

Jefferson County Public Schools
Expanded Learning Opportunities
2012-13
Final Report

Executive Summary

During the 2012-13 school year, Jefferson County Public Schools (Jeffco) field tested Expanded Learning Opportunities (ELO) in three elementary schools (Mortensen, Normandy, and Pennington Elementary), two middle schools (Creighton and North Arvada Middle School), and two high schools (Brady and Conifer High School). The schools were representative of Jeffco's diverse student population with respect to size, demographics, school level, and location. The seven schools identified various outcomes including increasing student achievement through better management of instructional time, increasing teacher observations, creating more meaningful professional development, and improving student engagement.

An evaluation was conducted on all seven schools that incorporated ELO programs and a more detailed analysis was conducted on three of the seven schools (focus schools, labeled as School A, School B, and School C), which incorporated the most student intensive ELO strategies and interventions. Some of these strategies included double dosing for core classes (School A), out of school time strategies and academic interventions (School B), and extended school day and small group instruction (School C).

This report summarizes the findings from the analyses to determine how Jeffco's ELO initiative was implemented in seven schools. All schools reported positive outcomes, including increases in teacher effectiveness, academic successes for students, better use of instructional time, and higher levels of student engagement.

Analysis of student outcomes in the three focus schools revealed that on average, students enrolled in ELO interventions increased their standardized TCAP and Acuity scores. Overall, 17% of students moved up a TCAP proficiency level in reading, 13% in writing and 11% in mathematics. Additionally, Median student growth for students in the ELO programs increased in all content areas from school year 2011-12 to 2012-13. Compared to a matched group of similar students, the control group showed more improvement than the treatment group, however, the treatment groups started out lower and still made gains in each subject area, with the strongest gains achieved in writing and math. All ELO schools reported positive changes as a result of the initiatives and plan to continue to implement ELO interventions in the future.

Program Implementation

During the 2012-13 school year, Jefferson County Public Schools (Jeffco) field tested the Expanded Learning Opportunity (ELO) initiative in seven of its schools, all of which submitted proposals to the district requesting ELO funds. Participating schools included three elementary schools (Mortensen, Normandy, and Pennington Elementary), two middle schools (Creighton and North Arvada Middle School), and two high schools (Brady and Conifer High School). These schools represent the diverse student population of Jeffco with respect to size, demographics, school level, and location. The seven schools focused on:

- increasing student achievement through better management of instructional time,
- increasing teacher observations,
- creating more meaningful professional development, and
- improving student engagement.

Each school created ELO programs that were specifically designed to meet needs that had been identified by the School Time Use Tool,¹ state and district testing data (TCAP and Acuity), as well as administrative and teacher goals. While each school identified some site-specific goals, one common approach to increasing student achievement included adding extra time before school, after school, or in the summer (see Table 1). Others worked to add more time to the day by reducing passing periods and/or eliminating or minimizing non-instructional activities (assemblies, long announcements, etc.) in an effort to maximize instructional time during the school day. Additionally, some schools utilized ELO funds by adding staff to provide extra support for students and/or teachers. These supports included the creation of additional enrichment classes or providing students with a “double dose” of select core subjects. In addition to student supports, some schools also worked to improve teacher effectiveness by providing training and support for peer led observations and collaboration.

Table 1: ELO Approaches of Jeffco's Schools

	Minimize Non-Instructional Time	Extended Day	Professional Development	Access Periods	Summer Program	New Hires
Mortensen	X	X			X	
Normandy	X	X				
Pennington	X				X	
Creighton	X			X		X
North Arvada	X	X	X	X		
Brady	X	X	X			
Conifer	X		X	X		X

¹ The School Time Use Tool is a resource from the National Center on Time and Learning, intended to assist schools in optimizing their school day. A blank version can be found in Appendix A.

Method

The following three research questions were addressed by the evaluation:

1. What are the common needs and challenges schools experience as indicated by the School Time Use Tool?
2. What are the common approaches that schools are using to create extended learning opportunities?
3. What student outcomes result from the extended learning opportunities?

To answer these research questions, site visits were conducted at each of the schools. Visits focused on viewing interventions in action and on informal conversations with the teachers involved in the interventions. Schools also presented information about their strategies and if applicable, provided testing data that related to specific interventions. Additionally, interview protocols were developed and formal interviews were conducted with principals of the seven schools to gather feedback on program implementation, initial impressions, and to share struggles and successes of the programs. Each school adapted the School Time Use Tool therefore comparable data points across schools were not available; however, the interviews with key stakeholders included questions about their use of the tool and the needs identified by the tool.

Results

Principals of the schools reported many successes of their ELO initiatives, relating to teacher effectiveness, academic success, increases in instructional time, and student engagement. Schools believed that the implementation of ELO initiatives benefited students and teachers and helped to create a positive environment focused on collaboration and student growth. All of the principals/schools involved in the initiative are planning to continue to incorporate ELO strategies and hope to build and increase their programs in the future.

Teacher Effectiveness

Principals made a concerted effort to provide strong professional development for teachers by focus on how to use peer observation to provide meaningful, constructive feedback in a safe environment. Principals noted that ELO programs allowed teachers to get motivated about change, provide specific information about what they wanted to see in classrooms, and provide the professional development that teachers needed to become more effective. As a result, teachers reportedly became more adept at sharing and critiquing each other's use of instructional time, more collaborative, began to "own" their data and use it to drive instruction, and found ways to more effectively connect and communicate with students than before. One principal stated that her teachers were becoming "more effective" and that she felt the programs were "directly impacting instruction and helping us better meet [the] needs of our kids".

One high school utilized a software program for peer observers to track the classroom activities of teachers, including time spent, engagement levels of students, and comments for each activity. This program has been touted for its increase in classroom observations, immediate feedback, and long-term sustainability. Instructional leaders, who are tasked with supporting teachers through observations and subsequent conferences, asserted that there has been a culture shift, resulting in an increased teacher focus on changing their instruction and reflecting on their lesson designs. Moreover, this new structure allows teachers to receive constant feedback in a timely manner, as conversations between teachers and their observers usually occur immediately following each observation. Several schools (approximately ten) plan to replicate this model in the 2013-14 school year.

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In another example, a principal provided time on Friday afternoons for teachers to watch and discuss videotaped lessons, as a response to teachers' requests for more time to collaborate. Data collection reportedly led to a collaborative culture where teachers receive more feedback from their peers and feel more comfortable to call on their peers for support than before.

Academic Success

In addition to increased teacher effectiveness, ELO interventions also helped to create academic successes for students. Student achievement through Acuity, Dynamic Indicator of Basic Early Literacy Skills (DIBELS), the Scholastic Math Inventory (SMI), the Scholastic Reading Inventory (SRI), site-based assessments, and additional measures of student success have been analyzed and reported by schools throughout the year to help gauge the effectiveness of the suggested changes and use of ELO funds. All schools involved in the ELO initiative reported celebrations around student achievement – for example, one school indicated that 14 out of 21 (or 66.7%) of students who attended a summer program increased scores in at least two

One school reported changes in attendance: "our attendance rate [is] 71%; last year it was 61% and our truancy rate just got down to 13%."

assessments based on Basic Early Assessment of Reading (BEAR), Transitional Colorado Assessment Program (TCAP), Acuity and Developmental Reading Assessment 2 (DRA2). Additional academic successes reported by schools include increases in Acuity and DIBELS scores, improvements in math scores on SMIs, and positive gains for ILP students on SRI tests. The principal at one elementary school provided evidence of increased scores

on monthly writing cold prompts and teachers at another elementary school reported that students demonstrate improved writing skills as measured by their school writing continuum. In

addition to academic successes, some schools saw increases in attendance and levels of student engagement as a result of their ELO programs. One school reported changes in attendance: “our attendance rate [is] 71%; last year it was 61% and our truancy rate just got down to 13%.”

Principals have found that these improved results have increased teacher buy-in, as one principal explained, “teachers are seeing higher results than they’ve ever seen... now they believe they can and now they want to.”

Increases in Instructional Time

Another major benefit of the ELO programs (and the School Time Use Tool in particular) was the identification of ways to more effectively use time throughout the school day. Multiple schools reported increases in instructional time, with some saving full days (e.g., one school saved two full days of instructional time) and others greatly increasing their number of contact hours throughout the year (e.g., an elementary school saved 54.5 hours a year for grades K-4 and 83.7 hours a year for grades 5-6). While not all schools were able to make major changes to increase actual instructional hours, ELO has “created a culture in which teachers value every instructional minute they have with students.”

Student Engagement

Principals also found that these ELO interventions have led to increased student engagement. For example, one high school’s software program led to an increased focus on student engagement by documenting how much the students were engaged for each classroom activity. At one elementary school, teachers asserted that the extra time spent during their before-school sessions enabled them to build stronger relationships; one commented that the before-school sessions provided a good community for students who did not have much support at home. Similarly, the teacher of a reading/writing intervention explained that the extra 55 minutes in class with the same students provided a community where students were held more accountable and relationships were created among students and between the students and the teacher. An elementary school’s summer school program provided students with time to adjust to being back in school and helped to prepare them for the start of the year. Finally, one high school saw higher levels of engagement, as determined by increases in the number of graduates and course completions, as well as increases in the number of students at proficient levels in the ACCESS assessments. This school also reported increases in attendance rates and decreases in truancy.

ELO has “created a culture in which teachers value every instructional minute they have with students.”

Challenges

Principals described the challenges they faced when implementing these approaches. A common challenge mentioned by several schools was resistance from teachers. Some teachers struggled with adjusting their schedules to create more instructional time (which often meant switching classes or schedules) and were not in favor of cutting some non-instructional activities.

In addition, in the case of peer observations, many teachers felt uncomfortable with the idea of evaluating and critiquing their colleagues. In order to overcome these challenges, principals worked with their staff to increase awareness by tracking the time spent on various instructional and non-instructional activities (using the School Time Use Tool) to encourage teachers to constantly think of ways to increase instructional time in their classrooms. One principal stated, “It has become a part of our school culture... it’s now part of all of our thinking, it’s what we’re thinking all the time.”

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School Based Interventions for the Focus Schools

The remainder of this report focuses on the student level outcomes at the three focus schools with ELO strategies designed to directly impact student achievement, labeled as School A, School B, and School C. These schools were selected for in-depth analysis, as they implemented the most student intensive strategies of the seven schools in the program. The three schools developed ELO programs that targeted the development of core skills in reading, writing, and/or math. Support programs were designed not only to build essential skills, but also to provide additional support to struggling students. In order to address these needs, the focus schools developed the following approaches:

School A

- Reading/Writing Instructional Model: Language Arts teacher for reading/writing sections for catch-up students
- Access support: Assistant Principal (0.5 FTE) to provide support during Access period to students receiving Insufficient Evidence (IE) grades

School B

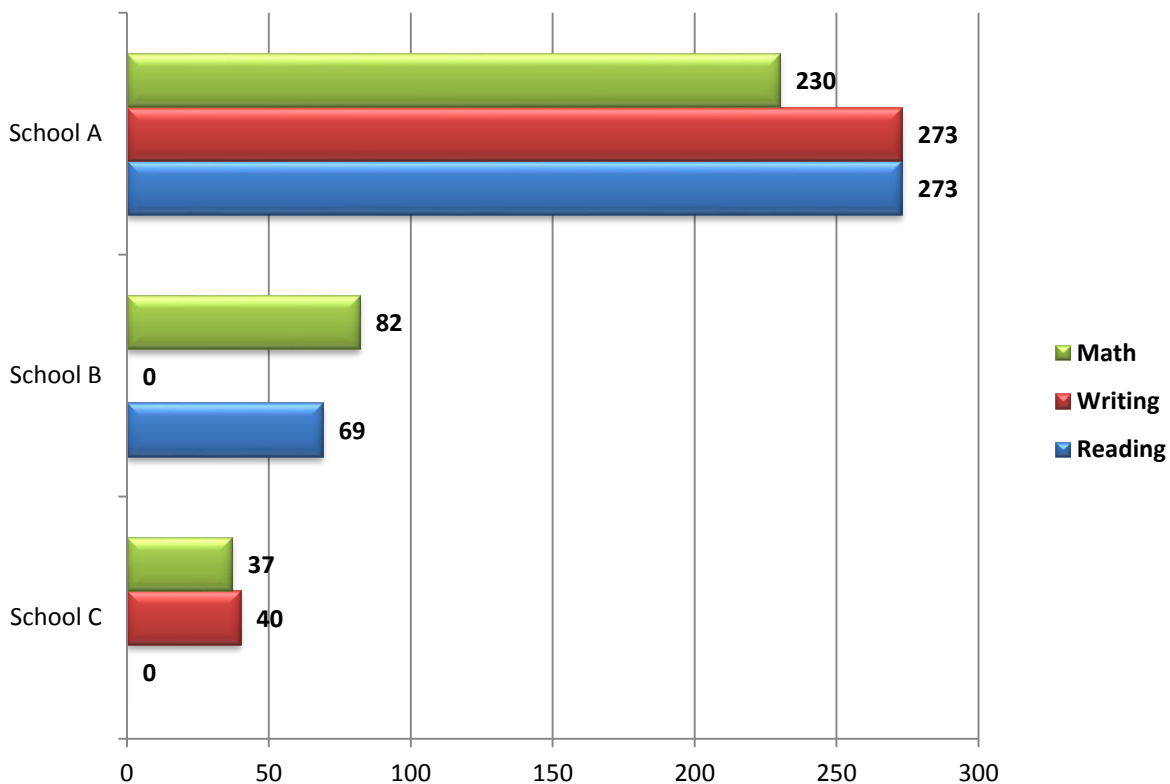
- Before/after school math tutoring: Two teachers available every morning and afternoon to help students with math
- Yearly Progress Pro (YPP): Two teachers available to work with students on YPP three days each week (YPP is an on-line assessment tool that measures student progress, provides specific exercises designed to close achievement gaps, and aims to get students to grade-level proficiency)
- ALEKS and SuccessMaker computer programs (both are on-line learning tools that adapt to individual student needs in order to build skills needed to attain proficiency)
- Learning Lab: Tutors available for students to obtain help during the school day

School C

- TURN: Programs before school with a focus on math and/or writing

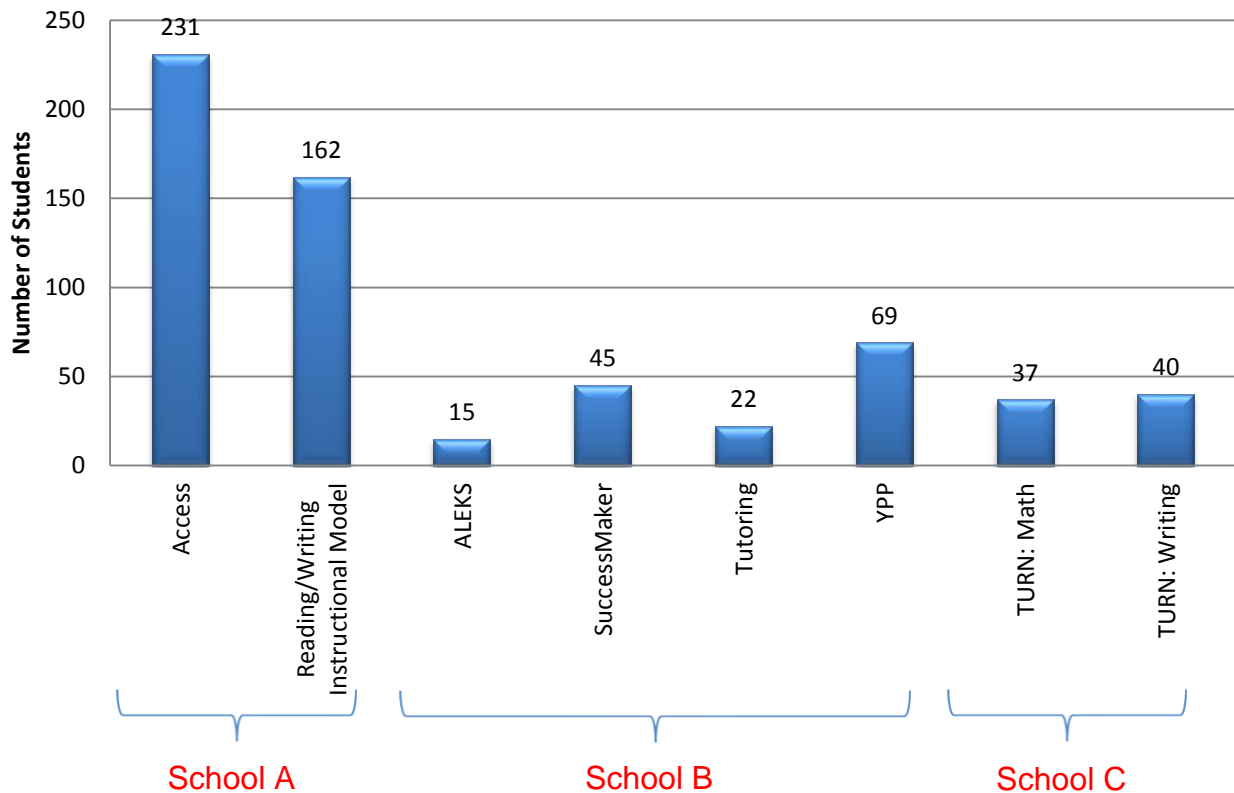
Schools implemented a variety of interventions designed to target skills in reading, writing, and math. For the three focus schools, 342 (72%) students were enrolled in a reading intervention, 313 (66%) were enrolled in a writing intervention, and 349 (74%) were enrolled in a math intervention. Students were selected based on several factors including previous TCAP and Acuity scores, grades, and teacher recommendations. Figures 1 and 2 illustrate the number of students enrolled in reading, writing, and/or math interventions as well as the number of students enrolled in specific interventions at the three focus schools.

Figure 1: Number of Students in ELO Programs by Intervention Subject (n=474)²



² Some students were enrolled in more than one intervention.

Figure 2: Number of Students per Intervention in the Focus Schools (n=474)



Characteristics of Students in ELO Programs in the Focus Schools

Figures 3 and 4 detail the available demographic and grade-level information for students in the focus schools who were enrolled in ELO programs. Of the 443 (out of 474) students for which demographic information and 2012-13 TCAP scores were available:

- 62% (n=273) were eligible for free and/or reduced lunch (FRL)
- 54% (n=238) were minority students³
- 12% (n=54) had an Individualized Education Plan (IEP)
- 52% (n=231) male and 48% (n=212) female
- 6% (n=26) were classified as gifted and talented (GT)
- 19% (n=83) were English Language Learners (ELL)⁴
- 86% (n=383) were middle school students (7th or 8th graders)

³ All non-white students were categorized as “minority” – i.e., American Indian/Alaska Native, Asian, Black/African American, Hispanic/Latino, Native Hawaiian/Other Pacific Islander, and multi-race students.

⁴ Students were classified as “ELL” if they were considered to be Non-English Proficient (NEP), Limited English Proficient (LEP), or Fluent English Proficient (FEP).

Figure 3: ELO Student Demographics (n=443)

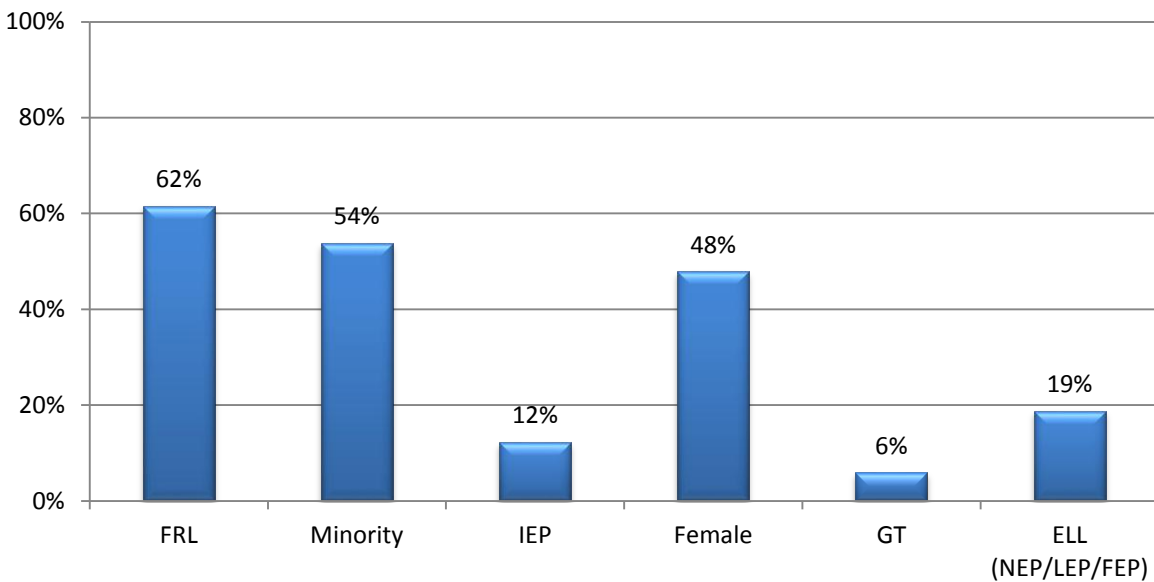
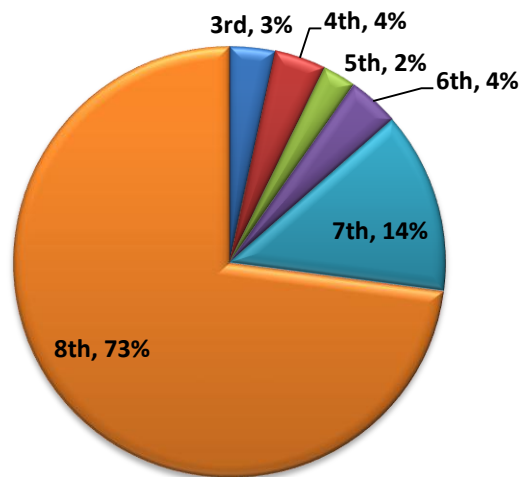


Figure 4: Grades of Students Enrolled in ELO Programs in the Focus Schools (n=443)



Student Level Outcomes

The analysis of the three focus schools included identifying students who participated in ELO strategies and analyzing their outcomes using TCAP data (proficiency levels and growth) and Acuity data from 2011-12 and 2012-13 as common assessments. For the purposes of this report, within-group analyses were conducted that compared TCAP and Acuity data of students before (2011-12) and after (2012-13) the ELO interventions. Additionally, between-group analyses were conducted to compare proficiency levels and growth data for students enrolled in the ELO programs with students who were not enrolled in the programs.

TCAP and Acuity Status Score Comparisons: Pre- and Post-ELO Intervention

The analysis of TCAP and Acuity status scores of ELO students was based on scale scores from TCAP (reading, writing, and math) and Acuity (language arts (LA) and math). To enable comparisons of students in grades with different scale score distributions, these scale scores were standardized by grade using Jeffco's district standard deviation. Standardizing scale scores created a distribution of scores with a mean of 0 and standard deviation (SD) of 1 based on the relative distribution of district scores. Use of the district standard deviation for normalization was used rather than the sample standard deviation so ELO intervention student scores could be compared to score positions of all students in the district as opposed to only those students included in the sample. As evidenced in Tables 2 and 3, the TCAP and Acuity standardized scores of ELO students were negative on average (i.e., below the Jeffco mean of zero), indicating that the ELO sample was scoring lower overall than the Jeffco population. Since these values were negative (using the district standard deviation), ELO students were increasing in proficiency if the value was closer to zero after the ELO intervention (i.e., in 2012-13).

To determine if students' scores changed after participation in ELO, a paired samples t-test was used to compare pre- and post-ELO scores of students who participated in an ELO program(s) in one of the three focus schools in 2012-13. As illustrated in Table 2, TCAP scores for ELO students in 2012-13 (post-ELO intervention) were slightly higher on average than TCAP scores in 2011-12 (pre-ELO intervention). For all three content areas, pre-ELO scores were not significantly different from post-ELO scores (reading: $t(294) = 1.37$, $p = 0.17$, $d = 0.04$; writing: $t(251) = 0.47$, $p = 0.64$, $d = 0.02$; math: $t(296) = 1.81$, $p = 0.07$, $d = 0.05$).

Table 2. Average TCAP Standardized Scores in 2011-12 and 2012-13 for ELO Students⁵

		Mean	SD	t	df	P	Cohen's d
Reading (n=295)	2012-13	-0.73	0.97	1.37	294	0.17	0.04
	2011-12	-0.77	1.04				
	<i>Difference</i>	<i>0.04</i>					
Writing (n=252)	2012-13	-0.55	0.92	0.47	251	0.64	0.02
	2011-12	-0.57	0.86				
	<i>Difference</i>	<i>0.02</i>					
Math (n=297)	2012-13	-0.65	0.86	1.81	296	0.07	0.05
	2011-12	-0.70	0.89				
	<i>Difference</i>	<i>0.05</i>					

Table 3 provides similar results using a paired samples t-test to compare scores on the Acuity test. On average, post-intervention Acuity scores (2012-13) were slightly higher than pre-intervention Acuity scores (2011-12) for Forms A (approximately 0.06 higher on average) and B

⁵ t values represent the probability that two sets of values come from different groups, df (degrees of freedom) signifies the number of values in the calculation that can vary, p values indicate statistical significance of the values, and d (effect size) represents the strength of the relationship between the two variables.

(approximately 0.06 higher on average). For Acuity Form C, however, post-ELO scores were slightly lower than pre-ELO scores (approximately 0.02 lower on average, but not significantly so).

Table 3. Average Acuity Standardized Scores in 2011-12 and 2012-13 for ELO Students

		Mean	SD	t	df	P	Cohen's d
Reading LA Form A (n=287)	2012-13	-0.63	0.97	0.98	286	0.33	0.05
	2011-12	-0.68	1.01				
	<i>Difference</i>	<i>0.05</i>					
Reading LA Form B (n=275)	2012-13	-0.58	0.85	0.85	274	0.40	0.04
	2011-12	-0.62	0.96				
	<i>Difference</i>	<i>0.04</i>					
Reading LA Form C (n=291)	2012-13	-0.69	0.96	0.54	290	0.59	-0.03
	2011-12	-0.67	0.99				
	<i>Difference</i>	<i>-0.02</i>					
Writing LA Form A (n=247)	2012-13	-0.48	0.94	1.09	246	0.28	0.06
	2011-12	-0.54	0.97				
	<i>Difference</i>	<i>0.06</i>					
Writing LA Form B (n=234)	2012-13	-0.46	0.87	0.64	233	0.52	0.03
	2011-12	-0.49	0.95				
	<i>Difference</i>	<i>0.03</i>					
Writing LA Form C (n=248)	2012-13	-0.57	0.95	0.81	247	0.42	-0.04
	2011-12	-0.53	0.96				
	<i>Difference</i>	<i>-0.04</i>					
Math Math Form A (n=286)	2012-13	-0.60	0.89	1.60	285	0.11	0.07
	2011-12	-0.66	1.00				
	<i>Difference</i>	<i>0.06</i>					
Math Math Form B (n=284)	2012-13	-0.52	0.97	2.32	283	0.02*	0.10
	2011-12	-0.63	1.02				
	<i>Difference</i>	<i>0.11</i>					
Math Math Form C (n=287)	2012-13	-0.59	0.87	0.23	286	0.82	-0.01
	2011-12	-0.58	0.91				
	<i>Difference</i>	<i>-0.01</i>					

*Statistically significant at the 0.05 level.

TCAP Comparisons by School: Pre- and Post-ELO Intervention

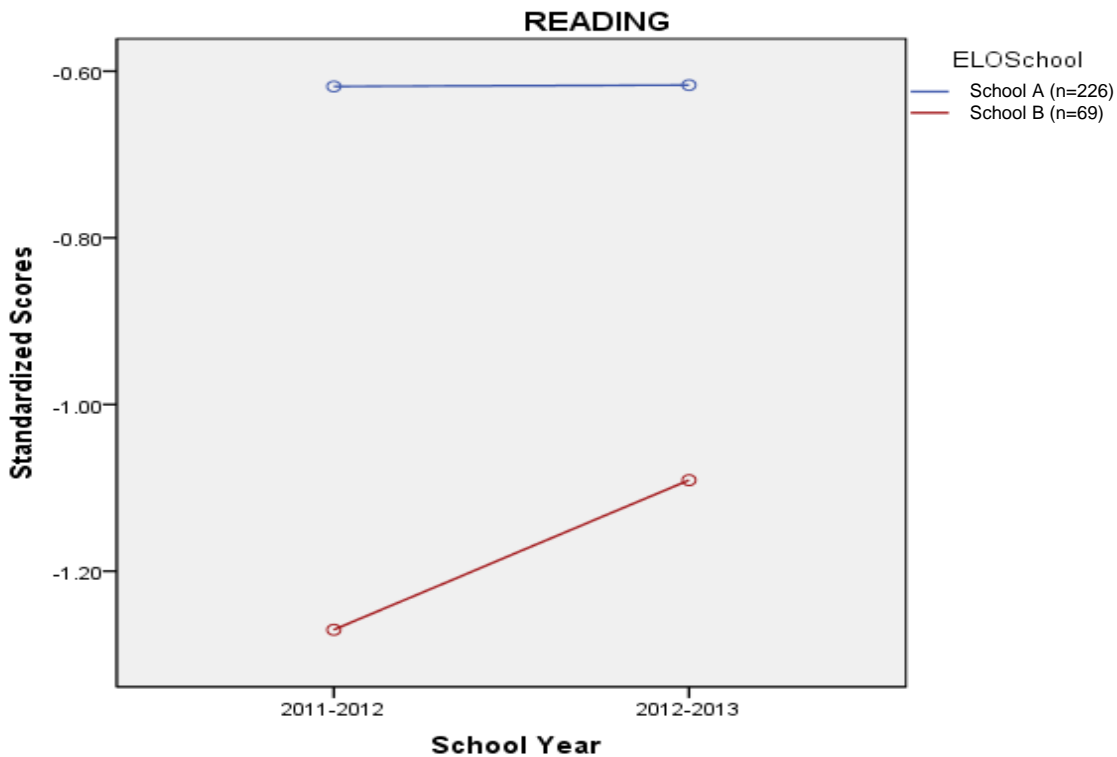
Each of the three schools implemented different ELO intervention strategies (as detailed in Figure 2) and in an effort to determine which school's strategies and interventions may have been most effective, a mixed ANOVA was run to determine if there were differences between standardized scores over time based on the introduction of ELO intervention(s). A comparison

was then made between each school to see how school interventions may have affected performance over time.

Figures 5, 6, and 7 illustrate the average standardized TCAP scores in reading, writing, and math for each of the three schools in 2011-12 and 2012-13. Before the intervention, students in School B scored lower on average than the other two schools, while students in School A scored lower on average than students in School C in writing and higher in math. After the intervention, standardized TCAP scores of students in School B interventions increased in reading and math, scores of students in School A remained approximately the same in all three subjects, and scores of School C students increased in writing and decreased in math.⁶

One school increased TCAP scale scores in reading and math while another increased their TCAP scale scores in writing.

Figure 5: TCAP Reading Standardized Scores by School: 2011-12 to 2012-13



⁶ Note: School B did not implement writing interventions and School C did not implement reading interventions.

Figure 6: TCAP Writing Standardized Scores by School: 2011-12 to 2012-13

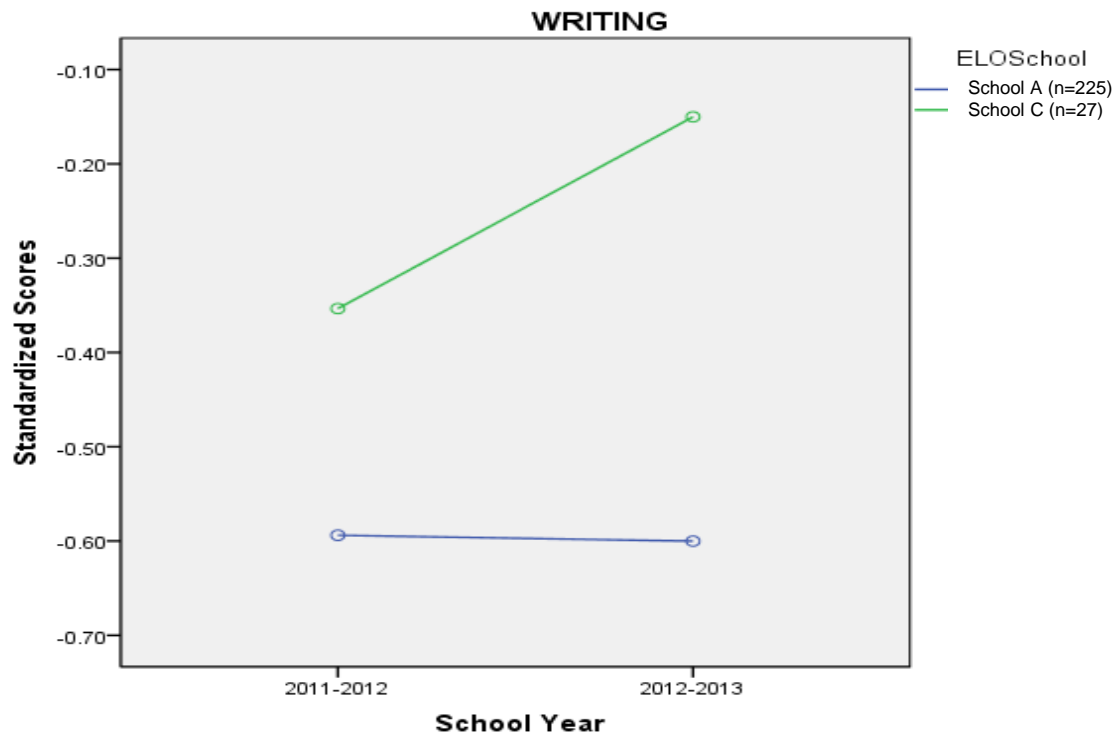
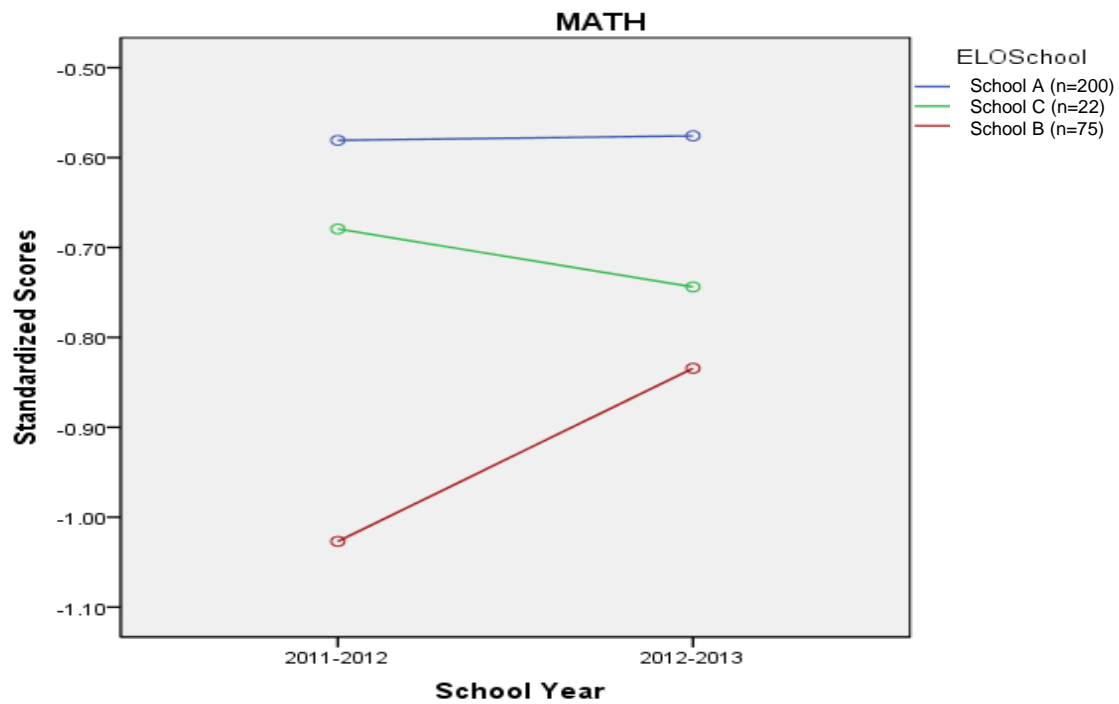


Figure 7: TCAP Math Standardized Scores by School: 2011-12 to 2012-13



TCAP Proficiency Level Change: Pre- and Post-ELO Intervention

Student performance measured by TCAP is categorized into four proficiency levels: Advanced, Proficient, Partially Proficient, and Unsatisfactory. To ascertain the impact of ELO interventions, an analysis was conducted to determine how many ELO students in the three focus schools moved between TCAP proficiency levels from 2011-12 (pre-ELO) to 2012-13 (post-ELO). Figures 8, 9, and 10 illustrate proficiency changes over time by content area (i.e., the percentage of ELO students who moved up one or two proficiency levels, moved down, or stayed in the same proficiency level from 2011-12 to 2012-13). For all three content areas, most students enrolled in the program maintained their proficiency levels from year to year: 71.9% of the students stayed in the same proficiency level in reading, 71.4% in writing, and 69.7% in math. Of the students who have reading TCAP scores in 2011-12 and 2012-13, more students (49 or 16.6%) moved up one or two proficiency levels than down (34 or 11.5%). Of the students who have writing or math TCAP scores in 2011-12 and 2012-13, fewer students moved up one or two proficiency levels than down: 32 (12.7%) vs. 40 (15.9%) for writing, and 33 (11.1%) vs. 57 (19.1%) for math. For all three content areas, results are statistically significant (reading: $\chi^2 = 379.46$, $df = 9$, $N = 295$, $p = 0.00$; writing: $\chi^2 = 148.62$, $df = 9$, $N = 252$, $p = 0.00$; math: $\chi^2 = 354.29$, $df = 9$, $N = 297$, $p = 0.00$).

17% of students moved up a proficiency level in reading; 13% in writing and 11% in mathematics.

Figure 8: Percent of Students Changing Proficiency Levels in Reading TCAP for the Focus Schools: 2011-12 to 2012-13 (n=295)

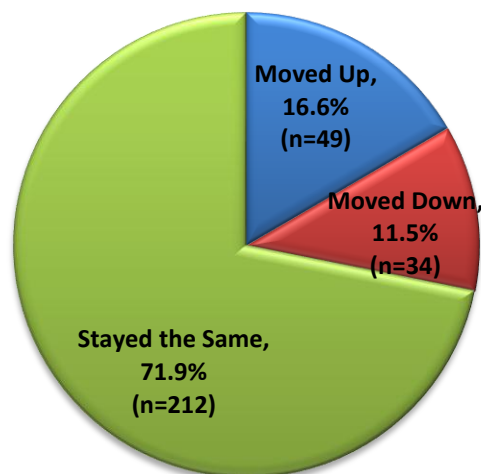


Figure 9: Percent of Students Changing Proficiency Levels in Writing TCAP for the Focus Schools: 2011-12 to 2012-13 (n=252)

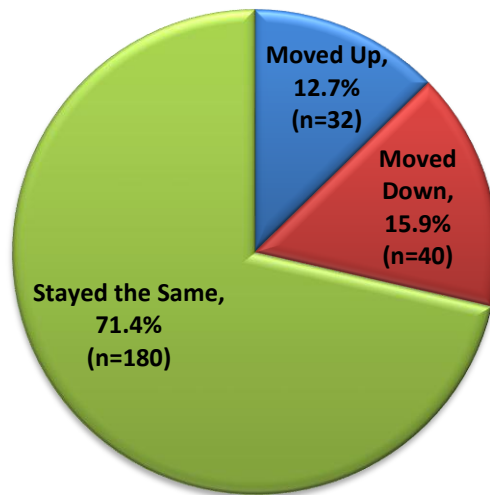
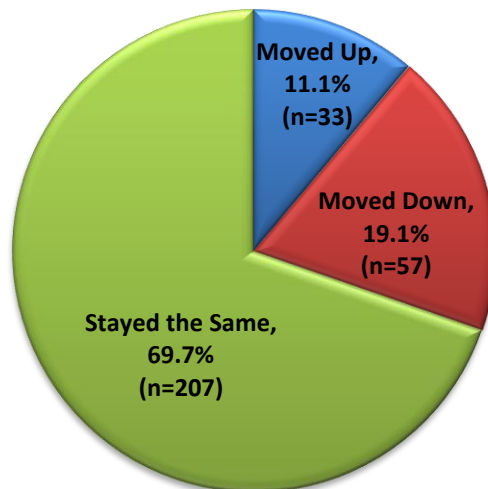


Figure 10: Percent of Students Changing Proficiency Levels in Math TCAP for the Focus Schools: 2011-12 to 2012-13 (n=297)



TCAP Growth Percentile Comparisons: Pre- and Post-ELO Intervention

In addition to TCAP achievement status, it is important to look at student growth to understand how students progress from year to year. Student growth percentiles (SGPs) are calculated using the Colorado Growth Model, which compares students' TCAP scores to scores of similar students (i.e., peers in the state with similar previous scores). The Wilcoxon Signed Rank test was used to assess whether TCAP growth percentiles of ELO students in the three focus schools differed between 2011-12 and 2012-13 (pre-ELO and post-ELO). As shown in Table 4, more than half of the ELO students improved (i.e., "positive" difference) in all three content areas, with a significant difference in reading and math. However, given the positive jump in median rank between testing years and p-value of $p \leq 0.06$ in writing, we can safely say that these differences are substantively significant and very much worth noting.

Median student growth for students in the ELO programs increased in all content areas from school year 2011-12 to 2012-13.

Table 4. Differences in TCAP Growth Percentiles for ELO Students: 2011-12 to 2012-13

	Median: 2011-12	Median: 2012-13	SGP Differences: 2011-12 to 2012-13	Number (%) of Students	Significance
Reading (n=286)	36.0	45.0	Positive	149 (52%)	0.05*
			Negative	128 (45%)	
			Tie	9 (3%)	
Writing (n=234)	32.5	38.0	Positive	125 (53%)	0.06
			Negative	107 (46%)	
			Tie	2 (1%)	
Math (n=280)	47.0	54.5	Positive	159 (57%)	0.02*
			Negative	115 (41%)	
			Tie	6 (2%)	

*Statistically significant at the 0.05 level.

TCAP Comparisons: Between-Groups Analysis

In addition to pre- and post-ELO intervention analyses, between-group analyses were conducted to analyze student level outcomes of ELO students compared to a group of students who did not participated in ELO, using TCAP status data. A propensity score matching process was used to match students who participated in an ELO program(s) in one of the three focus schools (treatment group) to students from outside of the ELO intervention in schools across the district (control group). These students were matched based on 2011-12 TCAP scores for reading, writing, and math.

As part of the between-group analysis, descriptive statistics were run to compare key demographics between treatment and control groups. Table 5 demonstrates comparisons between

treatment and control groups by specific demographic factors. A limiting factor was the inability to match closely on Free and Reduced Lunch and minority status proportion between the treatment and the control group. However, deeper analyses indicated that even though FRL does impact where students fall in terms of performance, the growth trajectory remains the same for treatment and control groups.

Table 5. Comparison of Treatment and Control Groups by Demographic Information

	Treatment (n=389)	Control (n=389)
FRL	64.3% (n=250)	41.1% (n=160)
Minority	53.7% (n=209)	37.3% (n=145)
Female	47.0% (n=183)	48.8% (n=190)
IEP	13.1% (n=51)	19.8% (n=77)
GT	5.9% (n=23)	5.7% (n=22)
NEP/LEP/FEP	20.8% (n=81)	14.1% (n=55)

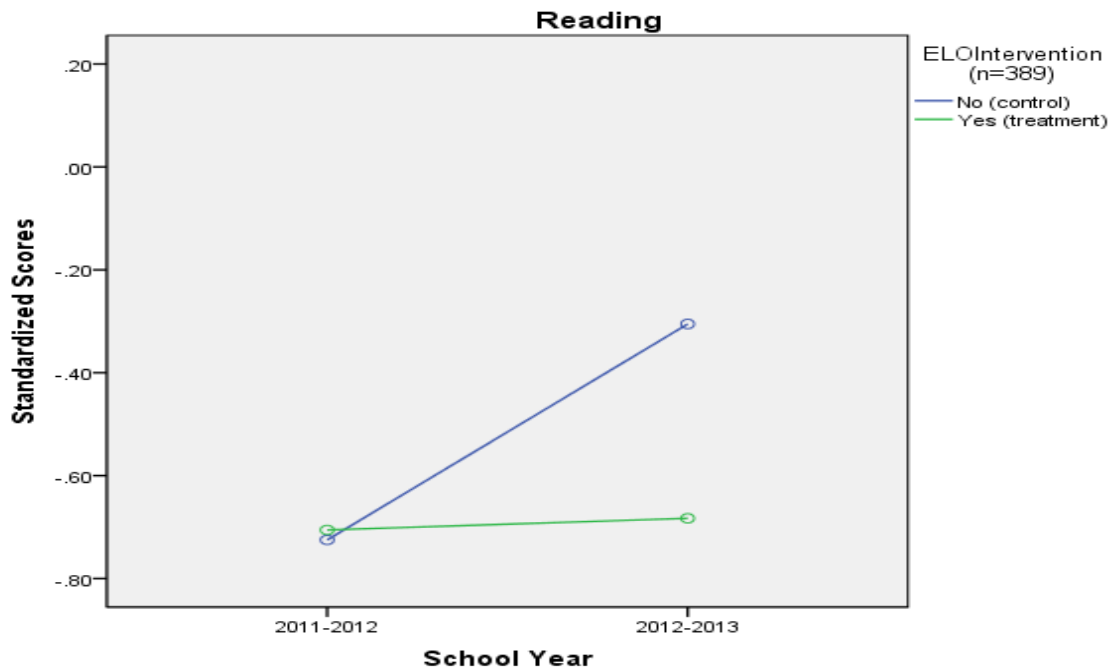
Similar to the pre- and post-ELO intervention analyses, the between-groups analysis was based on TCAP standardized scale scores. An independent samples t-test was used to compare 2012-13 TCAP scores of students in the treatment and control groups. Table 6 illustrates that on average, TCAP scores for the treatment group were lower than TCAP scores for the control group, for all three content areas (reading: $t(389) = 5.13$, $p = 0.00$, $d = -0.36$; writing: $t(389) = 3.53$, $p = 0.00$, $d = -0.26$; math: $t(389) = 2.39$, $p = 0.02$, $d = -0.17$).

Table 6. Average TCAP Standardized Scores in 2012-13 for Treatment and Control Groups

		Mean	SD	t	df	p	Cohen's d
Reading (n=389)	Treatment	-0.68	0.98	5.13	776	0.00	-0.36
	Control	-0.31	1.07				
	<i>Difference</i>	<i>-0.37</i>					
Writing (n=389)	Treatment	-0.65	0.89	3.53	776	0.00	-0.26
	Control	-0.41	0.96				
	<i>Difference</i>	<i>-0.24</i>					
Math (n=389)	Treatment	-0.65	0.85	2.39	296	0.02	-0.17
	Control	-0.50	0.94				
	<i>Difference</i>	<i>-0.15</i>					

Figures 11, 12, and 13 illustrate growth in TCAP standardized scores between the treatment and control groups for the 2011-12 to 2012-13 school year. On average, both groups scored higher in 2012-13 in all subject areas, although the control group showed more improvement than the treatment group. The treatment group made gains in each subject area, with the strongest gains achieved in writing and math.

Figure 11: TCAP Reading Standardized Scores for Treatment and Control Groups: 2011-12 to 2012-13



Although the control group showed more improvement than the treatment group, the treatment groups started out lower and still made gains in each subject area, with the strongest gains achieved in writing and math.

Figure 12: TCAP Writing Standardized Scores for Treatment and Control Groups: 2011-12 to 2012-13

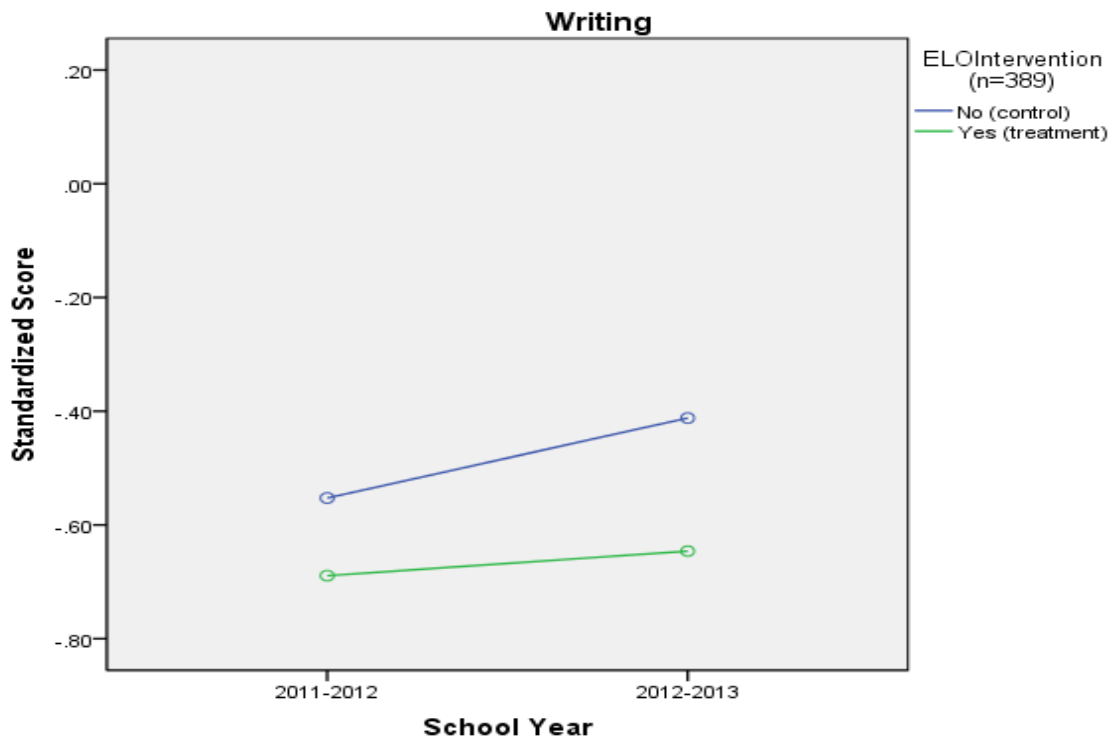
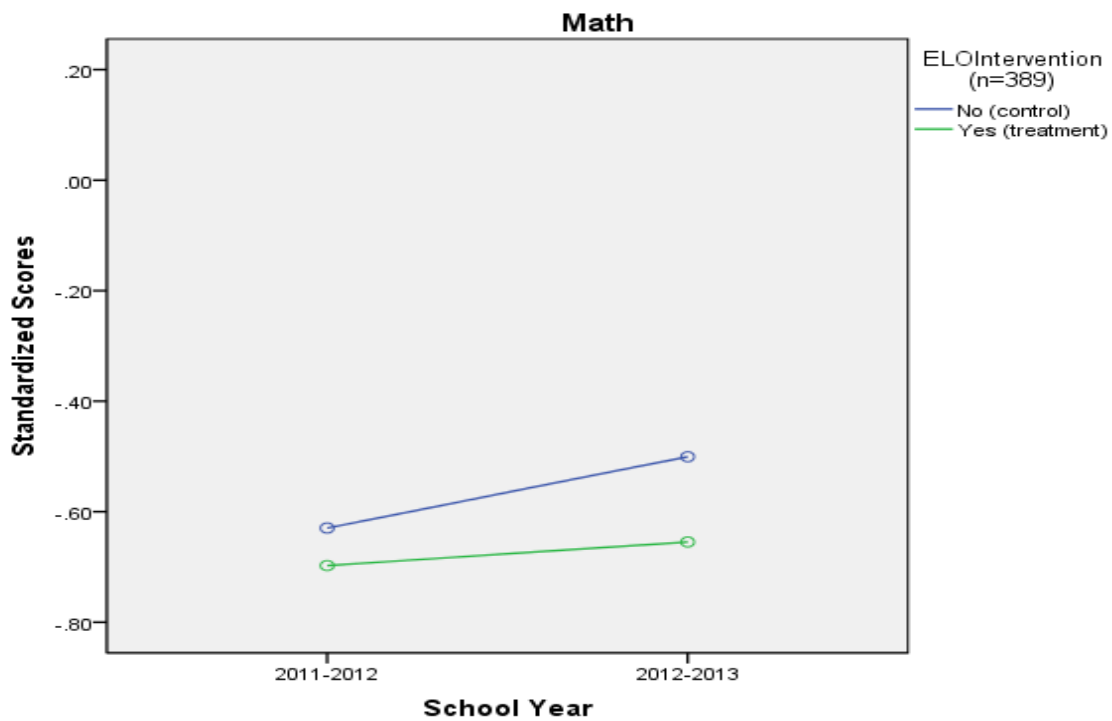


Figure 13: TCAP Math Standardized Scores for Treatment and Control Groups: 2011-12 to 2012-13



Summary

- All schools participating in the ELO initiative reported positive outcomes, including increases in teacher effectiveness, academic successes for students, better use of instructional time, and higher levels of student engagement.
- On average, standardized TCAP and Acuity scores of ELO students were slightly higher after the ELO intervention than before the intervention, but not significantly different.
- TCAP scores of students in School B interventions increased in reading and math, scores of students in School A remained approximately the same in all three subjects, and scores of School C students increased in writing and decreased in math.
- Most of the ELO students stayed in the same proficiency level from 2011-12 to 2012-13.
- More than half of the ELO students improved in all three content areas, with a significant difference in reading and math.
- When comparing between treatment (ELO) and control (non-ELO) groups, the ELO treatment group did not outperform the control group.

Limitations of the Study

Initial analysis of the ELO programs conducted at the three focus schools has not yielded statistically significant evidence that would indicate the success of the ELO program compared to similar students at other schools. However, feedback from participating schools suggests positive student outcomes anecdotally.

The lack of evidence does not necessarily imply that the ELO programs are ineffective, but in fact may be due to a number of limitations surrounding the study. Some schools did not keep accurate attendance or participation records, which made it impossible to set fidelity criteria for attendance or hours completed in an intervention. In addition, schools implemented different types of programs at varying levels of intensity – for instance, some schools implemented interventions throughout the school day and other schools held programs before or after school. Moreover, students varied in their involvement in ELO programs. For example, some students participated for one trimester while other students participated in multiple interventions during the entire year.⁷ It is also important to note that this is the first year of ELO implementation, so one should not expect to see major changes in student level outcomes.

In addition to limitations in the design of the program, between-school analyses were also limited because there was no way to determine the accuracy of the control group. Although matches were based on comparable 2011-12 TCAP scores, there was no information available on additional intervention programs outside of the scope of ELO, which may have influenced student performance. It is also questionable if TCAP is the appropriate test to measure the potential effects of the ELO programs. Future evaluations may need to include more time

⁷ Analyses were conducted that took into account the ELO involvement of students, but results did not indicate a difference between varying lengths of time.


sensitive measures of change and could also need to include non-standardized outcome measures such as attendance or behavior.

Conclusion

The impact of ELO interventions was difficult to determine based on a number of confounding factors. Program design and implementation, lack of fidelity criteria, and the ability to have a true control group created unforeseen issues with the quantitative analysis, resulting in challenges determining true program effectiveness. Although much of the initial analysis did not show statistically significant results, the qualitative pieces included in this report demonstrate that ELO programs are benefiting schools and students in a variety of ways. Principals reported increased awareness of their use of instructional time in the classroom, schools are working to build more collaborative environments, and supports are being created to ensure the development of best teaching practices. Additionally, it was reported by principals and teachers that each of these developments has enabled teachers to build stronger relationships with their students and create a sense of community in the classroom that has led to improved student engagement.

Appendix A

School Time Use Tool

																			
Quality Time Analysis Tool Calculating Time Spent Weekly and Annually																			
SECTION 1: CALCULATING TOTAL ALLOCATED SCHOOL TIME																			
Standard School Day		Start time:																	
		End time:																	
		#																	
		Standard Days/Week:		<div>Total Minutes/Day:</div>															
Early Release (ER) Days		Start time:																	
		End time:																	
		# Early Rel. Days/Week:		<div>Total Minutes/Release Day:</div>															
				<div>(Avg.)</div>															
School Year		# Std. Days:																	
		# ER Days:		<div>Required Annual Hrs.:</div>															
								Time Tracker:											
SECTION 2: CALCULATING WEEKLY ALLOCATED SCHOOL TIME																			
ACADEMICS/ACADEMIC SUPPORT				NON-CORE ACADEMIC				OTHER											
		%				%				%									
		<i>Minutes Allotted</i>				<i>Minutes Allotted</i>				<i>Minutes Allotted</i>									
		<i>/ Week Time</i>				<i>/ Week Time</i>				<i>/ Week Time</i>									
Core Academics				Enrichment/Non-Core Acad.															
English Language Arts				Physical Education				Lunch/Recess											
Mathematics				Art				Transitions b/t classes											
Science (incl. labs)				Music				Study Halls/Homework											
Social Studies				Computers/Technology				Homeroom											
Foreign Language				Other				Other											
Other				Other				Other											
Academic Support				Social/Emotional Support															
Tutoring				Community Bldg. Activity															
Remedial classes				Advisory															
Targeted Support				Other															
Other																			
Total Weekly Allotted				Total Weekly Allotted				Total Weekly Allotted											
Hours/Week				Hours/Week				Hours/Week											
Hours/Day (Avg.)				Hours/Day (Avg.)				Hours/Day (Avg.)											

SECTION 3: ESTIMATING WEEKLY NON-PURPOSED TIME					
ACADEMICS/ACADEMIC SUPPORT		NON-CORE ACADEMIC		OTHER	
<div> <div>%</div> <div>Minutes / Week</div> <div>Allotted Time</div> </div>		<div> <div>%</div> <div>Minutes / Week</div> <div>Allotted Time</div> </div>		<div> <div>%</div> <div>Minutes / Week</div> <div>Allotted Time</div> </div>	
In-class Transitions		In-class Transitions		NOTE: Because "Non-Purposed Time" by definition means a shift from its intended purpose (i.e., either Academics or Non-Core Academics) to Other, data are not entered separately here, but accounted for by totaling the amounts entered in the other two categories.	
Misc. interruptions		Misc. interruptions			
P.A. Announcements		P.A. Announcements			
Estimated Non-Purposed		Estimated Non-Purposed		Total Estimated Non Purposed	
SECTION 4: ESTIMATING ANNUAL REDIRECTED TIME					
ACADEMICS/ACADEMIC SUPPORT		NON-CORE ACADEMIC		OTHER	
		<div> <div>%</div> <div>Hours/ Year</div> <div>Allotted Time</div> </div>		<div> <div>%</div> <div>Hours/ Year</div> <div>Allotted Time</div> </div>	
NOTE: Because the tool assumes that all "Redirected time" is taken away from the Academics category, no data are entered here.		Assemblies		Mandated Testing	
		Other Schoolwide Events		Transitional Days	
		Field Trips		Transportation to Field Trips	
				Other Events	
				Early Release Day Reduction	
		Total		Total	
Est. Annual Time		Est. Annual Time		Est. Annual Time	
SECTION 5: ANALYSIS OF ACTUAL TIME SPENT					
ACADEMICS/ACADEMIC SUPPORT		NON-CORE ACADEMIC		OTHER	
By Week		By Week		By Week	
Minutes/Week		Minutes/Week		Minutes/Week	
Percent of Weekly Minutes		Percent of Weekly Minutes		Percent of Weekly Minutes	
By Year		By Year		By Year	
Hours/Year		Hours/Year		Hours/Year	
Percent of Annual Hours		Percent of Annual Hours		Percent of Annual Hours	