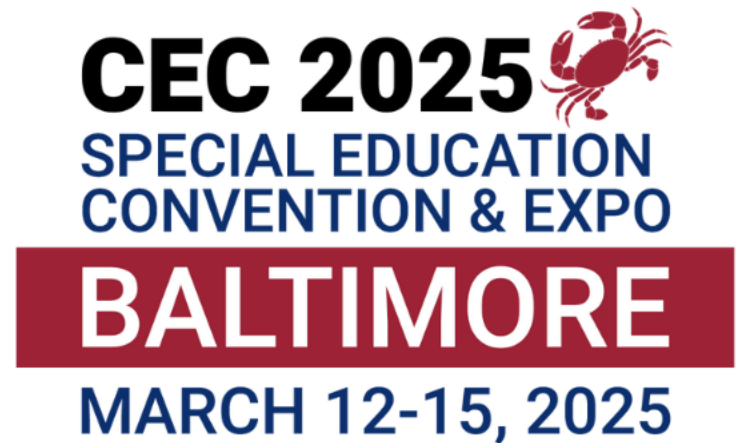


Closing the Gap: Long-Term Effects of a Comprehensive Early Literacy Program for Students with Disabilities

Jill Allor, Greg Benner, Stephanie Al Otaiba,
Stephanie Hermecz, and Charlotte Gregor



Community Circle



GOOD Afternoon:

Introduce yourself, and _____
to the person next to you.



Agenda

- Why
- Study
- Intervention
- Immediate Results
- Maintenance Results
- Discussion
- Behavior Supports
- Questions

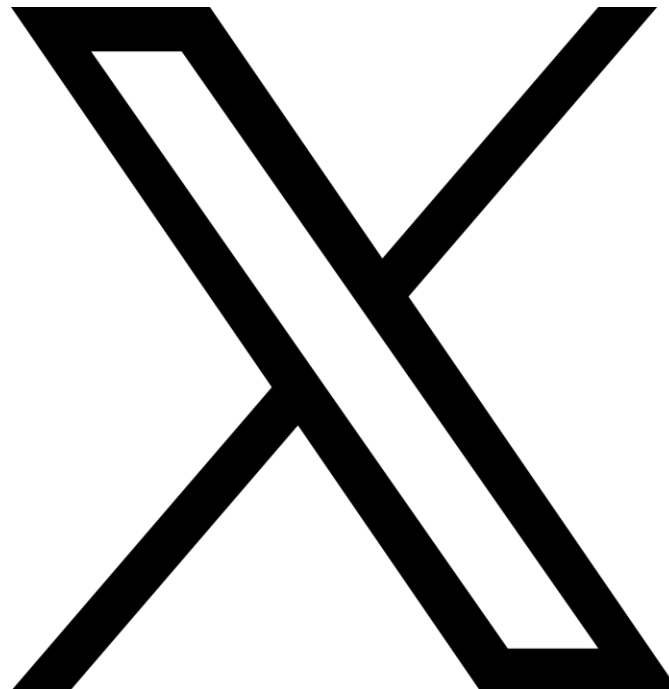


Project Intensity Team





TUSCALOOSA
WHOLE CHILD



#WholeChild
@GJBenner

bamawholechild.com



Friends on the Block Research and Development Acknowledgments



Support for carrying out research on the Friends on the Block curriculum was provided by grants H324K040011, R324A130102, and R324A200151 from the Institute of Education Sciences. The views expressed herein are those of the authors and have not been reviewed or approved by the granting agency. Jill Allor and Stephanie Al Otaiba acknowledge a financial interest in the Friends on the Block books and curriculum. Any inquiries should be directed to the Office of Research Compliance at Southern Methodist University.

Why



Literature Review:

Recent research on comprehensive programs

- Historically, research on reading for students with IDD (intellectual and developmental disabilities) has been limited
- Research in recent years has shown students with IDD respond favorably to more **comprehensive programs** of reading instruction (e.g., Allor, et al., 2014; Allor, et al., 2013; Browder, Mims, Spooner, Ahlgrim-Delzell, & Lee 2008; Connor, Alberto, Compton, & O'Connor, 2014; Lemons, et al., 2015).

Research with *Friends on the Block*

(from IES development grant)

- Allor, J. H., Gifford, D. B., Jones, F. G., Al Otaiba, S., Yovanoff, P., Ortiz, M. B., & Cheatham, J. P. (2018). The effects of a text-centered literacy curriculum for students with intellectual disability. *American Journal for Intellectual and Developmental Disabilities*. [pilot study with 8 students]
- Jones, F. J., Gifford, D. B., Yovanoff, P., Al Otaiba, S., Levy, D., & Allor, J. (2018). Alternate assessment formats for progress monitoring students with intellectual disabilities and below average intellectual quotients: An exploratory study. *Focus on Autism and Developmental Disabilities*. [assessment study]
- Allor, J. H., Yovanoff, P., Al Otaiba, S., Ortiz, M. B., & Conner, C. (2020). Literacy intervention for students with intellectual and developmental disabilities: A meta-analysis. [analysis of all 18 students from pilot studies]

The Study



Primary Research Questions

Do **students with disabilities** who experience **intensive literacy needs**, including students with intellectual and developmental disabilities, who participate in FOTB demonstrate greater **reading** and **language outcomes** compared to students who participate in BAU reading instruction?

Overall Mean Average School Demographics

- Districts: 3 (2 in AL, 1 in TX)
- Schools: 9 (6 in AL, 3 in TX)
- Enrollment: 544 (Range: 316-770)
- Minority Enrollment: 76% (6-99%)
- Economically Disadvantaged: 79% (51-91%)
- Student/Teacher Ratio: 15.3:1 (12:1 to 18:1)

Participants

- 30 students in FOTB (treatment) , 31 students in BAU(control)
- Gender: 61% male, 39% female
- Race: 56% African American, 30% White, 14% Hispanic/other
- Disability labels:
 - 11% Intellectual Disability
 - 46% Developmental Delay
 - 13% Autism (IQ mean=64.4; SD=17.6)
 - 20% Specific Learning Disability
 - 2% Speech/ Language Disorder
 - 3% Other Health Impairment
 - 5% Not Available

Participant Mean Average IQ

- Composite Kaufman Brief Intelligence Test Second Edition (KBIT-2)
- 73.1 (Range: 40 to 106)

Dosage

- Weeks of Instruction: 36.9
- Minutes of Instruction: 3150.9
- Average minutes per week: 86.1
- Level Completed: 12 (out of 14 FOTB levels)

Note: More than half of the students in the treatment group completed the entire program in 42 weeks or less (about 50 hours of instruction).

Reading Variables & Measures

- Phonemic Awareness
 - *Comprehensive Test of Phonological Processing, 2nd Edition—Blending Words*
- Decoding
 - Non-words
 - *Wechsler Individual Achievement Test, Fourth Edition (WIAT-IV) Pseudoword Decoding*
 - Real words
 - *FOTB Word List*
 - *WIAT-IV Word Reading*
- Fluency
 - *WIAT-III Oral Reading Fluency*

Language Variables & Measures

- Oral Expression
 - *WIAT-IV Oral Expression*
- Listening
 - *WIAT-IV Listening Comprehension*

Think, Pair, Share

What is the biggest challenge you face in teaching students with IDD to read?

Intervention

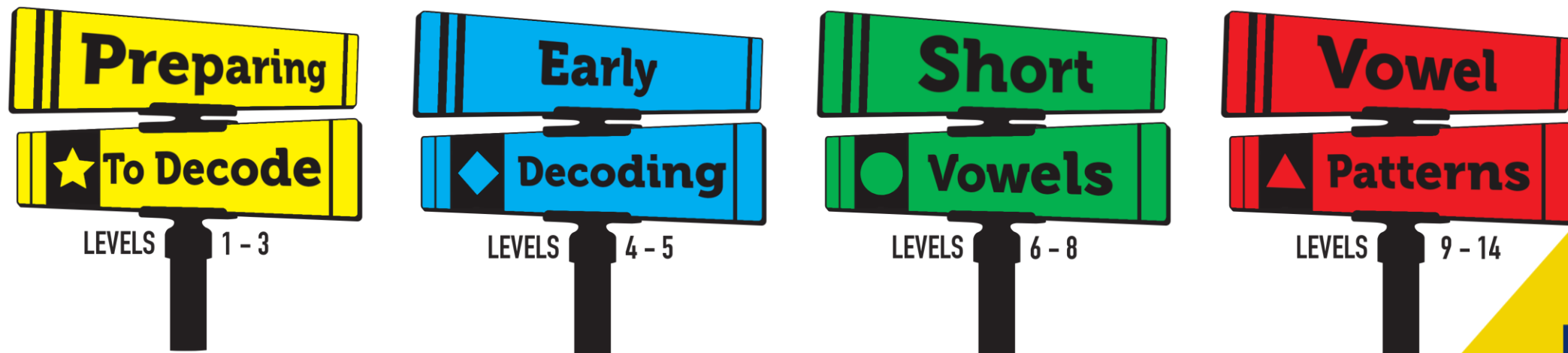


What is Friends on the Block?

A comprehensive and intensive **early literacy program** (initial instruction or intervention) designed to be **customizable** and provide needed supports and practice so **all students** can attain early literacy skills, particularly those with **intensive needs** such as students with disabilities (e.g., dyslexia, learning disabilities, intellectual and developmental disabilities).

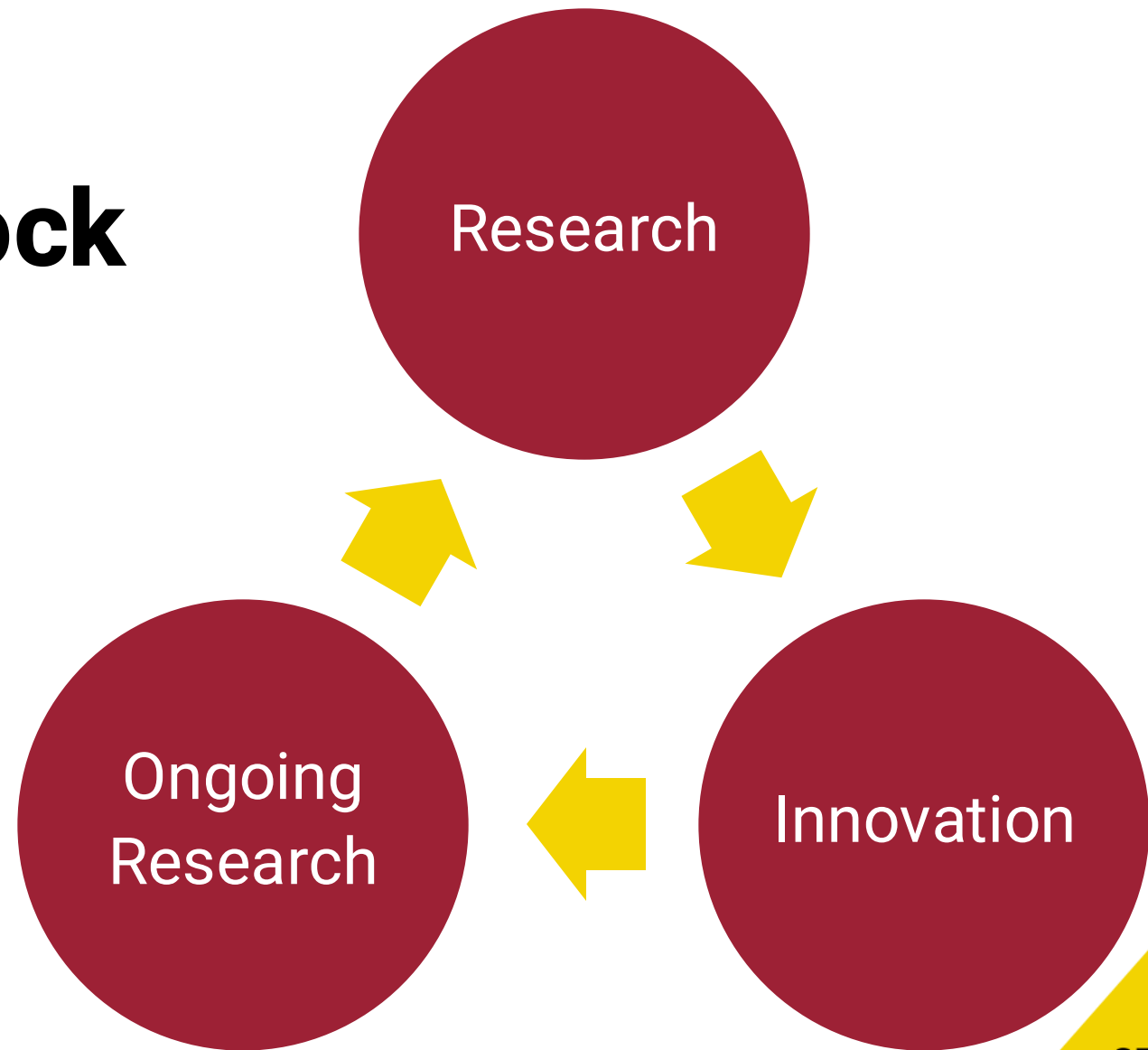
What are the components of FOTB?

- 60 student books with carefully controlled, decodable text
- Each book has a detailed Teacher's Guide and materials
- Over 130 learning games that provide specific cumulative practice of skills
- Organized into 14 levels that span four stages of skill development



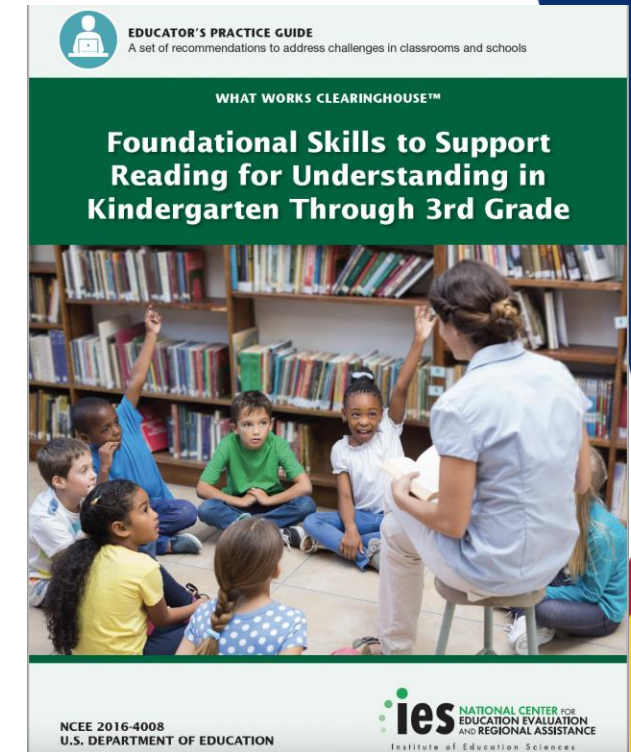
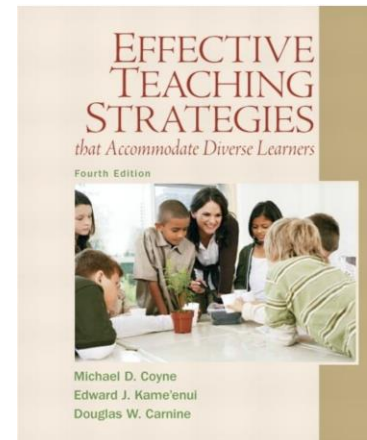
What makes Friends on the Block special?

- Applies existing research
- Ongoing process of research and innovation



Research: Evidence-based practices

- National Reading Panel (2000)
- WWC Practice Guide (2016)
- Principles of Effective Instruction (Coyne et al., 2006; Kame'ennui et al., 2002; Coyne et al., 2011)



Benefits of Friends on the Block



REDUCED COGNITIVE LOAD



EMBEDDED LANGUAGE AND
COMPREHENSION SUPPORTS



EXTENSIVE USE OF
CONNECTED TEXT

Innovation: Features of FOTB

- Multicriteria Student Books
 - Decodable with extensive cumulative review
 - Features enable students to begin reading in a book, with support, in the very first lesson
 - Culturally diverse
 - Natural sounding sentences that reflect spoken language to facilitate comprehension
 - Meaningful stories in common settings (familiar)
 - Fiction and Nonfiction with simple illustrations and photographs that enhance meaning and engagement
- Easily customized and highly engaging (student books and games)

Innovative Scope and Sequence

- Focuses on key skills within all strands of word recognition and language
- Facilitates integration of skills across strands and apply as they read books



Scope and Sequence

Strand	Objective/Skill	Activity Learning Game	★ 1-3	◆ 4-5	● 6-8	▲ 9-14
Language: Comprehension & Vocabulary	Make oral predictions about a text	Predict				
	Develop language and comprehension	Discuss				
	Discuss and summarize a text using a graphic organizer	Review/ Get the Gist (Level 12+)				
	Develop oral language by sorting words based on meaning	Think and Sort				
Phonemic Awareness	Orally blend the first sound and rime into a spoken word	Say the Word				
		Sounds Bingo				
	Say the first sound of spoken words	Say the First Sound				
		Sounds Bingo				
	Orally blend sounds (phonemes) into a word	Say the Word				
		Sounds Bingo				
Word Recognition	Fluently pronounce taught irregular (or temporarily irregular) words	Say the Sounds				
		Sounds Bingo				
		Read It				
		Amazing Words				
	Fluently say the most common sound for taught letters	Word Bingo				
		Word Play				
		Say the Letter-Sound				
		Climb and Slide				
	Sound out and read short vowel words with taught letters/patterns	Sound It Out				
		I Got It				
		Sound It Out				
		Speed Reader				
	Sound out and fluently read words with taught letters/patterns	I Got It				
		Read through the Seasons				
		Word Bingo				
		Word Play				
Fluency	Fluently read target words, including taught irregular words and words with taught letters/patterns	Read the Groups				
	Pronounce words with taught patterns with s, ed, and ing	Read the Parts				
Writing	Pronounce words with taught spelling patterns and syllable types	Super Sentences				
	Read target words and sentences fluently	Read				
	Read text with increasing fluency	I Got It				
Apply	Say the sounds in spoken words; spell words with taught letters/patterns	Say and Write				
	Write sentences fluently	Writing Super Sentences				
Apply	Apply various skills in the context of a book	Scavenger Hunt				

FOTB Target Word List and Phonics Patterns

#CEC2025

Friends on the Block Target Word List and Phonics Patterns

	★ Preparing to Decode			◆ Early Decoding		● Short Vowels			▲ Vowel Patterns					
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10	Level 11	Level 12	Level 13	Level 14
Letter Sounds	c, f, p, m, s, t	d, j, n	b, g, h, l, r	ck, k, a, z	u	ch, th, w, x, y	i, o, sh, qu, v	e	a-e, i-e, o-e	ai, ay, ol	al, ea, ee	ar, igh, er	oa, or, ow	ir, oo, ur
Sound It Out Words (Decodable)	In Levels 1-3 students are learning phonemic awareness blending and segmenting, letter-sounds, and a small number of irregular words. Students begin in the level in which they miss two or more target words (Levels 1-5) or four or more target words (Levels 6-14). As soon as the students learn most of the words in the starting level, move to the next level. (Note: Sound it Out words in Levels 4-5 are repeated in Level 6.)			am and at can dad mad sad	am and at can dad mad sad	am and at can dad fun had hat mad ran run sad sun up us	big did got him if in it mom not on sit stop this will with	bed best end get help let next red step tell them then went when yes	came fine five gave home hope like made make nine same side smile time white	cold day hold may old plain play rain roll say stay tail told wait way	all call clean each eat feel green neat need read see seem small tall wall	after better chapter different forget high light might never night number part right start together	before below door follow goal know more morning own road short show slow yellow	bird book burn cook disturb girl good hook hurt shirt stood third took turn wood
Read It Words (Irregular)	Level 1 a do I like not want	Level 2 dad here is look mom see the where	Level 3 are at happy in no she yes you	Level 4 good help play there to was	Level 5 big have little my please very what	Level 6 be friend give go he her it me on so thank we who with your	Level 7 because care come could feel first of how next said should take too why would	Level 8 again away clothes cold eat food for from need oh out put ready some	Level 9 about animal been day does down every many one or other push snow they were	Level 10 any ball both boy done family girl more most once room saw their warm young	Level 11 another answer kind know our people question really second soon sure thought word work	Level 12 almost book bought break buy easy four learn money new probably review these two watch	Level 13 above alone by eight find house idea often special talk through usually walk water worry	Level 14 able along carry color full great heard instead live love move only over try world
Note: Words in blue are made up of patterns taught in later levels so they are temporarily irregular. They are introduced prior to the pattern to facilitate meaning and may facilitate learning of the phonics pattern.														



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Preparing

★ **To Decode**

LEVELS 1 - 3

Early

◆ **Decoding**

LEVELS 4 - 5

Short

● **Vowels**

LEVELS 6 - 8

Vowel

▲ **Patterns**

LEVELS 9 - 14

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BALTIMORE
MARCH 12-15, 2025

A Typical FOTB Lesson (Flexible: About 20-35 minutes) Level 4 Example

Part 1: Warm-Ups

5-8 minutes

Part 2: Book Reading

10-15 minutes

Part 3: Learning Games

5-10 minutes



1. Warm-Up (about 5 minutes)

- Model and provide brief practice of key skills
- In FOTB Level 4:
 - phonemic awareness (blending and segmenting)
 - letter sounds/patterns (new: ck, k, a, z)
 - decodable words "Sound It Out"
 - high-frequency irregular (or temporarily irregular) words "Read It"

Warm-Up

Say the Letter-Sound	r	ck	a	k	l
Sound It Out	am	sad	can	at	dad
Read It	was	to	she	there	happy

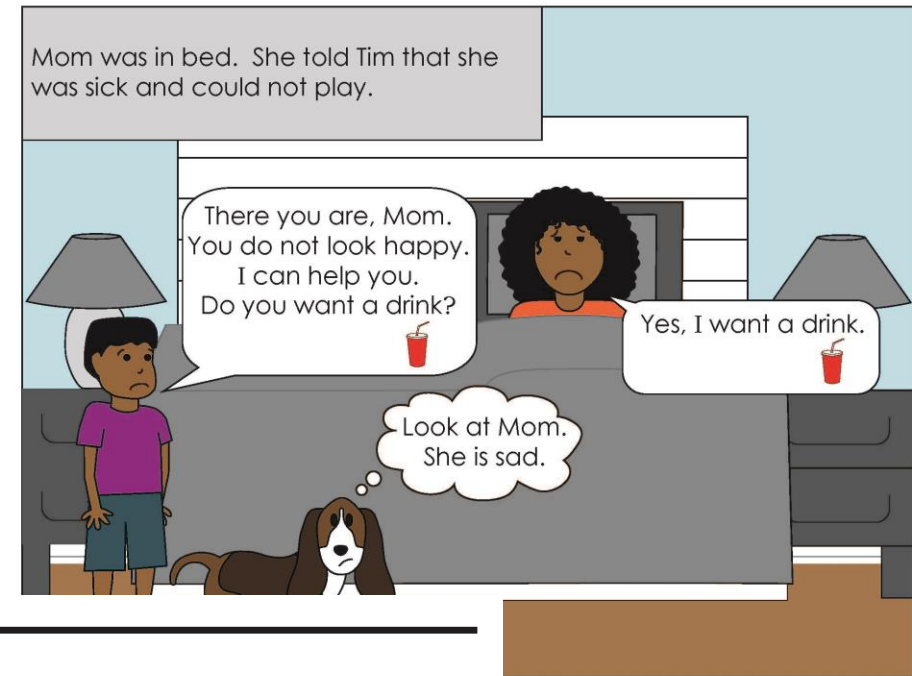
Mom Gets Sick/Lesson A

2. Book Reading (about 10-15 minutes)

- **Helper Text** (in gray) is read by the teacher
- **Immediate corrective feedback** is provided (I, We, You)
- **Dialogic reading style questioning** is used to foster language development and comprehension
- **Comprehension strategies** include predicting, main idea, and story grammar

Let's Try It: Book Reading

- Page 4 of Mom Gets Sick



3

What is wrong with Mom? (She is sick.) How do you feel if your mom gets sick? Why?

2

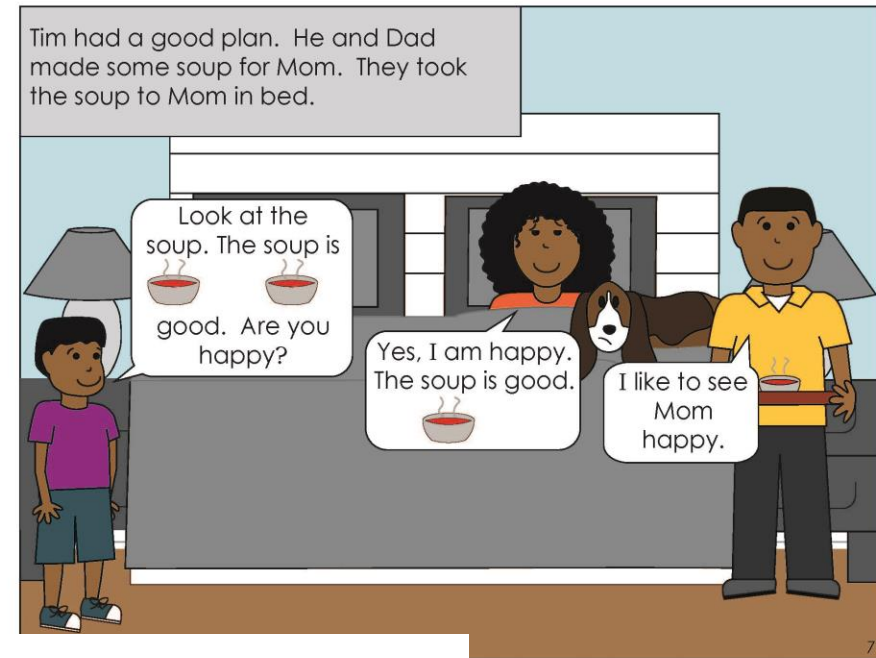
Mom is sick in _____. (bed) Why does Tim want to get Mom a drink?

1

What color is the blanket? (gray) What is behind Mom's head? (pillow)

Let's Try It: Book Reading

- Page 7 of Mom Gets Sick



3

What did Tim and Dad do to help Mom? (made soup) What kinds of food do you think is good to eat if you get sick?

2

The soup on the tray is for _____. (Mom) Tim and Dad made _____. (soup) Why is Mom happy now?

1

What is Dad holding? (a tray with soup) What is in the bowl? (soup)

3. Learning Game (about 10-15 minutes)

- Teacher selects game to customize lesson based on student needs
- Intensive, targeted practice

Let's Try It: Word Bingo

4

Word Bingo

play	are	can	there
was	here	mad	to
no	good	am	dad
sad	at	help	and

1

© Friends on the Block

What results can you expect with FOTB?

- Students completing the program are solidly reading on early 2nd grade level or higher with fluency and basic comprehension
- First Cohort of RCT
 - 61 students (n=30 FOTB, 31 business as usual)
 - Mean Dosage: 52 hours; 37 weeks (about 1.5 hours per week)

Number of Students (out of 30 receiving FOTB)	FOTB Levels Completed (out of 14)	Word Identification GE Scores
18	ALL	2 nd to 4 th grade
5	11, 12, or 13	Mid 1 st to 2 nd grade
4	7 or 8 (sounding out CVC words well)	Mid 1 st
2	Minimal progress	Remained below 1 st

Note: More than half of the students in the treatment group completed the entire program in 42 weeks or less (about 50 hours of instruction).

Group Huddle

How could Friends on the Block benefit your students?

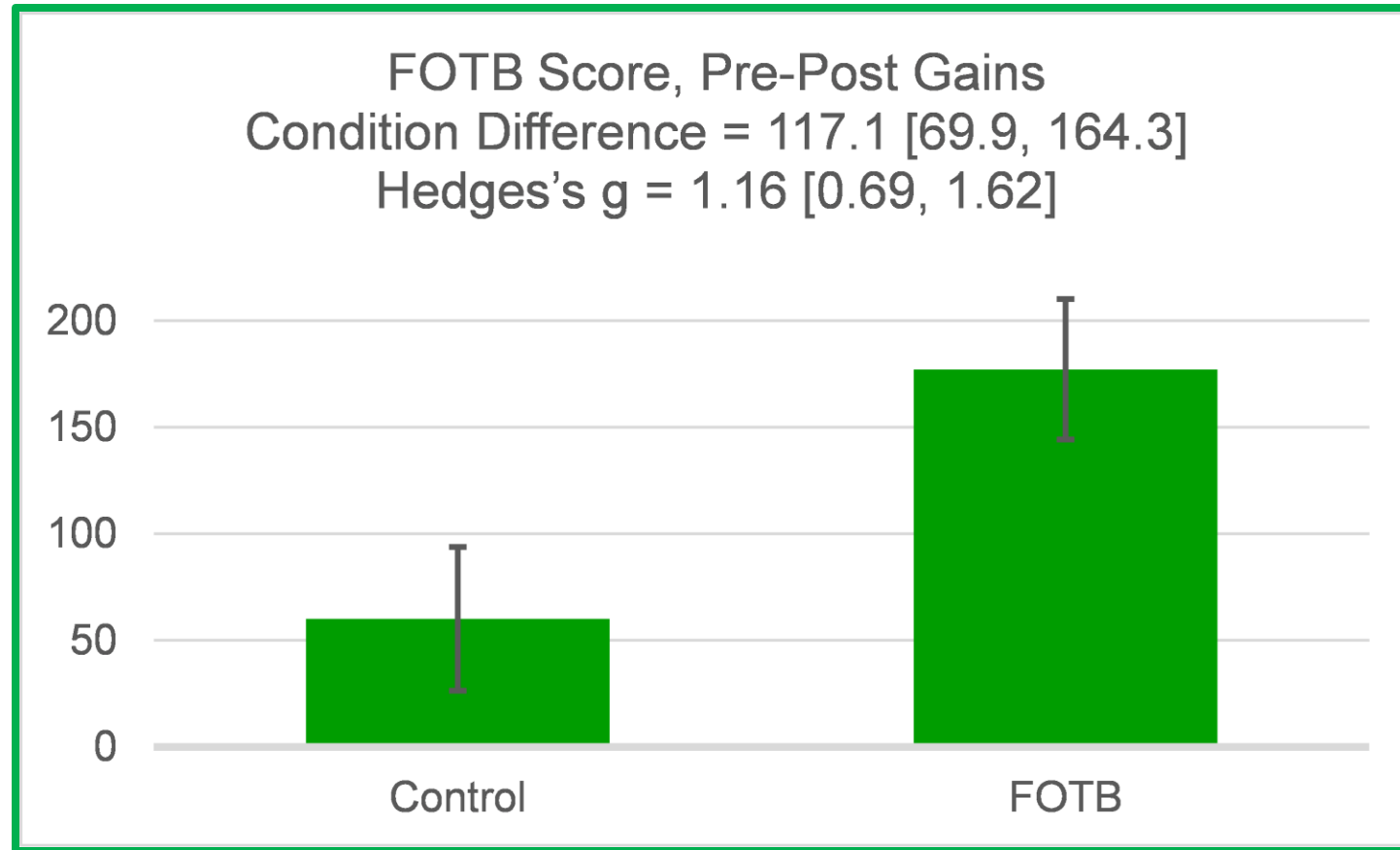
Immediate Results



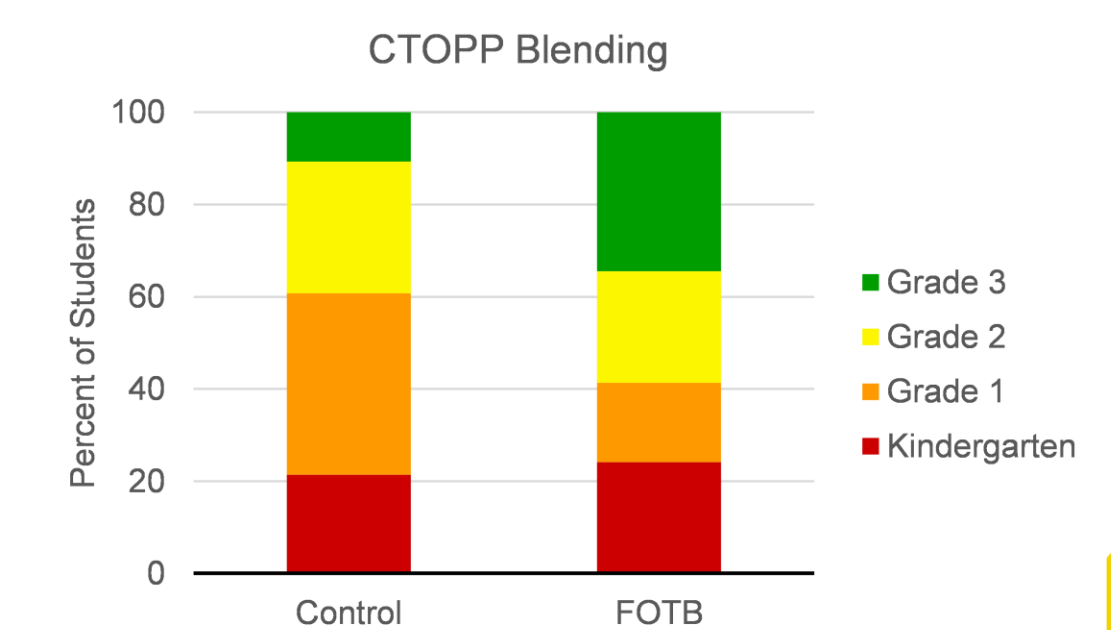
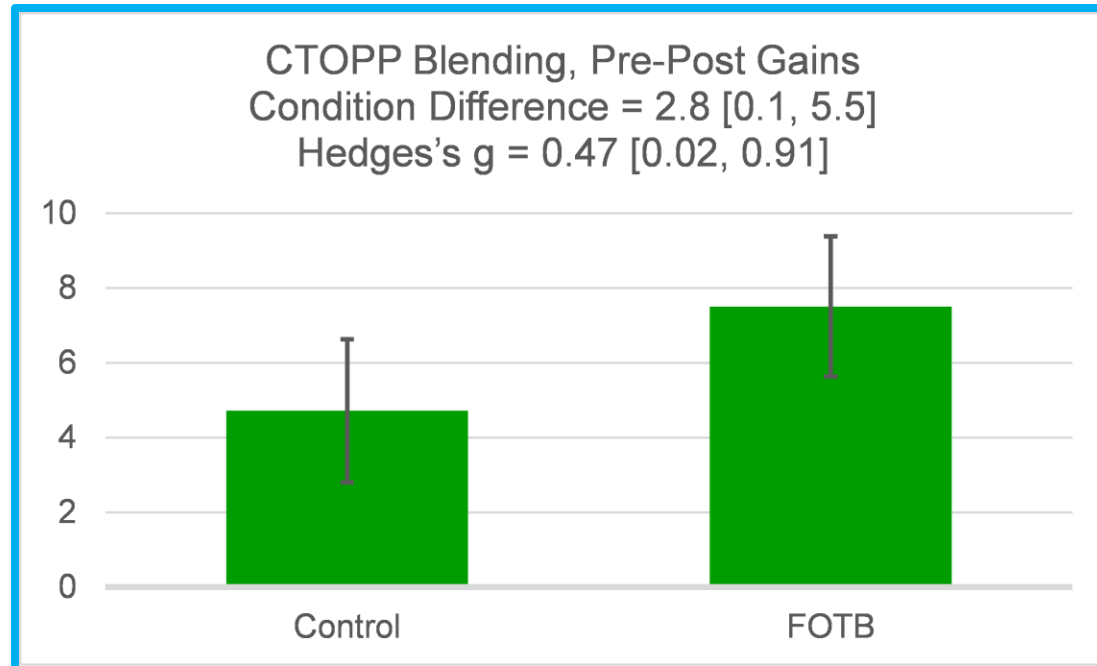
Results Overview

- Preliminary results—first cohort of two cohorts of students
- Analyzed 22 measures—reported a representative summary
 - Proximal measure for FOTB
 - Phonemic Awareness
 - Pseudoword Decoding
 - Word Reading
 - Reading Fluency
 - Listening Comprehension
 - Oral Expression
 - Reading Comprehension

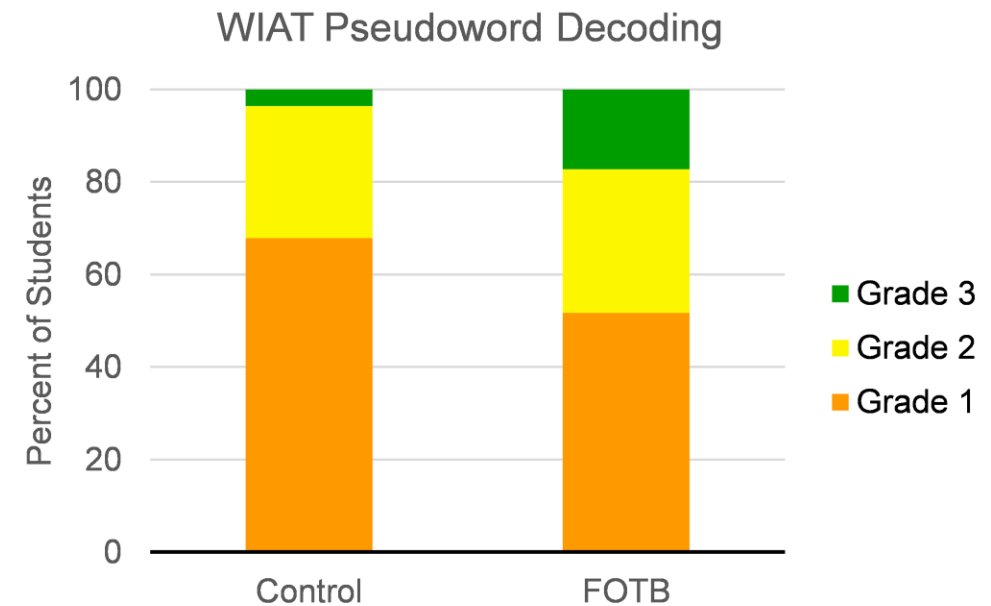
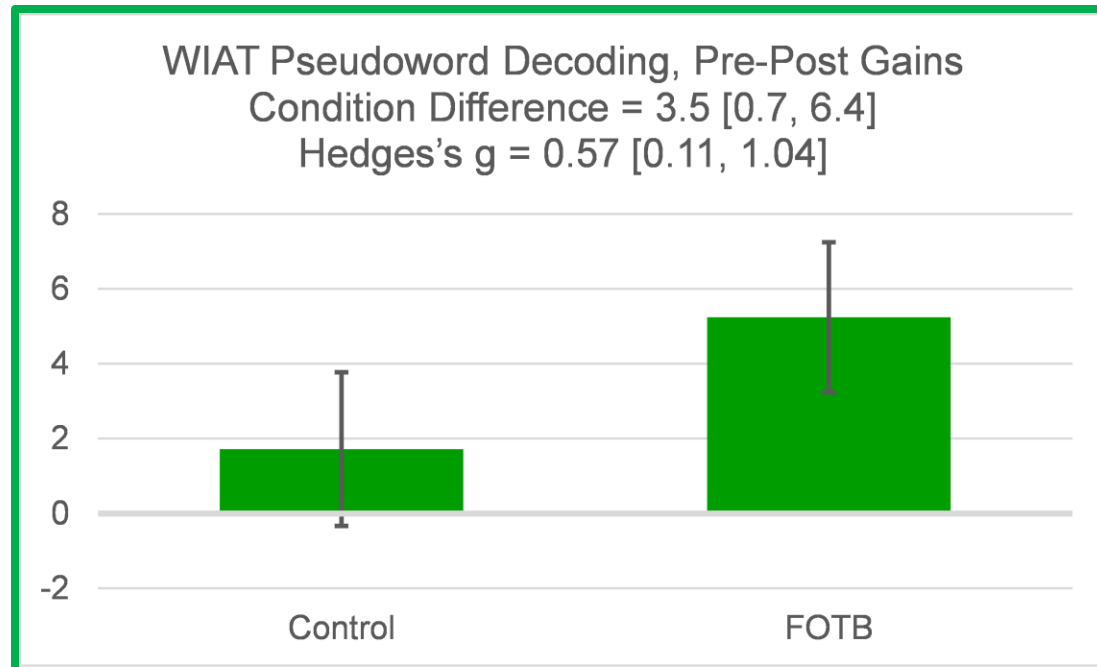
Proximal measure for FOTB



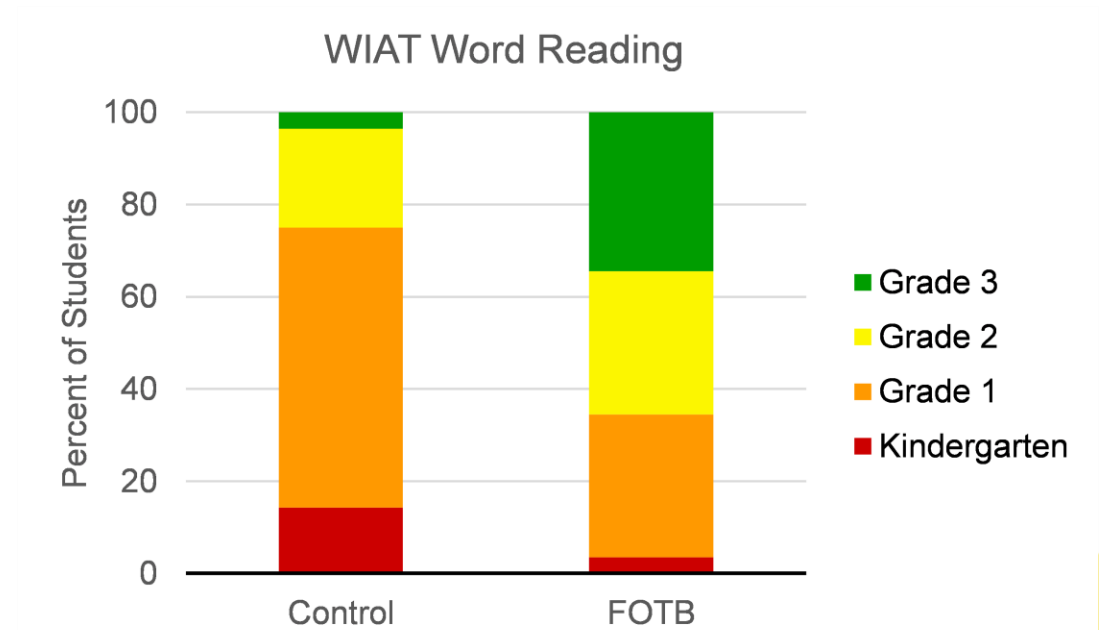
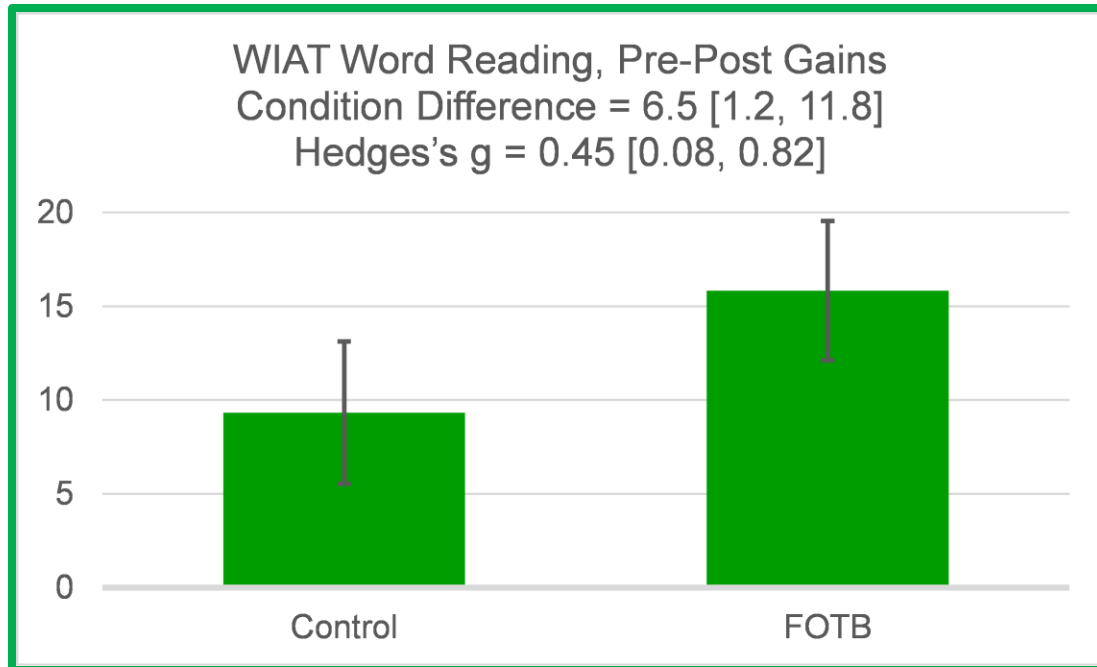
Phonemic Awareness (Blending)



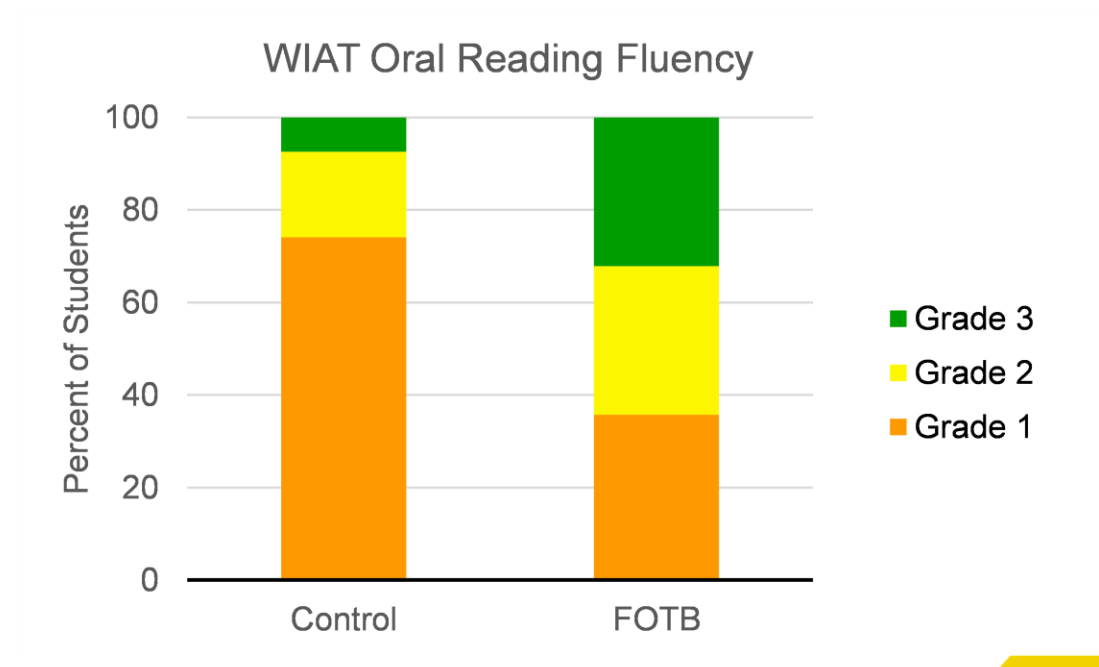
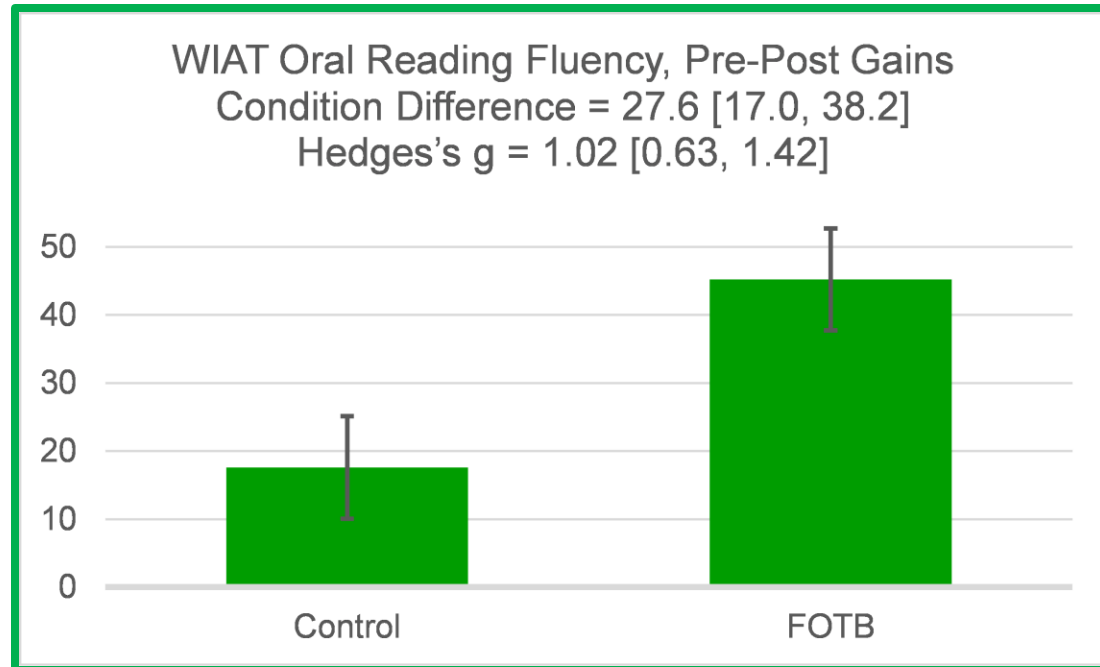
Pseudoword Decoding



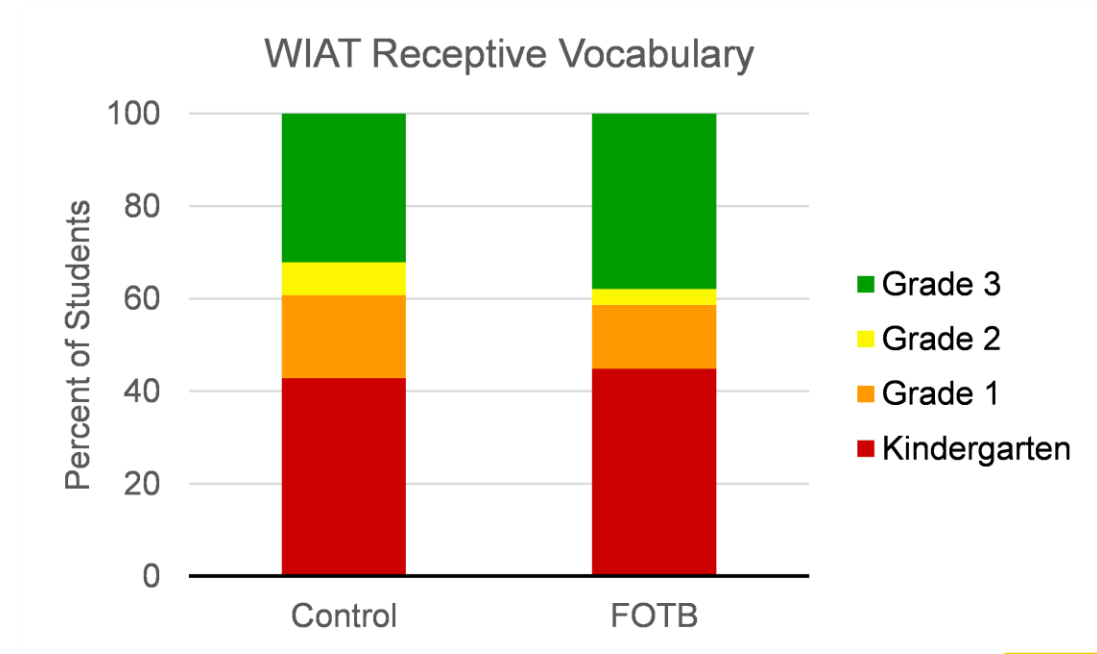
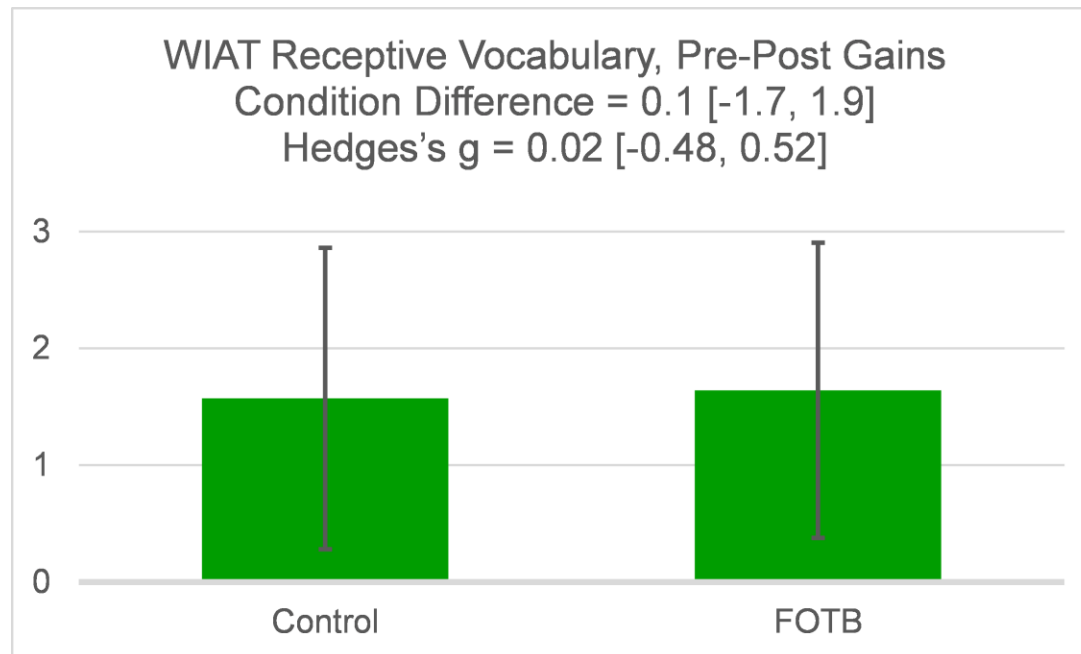
Word Reading



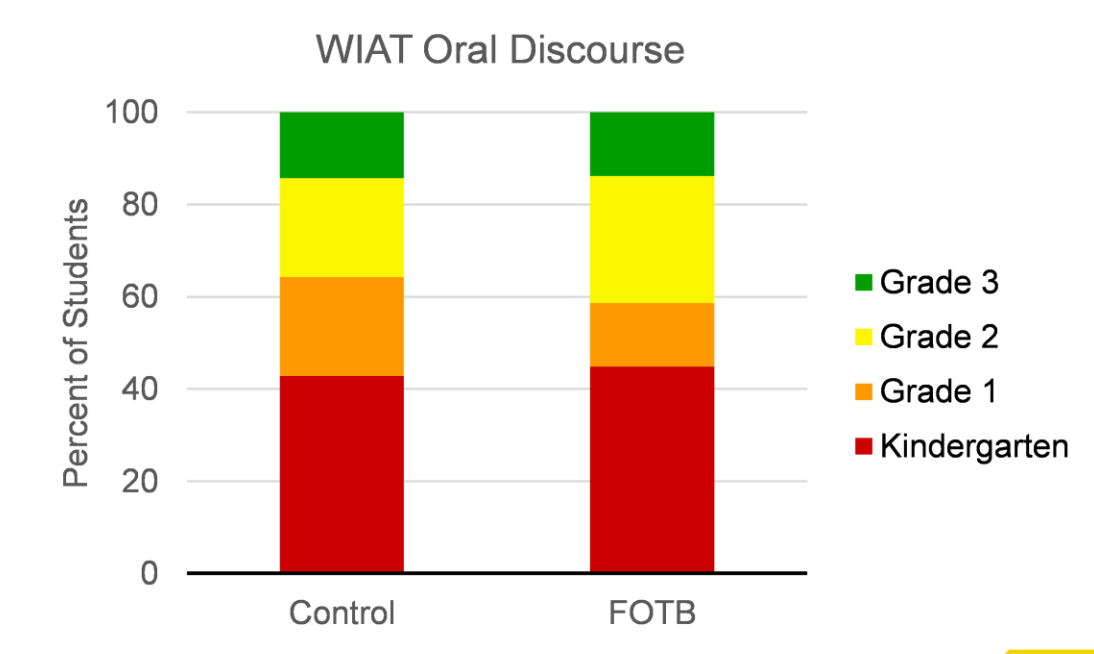
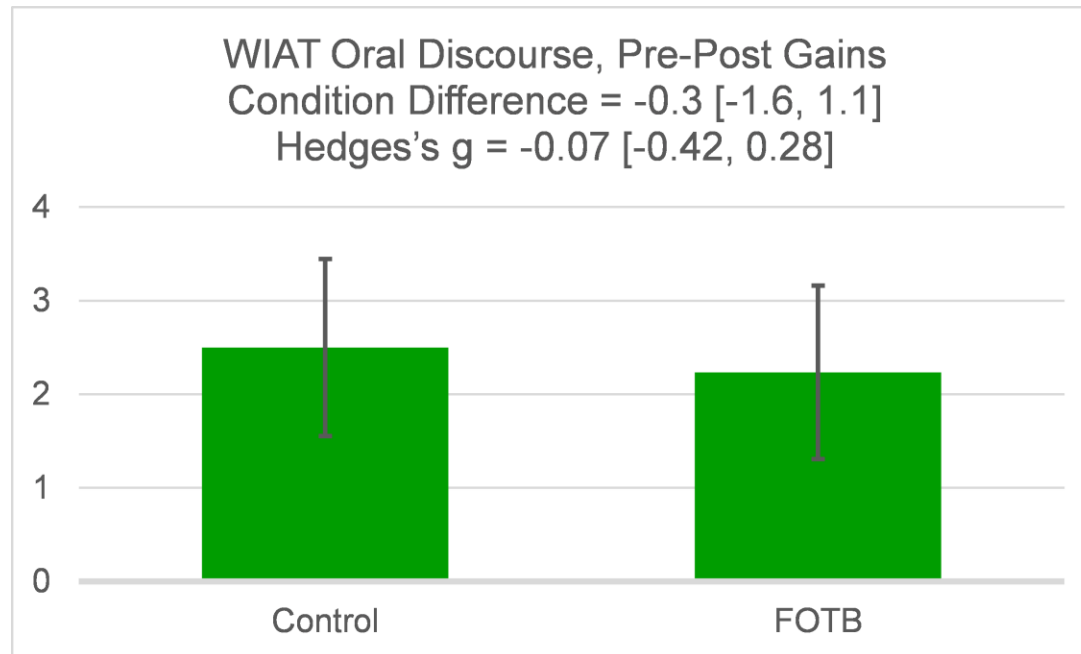
Oral Reading Fluency



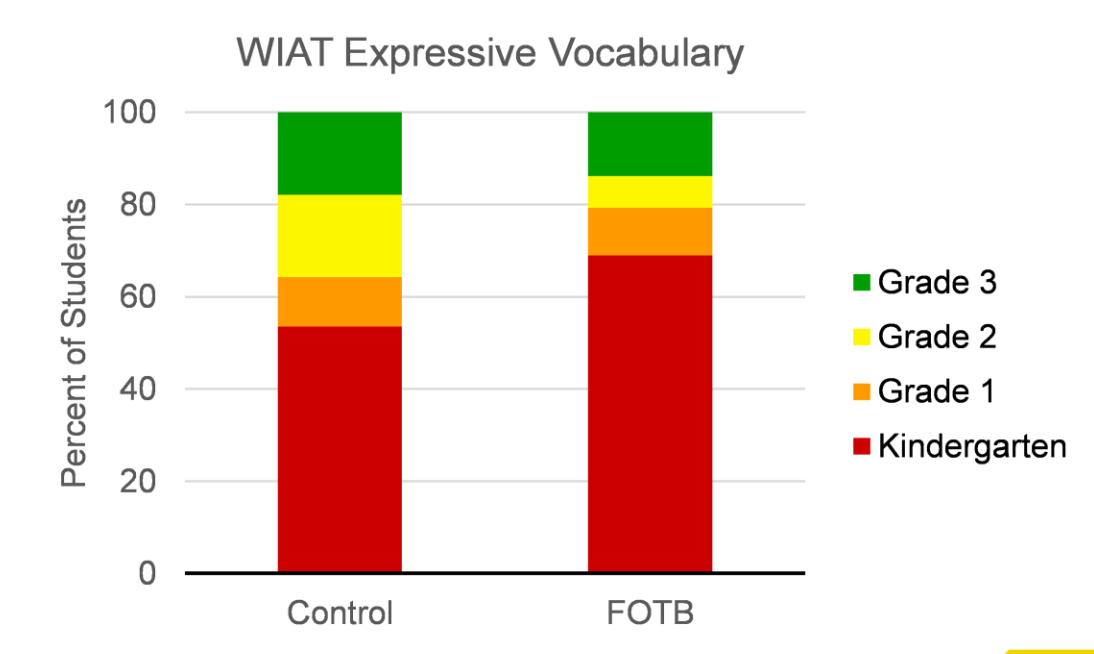
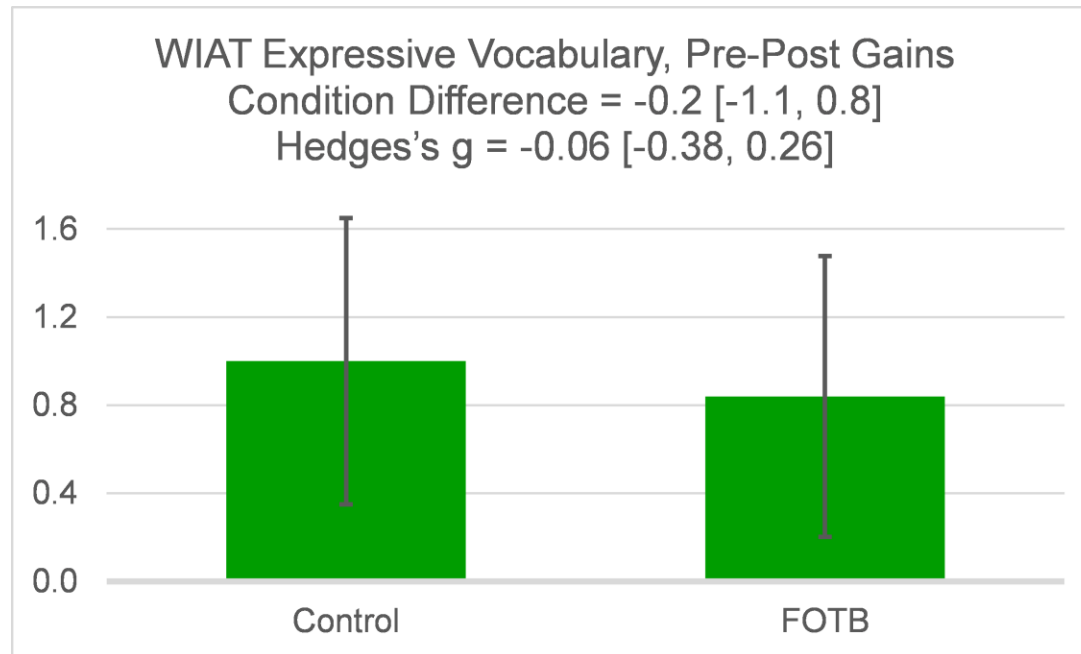
Listening Comprehension (Receptive Vocabulary)



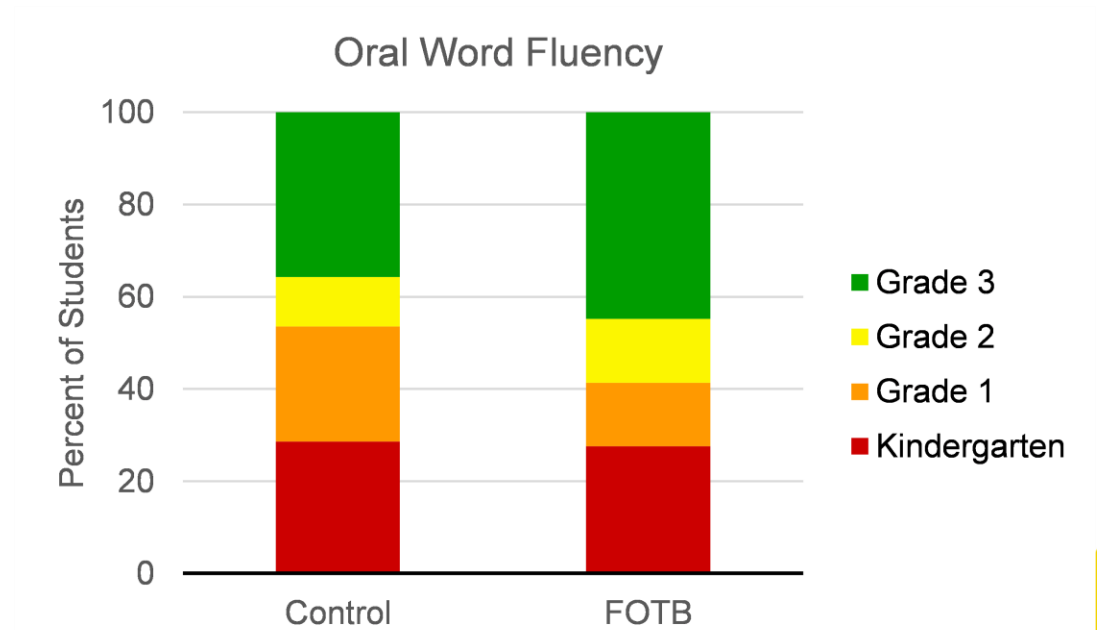
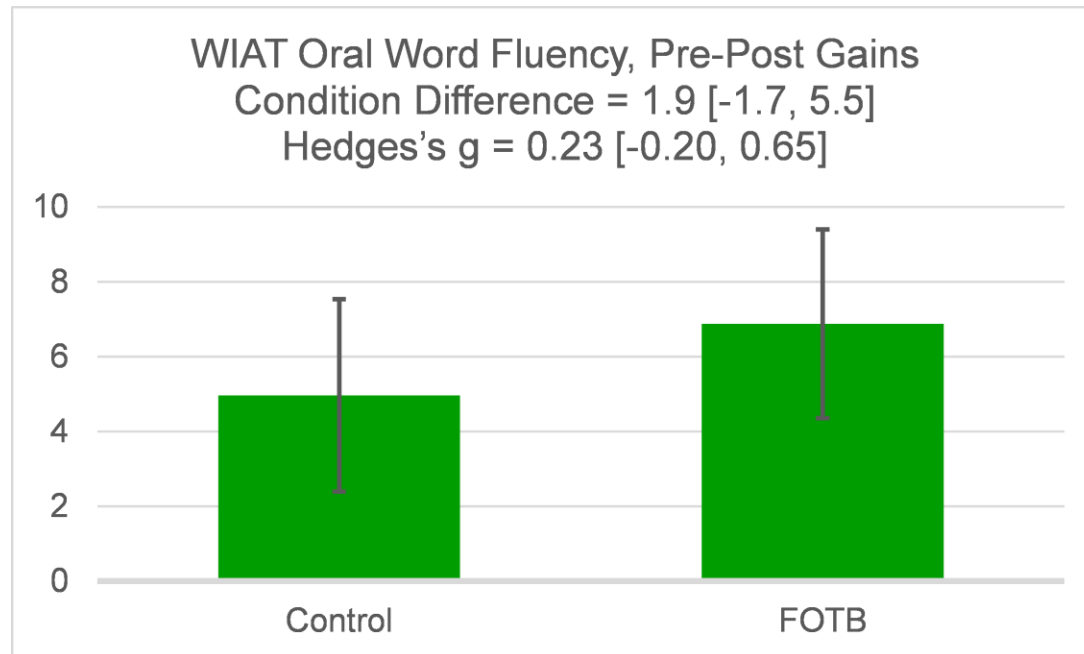
Listening Comprehension (Oral Discourse)



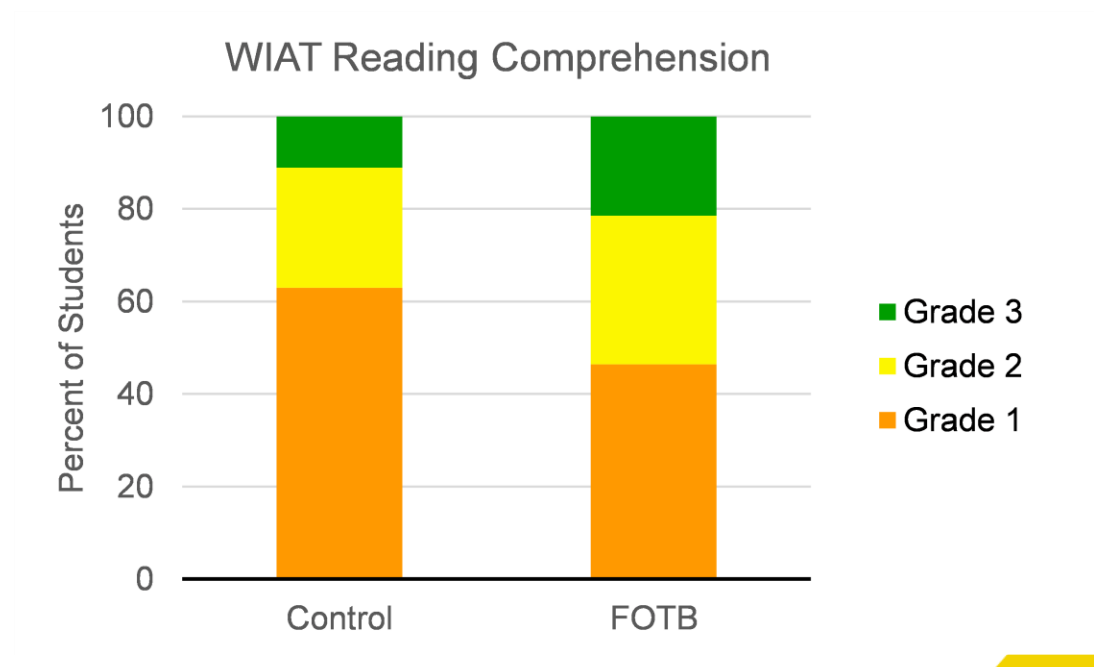
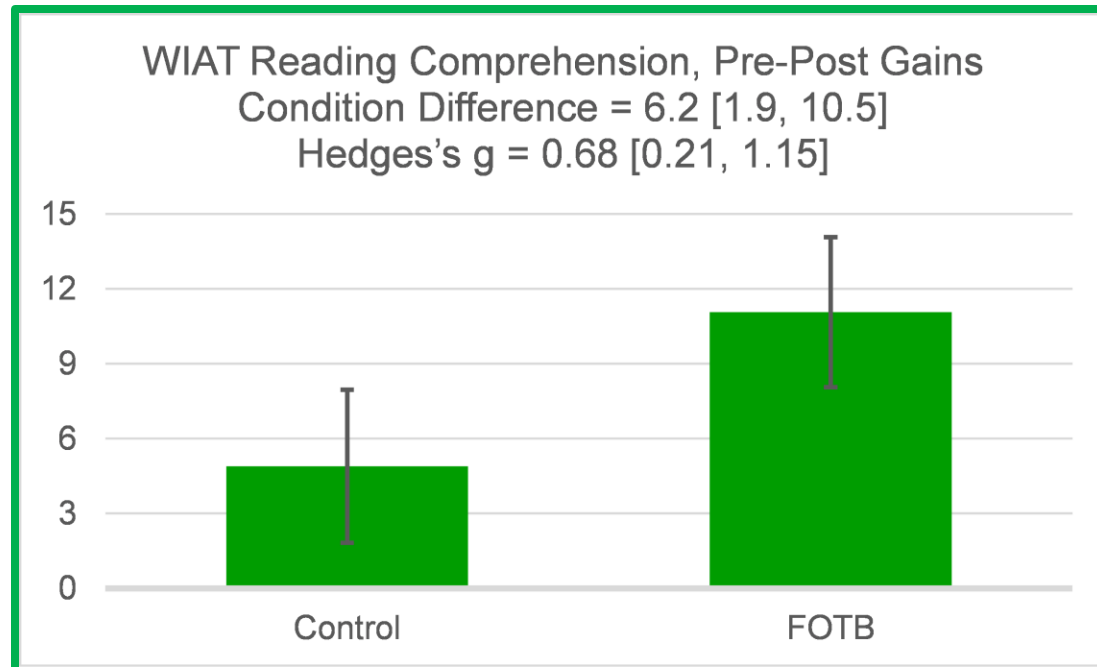
Oral Expression (Expressive Vocabulary)



Oral Expression (Oral Word Fluency)



Reading Comprehension



Results Summary

Measures Reported Today	<i>p</i>	<i>g</i>
FOTB (proximal measure of target words)	.0006	1.2
CTOPP Blending	.0702	0.5
WIAT Pseudoword Decoding	.0326	0.6
WIAT Word Reading	.0326	0.4
WIAT Oral Reading Fluency	.0006	1.0
WIAT Receptive Vocabulary	.9388	0.0
WIAT Oral Discourse	.7561	-0.1
WIAT Expressive Vocabulary	.7606	-0.1
WIAT Oral Word Fluency	.4026	0.2
WIAT Reading Comprehension	.0176	0.7

Other Measures	<i>p</i>	<i>g</i>
WIAT Sentence Repetition	.5565	0.1
Peabody Picture Vocabulary Test	.5482	-0.1
Expressive Vocabulary	.4658	0.1
CUBED Phonological Awareness	.2208	0.3
CUBED Word ID	.0326	0.6
CUBED Decoding	.0006	0.9
CUBED Narrative Lang. Reading WPM	.0006	0.9
CUBED NL Reading Story Qs	.0310	0.6
CUBED NL Listening Story Qs	.0310	0.7
CTOPP Elision	.0018	0.8
CTOPP Sound Matching	.0136	0.9
CTOPP Phoneme Isolation	.2313	0.4

Note. *p* values adjusted with Benjamini–Hochberg correction for 22 total tests

Results Summary

Measures Reported Today

- Statistically significant ($p < .05$)
 - FOTB
 - WIAT Pseudoword Decoding
 - WIAT Word Reading
 - WIAT Oral Reading Fluency
 - WIAT Reading Comprehension
- Marginally significant ($p < .10$)
 - CTOPP Blending
- Our effects for word reading are stronger than prior research, including our own.
- We did not find effects favoring FOTB for language measures.
- Anecdotally, students enjoyed reading the books and engaged with the characters and settings.

Note. p values adjusted with Benjamini–Hochberg correction for 22 total tests

Follow-Up Results



Follow-Up Results Summary

Baseline to Post	<i>p</i>	<i>g</i>
FOTB (proximal measure of target words)	.0006	1.2
CTOPP Blending	.0702	0.5
WIAT Pseudoword Decoding	.0326	0.6
WIAT Word Reading	.0326	0.4
WIAT Oral Reading Fluency	.0006	1.0
WIAT Receptive Vocabulary	.9388	0.0
WIAT Oral Discourse	.7561	-0.1
WIAT Expressive Vocabulary	.7606	-0.1
WIAT Oral Word Fluency	.4026	0.2
WIAT Reading Comprehension	.0176	0.7

Baseline to Follow Up	<i>p</i>	<i>g</i>
FOTB (proximal measure of target words)	.0557	0.7
CTOPP Blending	.5247	0.2
WIAT Pseudoword Decoding	.0622	0.6
WIAT Word Reading	.0745	0.4
WIAT Oral Reading Fluency	.0033	0.95
WIAT Receptive Vocabulary	.5176	0.2
WIAT Oral Discourse	.7817	-0.1
WIAT Expressive Vocabulary	.2572	0.3
WIAT Oral Word Fluency	.0801	0.7
WIAT Reading Comprehension	.0303	0.8

Note. *p* values adjusted with Benjamini–Hochberg correction for 22 total tests

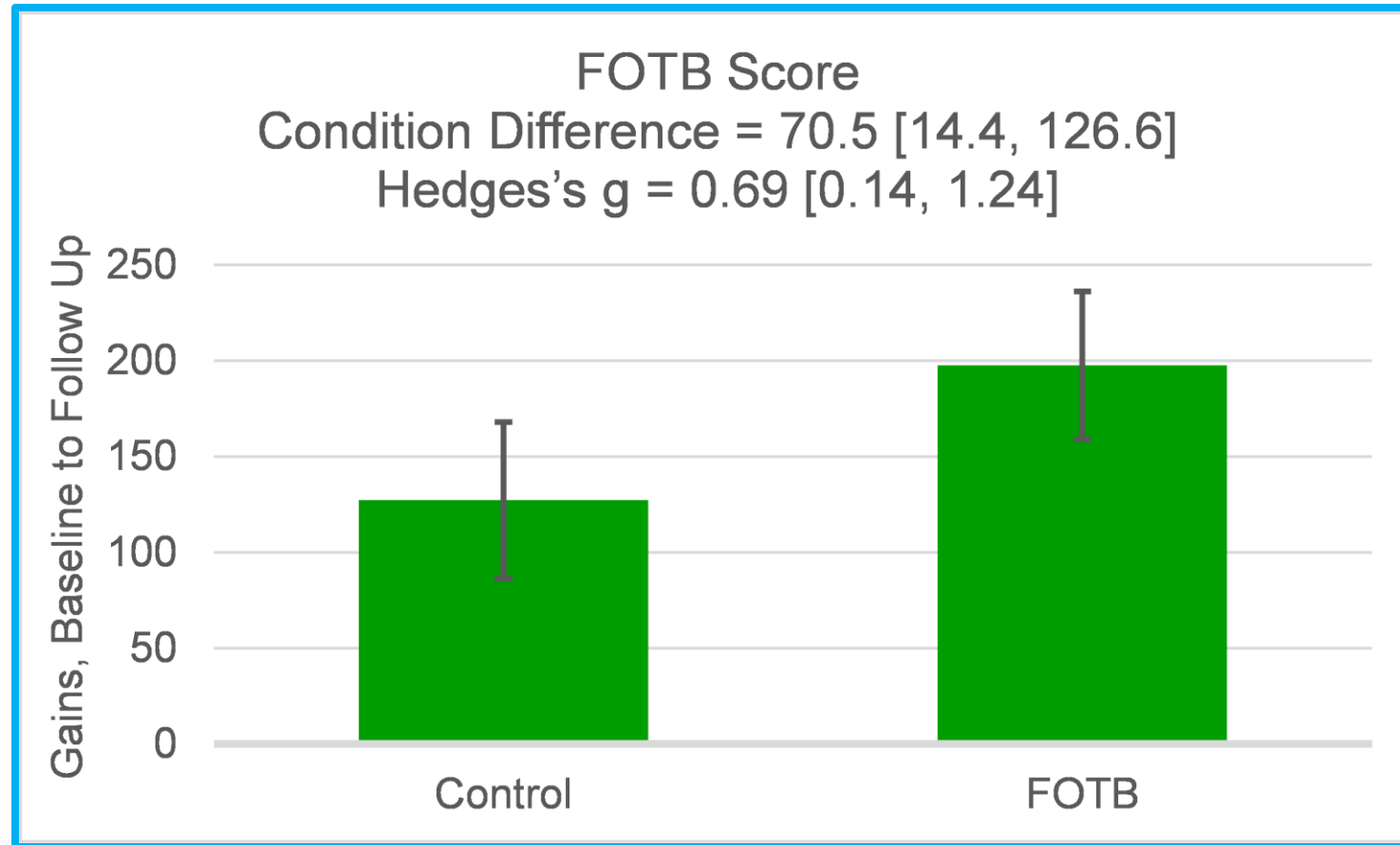
Methods

Students Tested at Follow-Up

Approximate Timeline

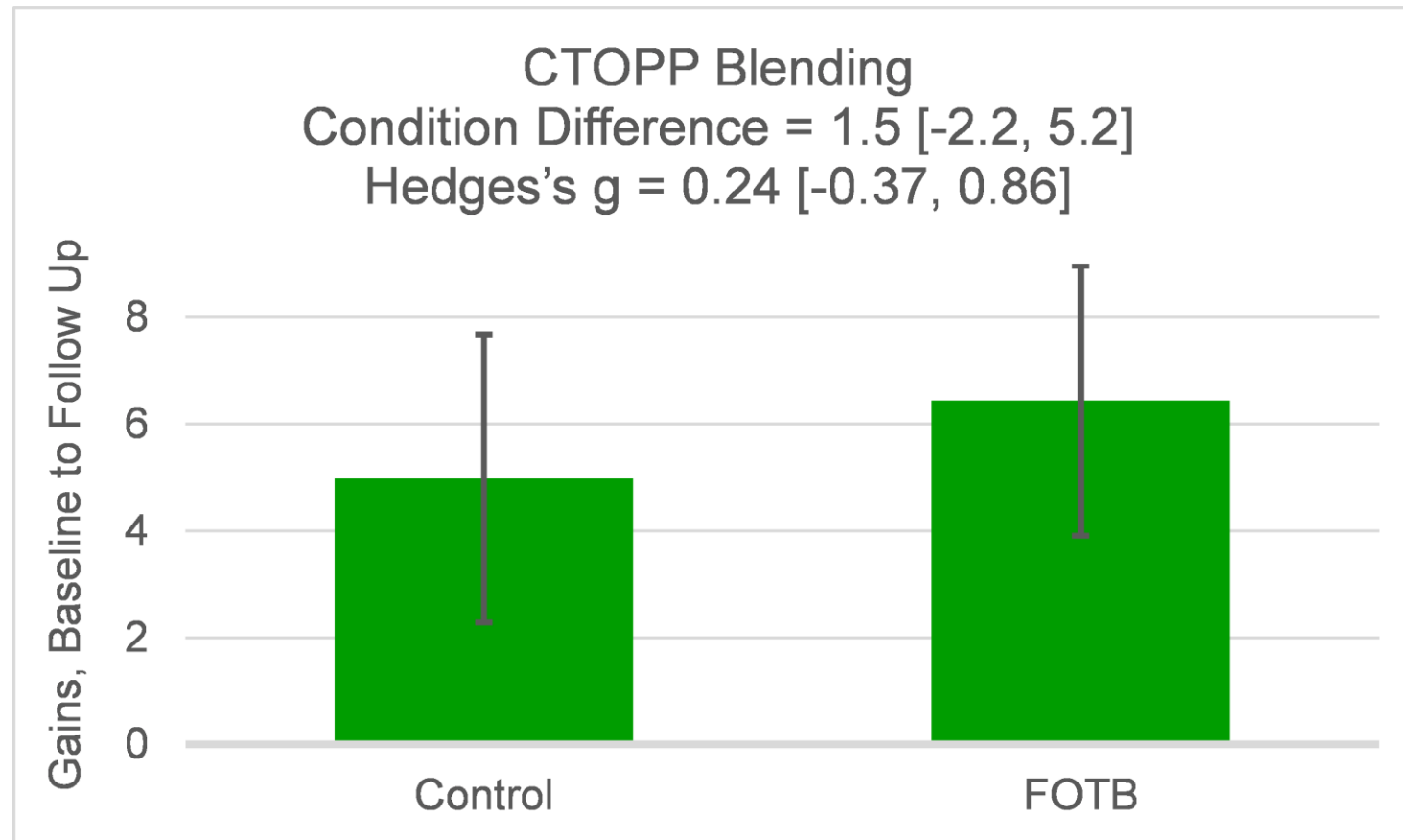
- Baseline: Fall 2021
 - Post: Spring 2023
 - End of Intervention
 - Follow-Up: Spring 2024
- $N=39$ (21 FOTB; 18 BAU)
 - Mean Age at Beginning of Intervention: 7.6
(Control SD=1.5, Treatment SD=1.1)
 - Gender: 67% male, 33% female
 - Race: 64% African American, 36% White
 - Disability labels:
 - 10% Intellectual Disability
 - 54% Developmental Delay
 - 10% Autism (IQ mean=76.5; SD=11.86)
 - 15% Specific Learning Disability
 - 5% Speech/ Language Disorder
 - 5% Other Health Impairment

Proximal Measure for FOTB

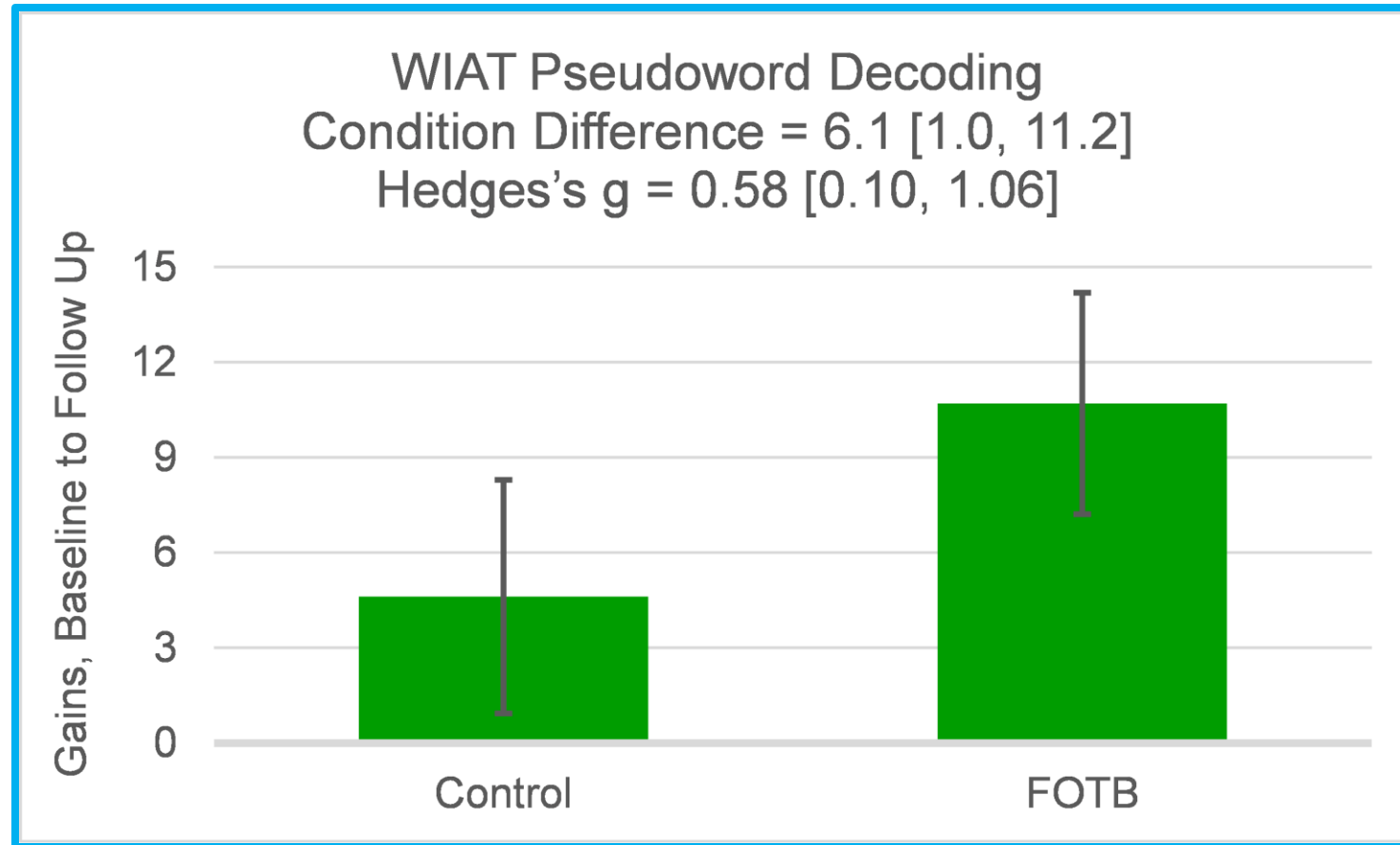


Student	Pre	Post	Follow-up
"Sayla"	19	296	302
"Ben"	3	265	273
"Olivia"	2	120	278
"Dashia"	4	277	294
"Darius"	1	79	258
"Carter"	13	265	286

Phonemic Awareness (Blending)



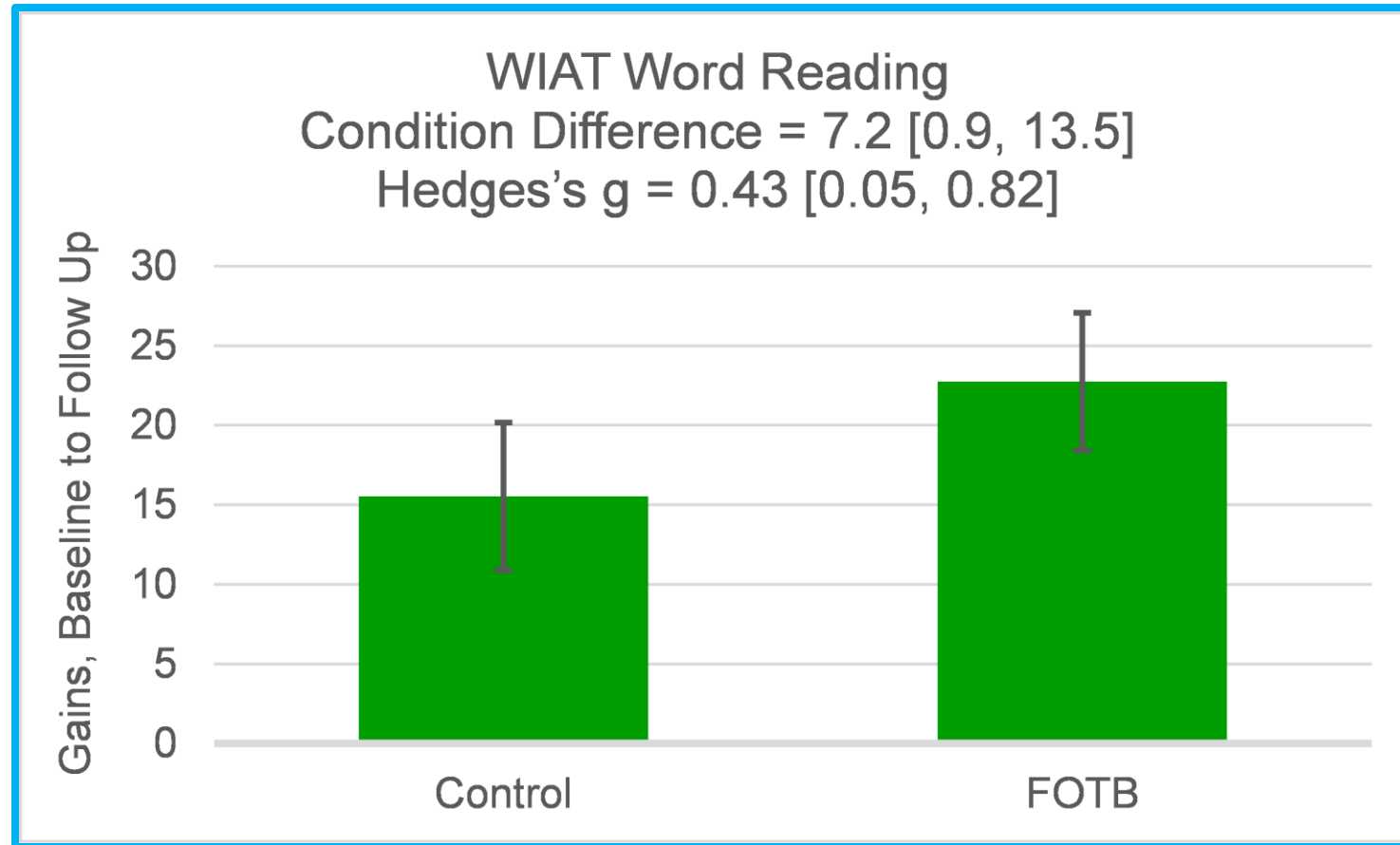
Pseudoword Decoding

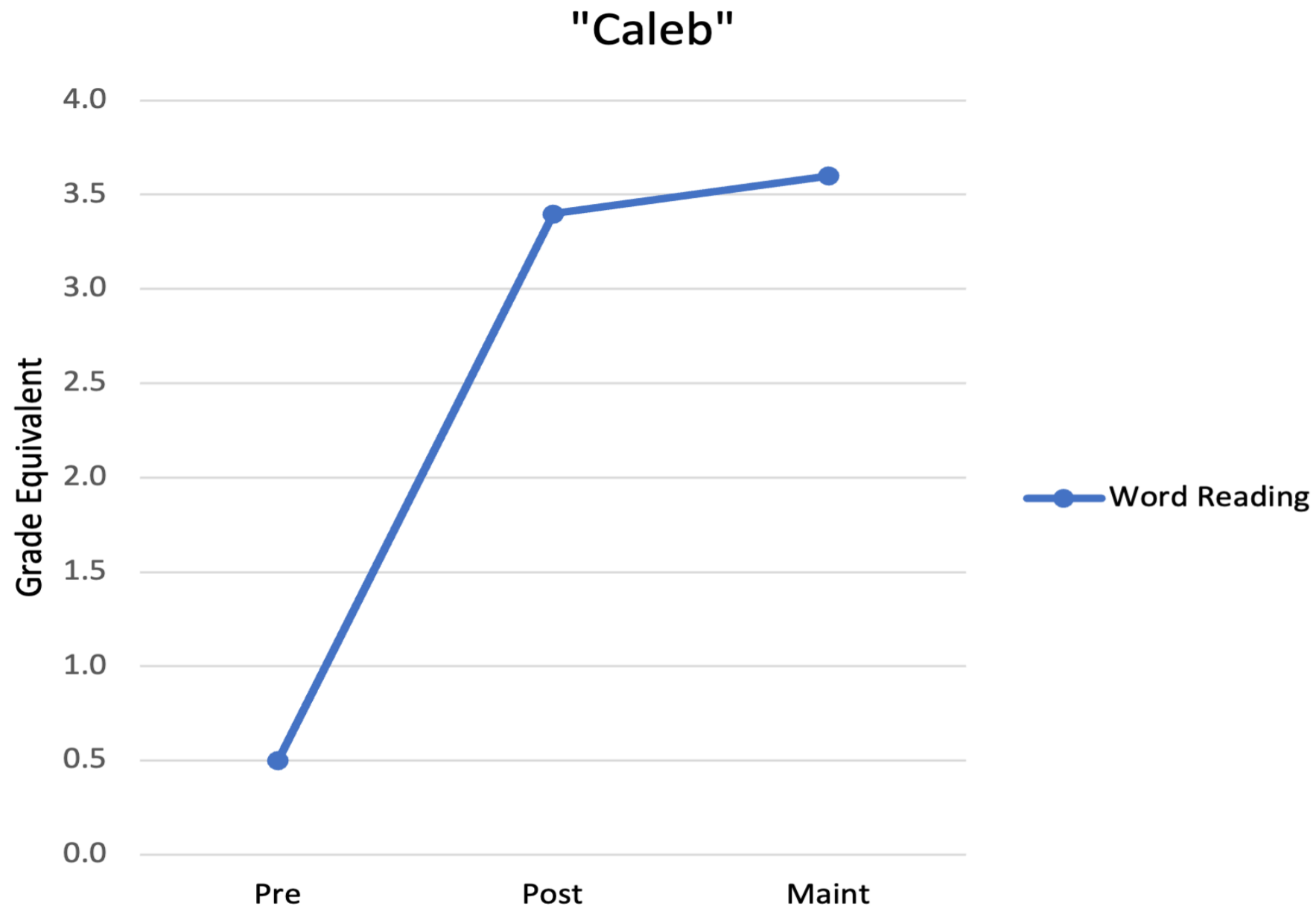


What does increased blending and decoding skills look like?

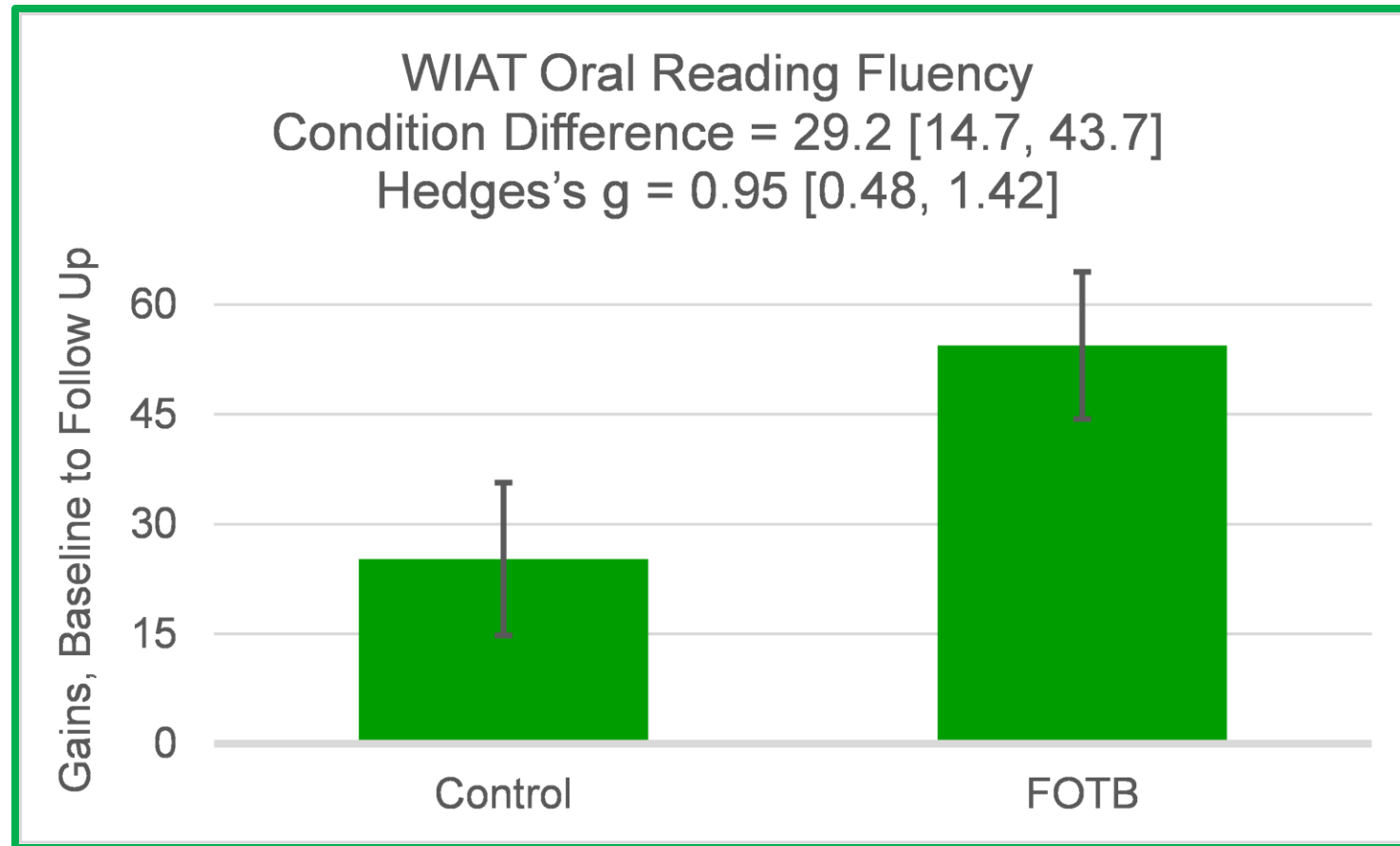
- **"Darius"**—2nd grade at the beginning of the study, retained due to excessive absences.
- Once his decoding skills increased he was able to access higher level text, therefore enabling him to participate in class.
- **"Ben"**—Self-contained classroom at the beginning of the study, transitioned to 4th grade general education during the course of the study due to increased literacy skills.

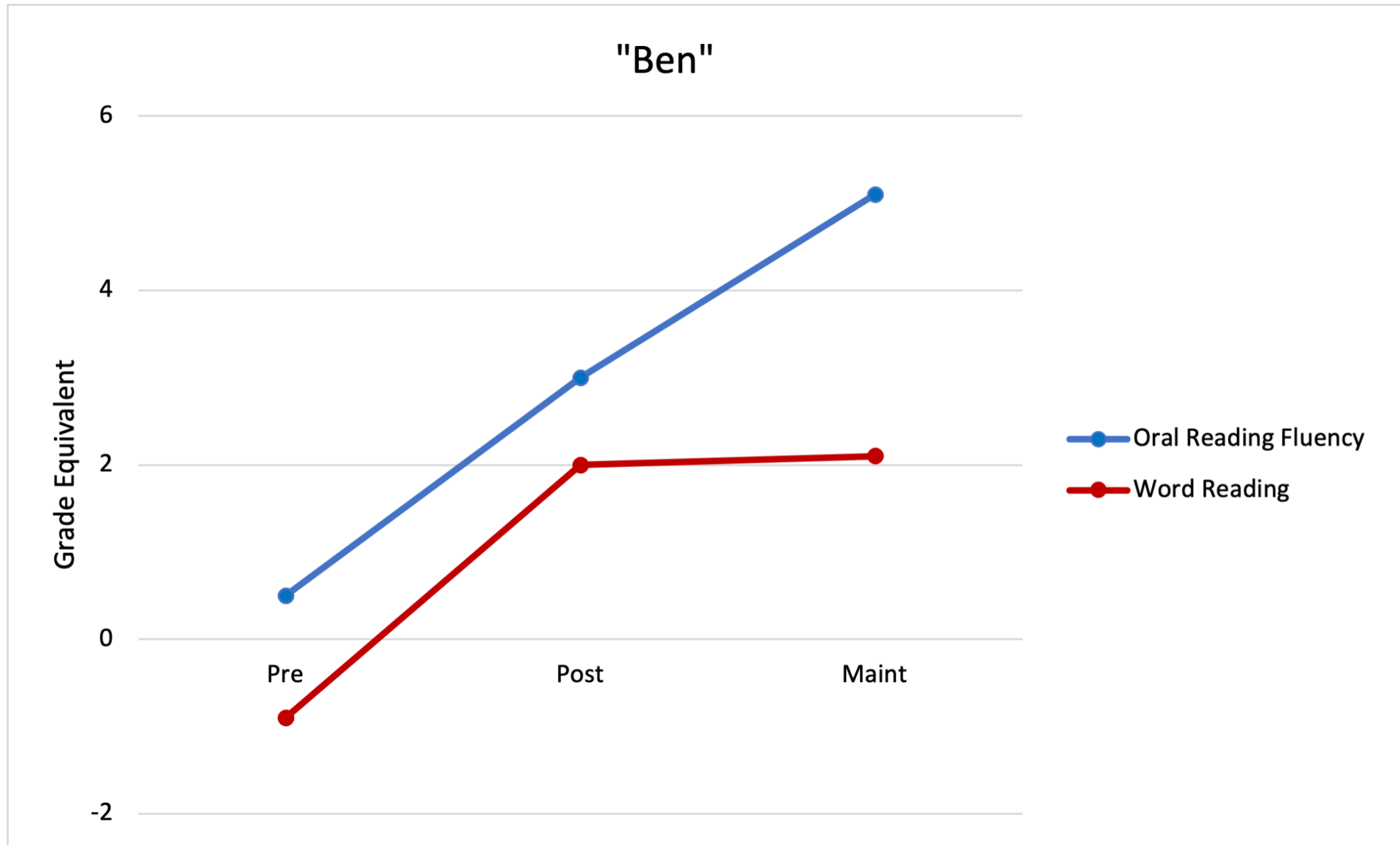
Word Reading



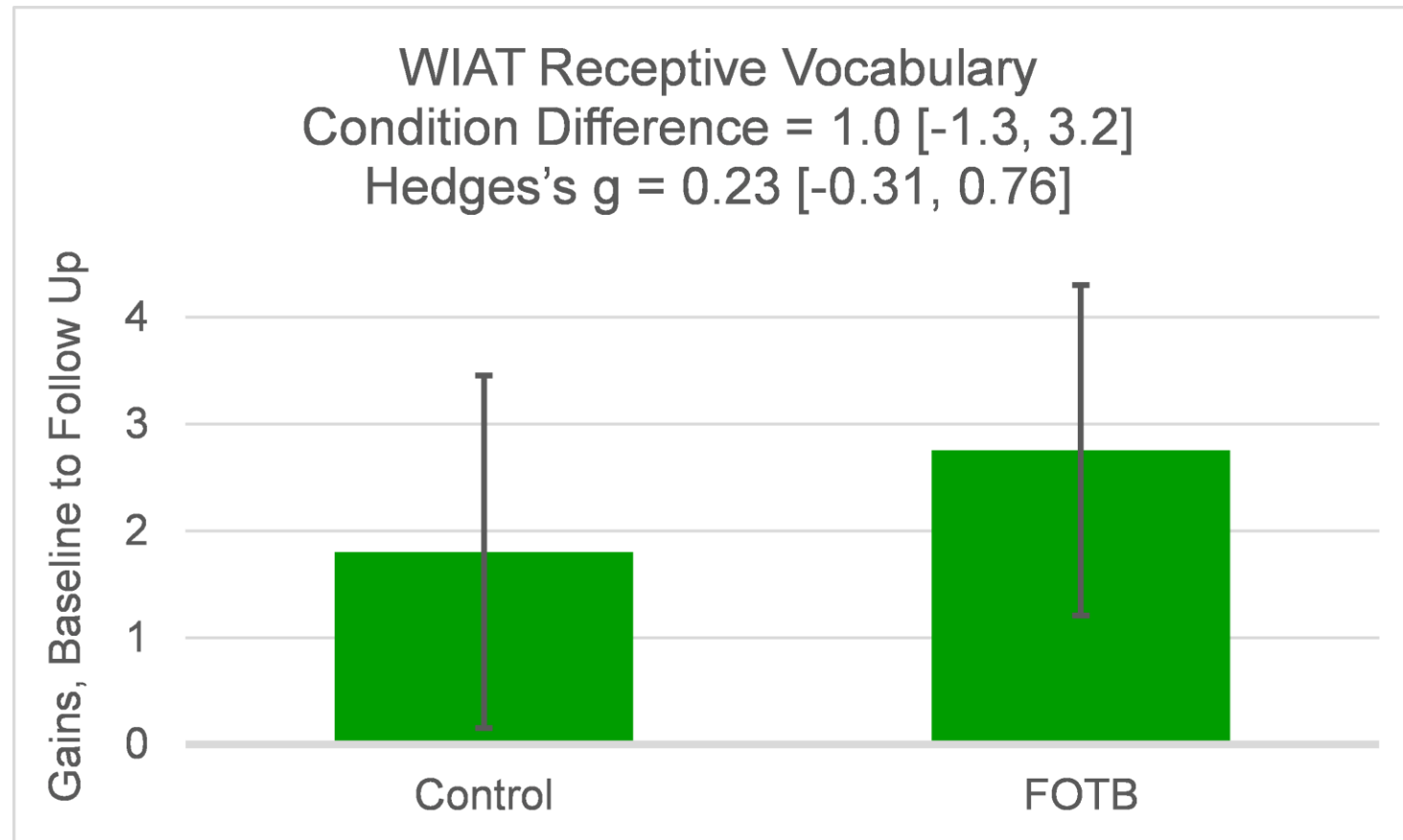


Oral Reading Fluency

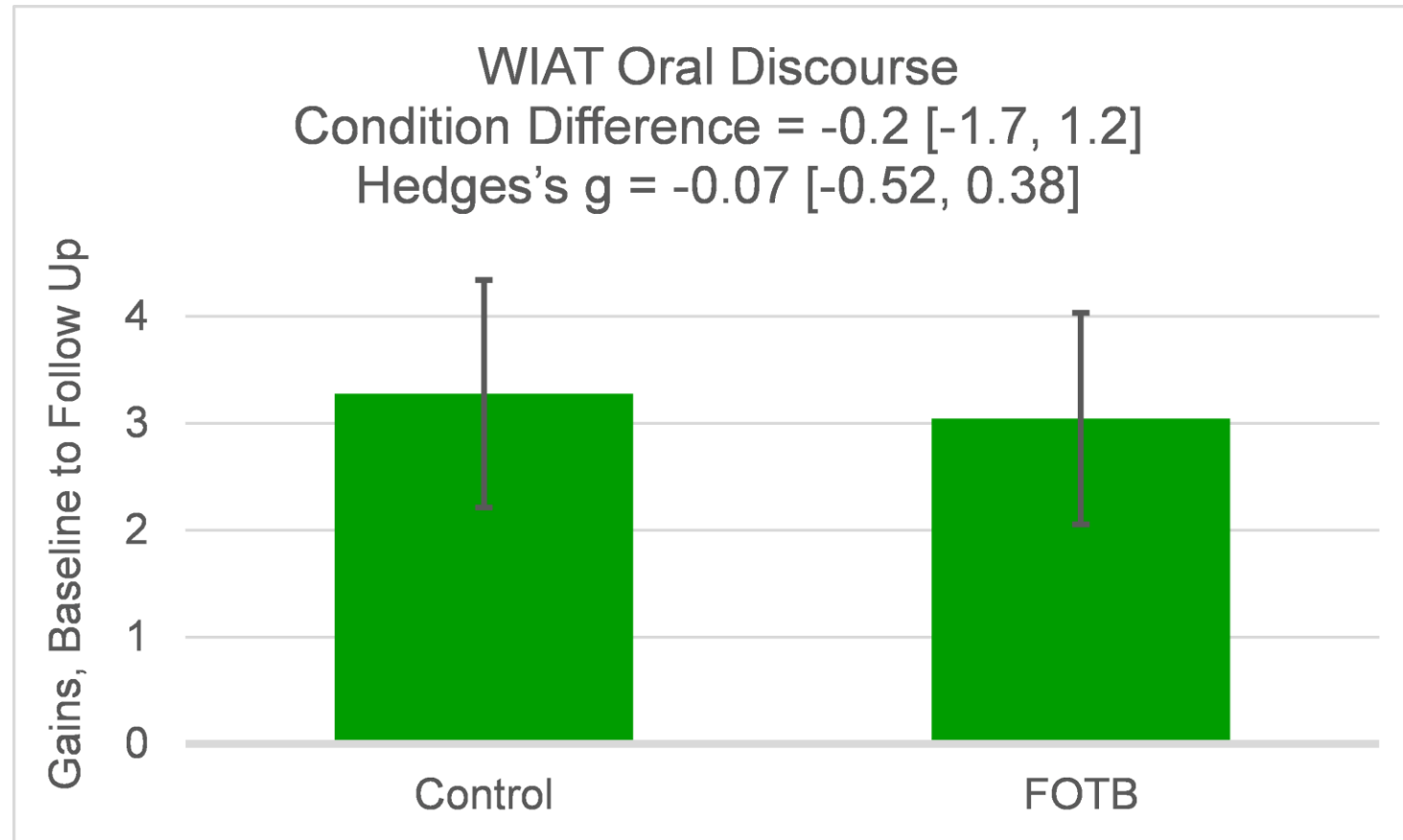




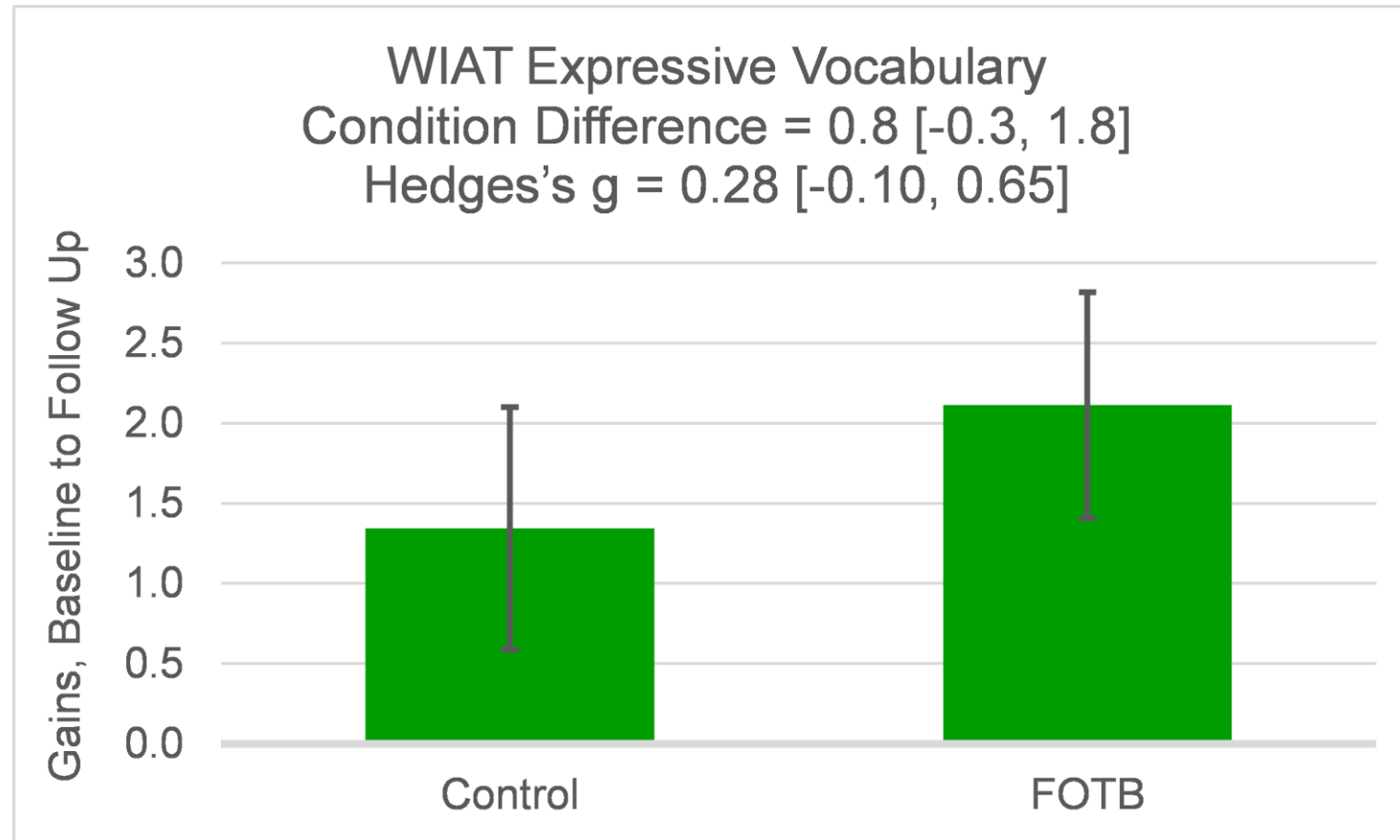
Listening Comprehension (Receptive Vocabulary)



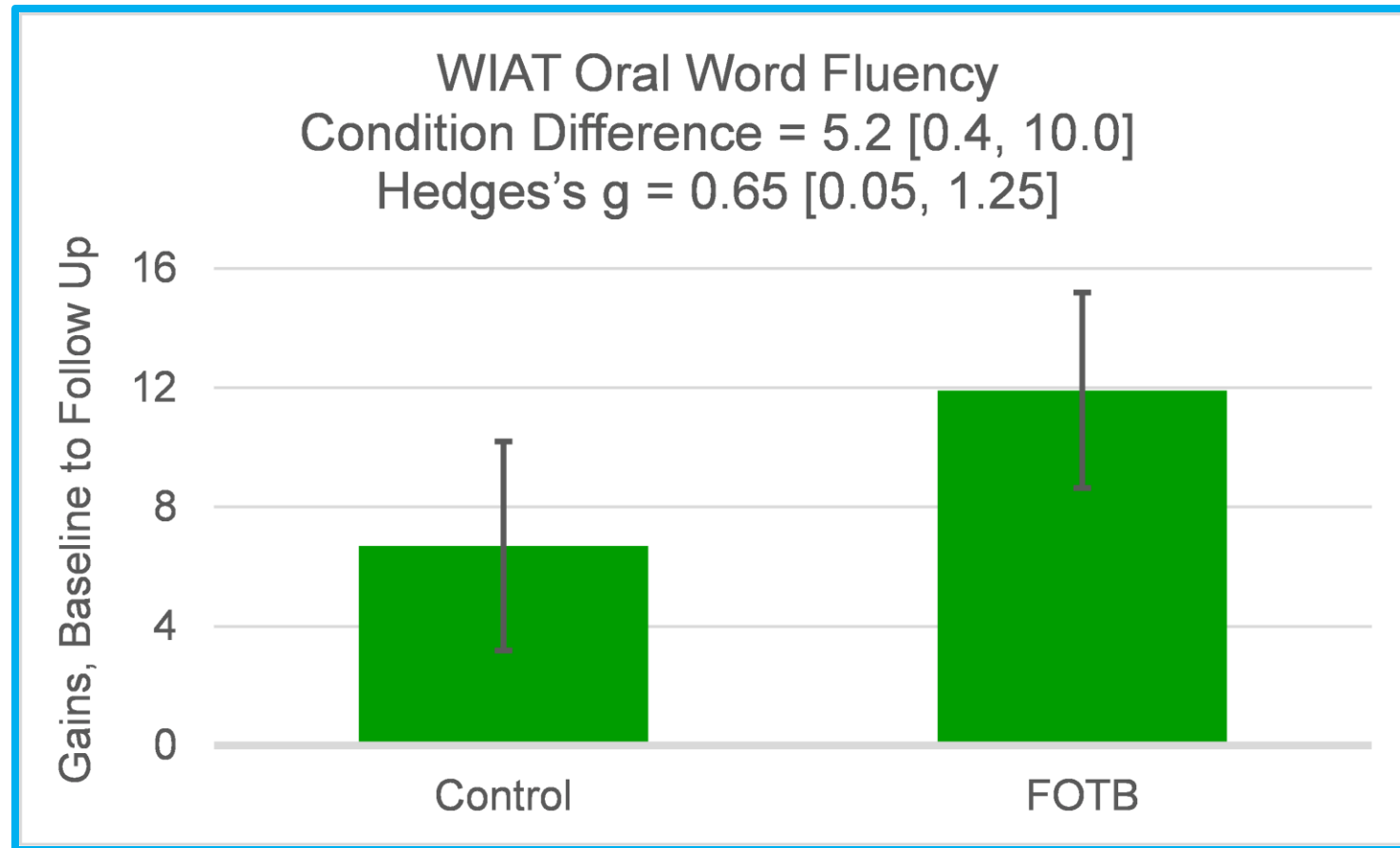
Listening Comprehension (Oral Discourse)



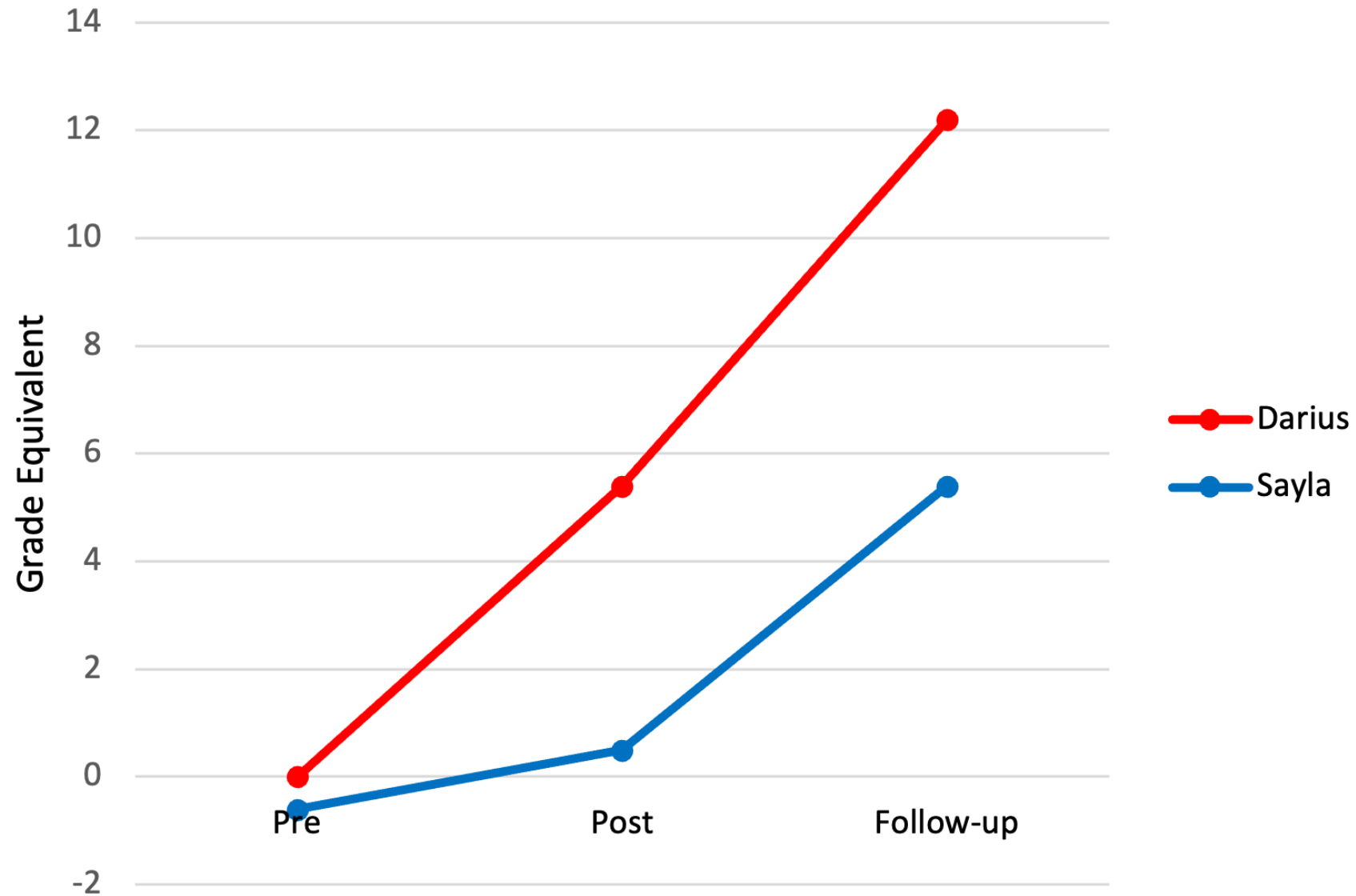
Oral Expression (Expressive Vocabulary)



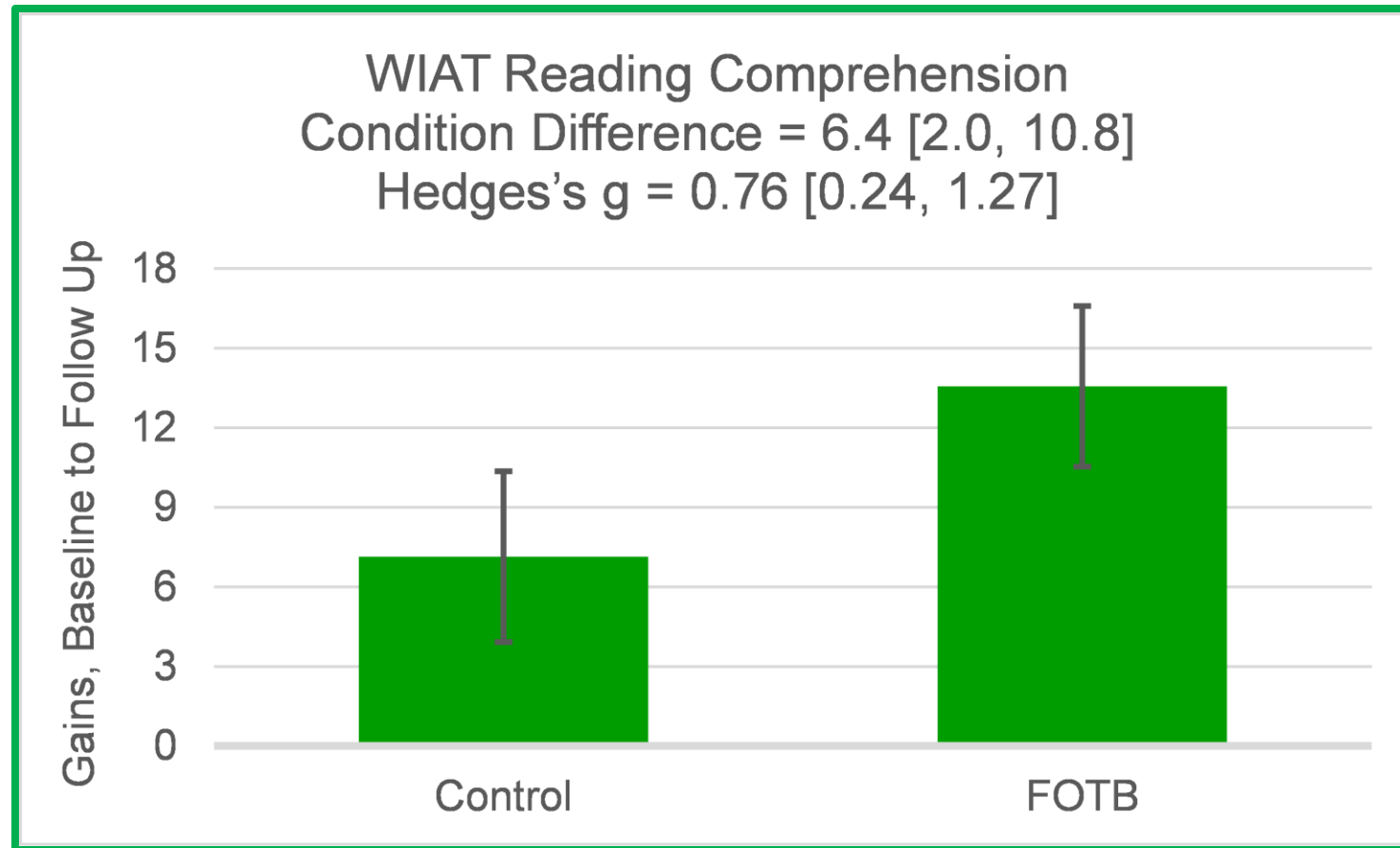
Oral Expression (Oral Word Fluency)



Oral Word Fluency



Reading Comprehension



Discussion



Implications

- FOTB shows impact as intensive early literacy intervention, particularly with those most in need of such support.
- Key take away: With appropriate support, students with intensive needs are not just reading words, but reading with fluency and comprehension. And the effect continued even after intervention.
- It is important to customize instruction with data-based individualization
- Fidelity is key – a key part of fidelity is making data-based instructional decisions
 - In FOTB, includes pacing (how quickly to advance through intervention), providing scaffolding and corrective feedback, and selecting activities within the program to target student needs

Self-Teaching Hypothesis (e.g., Share, 1995)

- Share proposed students learn to use phonological, phonetic, and contextual information to decode new words and to overcome "decoding ambiguity."
- Our FOTB treatment students, who continued to read with more fluency and comprehension, may now be able to benefit from a broader range of instruction and decode more novel words

Implications for Teachers and Administrators

- It is vital to include special education teachers in science of reading and structured literacy training (Allor & Al Otaiba, in press).
- Special and general education teachers and other members of instructional teams can use student reading data to set goals, customize instruction and pacing, plan grouping, and to evaluate when changes or other supports are needed.

Limitations and Directions for Future Research

- A limitation is that our interventionists provided the intervention, so additional research is needed that is delivered by classroom teachers.
- These results should be considered preliminary as we have another cohort and additional data to analyze.
- Given the limited language effects on WIAT, we will explore with additional analyses of other measures.
- Research is needed to examine longer-term effects and the effectiveness of FOTB relative to comparable programs.

Core Behavioral Supports



TCSS Super Strategies



WARM WELCOMES



TEMPERATURE
CHECKS



COMMUNITY
CIRCLES



WARM GOODBYES

Non-Verbals

- The 'Look'
- Stand Close to You



Differentiated Behavioral Supports



1



STOP

2



Smell the
Flower

3



Blow out
the candle

4



Relax your
body

Questions



Boosting Fluency and Text Comprehension for Students with Intensive Needs: Case Studies with Diverse Learners

Thursday, March 13th, 8:00- 9:00am, Room 309



This presentation will highlight case studies of elementary students with a variety of disabilities including intellectual and developmental disabilities who received intensive, comprehensive early literacy intervention as part of a large-scale RCT. We will provide concrete, practical examples of how to modify literacy intervention that teachers can implement immediately!

Nationwide Survey of **General Education Access** and **IEP Meetings** for **K-3 Students**:

We are conducting a **nationwide, 35-minute, online survey** about IEP meetings for **students with extensive support needs**.

What factors influence LRE decisions, general education access, and reading instruction?



To learn more, scan the code or click the link below:

<https://redcap.link/K-3IEPMeetings>



Questions:

Elizabeth Rossi
Doctoral Candidate
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VUMC IRB #250076

Eligible Participants

Licensed Special Education Teachers of students in Grades K-3

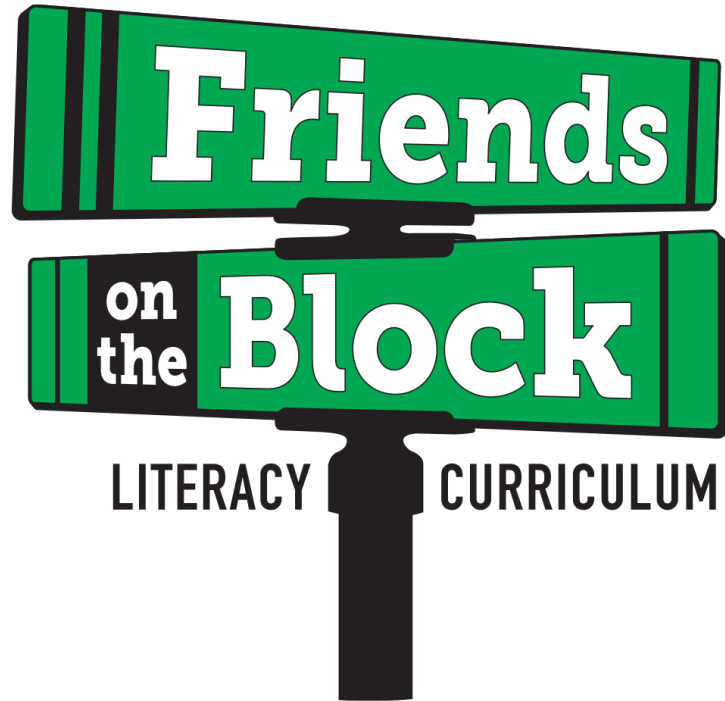
Know any interested colleagues?

Please forward this flyer via email or text.

Valid participants can enter a raffle to win an Amazon gift card!



For More Information on Friends on the Block



Overview & Demonstration Videos

FREE Materials



OSF Registries

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Takeaway: FOTB is effective in boosting the early literacy skills of children with intensive needs.

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