



**The Impact of Beyond the Bell's  
Language in Action Program on  
California English Language Development  
Test (CELDT) Scores of English Learners**

**2012-13 to 2014-15**

**Prepared for**

**Los Angeles Unified School District**

**Beyond the Bell Branch**

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## Summary

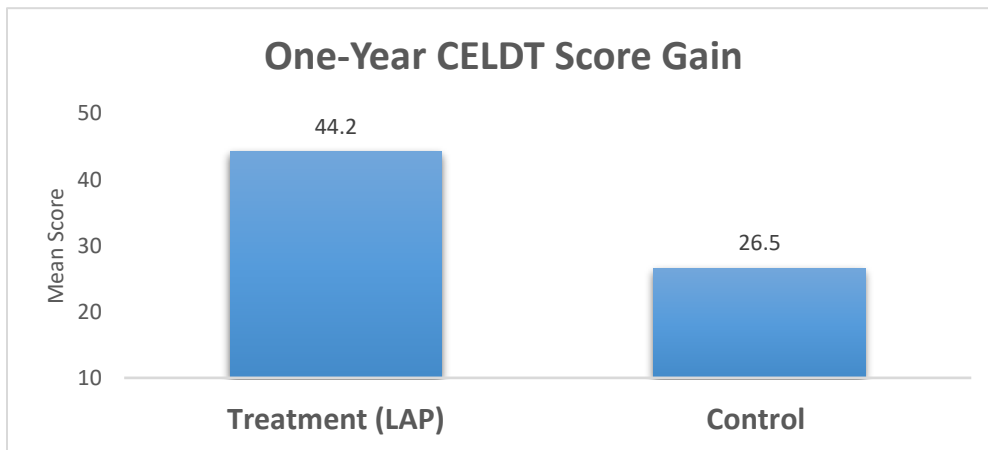
Beyond the Bell (BTB) initiated the 15-session *Language in Action Program (LAP)* as part of a broader after-school program to help ELs reach academic and linguistic proficiency while attending high school. *Language in Action* provides opportunities for ELs to practice language through authentic social interaction while engaged in group service-learning projects and peer-mediated collaborative learning.

Using a quasi-experimental matched pair design, the California English Language Development Test (CELDT) score gains of 732 English Learners (ELs) who participated in BTB's *Language in Action Program* were compared with a carefully matched control group of ELs who participated in BTB's ASSETs program, but did not participate in *Language in Action*.

The treatment group participated in *Language in Action* for one of the years included in the study (2012-13, 2013-14, or 2014-15). Control group students were matched on a variety of characteristics including baseline CELDT score. The outcome compared was change in CELDT score between the fall semester prior to and the fall semester immediately following the participation year.

**In summary, the one-year CELDT score gain of *Language in Action* participants was 17.7 points greater than the gain of ELs who participated in BTB's ASSETs program, but not in *Language in Action*.**

*Language in Action* participants' mean one-year CELDT score increase (M=44.2) was significantly greater than the mean increase of the control group (M=26.5),  $t(731) = 7.37$ ,  $p < 0.001$ ,  $d = 0.38$ . These findings support after-school service-learning and peer-mediated collaborative learning as effective instructional approaches for second language development.



## Background

Service-learning has become popular in schools across the nation. Different from traditional community service, service-learning infuses academic learning into hands-on service projects (Furco, 2002). Although not originally used in EL programs, service-learning has emerged as an effective instructional approach for second language development (Falasca, 2010). The flexible scheduling and informal environment of after-school programs provide the conditions that service-learning projects often require.

There are several reasons that service-learning may enhance the literacy development of second language learners. First, service-learning offers EL students opportunities for collaborative learning, a form of peer-mediated learning. In a meta-analysis of 28 experimental and quasi-experimental studies, peer-mediated learning was more effective in improving literacy outcomes for ELs than individualized or teacher-centered learning, with a mean effect size of .486 (Cole, 2014). The collaborative learning approach focuses on “completion of a complex task” with students “left to their own devices to divide the labor, develop relations of power and authority, and to navigate task demands” (Cole, 2014 p. 360). Service-learning fits this description of collaborative learning, as small groups of students identify a need in their local community and work collectively to address it.

Peer-mediated, collaborative learning finds its roots in Vygotsky’s (1980) sociocultural theory of language development and Long’s (1981) *Interaction Hypothesis*, both suggesting that language learning is a socially mediated process. As students work collaboratively in a service-learning project, they are able to, through purposeful interaction, scaffold one another toward improved literacy (Lantolf, 2000; Vygotsky 1980). Interaction focuses learners’ attention on language and increases motivation for learning more powerfully than individualistic or teacher-centered approaches to instruction (Long, 1981; Krashen & Terrell, 1983).

Use of language in personally meaningful contexts created by student-driven service-learning projects also increases students’ motivation for learning (Willems & Gonzalez-DeHass, 2012). Service-learning projects provide much greater opportunity for authentic language output through multiple modalities (speaking, listening, reading, and writing) than traditional classroom settings. Typical service-learning projects incorporate 1) *reading* as students gather and familiarize themselves with information on a chosen topic of interest, 2) *speaking* and *listening* as students interact with each other, adult facilitators, community partners, or school and city officials during the project, and 3) *writing* as students take notes during their project and engage in adult-facilitated reflective writing about their experience at the conclusion of the project.

Most importantly, the service-learning project provides a safe haven for individuals to engage in extended oral language practice and to build confidence speaking English. ELs can make significant gains in vocabulary and syntax through interactions occurring as part of the project (Falasca, 2010). Service-learning projects can help second language learners find their voice not only in academic contexts, but also in their communities (Falasca, 2010).

## Purpose of the Study

The Beyond the Bell Branch (BTB) of the Los Angeles Unified School District (LAUSD) initiated the *Language in Action Program* (LAP) as part of the after-school program to help EL students reach academic and linguistic proficiency while attending high school. *Language in Action* incorporates service-learning as a vehicle for peer-mediated language development. The current study tests the hypothesis that peer-mediation within the context of service-learning in an after-school program will enhance language development among high school ELs.

To test this hypothesis, the impact of Beyond the Bell's *Language in Action Program* on ELs was examined at 59 high schools between the 2012–13 and 2014–15 school years. The outcome measured was the performance of ELs on the California English Language Development Test (CELDT). Outcomes for a treatment group of 732 ELs who were *Language in Action* participants were statistically compared with those of carefully matched control groups of ELs who did not participate in *Language in Action*, but who did participate in the general after-school program. Changes in students' CELDT scores were measured between the fall prior to and the fall immediately following treatment group students' participation in *Language in Action*.

## Context of the Study

In LAUSD, students classified as ELs account for approximately 26% of the total K–12 enrollment of which 93% speak Spanish as their primary language (California Department of Education, 2014–15). LAUSD's Beyond the Bell Branch operates California's largest after-school program consortium, which includes programs at 73 high schools serving approximately 85,000 students annually, of which 15% are ELs.

Beyond the Bell initiated the after-school *Language in Action Program* to help EL students reach academic and linguistic proficiency while attending high school. The program design addresses factors contributing to the underachievement of ELs by training staff in language development and academic language, offering ELs extended time for oral practice, and inviting them to participate in other after-school activities with English-fluent peers. The *Language in Action* is an eleven week, 15-session program that features the following components, incorporating opportunities for social interaction, collaborative project-based learning, and service-learning:

1. **Immersion Week:** The program begins with an intensive, five-day, Immersion Week during which EL students build relationships with staff and peers and participate in an activity-based curriculum after school that is designed specifically to improve speaking and listening skills and promote their continued involvement.
2. **Follow-up Sessions:** Following Immersion Week, EL students participate in 10 follow-up sessions where written and oral English skills are practiced using a project-based curriculum that includes leadership, self-reflection, arts and crafts activities, and a service-learning project. These activities, scheduled regularly throughout the school year during the after-school program, are designed to further develop language skills using Specifically Designed Academic Instruction in English (SDAIE) strategies. Peer mentors and after-school program staff receive SDAIE training.
3. **Service-Learning Project:** A service-learning project is embedded in the 10 follow-up sessions. During the first eight weeks, students plan their service projects and develop English skills

through project-related activities such as writing a business letter or e-mail or making business calls to engage local community partners. In the ninth week, students conduct their service project. In the 10th week, students engage in a reflection activity designed to promote written and oral English skills. Service-learning projects conducted at individual high schools have included campus beautification, anti-bullying campaigns, food and clothing drives, advocacy for pet adoption, and writing narratives for picture books and reading them to students at local elementary schools.

4. **Culminating Event:** EL students participate in a College Day held at a local university where students celebrate their achievements, give presentations regarding their service-learning projects, meet EL students from other schools, and take a campus tour.

Beyond the Bell subcontracts with two experienced youth development agencies (arc and EduCare), to deliver the *Language in Action Program*. These agencies train and collaborate with staff from community-based organizations (CBOs) that operate the broader after-school program at each high school. Beyond the Bell consultants, who are retired LAUSD principals, partner with these youth development agencies to provide ongoing professional development, coaching, and monitoring for after-school program staff.

### **Subjects**

Subjects were students designated as English Learners (ELs) in grades 9–11 attending high schools within the LAUSD at which federally-funded After School Safety and Enrichment for Teens (ASSETs) programs are operated through Beyond the Bell. EL students were selected for inclusion in one of two groups: a treatment group of 732 *Language in Action* participants and a carefully matched control group of 1,977 students who did not participate in *Language in Action*, but who did participate in the general after-school program. Control group students attended the same schools and were in the same grade levels as the *Language in Action* participants. They were also matched based on similarities in gender, ethnicity, free/reduced meal status, English learner (EL) status, special education status, involvement in gifted and talented education, and baseline score on the California English Language Development Test (CELDT).

### **Treatment Group Selection**

The treatment group was comprised of high school EL students who participated in *Language in Action*, for a minimum of four days, during one of the school years for which outcomes were analyzed in this study (2012–13, 2013–14, or 2014–15). Since the *Language in Action Program* lasts for 15 sessions and is completed within one school year, each participant was included in the treatment group for only one of the three years of the study.

Inclusion in both the treatment and control groups required the availability of participation year data for all matching variables. The participation year for each match was defined as the year in which the treatment student participated in *Language in Action*. Inclusion in treatment and control groups also required a CELDT score for the fall prior to and immediately following the participation year. Since the CELDT is given at the beginning of the fall semester, the CELDT score from the fall of the school year in which the treatment student participated in *Language in Action* was used as a baseline measure. The CELDT score from the fall semester of the school year after which the treatment student participated in

*Language in Action* was considered the follow-up measure. Change in CELDT score, which was the outcome analyzed, was calculated as the difference between the baseline and follow-up measure.

Table 1 shows the number of students included in the treatment group from each year of the study, specifying the years of the baseline and follow-up measures.

Table 1

*Number of Language in Action Participants Included in the Treatment Group by Year*

Participation Year	Baseline CELDT Exam	Follow-up CELDT Exam	Treatment Group Sample Size
2012-13	Fall 2012	Fall 2013	<i>n</i> = 264
2013-14	Fall 2013	Fall 2014	<i>n</i> = 271
2014-15	Fall 2014	Fall 2015	<i>n</i> = 197

### **Control Group Selection and Matching**

The control group was comprised of EL students who did not participate in *Language in Action*, but who did participate in Beyond the Bell’s general after-school program. They were matched with students in the treatment group using the following criteria. All matching variables were from the treatment student’s participation year.

1. They were matched directly based on school attended, grade level, gender, ethnicity, free/reduced meal status, EL status, and baseline CELDT score (within one third of a standard deviation).
2. They were also matched using a weighted propensity score based on grade level, gender, ethnicity, free/reduced meal status, regular school attendance rate, EL status, special education status, and involvement in gifted and talented education. The weights assigned to these factors were generated using a regression model predicting the likelihood (or “propensity”) that each student would enter the *Language in Action* program the following year. Frequent program attenders were then matched with comparison group students who had similar predicted propensity.

Up to five matching control students were identified for each frequent program attender. When more than five comparison students were available by direct match, weighted propensity scores were used to select the nearest five matches. Following this procedure, one control student could serve as a match for more than one *Language in Action* participant from the same school. To avoid overweighting the results for control students, their results were averaged to form a one-to-one comparison with results for *Language in Action* participants. Therefore, the control “student” in each matched pair was actually a composite of up to five students rather than a single student. This substantially reduces sampling error in identifying the control outcomes against which outcomes of *Language in Action* participants were compared. Table 2 compares characteristics of frequent attenders in the treatment group with those of students in the matched control group.

Table 2

*Baseline Characteristics for Language in Action Participants and Matched Controls*

	Frequent Participants ( <i>n</i> = 732)	Matched Controls ( <i>n</i> = 1,977)	
Outcomes	<i>M</i>	<i>M</i>	Difference
CELDT score	507.95	512.43	-4.48
Absences/days enrolled	2.6%	5.7%	-3.2%
CELDT Performance Level 5	0.4%	0.0%	0.4%
CELDT Performance Level 4	7.2%	4.5%	2.7%
CELDT Performance Level 3	37.3%	35.1%	2.2%
CELDT Performance Level 2	34.8%	37.7%	-2.9%
CELDT Performance Level 1	20.2%	22.7%	-2.5%
Characteristics	%	%	Difference
Hispanic	96.7%	98.6%	-1.9%
Black	0.3%	0.2%	0.1%
Asian	2.6%	1.0%	1.6%
White	0.0%	0.0%	0.0%
Other ethnicity	0.4%	0.3%	0.2%
Male	50.5%	54.9%	-4.4%
Female	49.5%	45.1%	4.4%
Free/reduced meal	83.2%	88.2%	-5.0%
Special education	8.5%	10.5%	-2.0%
Gifted/talented	0.0%	0.0%	0.0%
Limited English proficient	100%	100%	0.0%
Parent education			
HS grad or above	9.4%	16.0%	-6.6%
Unknown or not HS grad	21.7%	43.7%	-21.9%

The number of days that students attended Beyond the Bell’s general after-school program was not included in the matching criteria. Including this as a matching variable would have severely limited the sample size, as *Language in Action* participants tended to participate more frequently in the general after-school program than other ELs. In this study, *Language in Action* participants attended a mean of 20.3 days in the general after-school program compared with 8.3 days for students in the control group. However, all students in the control group attended the after-school program during the year for which outcomes were analyzed, and had the highest predicted propensity for participating in *Language in Action*. Both of these factors should reduce self-selection bias.

**Dependent Measure**

Performance on the California English Language Development Test (CELDT), measured by change in mean scores between baseline and follow-up years, was used as the dependent measure in the study. The CELDT was used in California schools to identify students who needed improvement in speaking, listening, reading, and writing in English. In California, students in grades K–12 designated as ELs are required by law to take this test each year in the fall and are allowed to retest multiple times a year until they achieved a score high enough to be reclassified as fluent English proficient.

Change in mean CELDT score for the treatment group was compared with the mean change for matched controls. The net gain was reported as the difference in mean change between the two groups (mean change of treatment group minus mean change of control group).

**Findings**

A paired samples *t*-test was used for comparing group means, with an alpha level of .05 used to determine statistical significance. A paired samples *t*-test may be used on a matched-pairs sample when an unpaired sample is used to form a paired sample based on additional variables measured along with the dependent variable of interest in order to reduce or eliminate confounding effects (David & Gunnink, 1997). Cohen's *d* was used as the measure of effect size, calculated as the difference in the two groups' means divided by the average of their standard deviations. A *d* of 1 indicates that group means differ by one standard deviation, a *d* of .5 indicates that group means differ by half a standard deviation, and so forth. Table 3 shows that the mean CELDT score gain of *Language in Action* participants (*M*=44.2) was significantly greater than the mean gain of matched non-participant controls (*M*=26.5).

Table 3

*Comparison of Mean CELDT Score Gains of Language in Action Participants and Matched Controls*

<i>M</i> ( <i>SD</i> )*	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i> **
17.7 (65.0)	7.37	731	.001***	0.38

\*Mean change of frequent participants minus the mean of matched controls.

\*\*Cohen’s *d* was used as the measure of effect size.

\*\*\*Indicates statistical significance.



## Conclusion

The mean increase in CELDT score points for *Language in Action* participants was significantly greater than the mean increase for the matched control group, with a moderate to large effect size ( $d = .38$ ). This is one of few studies of an after-school program with positive academic findings for high school ELs, many of whom are LTELs, where a standardized test of English language development is the outcome measured. The majority of experimental and quasi-experimental studies on after-school programs with positive academic findings were conducted among mainstream elementary or middle school children and used standardized tests in English-language arts and math as outcome measures (Dynarski et al., 2004; Dynarski et al., 2003; James-Burdumy, Dynarski, Deke, Mansfield, & Pistorino, 2005; Gottfredson, Cross, Wilson, Rorie, & Connell, 2010; Lauver, 2002; Durlak & Weissberg, 2007; Lauer et al., 2006).

The results of this study support the hypothesis that peer-mediation within the context of an after-school program enhances language development among high school ELs. The results of the study also support the use of service-learning as an approach to literacy development in second language learners, consistent with Cole's (2014) meta-analysis showing the effectiveness of peer-mediated learning for ELs. The *Language in Action Program* targets both oral language and literacy while combining peer mediation with direct instruction, which is suggested to be more effective than peer mediation alone (Cheung & Slavin, 2005).

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