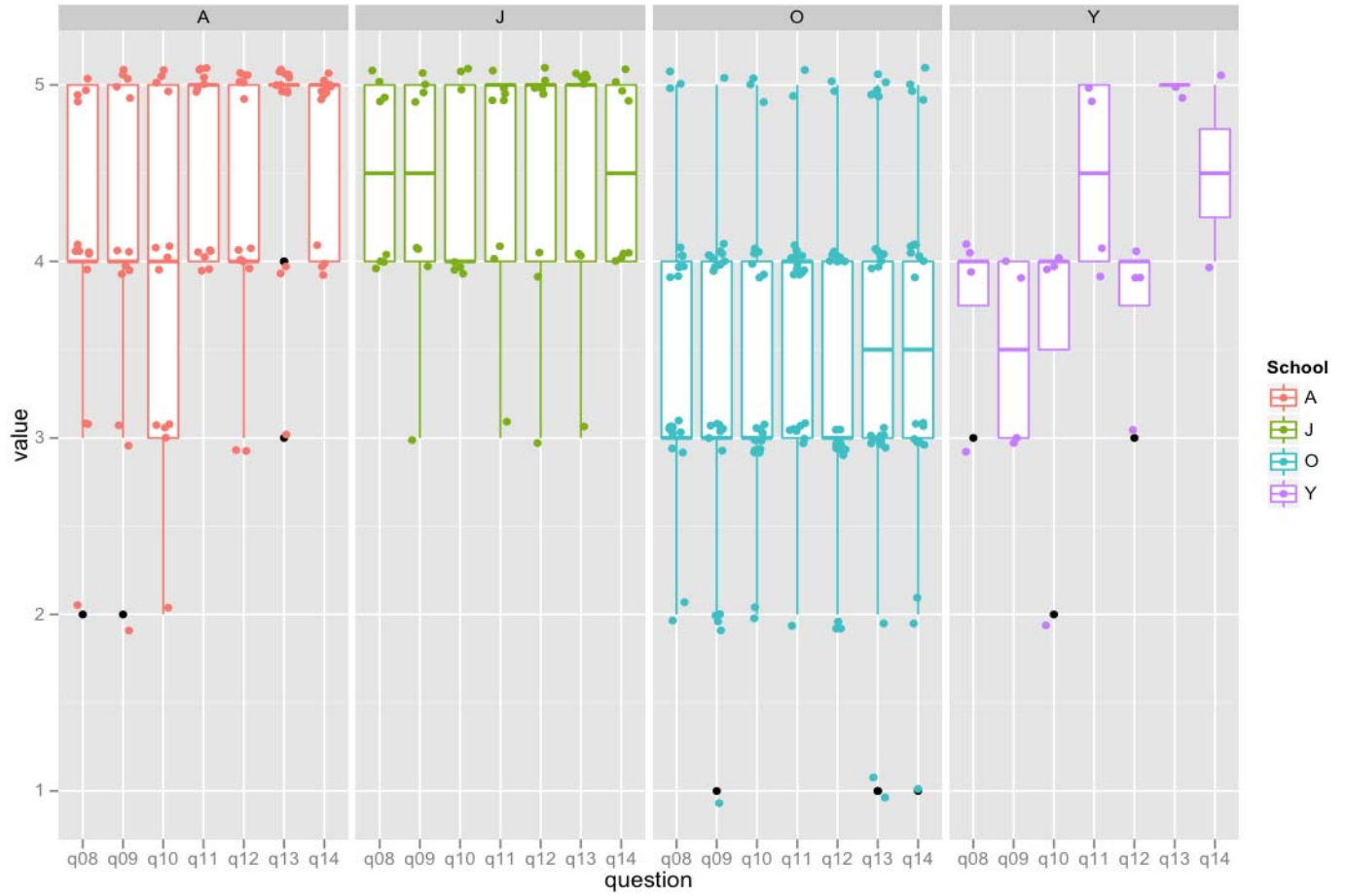


Figure 1c: Teacher satisfaction survey results, questions 15 through 22, by school.

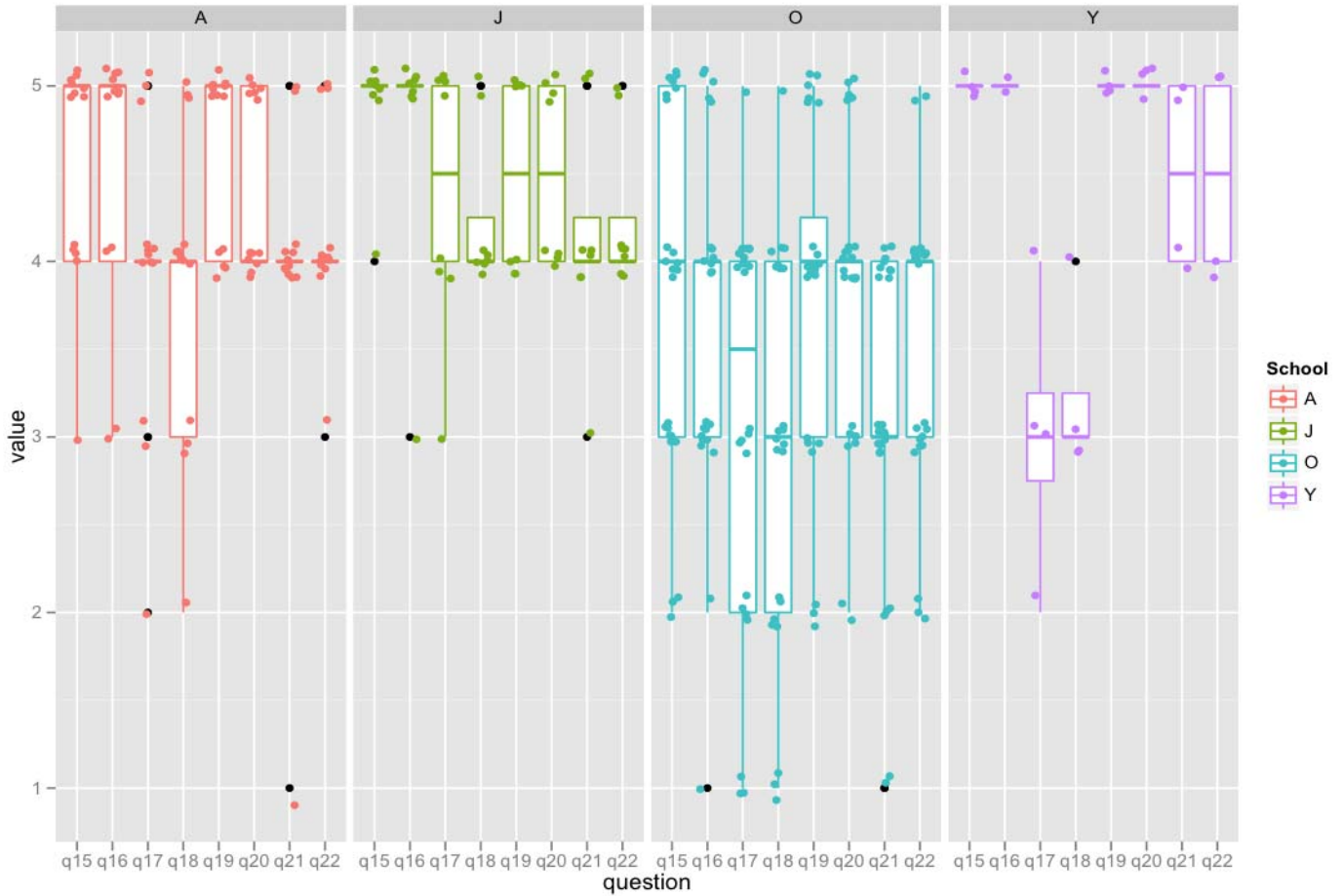


Table 7: Teacher satisfaction survey results.

Question	% saying Agree/Strongly Agree	Question	% saying Agree/Strongly Agree
1	67.3	12	62.5
2	81.2	13	70.2
3	73.5	14	75.6
4	67.3	15	77.6
5	80.0	16	69.6
6	71.4	17	61.2
7	72.3	18	54.2
8	66.7	19	85.7
9	61.2	20	83.7
10	57.4	21	65.3
11	80.9	22	75.5

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Table 8: Student satisfaction survey results: data shown only for classes which have completed at least unit 2b.

School	Teacher	Grade	Unit Completed	Q1 Total Responses	Q1 % Always/Almost Always	Q1 % Never	Q2 Total Responses	Q2 % Always/Almost Always	Q2 % Never	Q3 Total Responses	Q3 % Always/Almost Always	Q3 % Never
A	15	K	5	23	65.22	13.04	23	86.96	13.04	23	100.00	0.00
A	16	5	2b	19	84.21	0.00	19	89.47	0.00	19	89.47	5.26
J	13	4	2b	19	52.63	21.05	19	68.42	10.53	19	57.89	0.00
J	14	4	2b	18	55.56	11.11	17	58.82	0.00	16	75.00	18.75
O	18	2	2b	25	68.00	8.00	25	68.00	12.00	24	83.33	8.33
O	18	2	3a	23	73.91	0.00	27	77.78	3.70	24	87.50	0.00
O	18	2	4	25	84.00	0.00	23	82.61	0.00	22	72.73	4.55
O	20	2	2b	27	62.96	0.00	28	67.86	10.71	28	71.43	7.14
O	20	2	3a	28	64.29	0.00	28	64.29	0.00	26	61.54	0.00
O	20	2	4	28	75.00	0.00	28	92.86	0.00	28	71.43	0.00
O	21	3	2b	19	52.63	0.00	21	66.67	0.00	22	72.73	0.00
O	22	3	2b	25	72.00	8.00	25	92.00	4.00	25	68.00	8.00
O	22	3	3a	26	88.46	0.00	26	92.31	0.00	26	92.31	3.85
O	23	3	3a	28	67.86	0.00	28	71.43	0.00	28	85.71	10.71
O	25	3	3a	25	76.00	4.00	25	96.00	0.00	25	100.00	0.00
O	27	4	6	50	60.00	14.00	50	68.00	6.00	50	84.00	4.00
O	28	4	6	23	56.52	0.00	23	52.17	0.00	23	60.87	4.35
O	31	5	2b	26	76.92	11.54	26	69.23	0.00	24	62.50	0.00
O	31	5	3a	24	75.00	16.67	24	66.67	8.33	23	73.91	4.35
O	31	5	5	21	47.62	33.33	23	73.91	8.70	21	71.43	0.00
Y	1	K	3b	20	65.00	15.00	20	80.00	10.00	20	90.00	5.00
Y	2	K	3b	17	70.59	11.76	14	92.86	0.00	15	86.67	13.33
Y	3	1	2a	17	23.53	11.76	17	88.24	0.00	15	80.00	13.33
Y	3	1	2b	14	78.57	7.14	16	100.00	0.00	16	87.50	6.25
Y	3	1	3a	21	66.67	0.00	14	92.86	0.00	21	95.24	0.00
Y	3	1	4	20	85.00	10.00	15	93.33	0.00	16	93.75	6.25
Y	3	1	5	21	80.95	4.76	20	95.00	0.00	19	100.00	0.00
Y	3	1	6	24	70.83	8.33	20	70.00	0.00	21	38.10	19.05
Y	4	3	2b	28	89.29	3.57	30	83.33	6.67	28	53.57	7.14
Y	4	3	3a	28	89.29	3.57	30	83.33	3.33	28	53.57	3.57
Y	5	3	2b	28	89.29	0.00	28	67.86	7.14	29	100.00	0.00
Y	5	3	3a	28	78.57	0.00	26	80.77	0.00	28	82.14	0.00
Y	6	3	2b	28	85.71	3.57	28	85.71	3.57	28	85.71	3.57
Y	6	3	3a	28	85.71	3.57	28	85.71	3.57	28	89.29	3.57
Y	8	4	6	30	100.00	0.00	30	100.00	0.00	30	100.00	0.00

Appendix

A.1 Teacher satisfaction survey.

Teachers responded with Strongly Disagree to Strongly Agree on a scale of 1-5 (5 choices).

- 1) I had an easy time getting started with WriteSteps.
- 2) The Lesson Steps are clear and organized. I can follow them without difficulty.
- Components:
- 3) The visual aids are helpful and the directions for using them are clear.
- 4) The student samples are helpful for demonstrating the teaching points.
- 5) The Independent Practice (Focus Skill writing) matches the teaching points covered in the lesson.
- 6) There is a beneficial mix of free choice and prompt writing.
- 7) There are enough opportunities for Assessment (Formal Core writing) of student writing.
- 8) The Rubrics provide adequate information about the quality of student writing.
- 9) The Rubrics and lessons involving the rubrics are helpful in demonstrating to students the elements of quality writing.
- 10) The Rubrics help me score student writing objectively.
- 11) The Lessons are appropriate to present to the whole group.
- 12) The Lessons can be effectively used with students above or below grade level.
- Convenience and thoroughness of eWriteSteps:
- 13) I find eWriteSteps to be convenient and easy to use.
- 14) WriteSteps has all the components that I need.
- Availability of Teacher Support:
- 15) I know how to contact a representative of WriteSteps to get answers to my questions, or to share ideas.
- 16) It has been communicated clearly that I am encouraged to contact a representative of WriteSteps whenever I want to.
- Grammar Coverage:
- 17) The grammar that is taught throughout the lessons is thorough and helpful.
- 18) The teaching of grammar skills is repeated and spiraled adequately.
- Core compliance:
- 19) I am satisfied with the emphasis of the National Common Core Standards within the WriteSteps lessons.
- 20) I can see where, when, and how often, the Core Standards are being addressed.
- Student Reaction:
- 21) My students enjoy writing class using the WriteSteps program.
- 22) My students are making recognizable writing progress.

A.2 Student satisfaction survey.

- 1. I enjoy writing.

Never	Sometimes	Almost Always	Always
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- 2. I feel proud of the writing I do.

Never	Sometimes	Almost Always	Always
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- 3. My writing is: (not including handwriting)

Poor (D or lower)	Average (C)	Good (B)	Excellent (A)
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A.3 School Demographics

School A is a charter school with 350 students. The racial/ethnic makeup is as follows:

58% African American

8% Arab American

7% Caucasian

26% Hispanic

They are a Title I school with 90% of their students qualifying for free or reduced lunch.

School J is a charter school with 355 students in K-5th grades.

99% of their students are African American.

They are a Title I school with about 90% of their students qualifying for free or reduced lunch.

School O is a public school in a district of 1530 students. School O has 650 students.

Most of their students are Caucasian.

At the time this research was conducted, they were not a Title I school.

50% of their students qualify for free or reduced lunch.

School Y is a public school in a district of 3600 students. School Y has 550 students. The racial/ethnic makeup is as follows:

70% African American

20% Caucasian

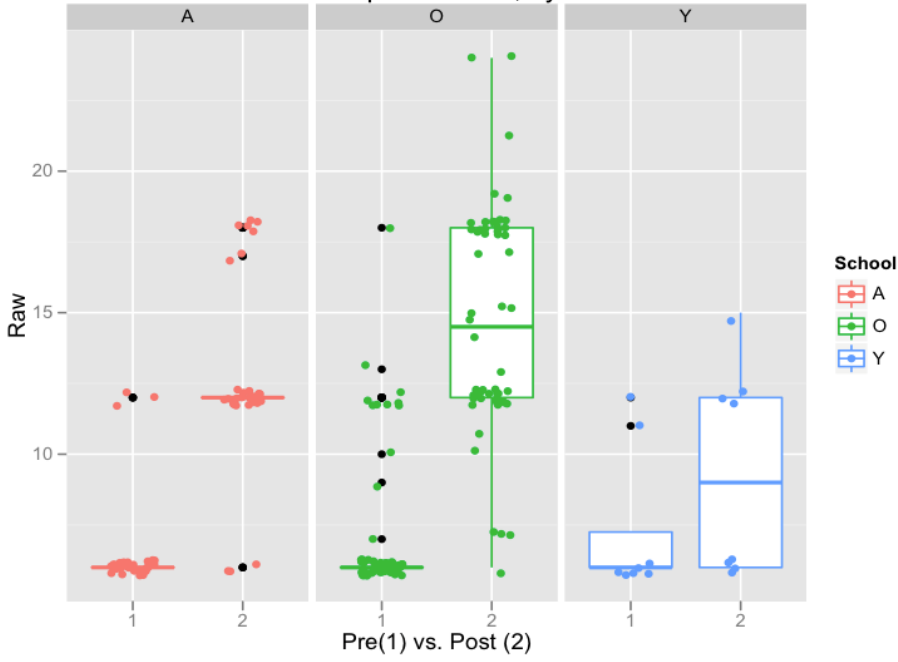
10% ELL students from a variety of ten other countries

They are a Title I school with 75% of their students qualifying for free or reduced lunch.

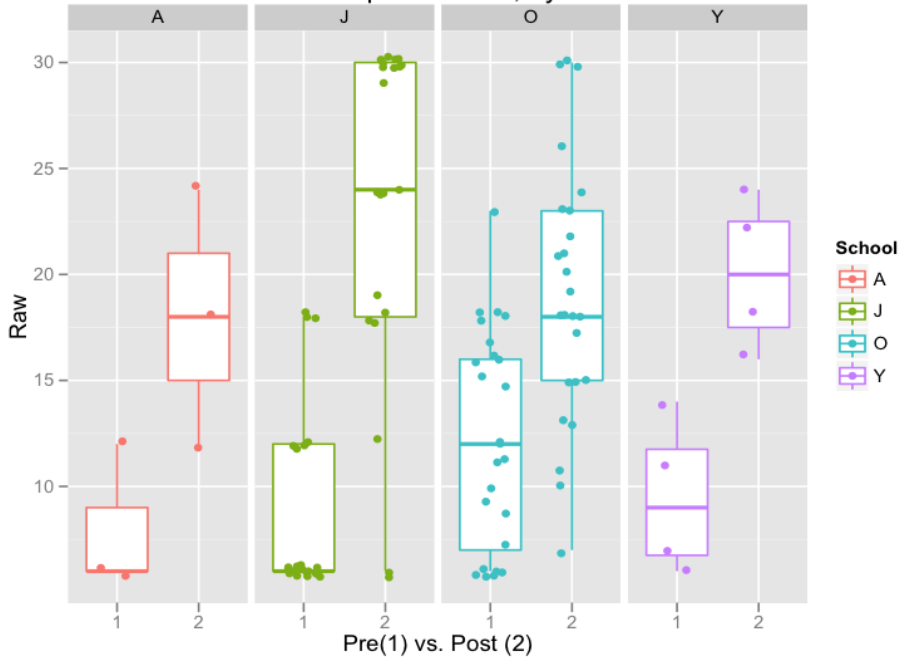
A.3 Figures for student progress, by grade and school. All data is shown (not all schools were represented in each grade).

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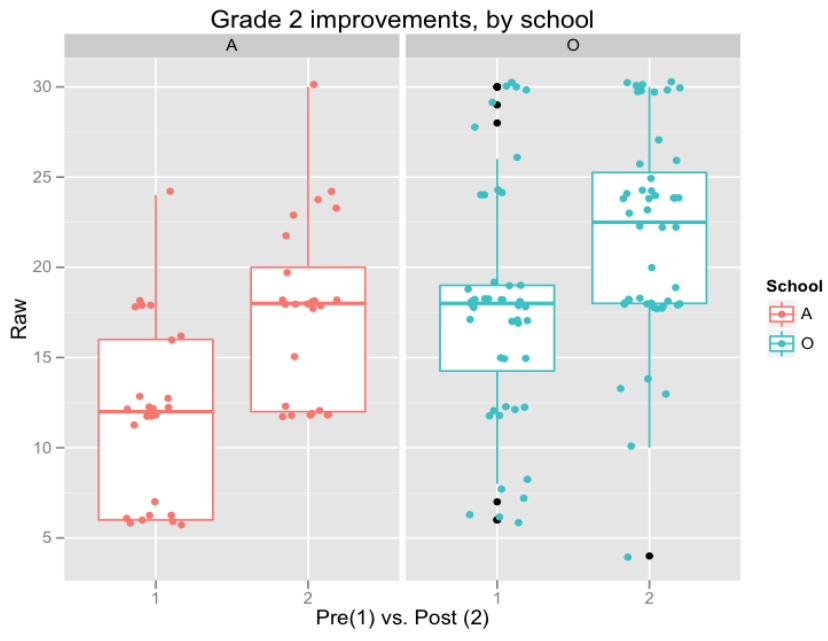
Grade K improvements, by school



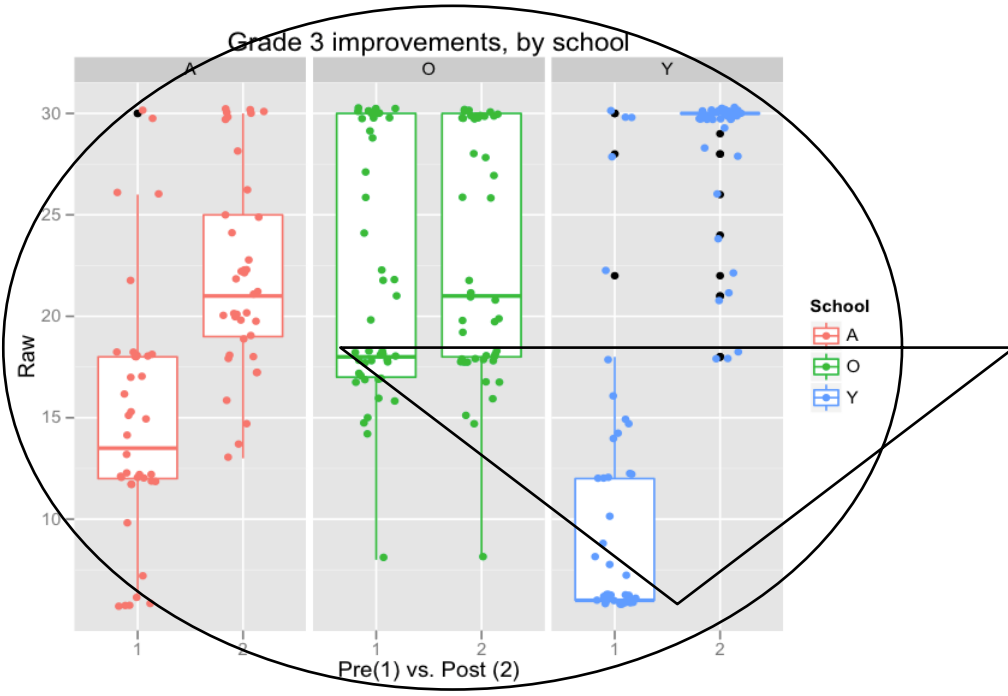
Grade 1 improvements, by school



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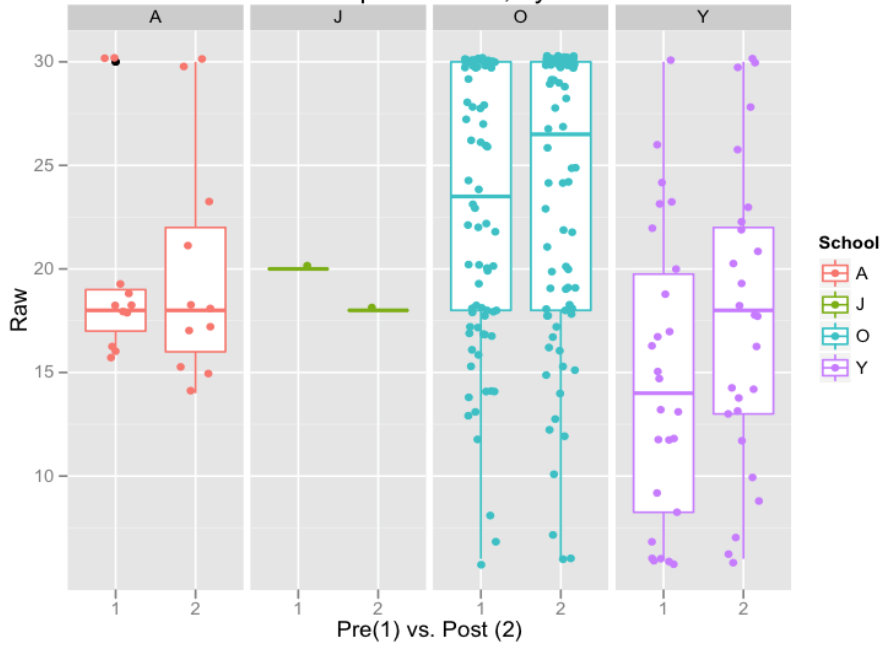


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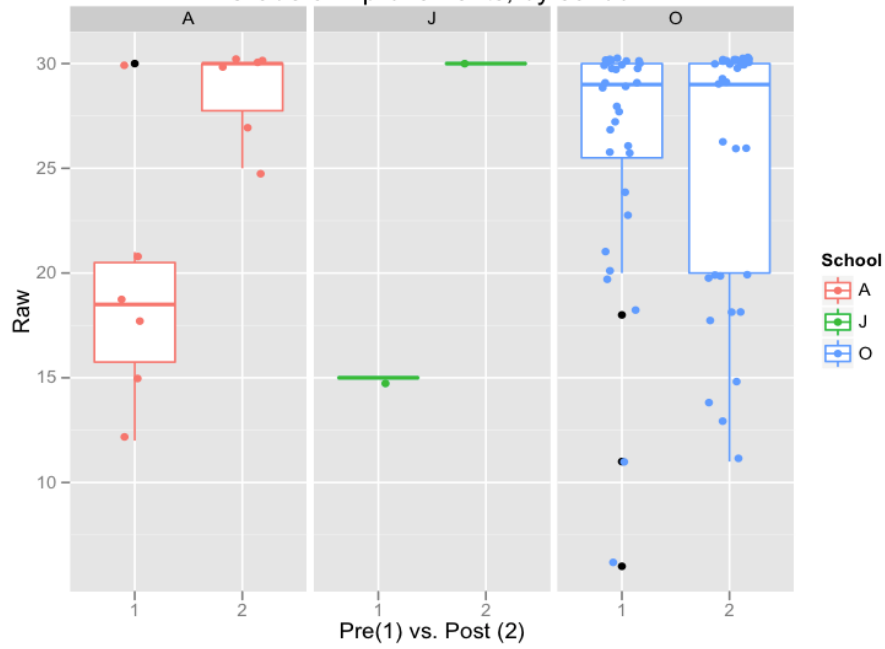


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Grade 4 improvements, by school

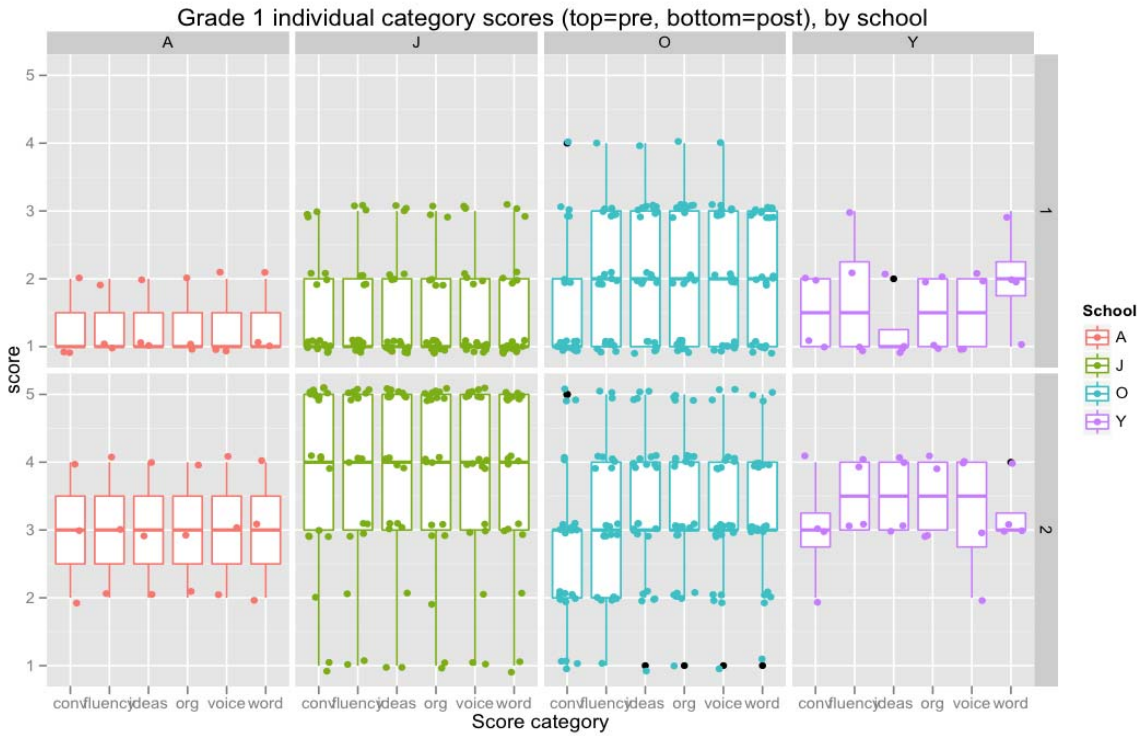
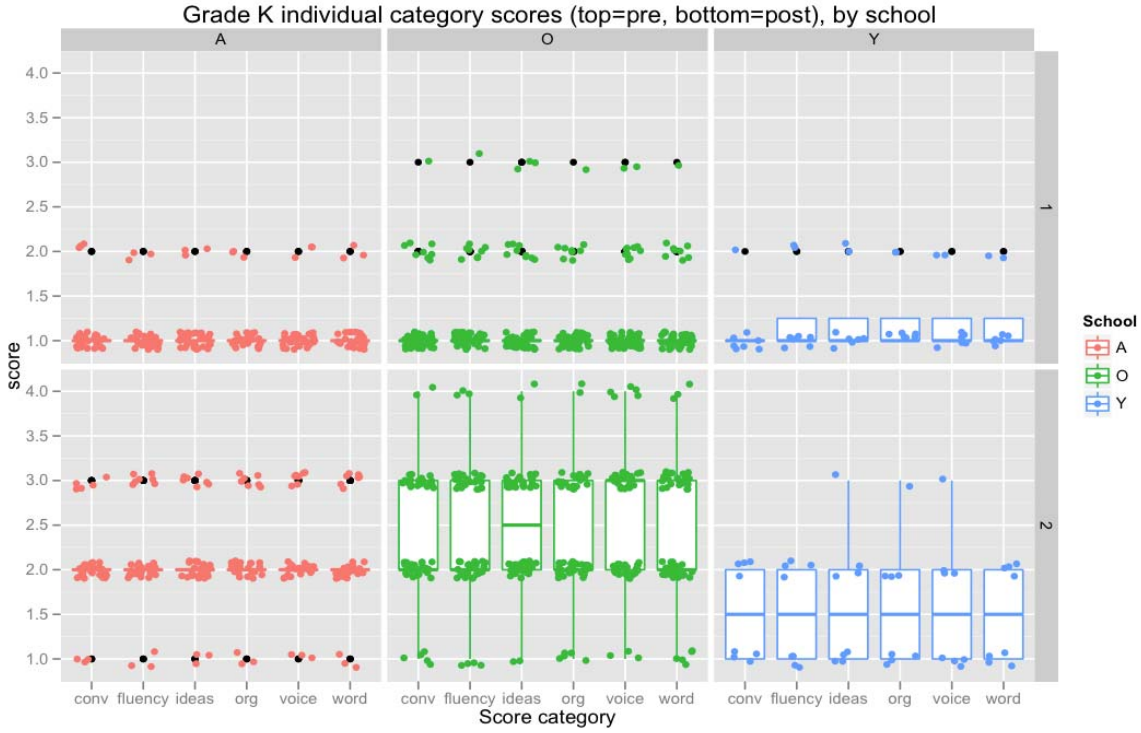


Grade 5 improvements, by school

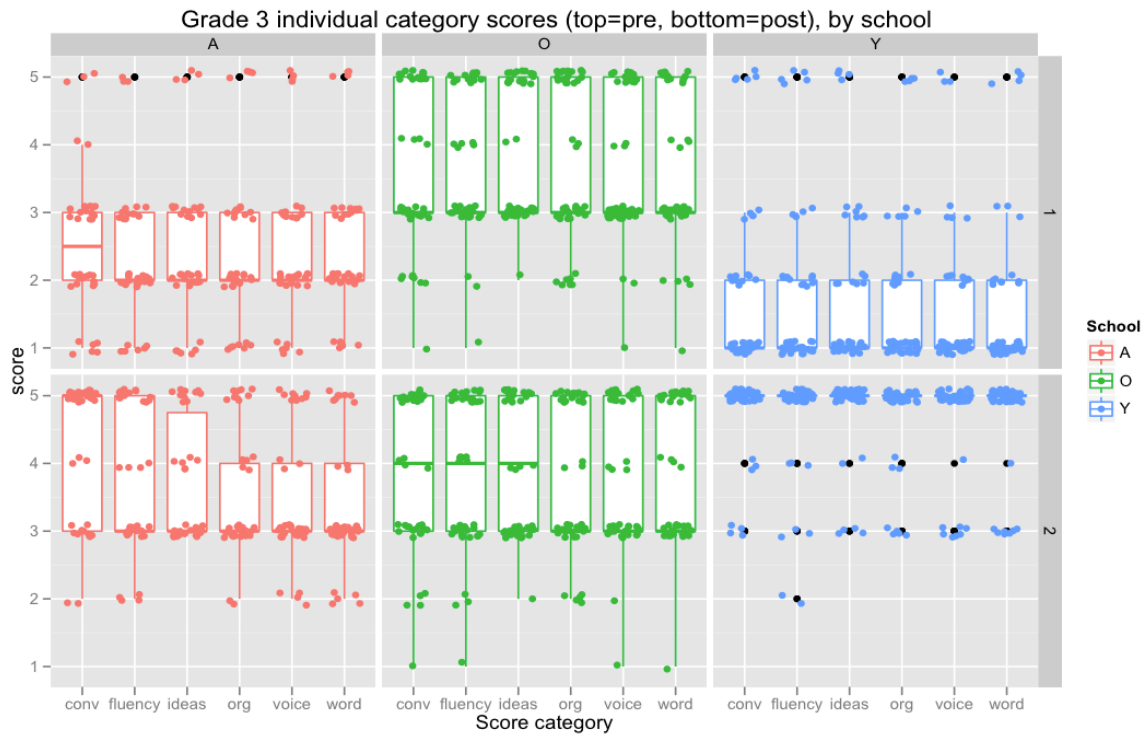
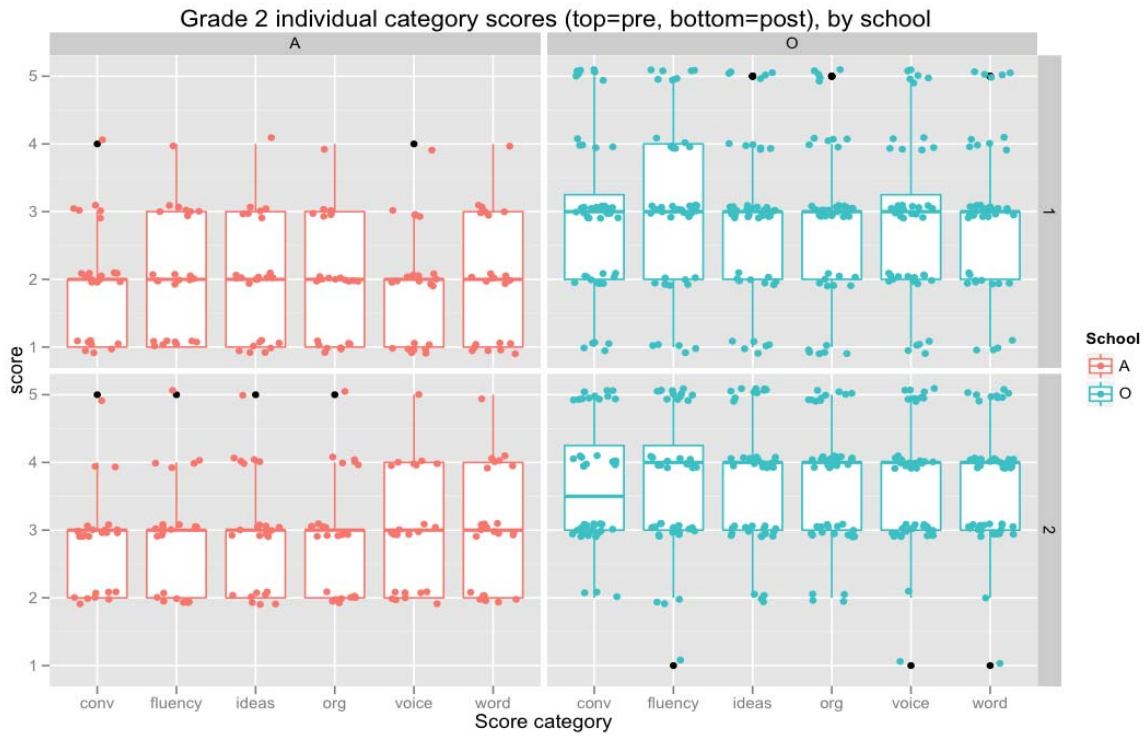


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A. 4 Individual category score improvements, by grade and school. All data is shown.

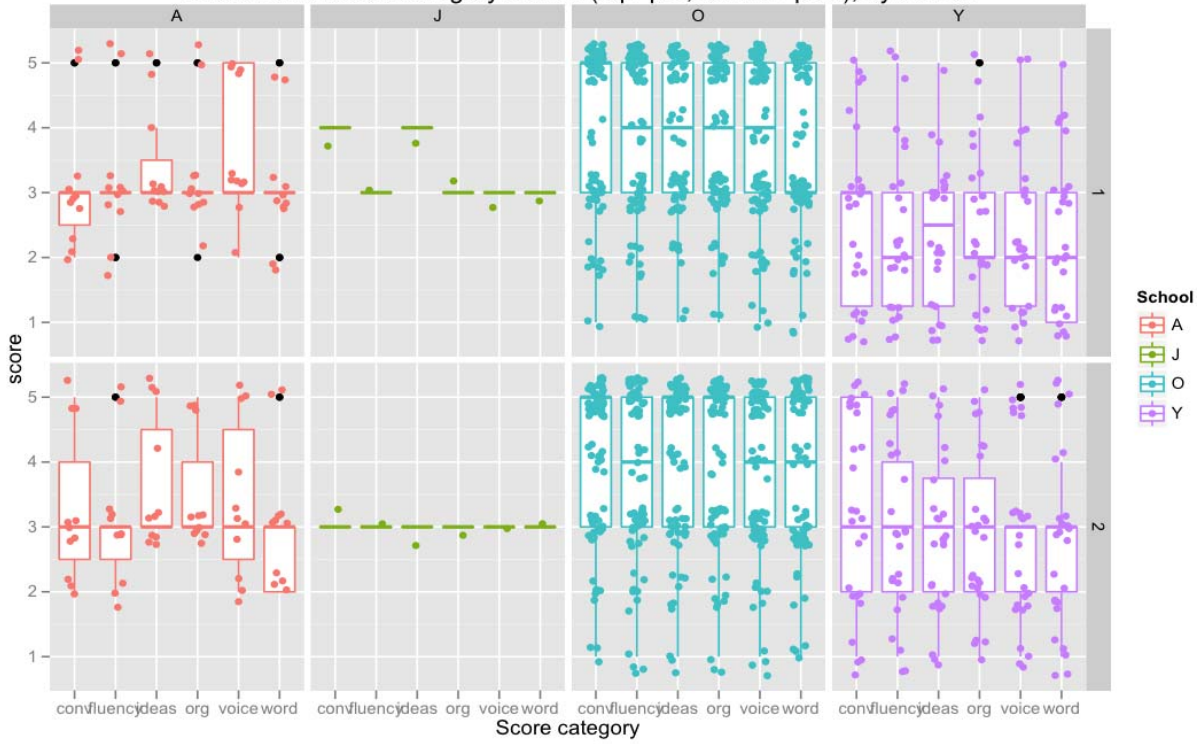


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WriteSteps Report

Grade 4 individual category scores (top=pre, bottom=post), by school



Grade 5 individual category scores (top=pre, bottom=post), by school

