

A Study of the Effectiveness of *Milestones*

2008-2009



This study was conducted by SEG Research, an independent educational research firm located in New Hope, Pennsylvania. SEG Research provides research, evaluation, and assessment services to educational publishers, educational technology providers, assessment service providers and government agencies. SEG has been meeting the research and assessment needs of organizations since 1979. This research was supported by a grant from Heinle.

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Executive Summary

Background and Purpose

During the 2008-2009 school year, SEG Research conducted a multi-site study of the effectiveness of *Milestones*, an instructional program designed to provide intervention for English Language Learners (ELL) and Struggling Readers. The study examined the growth in Reading and Language skills for California and Florida student, receiving instruction using *Milestones*. Seventh grade students enrolled in a summer intervention class in California and sixth grade students enrolled in a Developmental Language Arts through ESOL Program in Florida were provided with instruction using *Milestones*. Their Reading and Language proficiency was measured before and after receiving instruction using a post hoc, pre-post, treatment-only research design, to determine the extent to which students Language and Reading levels grew. Student Reading and Language skills were measured using the CELDT and CST in California and using the CELLA test in Florida.

This study investigated the following questions:

1. Do ELL students show significant gains in Reading and Language skills after receiving instruction using *Milestones*?
2. Do boys and girls receiving instruction using *Milestones* differ in their level of Reading and Language skills growth?
3. Do students of different ethnicities receiving instruction using *Milestones* differ in their level of Reading and Language skills growth?
4. Do students participating and not participating in free or reduced lunch receiving instruction using *Milestones* differ in their level of Reading and Language skills growth?

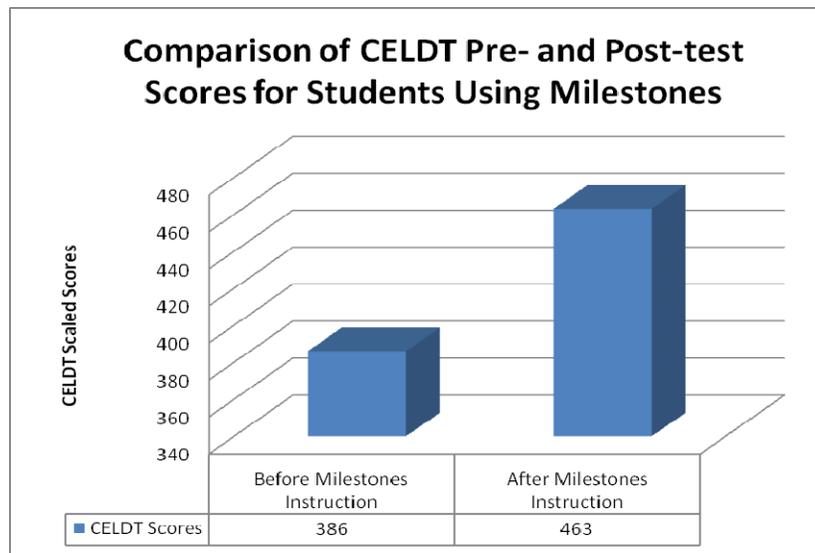
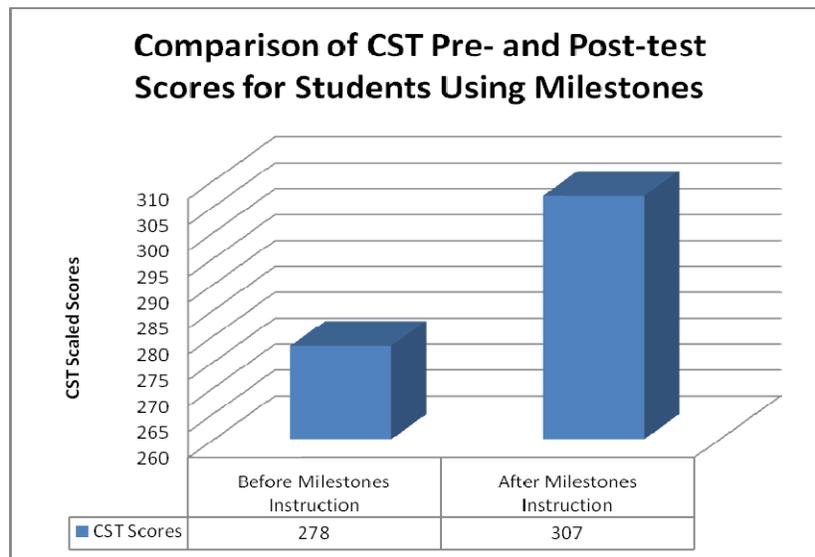
Study Design

The study employed a post hoc, pre-post, treatment-group only design. Student growth in Language and Reading skills was measured by comparing their proficiency at the beginning of instruction and again after receiving instruction. Students were administered the CST and CELDT in California and the CELLA in Florida as a pre-test prior to instruction and again after receiving instruction. Students were provided with instruction using *Milestones* between the pre-test and post-test. The pre- and post-test results were then compared statistically.

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California Findings

Students in California provided with instruction using *Milestones* showed substantial growth from pre- to post-test. During the course of the study, students showed a statistically significant increase in test scores. This increase is illustrated below.

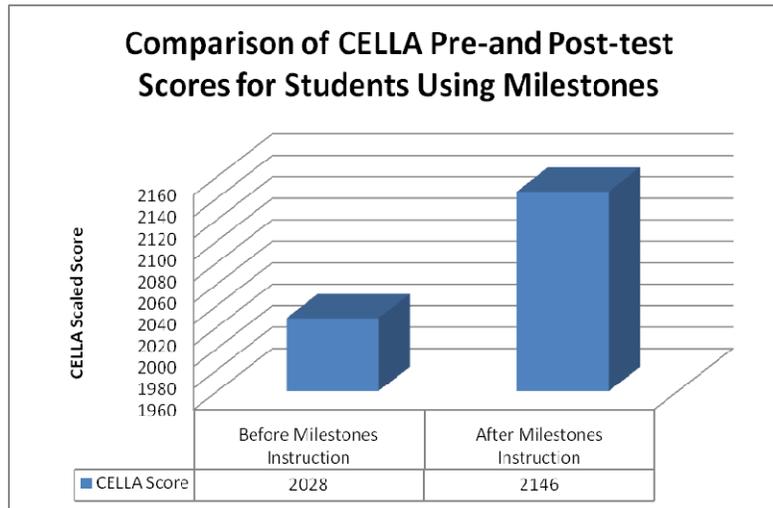


To better understand the magnitude of growth for students in *Milestones* classrooms we looked at the “effect size,” a common metric that can be used to evaluate the amount of growth across studies, when different measures are used; the effect size for growth in CELDT scores was $+.69$ and $+.39$ for CST. This indicates that students provided with instruction using *Milestones* showed substantial growth in Reading and Language skills. For a student at the 50th percentile on CELDT at the beginning of the study, this represents an increase to the 70th percentile.

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Florida Findings

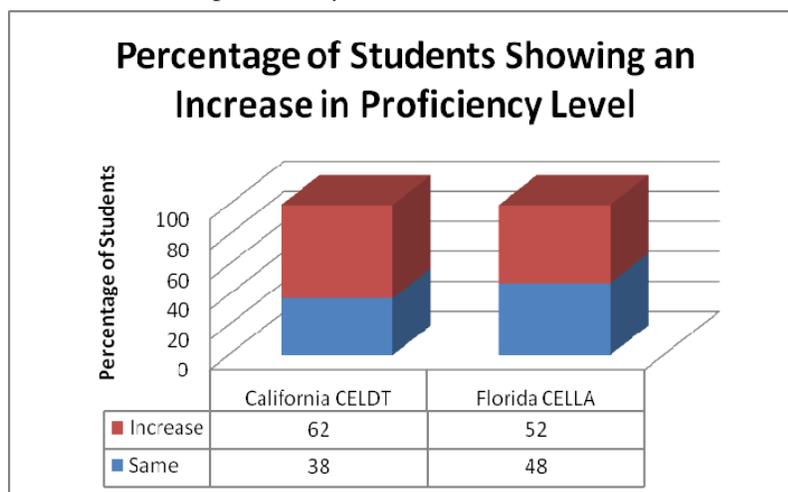
Students in Florida provided with instruction using *Milestones* showed substantial growth from pre- to post-test. During the course of the study, students showed a statistically significant increase in test scores. This increase is illustrated below.



The effect size for growth in CELLA scores was $+0.81$. This indicates that students provided with instruction using *Milestones* showed substantial growth in Reading and Language skills. For a student at the 50th percentile on CELLA at the beginning of the study, this represents an increase to the 79th percentile.

Growth in Proficiency Levels

Based on the test scores, students taking the test are classified into one of five proficiency levels based on the TESOL classifications: Beginning, Early Intermediate, Intermediate, Early Advanced and Advanced. Nearly two thirds (62%) of the students in California gained one proficiency level and more than half (52%) of the students in Florida gained one or more proficiency levels.



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Gender, Ethnicity and Free and Reduced Lunch Analysis

We examined whether there were any differences in growth between male and female students, students in different ethnic groups, and between students receiving free or reduced lunch and those who were not receiving this service. There were no significant differences in the post-test scores between boys and girls, students of different ethnicities, and between those students who were receiving free or reduced lunch and those not receiving free or reduced lunch. *Milestones* was equally effective regardless of gender, ethnicity, or participation in free or reduced lunch.

Student Sample

Sixty-one students participated in the study, 24 students enrolled in a summer intervention class using *Milestones* at Sullivan Middle School in Fairfield, California and 37 students enrolled in the Developmental Language Arts through ESOL Program using *Milestones* at Pierce Middle School in Tampa, Florida. Table 1 shows the number of students comprising each gender, ethnicity, and free or reduced lunch category for both the Florida and California samples. Ethnicity was not reported for the Florida sample.

Table 1. Demographic Profile of Student Participants

Variable	Number (N) of Students (California Sample)	Number (N) of Students (Florida Sample)
GENDER		
Male	18	18
Female	6	19
Total (All Gender)	24	37
Ethnicity		
Caucasian	3	N/A
African American	6	N/A
Hispanic and Other	15	N/A
Total (All Ethnicity)	24	N/A
FREE OR REDUCED LUNCH		
Receiving Free or Reduced Lunch	18	37
Not Receiving Free or Reduced Lunch	6	0
TOTAL (Receiving and Not Receiving)	24	37

SUMMARY

The students using *Milestones* showed significant gains in Reading and Language skills in both an intensive summer instruction program and a full year of instruction delivered during the school year. Students showed substantial increases in test scores from the pre- to post-test and more than half of the students increased by one or more proficiency levels. There were no significant differences in post-test scores for either gender, different ethnicities or based on free or reduced lunch participation, indicating that *Milestones* was equally effective for all groups examined in the study.

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Students showed significant growth in Reading and Language skills after receiving instruction using *Milestones*. This was true for both the intensive summer program in California and the full year instruction in Florida. Students typically rose in proficiency level during the course of the study. Nearly two thirds (62%) of the California students gained one proficiency level, and more than half (52%) of the students in Florida gained one or more proficiency levels.

The size of the effects we observed were substantial; an effect size of $+0.69$ was found for CELDT, an effect size of $+0.39$ was found for the CST test, and an effect size of $+0.81$ was found for CELLA. While effect size is a relative measure and there is no absolute criterion for what constitutes a large effect, for a student at the 50th percentile, this would represent an increase in the case of CELDT to the 70th percentile and in the case of CELLA to the 79th percentile from pre- to post-test.

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