

# A REASON TO SMiLE:



## Effective Literacy Instruction for Students with Significant Cognitive Disabilities

In 2017, researchers from Education Development Center (EDC), in partnership with the New York City Department of Education's District 75, and with funding from the Institute for Educational Sciences, launched an evaluation of the impact of **Structured Methods in Language Education (SMiLE)** on the literacy skills of students with significant cognitive disabilities.

District 75 provides highly specialized instructional support at more than 300 sites across New York City to students facing significant educational challenges, including autism spectrum disorders, significant cognitive delays, emotional disturbances, sensory impairments and multiple disabilities.

The District 75 Office of Literacy has employed SMiLE to teach literacy to students for more than a decade, but a rigorous impact evaluation had never been done. For this study, District 75 collaborated with researchers at EDC to evaluate SMiLE's impact on K-5 students with significant cognitive disabilities (SCD) who are non- or beginning readers.

**Study Purpose: Evaluate the impact of SMiLE on the literacy skills of students with significant cognitive disabilities.**

### The SMiLE program:

- provides a highly structured, multisensory reading program.
- targets the high-need population of students with significant cognitive disabilities (SCD), engaging them sequentially.
- requires fewer resources for training than similar literacy programs, and implementation requires only ten minutes of 1:1 instruction daily.

### SMiLE professional development:

- provides instructors with three one-day workshops spread over academic year.
- supports instructors as they work with two students while learning SMiLE.

### Study Description

- Teachers, paraprofessionals, and speech therapists were randomly assigned to treatment or control status.
- Each instructor identified two eligible students and obtained parental consent.
- Treatment instructors used SMiLE and control instructors used business-as-usual literacy practices.
- The final sample included 159 instructors and 297 students.



Teaches literacy to students who have difficulties with phonemic awareness using traditional methods;



Emphasizes a scripted, structured and consistent methodology, aligning seamlessly with the ABA methodology;



Embeds independent activities for students to engage in individually;



Is divided into five modules beginning with sound-symbol relationships, moving on to nouns, verbs, colors and numbers, introducing sentences, and ultimately stories.

### SMiLE Study Final Sample

	Number of Instructors	Number of Students
Treatment	96	183
Control	63	114
Total	159	297

# A REASON TO SMiLE: Effective Literacy Instruction for Students with Significant Cognitive Disabilities

## Assessments

Three assessments, with a total of 11 sub-tests, were used to examine SMiLE's impact.

- **Student Annual Needs Determination Inventory (SANDI):** Administered in the fall and spring. Sub-tests: reading, writing, communication
- **Mini-SANDI:** Modified version of full SANDI administered to study participants in December 2017 and May 2018. Sub-tests: reading and communication
- **webABLLS:** Designed for learners on autism spectrum, with language delays, or other developmental delays. Sub-tests: visual performance, receptive language, verbal behavior, requests, labeling, reading

The study results demonstrate that the SMiLE literacy program has a positive and significant effect on reading skills for students with significant cognitive disabilities.

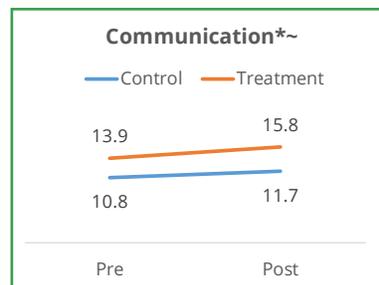
Each graph shows the pre and post intervention scores for treatment and control students, conditional on student characteristics and teacher role. For each sub-test, treatment students scored substantively higher than control students on their post intervention assessment.

### SANDI

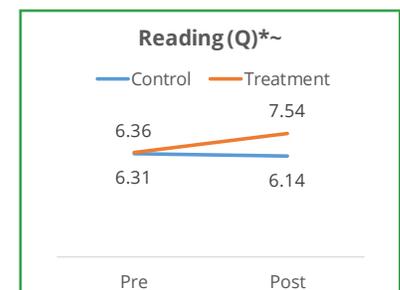


\* $p < .05$ ; ~effect size  $> 0.25$

### Mini-SANDI



### WebABLLS



## SMiLE Works!

- Students taught by teachers who received SMiLE professional development demonstrated significantly greater growth in reading scores than students taught by teachers using business as usual.
- SMiLE can be used successfully by instructors with no literacy experience, including paraprofessionals.
- SMiLE requires fewer staffing resources than similar programs.

SMiLE  
Evaluation  
Team

Caroline E. Parker, Ed.D.  
Education Development Center  
cparker@edc.org

Raizel Reider, Ed.D.  
District 75/Citywide Programs  
NYC Department of Education  
rreider@schools.nyc.gov

Lauren Katzman, Ed.D.  
Urban Collaborative  
Arizona State University  
lauren.katzman@asu.edu