



***Developing and evaluating a K-3
multi-tier reading reform initiative:
The Connecticut K-3 Literacy Initiative***

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HILL for Literacy

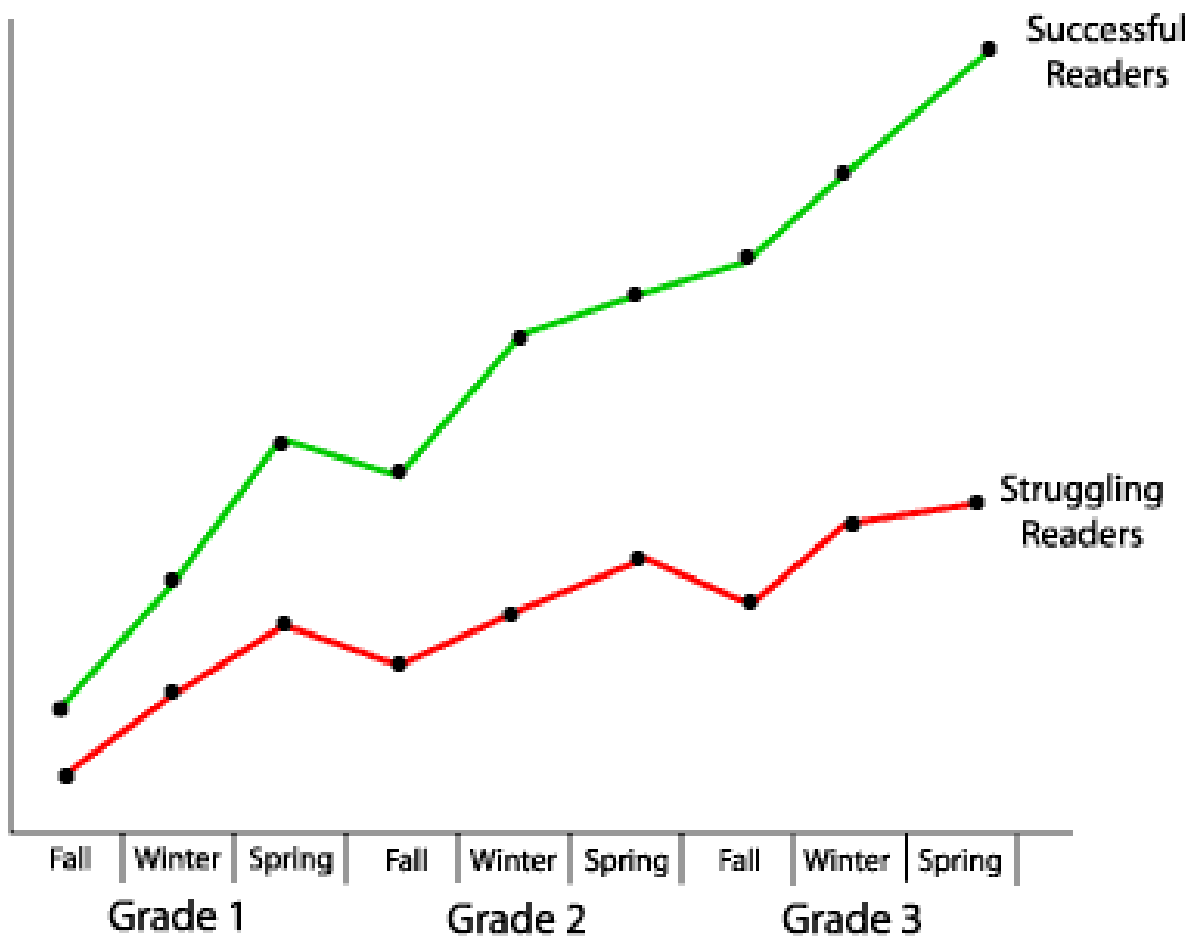
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Outline of Session:

- Context for CK3LI
- Features of CK3LI Reading Model
- Evaluation of CK3LI Pilot

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What research tells us about the achievement gap in reading:

- The achievement gap emerges early
- The achievement gap grows more discrepant over time
- The achievement gap is stubbornly resistant to change
- The achievement gap is evident across all areas of literacy

4 th Grade Reading Achievement Gap in CT	Rank
Poor vs. middle- and high-income students	
Hispanic vs. white students	
Black vs. white students	

4 th Grade Reading Achievement Gap in CT	Rank
Poor vs. middle- and high-income students	3 rd worst
Hispanic vs. white students	
Black vs. white students	

4 th Grade Reading Achievement Gap in CT	Rank
Poor vs. middle- and high-income students	3 rd worst
Hispanic vs. white students	5 th worst
Black vs. white students	

4 th Grade Reading Achievement Gap in CT	Rank
Poor vs. middle- and high-income students	3 rd worst
Hispanic vs. white students	5 th worst
Black vs. white students	7 th worst

Context/History

- Comprehensive education reform bill approved with bipartisan support in the legislature and signed into law by Governor Malloy
- Public Act 12-116, *An Act Concerning Educational Reform*
 - Black and Puerto Rican Caucus
 - State Department of Education

CK3LI Goals

1. Focused initial effort in Year 01 on establishing a comprehensive assessment system, identifying students most at risk for reading difficulties, and providing them with intensive small group intervention. *(5 pilot schools)*
2. Full implementation K-3 reading model in Year 02 to incorporate comprehensive classroom reading supports for all students including research based instructional tools and materials, embedded coaching, professional development, data based decision making, and parent engagement. *(5 pilot schools)*
3. Expanded implementation of K-3 reading model in Year 03 across 17 school districts in CT. *(17 expansion schools)*

CK3LI Initial Pilot Schools

- Norris, Langford (East Hartford)
- Windham Center (Windham)
- Burns Latino Studies Academy (Hartford)
- Truman (New Haven)
- John Barry (Meriden)

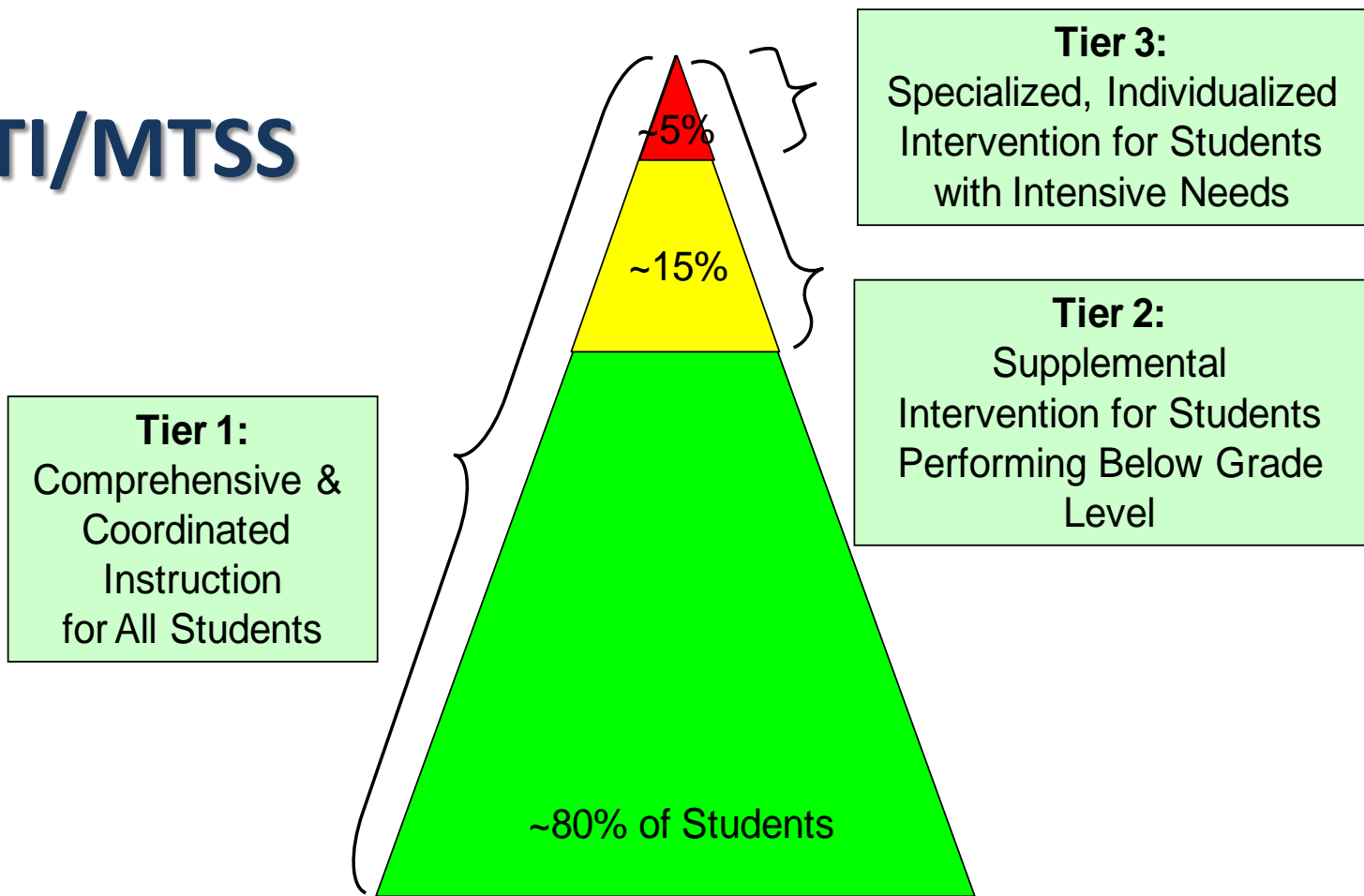
CK3LI Leadership Team

- **UConn:** *George Sugai, Michael Coyne, Ashley Oldham, Mari Cuticelli*
- **HILL for Literacy:** *Darci Burns*
- **Literacy How:** *Margie Gillis*

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RTI/MTSS



Comprehensive School-wide Reading Improvement Model

- School-wide reading improvement plan
- School literacy leadership team
- Comprehensive literacy assessment system
- High quality classroom reading instruction for all students
- Evidence-based supplemental intensive reading interventions
- Embedded coaching and ongoing professional development
- Aligned summer school intervention supports
- Parent engagement program

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CT K-3 Literacy Initiative: CK3LI

School Literacy Plan SY13-14

Priority Goal 1: *Establish a team of literacy leaders with a cohesive knowledge base on the leadership routines necessary to institute evidence-based literacy practices with in a tiered instructional model and that will provide on-site facilitation and establish sustainability for the initiative.*

Priority Goal 2: *Collaborate with the school to implement the new core program in a multi-tiered instructional framework.*

Priority Goal 3: *Create a consistent knowledge base and common language among teachers that is based on the overview of reading, current reading research and evidence-based practices in reading instruction and behavior management.*

Priority Goal 4: *Collaborate with the school leaders to establish a framework and process for using scientifically-based dynamic assessments to make instructional decisions at the district, school, grade, classroom and individual student levels.*

Priority Goal 5: *Develop and implement a school-home/family model for student support*

**Activity Timeline
2013-2014**

Date	Time/ Hours	Activity/Topic	Materials Needed	Facilitator	Attendees	Goal
8/14	9-2	Literacy Leadership Team Retreat	Calendars Schedules School Literacy Plan Activity Timeline	CK3LI Leadership Team	Literacy Team	6-7
8/15-8/16	8:30-3:00	Summer Teacher Training	TE Training Materials Guide on the Side ECRI templates	Pearson HILL	Teachers	5
Week of 9/12		Disseminate Testing memo	Testing Memo	Coach	Teachers RS, SPED	2
9/12	9:00-grade 3 9:50-grade 2 12:10-grade 1 1:00-K	Grade Level Implementation Meetings	Reading Street – set up and distribute materials	Katie	Grade Level Teams	2
9/12	2:00-3:30	Literacy Leadership Team Meeting	Activity Timeline SLP Distribution of People Resources	Coaches	Team	6-7
9/26	1:30-3:30	Early Release - Small Group PD	Reading Street Alternate Small Group Plans ECRI Templates Norris Small Groups	Coaches Cathie Callanan	All Teachers	5
9/16-9/27		DIBELS Next Testing	Testing Materials Data Entry Forms Stopwatches	Interventionists		2
9/16-9/27		Reading Street Baseline test (grades 2 and 3)	Testing Materials	Interventionists		2
9/5—9/19		SAT 10 Testing		Teachers		2
10/4		Data Entry Due Date	Data System	Coaches		2
Week of 10/7		Data meeting Prep	Data Meeting Docs LCD/Screen Data Reports Workbook	Coaches	School-based data leaders	3
10/8	1:00-3:00	Pre Data Meeting	Completed Data Workbooks DDS Reports	Katie	Interventionists	3
10/10	8:30-2:00	Grade Level Data Meetings	Data Meeting Docs	Katie	Grade Level Teams	3

Comprehensive School-wide Reading Improvement Model

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- High quality classroom reading instruction for all students
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School Leadership Team:

- Purpose: Distributed leadership
- Monthly meetings
- Members:
 - Principal
 - Teachers (SPED, ELL and Regular Ed)
 - Literacy Coach
 - Instructional Assistants
 - Parents

Comprehensive School-wide Reading Improvement Model

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- **Comprehensive literacy assessment system**
- High quality classroom reading instruction for all students
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Developed a comprehensive literacy assessment implementation plan in each school

- Selected an assessment system (CBM: DIBELS) for screening, benchmarking, and progress monitoring that is highly predictive of reading outcomes

- Conducted grade level data meetings with teachers, interventionists and administrators 5x per year.
- Reviewed school level data 3-4x per year during leadership team meeting.
- Reviewed school level data with district leaders 3x per in district leadership team meetings.

Data Workbooks

- Organize assessment data to identify student needs and to coordinate instruction and intervention

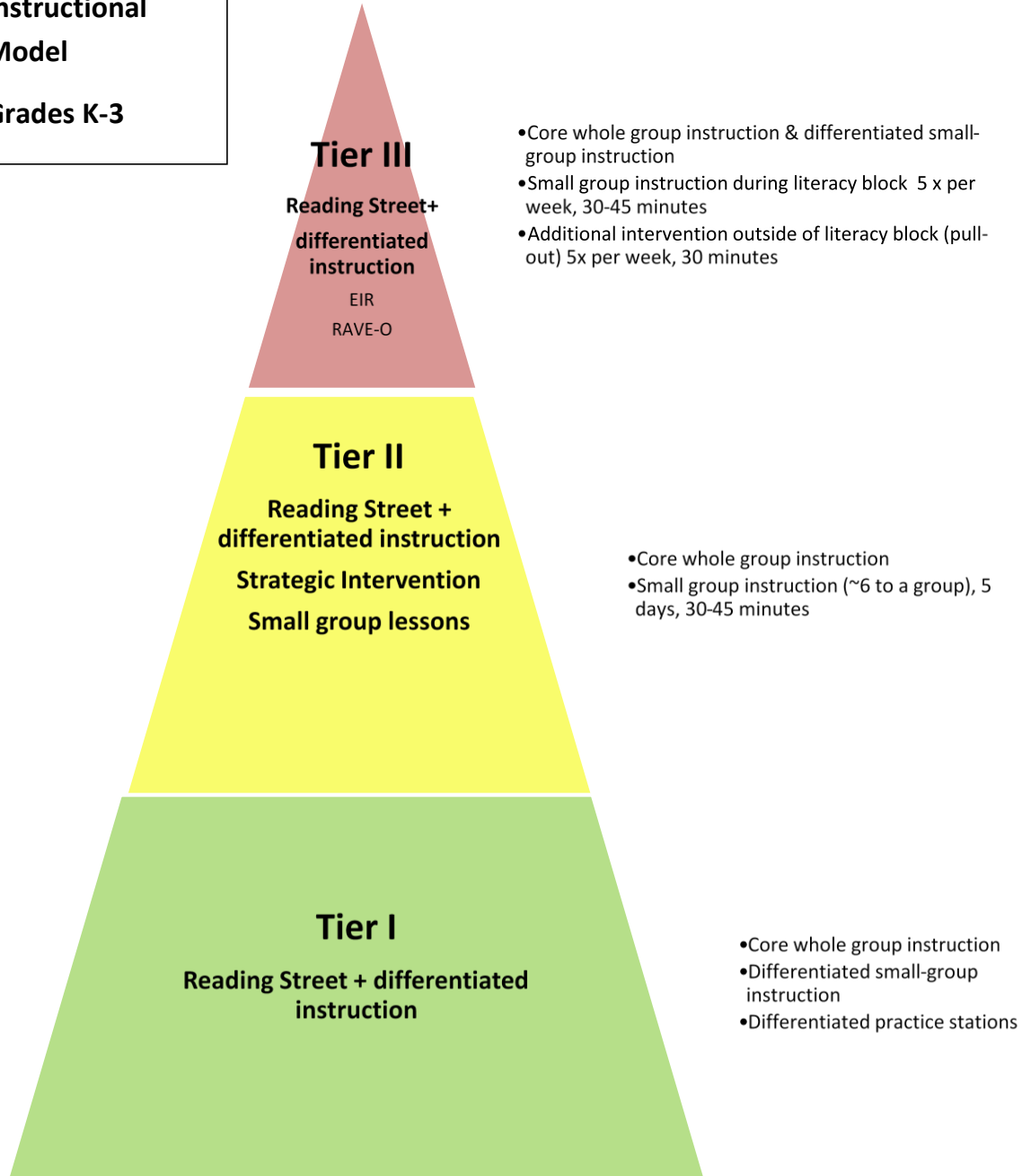
Name	Teacher	PSF	NWF	Focus	Fall Grouping			
					Tier 1 Level	Small Group	Tier 2 Program	Interventionist
Sandra	Ruiz	42	60	fluency	on-level	Ruiz 1		
Marco	Ruiz	50	40	phonics	on-level	Ruiz 2		
Julia	Ruiz	42	25	basic phonics	strategic	Clark		
James	Ruiz	32	20	basic phonics	strategic	Clark		
Joe	Ruiz	18	10	letter-sound	intensive-EL	Watson	P-EIR 1	Watson
Ben	Ruiz	20	14	letter-sound	intensive-EL	Watson	P-EIR 1	Watson
Abby	Ruiz	10	2	letter-sound	intensive-EL	Watson	P-EIR 1	Diaz

Comprehensive School-wide Reading Improvement Model

- School-wide reading improvement plan
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- **High quality classroom reading instruction for all students**
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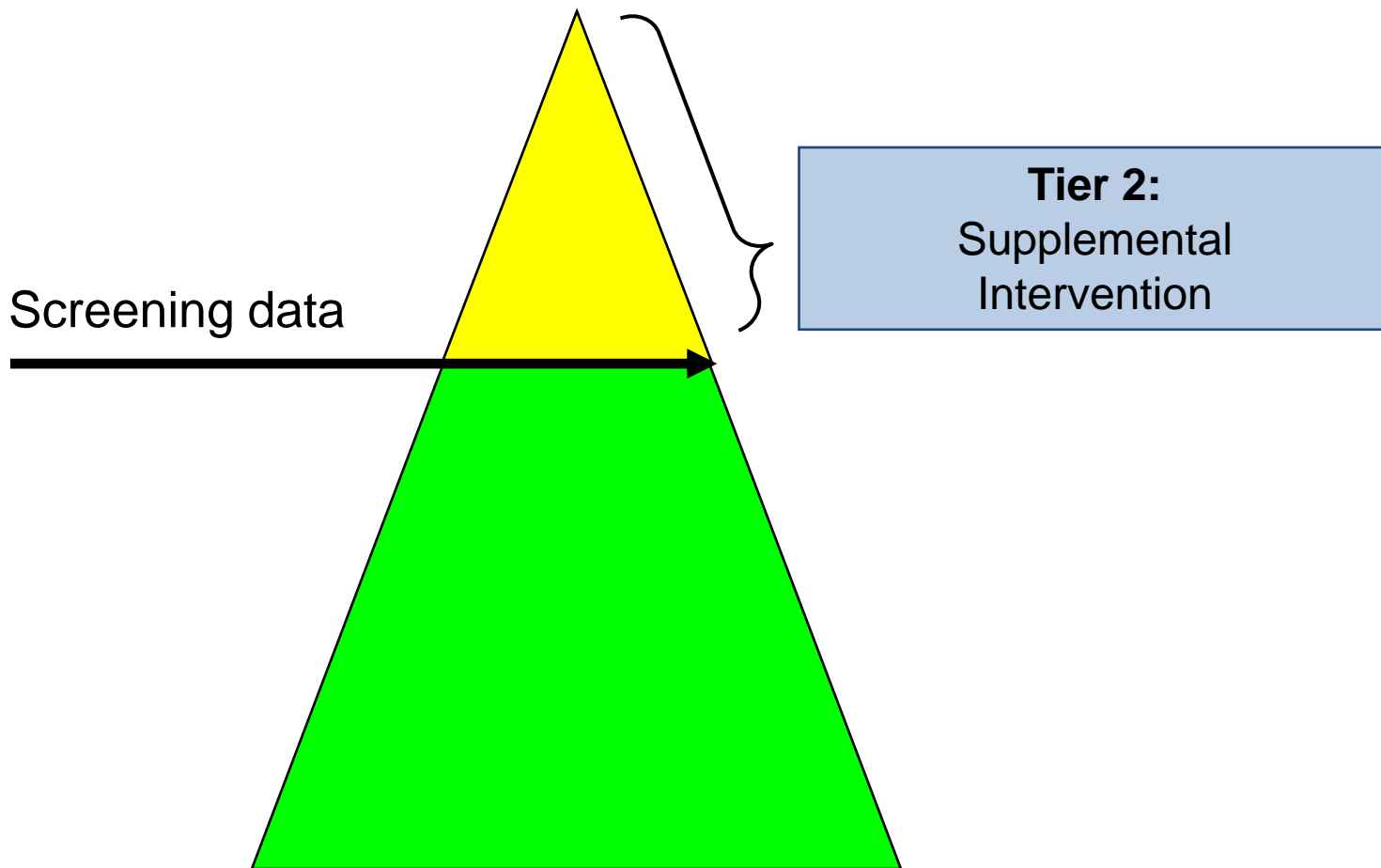
**Tiered
Instructional
Model**

Grades K-3

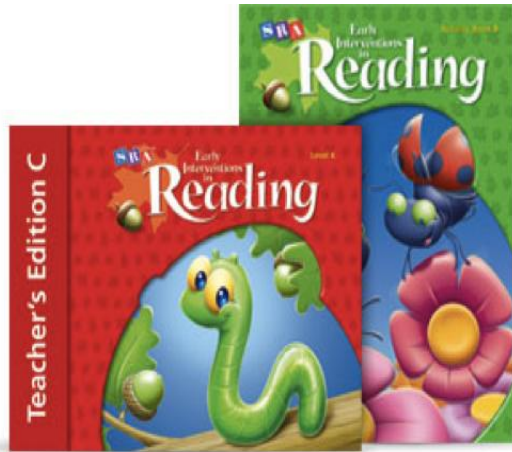


Comprehensive School-wide Reading Improvement Model

- School-wide reading improvement plan
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- High quality classroom reading instruction for all students
- **Evidence-based supplemental intensive reading interventions**
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Developed a supplemental intervention implementation plan for each school



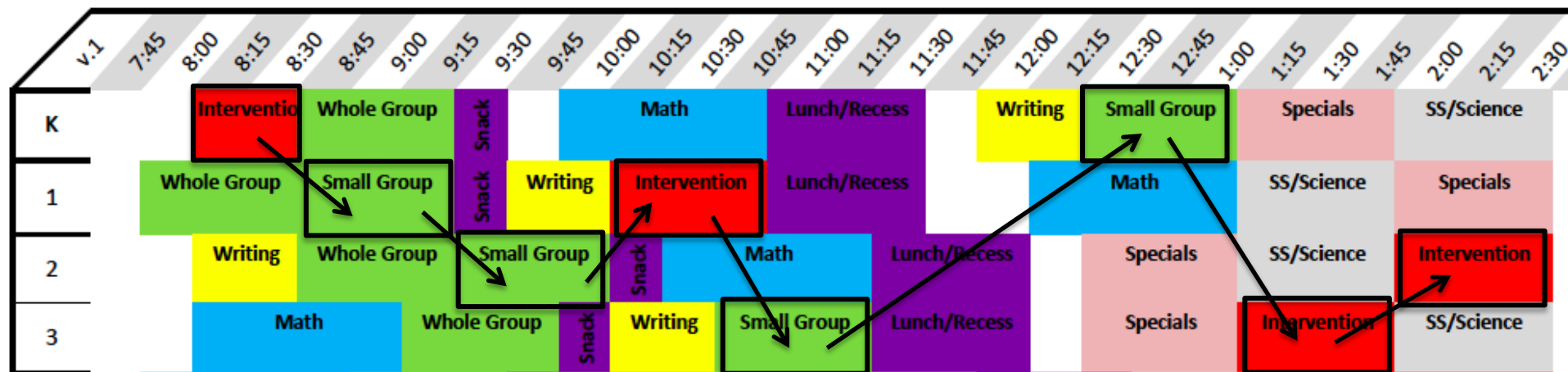
- Identified *Proactive Early Interventions in Reading (P-EIR)* as base intervention program

Developed a supplemental intervention implementation plan for each school

- 40-60% of K-3 students at each school received intervention
- Students received 30-45 minutes of small-group intervention per day, 5 days per week
- Intervention was adjusted and differentiated based on ongoing progress monitoring data
- Implementation data suggests that intervention was delivered with high levels of quality, fidelity, and consistency across schools

Master Academic Schedule

- Maximize opportunities for targeted small group reading instruction and intervention



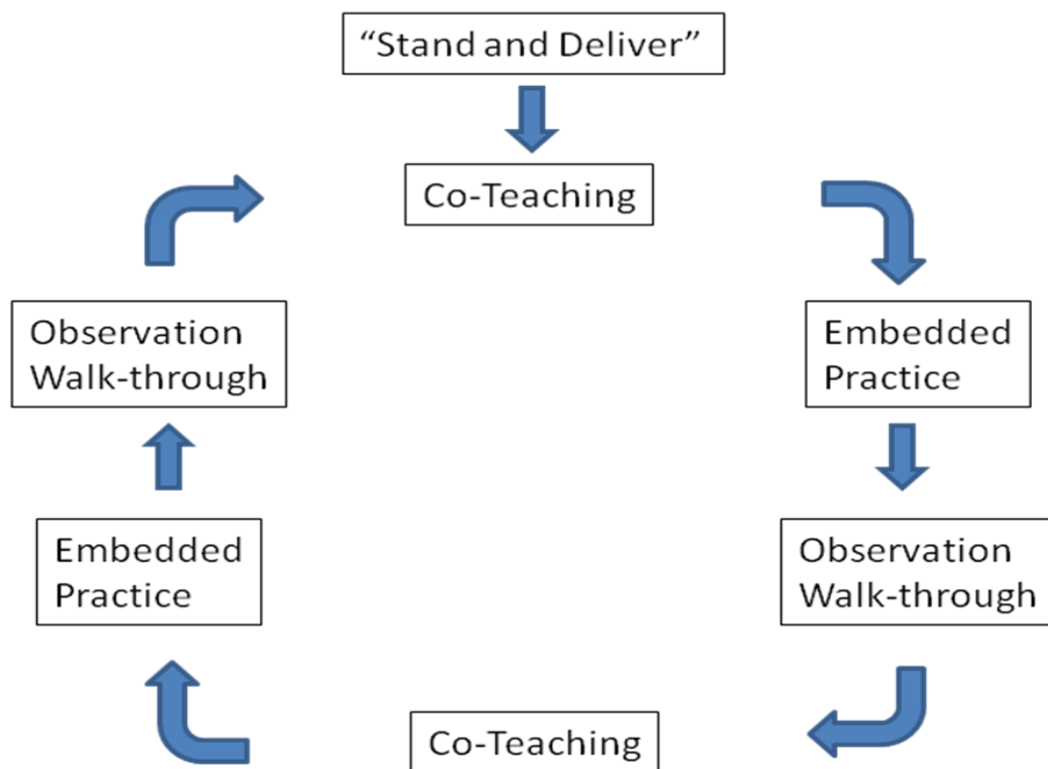
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Professional Development Topics:

- Model of Reading Development
- Current Reading Research
- Implementing systematic, explicit instruction
- Managing the literacy block
- Behavior management techniques

Professional Development Sequence



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CK3LI Goals

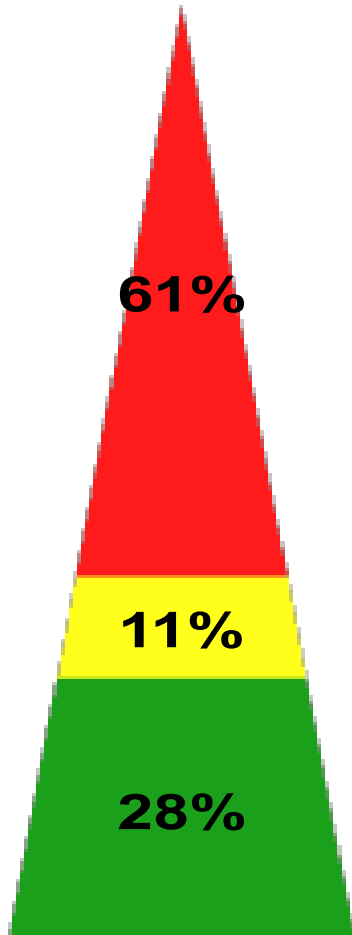
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Research Questions

- Year 01
 - Does supplemental small-group reading intervention increase the literacy and reading achievement of K-3 students most at risk for reading difficulties?
- Year 02
 - Does the full CK3LI model increase the literacy and reading achievement of all K-3 students?

Pilot Schools

Fall Screening: Kindergarten 2013
(DIBELS First Sound Fluency)



Students well below beginning of kindergarten benchmark



Students at or above beginning of kindergarten benchmark

Participants

Grade	Intensive Intervention	Classroom Instruction Only
Kindergarten	114	172
1 st Grade	105	170
2 nd Grade	129	144
3 rd Grade	142	127

Measures

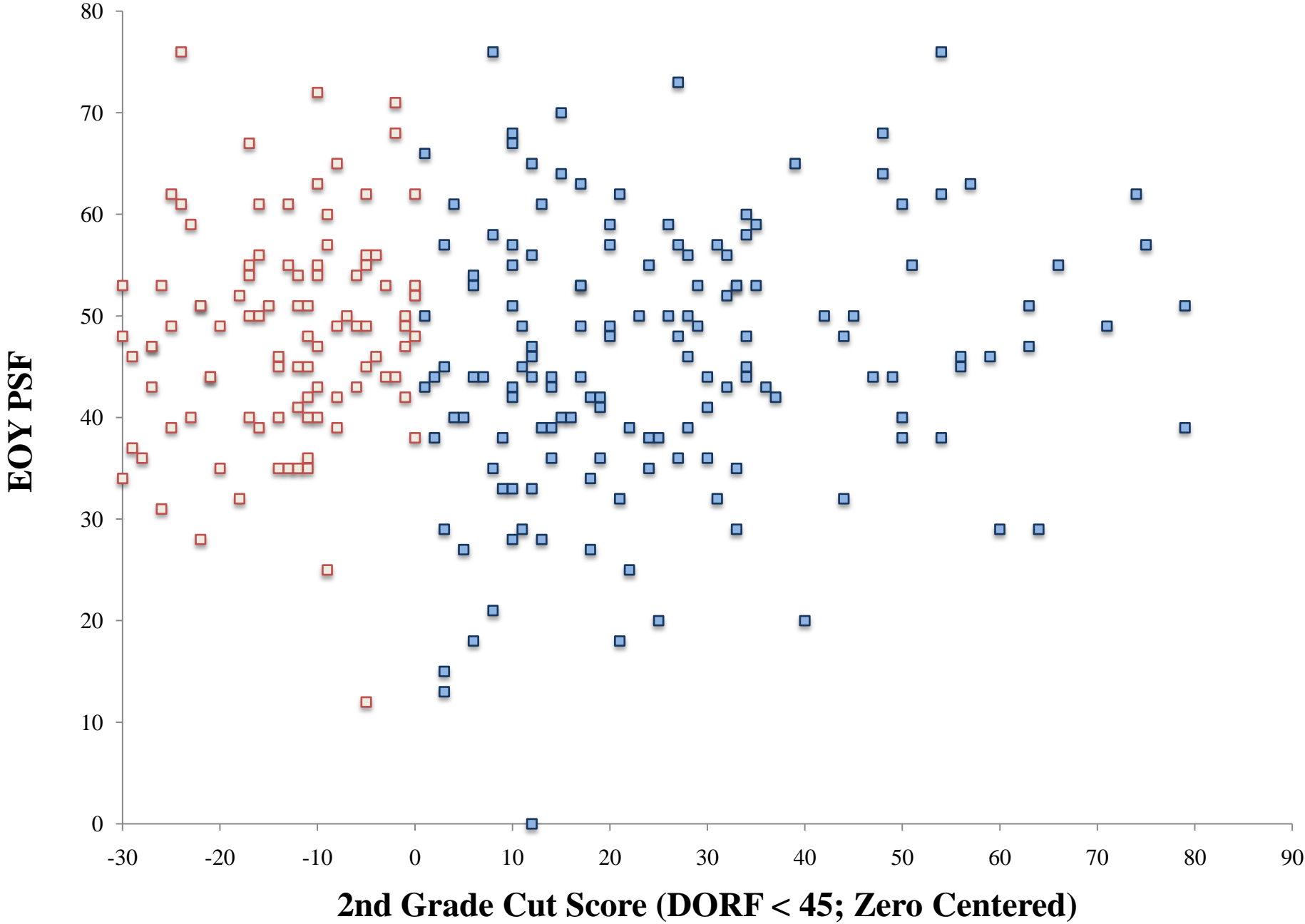
- Phonemic Awareness
 - DIBELS Phoneme Segmentation Fluency (PSF)
- Letter Knowledge, Decoding
 - WRMT Letter-Sound Subtest
 - DIBELS Nonsense Word Fluency (NWF)
- Reading Fluency
 - DIBELS Oral Reading Fluency (ORF)
- Reading Comprehension
 - DIBELS DAZE
 - WRMT Passage Comprehension Subtest

Design/Analyses

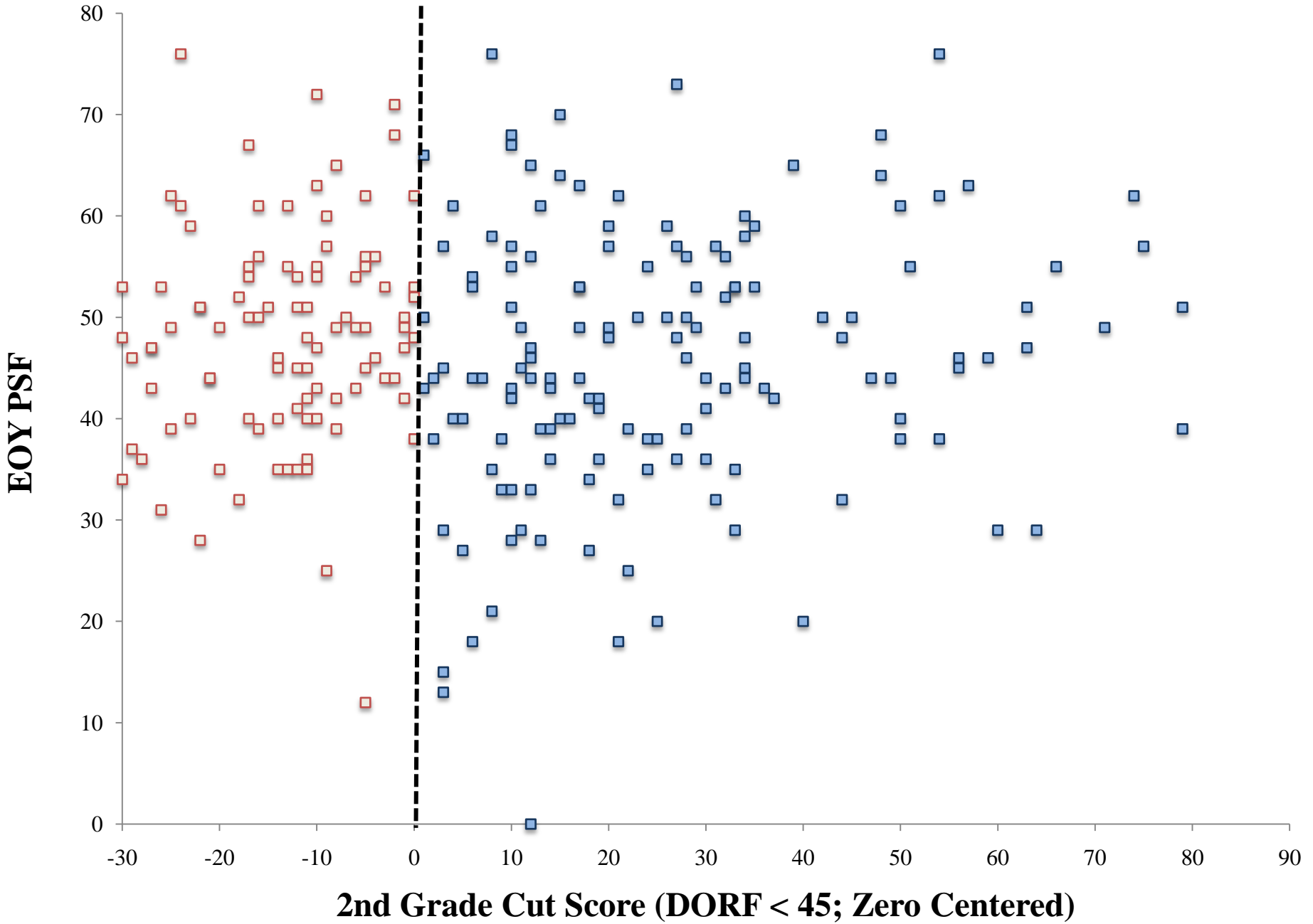
Regression Discontinuity design

- A regression discontinuity design estimates the causal effect of an intervention by comparing the actual achievement of students who received the intervention with their predicted achievement if they had not received the intervention.
- Using this design, we are able to examine whether reading growth can be attributed to the intervention rather than to other variables (e.g., selection bias, maturation, etc.)

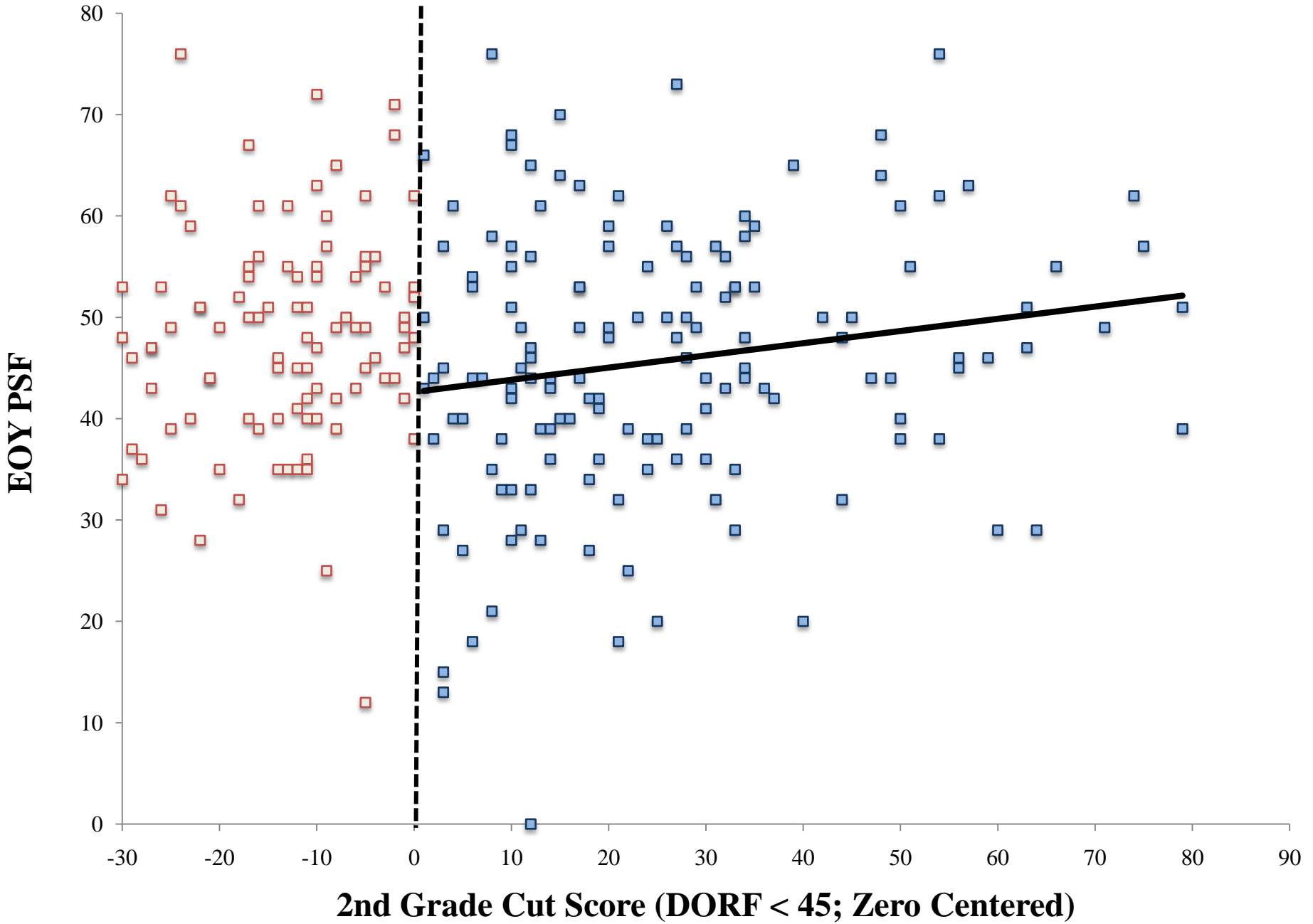
2nd Grade EOY: PSF



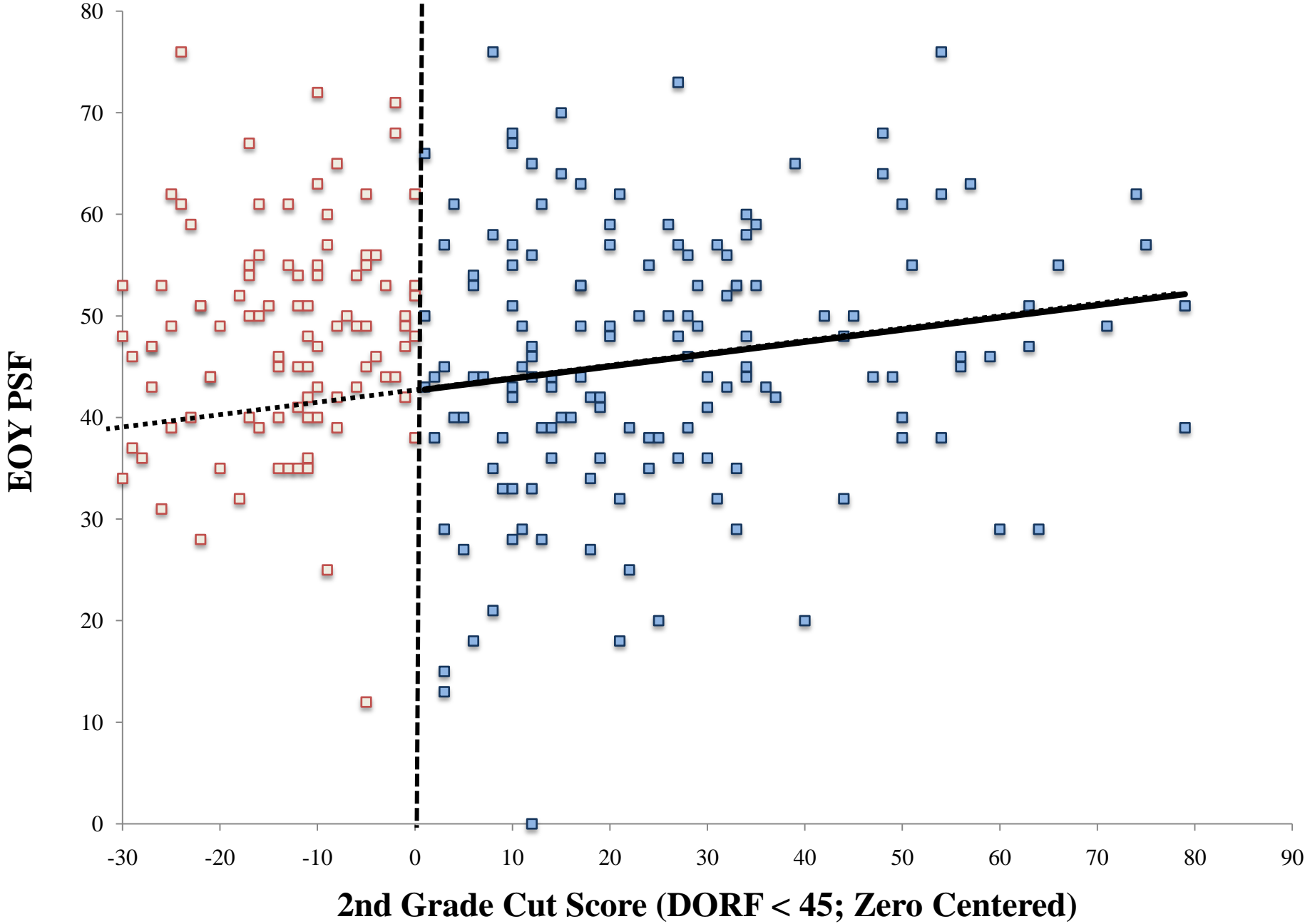
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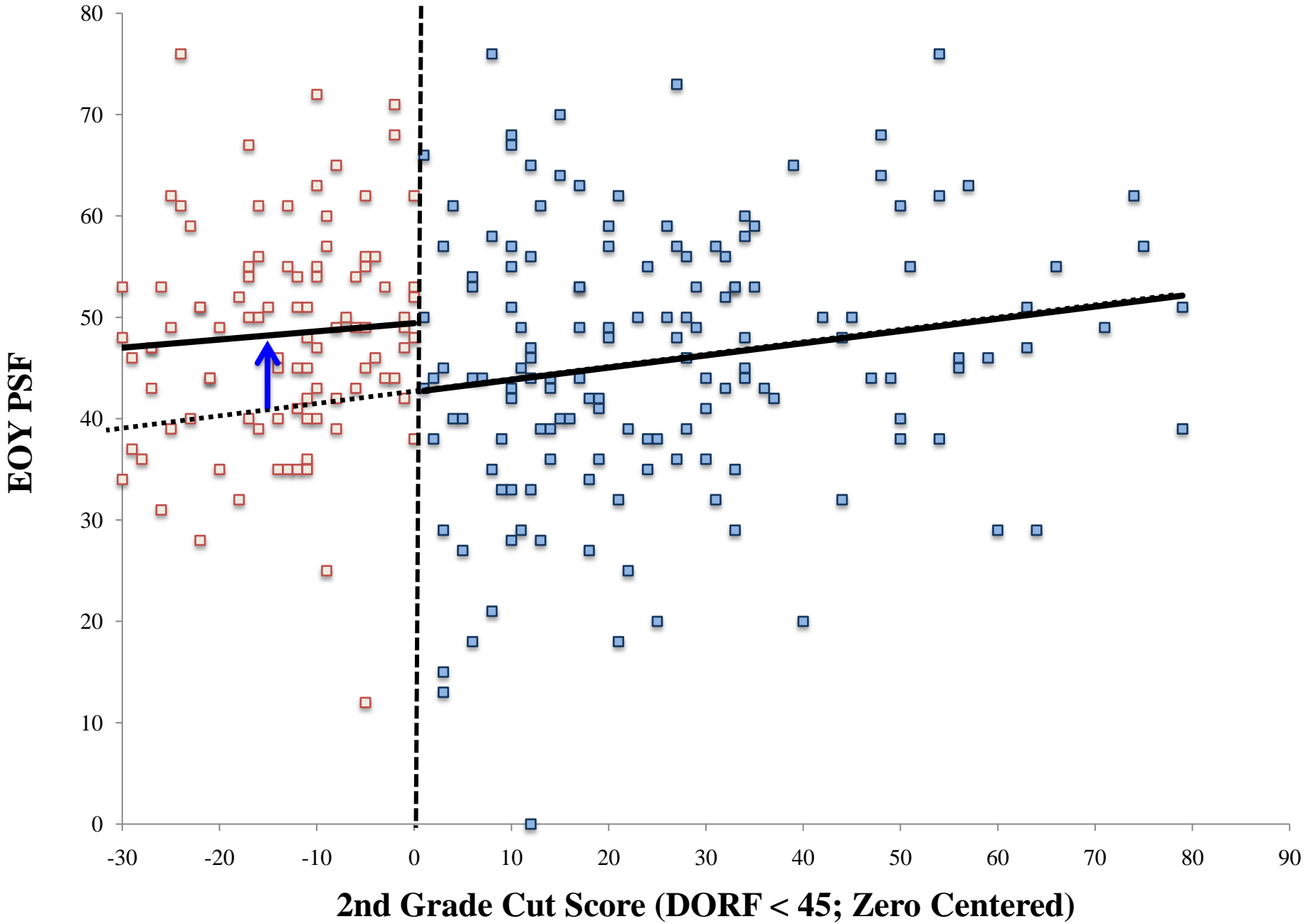
2nd Grade EOY: PSF



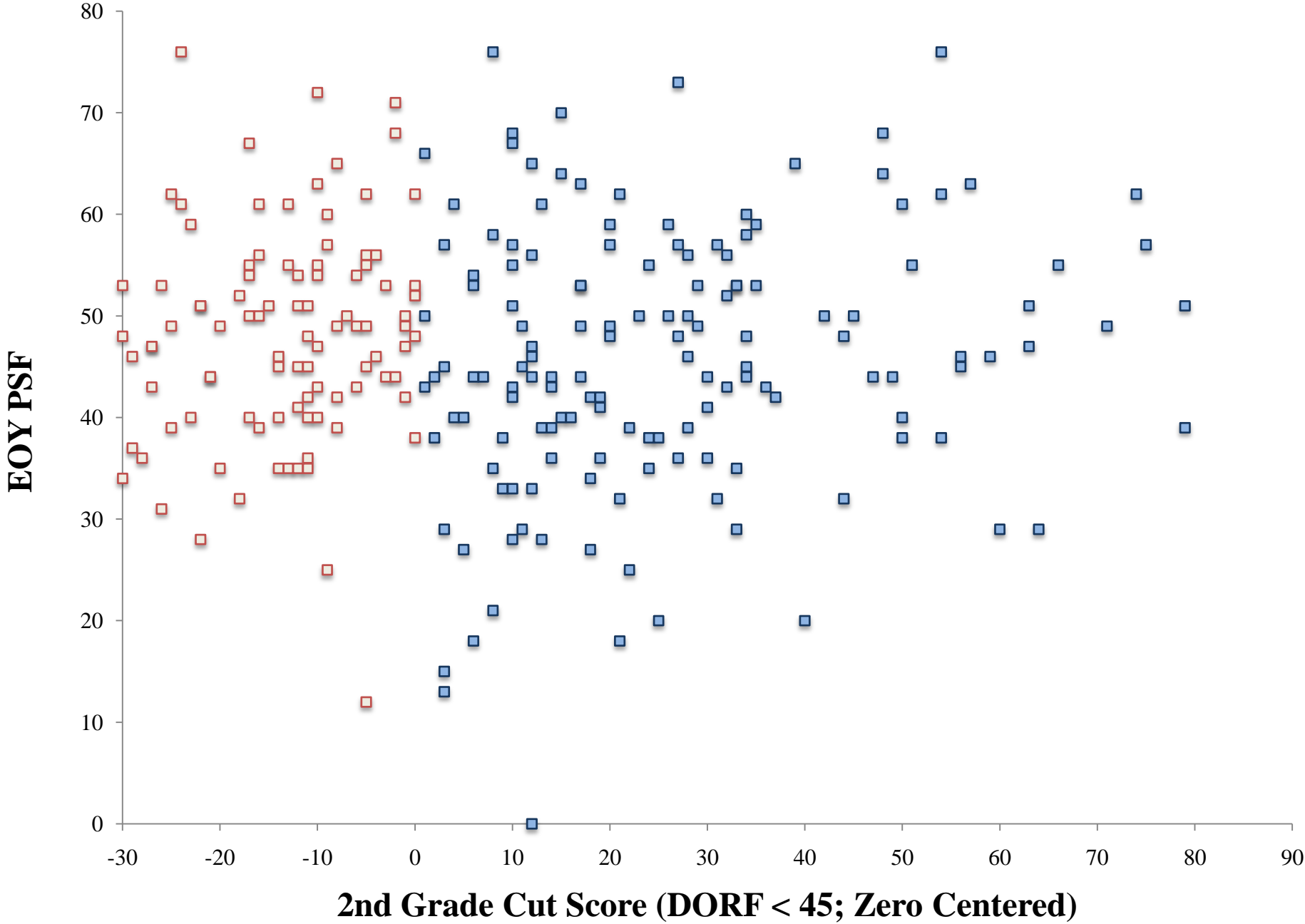
2nd Grade EOY: PSF



2nd Grade EOY: PSF



2nd Grade EOY: PSF



- Magnitude of the effect of an intervention

Effect Size: <u>d</u>	Magnitude	Improvement Index
0.25	small/medium	10 percentile points
0.5	medium	20 percentile points
0.8	large	30 percentile points

Improvement Index: the expected change in percentile rank for an average comparison group student if the student had received the intervention.

Year 1 Results

	K	1	2	3
Phonemic Awareness				
DIBELS PSF	.36 (14%)	.05 (2%)	1.01 (34%)	.36 (14%)
Decoding				
DIBELS NWF	.23 (9%)	.59 (22%)	1.10 (36%)	-
Letter Sound	-	1.01 (34%)	.78 (28%)	.38 (15%)
Reading Fluency				
DIBELS ORF		-	-	.29 (11%)
Reading Comprehension				
DIBELS DAZE				.36 (14%)
WRMT Passage Comprehension	-	-	-	.25 (10%)

?

Foundational Skills K-3

	K	1	2	3
Phonemic Awareness				
DIBELS PSF	.36 (14%)	.05 (2%)	1.01 (34%)	.36 (14%)
Decoding				
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Reading Fluency				
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Reading Comprehension				
DIBELS DAZE				.36 (14%)
WRMT Passage Comprehension	-	-	-	.25 (10%)

Advanced Skills Grade 3

	K	1	2	3
Phonemic Awareness				
DIBELS PSF	.36 (14%)	.05 (2%)	1.01 (34%)	.36 (14%)
Decoding				
DIBELS NWF	.23 (9%)	.59 (22%)	1.10 (36%)	-
Letter Sound	-	1.01 (34%)	.78 (28%)	.38 (15%)
Reading Fluency				
DIBELS ORF		-	-	.29 (11%)
Reading Comprehension				
DIBELS DAZE				.36 (14%)
WRMT Passage Comprehension	-	-	-	.25 (10%)

Summary of Findings

- CK3LI students who were identified as experiencing significant reading difficulties and received small group intervention experienced **greater reading growth and achievement** than they would have if they had not received intervention.
- These findings compare favorably to existing research on effective beginning reading interventions.

Research Questions

- Year 01
 - Does supplemental small-group reading intervention increase the literacy and reading achievement of K-3 students most at risk for reading difficulties?
- Year 02
 - Does the full CK3LI model increase the literacy and reading achievement of all K-3 students?

Participants

- *900 students in grades K-3*
 - *40 K-3 classrooms*
 - *more than 80% of students eligible for free and reduced lunch*
 - *66% Hispanic students, 17% Black students, 13% White students, and 4% other race/ethnicity*

Participants

- 4 pilot schools from Year 01 & 02
 - 900 students in grades K-3
 - 40 K-3 classrooms
 - more than 80% of students eligible for free and reduced lunch
 - 66% Hispanic students, 17% Black students, 13% White students, and 4% other race/ethnicity

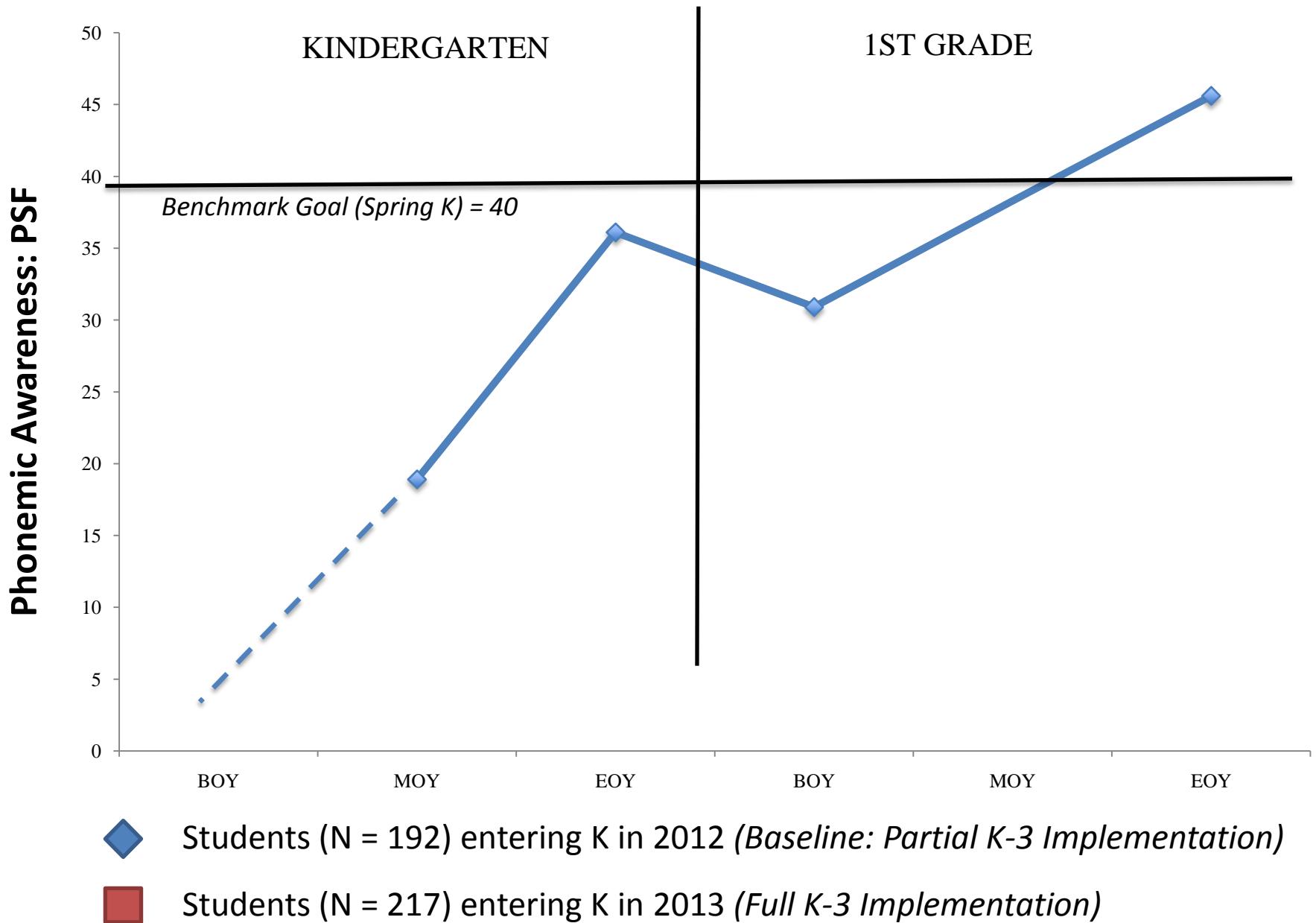
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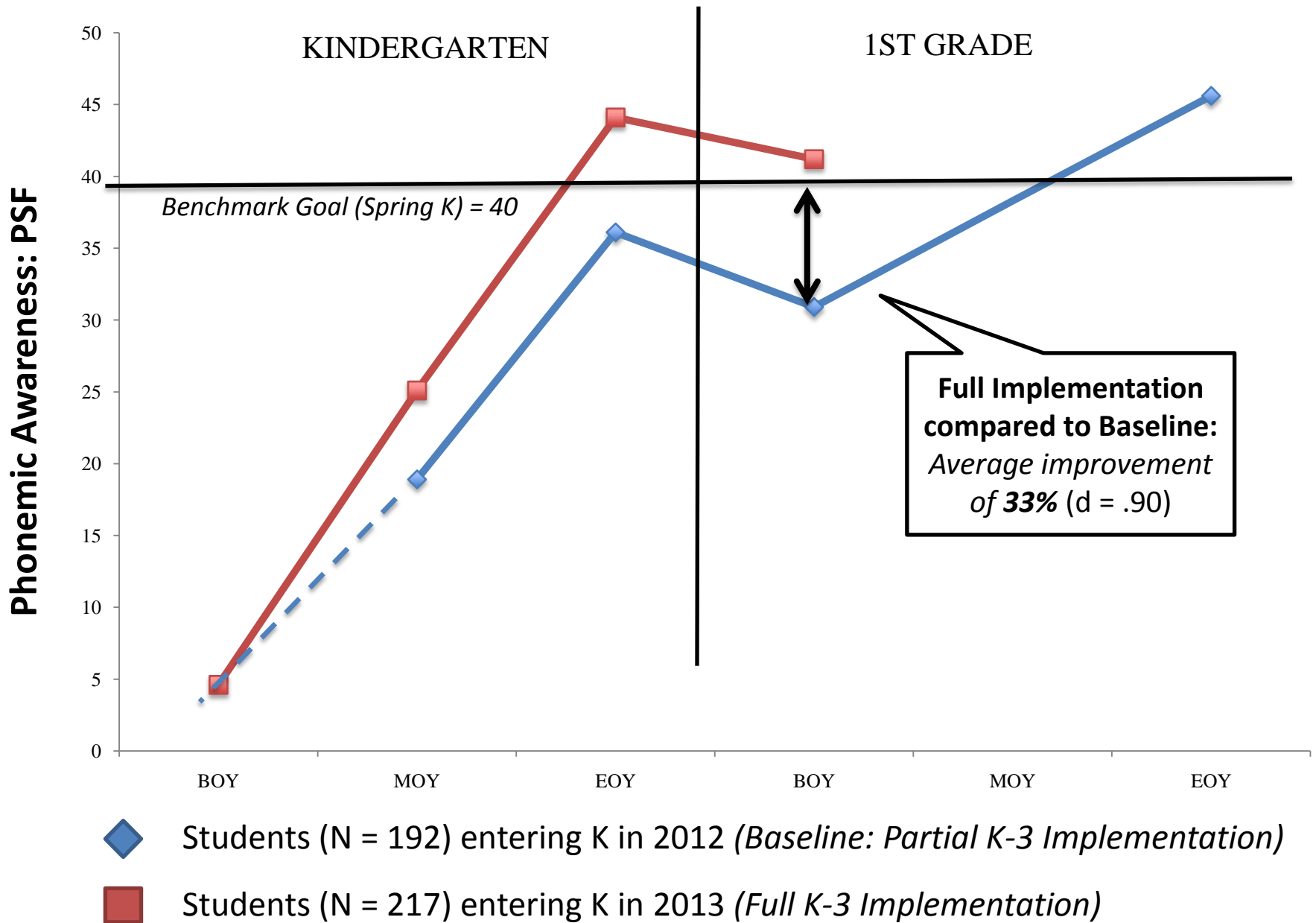
Design/Analyses

- We compared cohorts of students who entered each grade level during the 2012-2013 school year with cohorts of students who entered the same grade during the 2013-2014 school year
- 2012 – 2013 cohort: one year of partial implementation
- 2013 – 2014 cohort: one year of full implementation
- 2014-2015 cohort: second year of full implementation

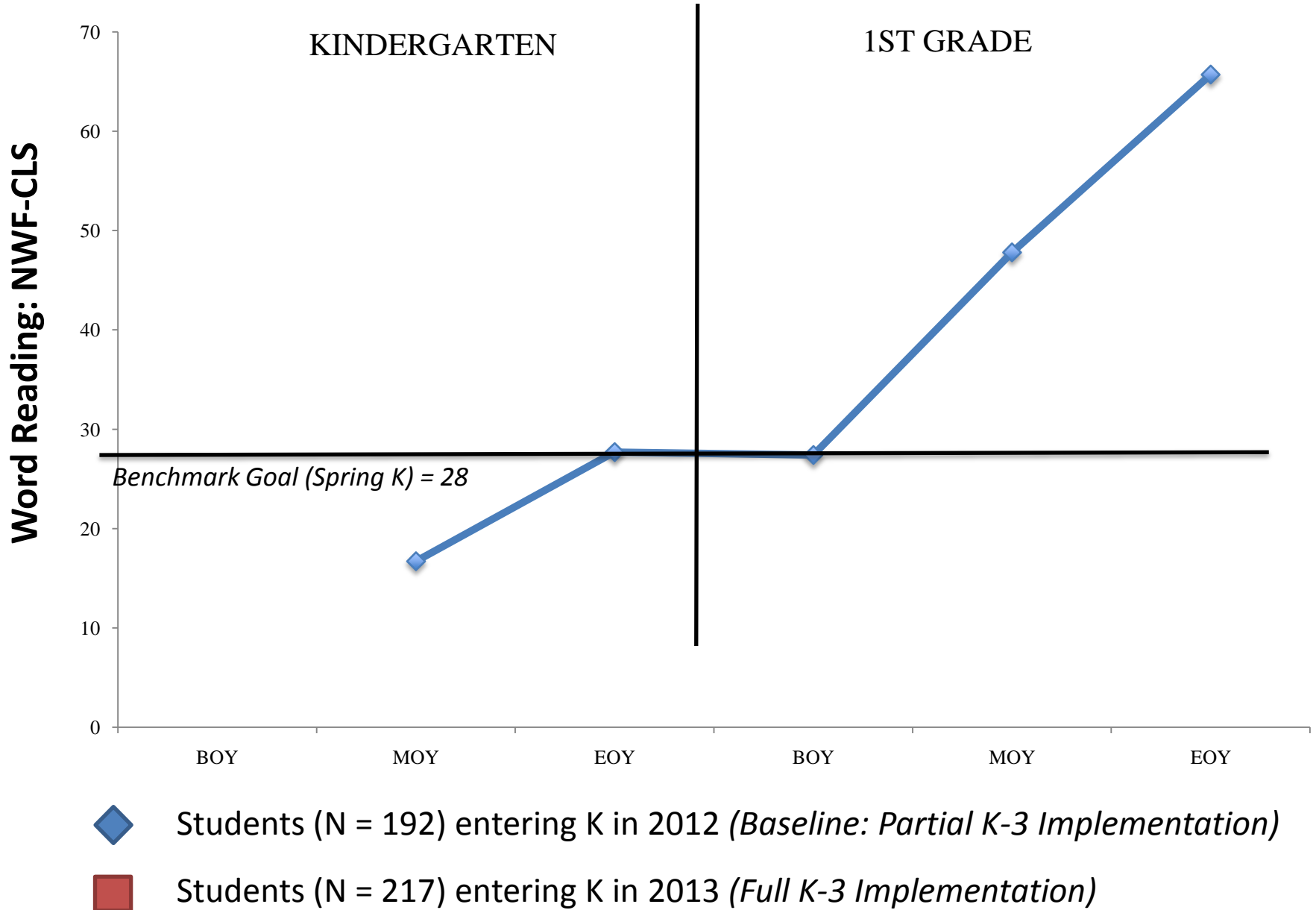
Effects of K-3 Reading Model



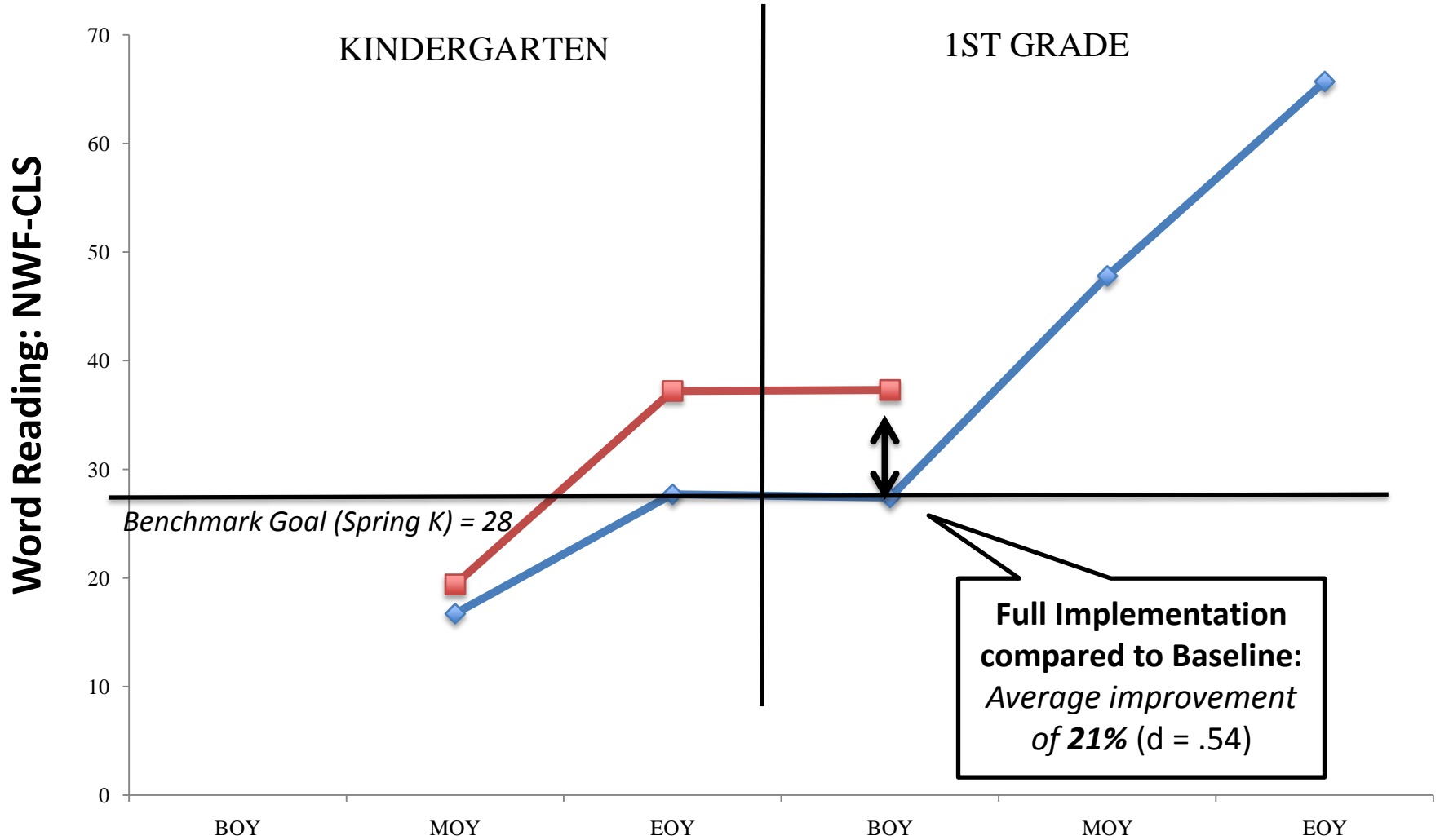
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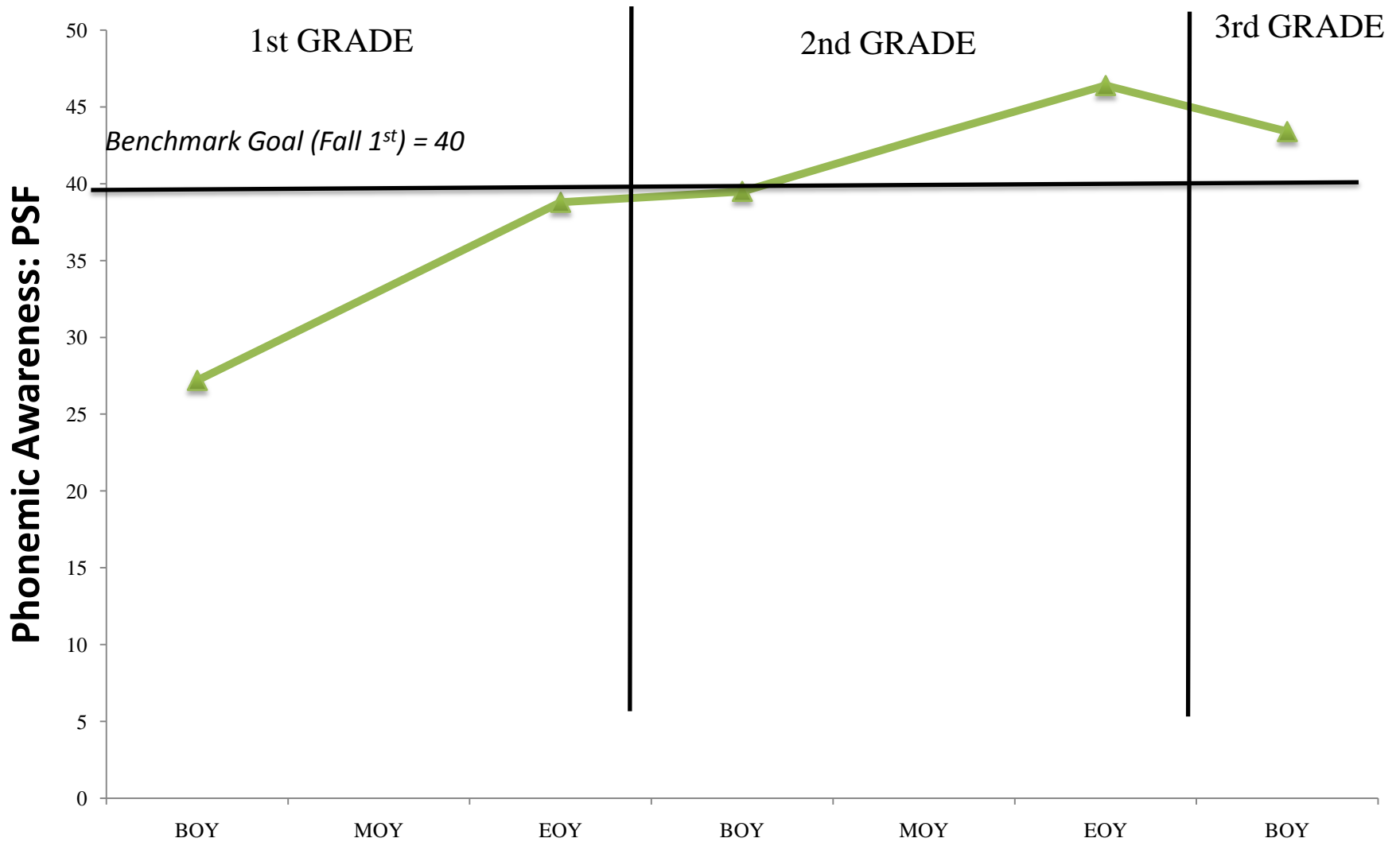


Effects of K-3 Reading Model



- ◆ Students (N = 192) entering K in 2012 (*Baseline: Partial K-3 Implementation*)
- Students (N = 217) entering K in 2013 (*Full K-3 Implementation*)

Effects of K-3 Reading Model



Students (N = 169) entering 1st in 2012 (*Baseline: Partial K-3 Implementation*)

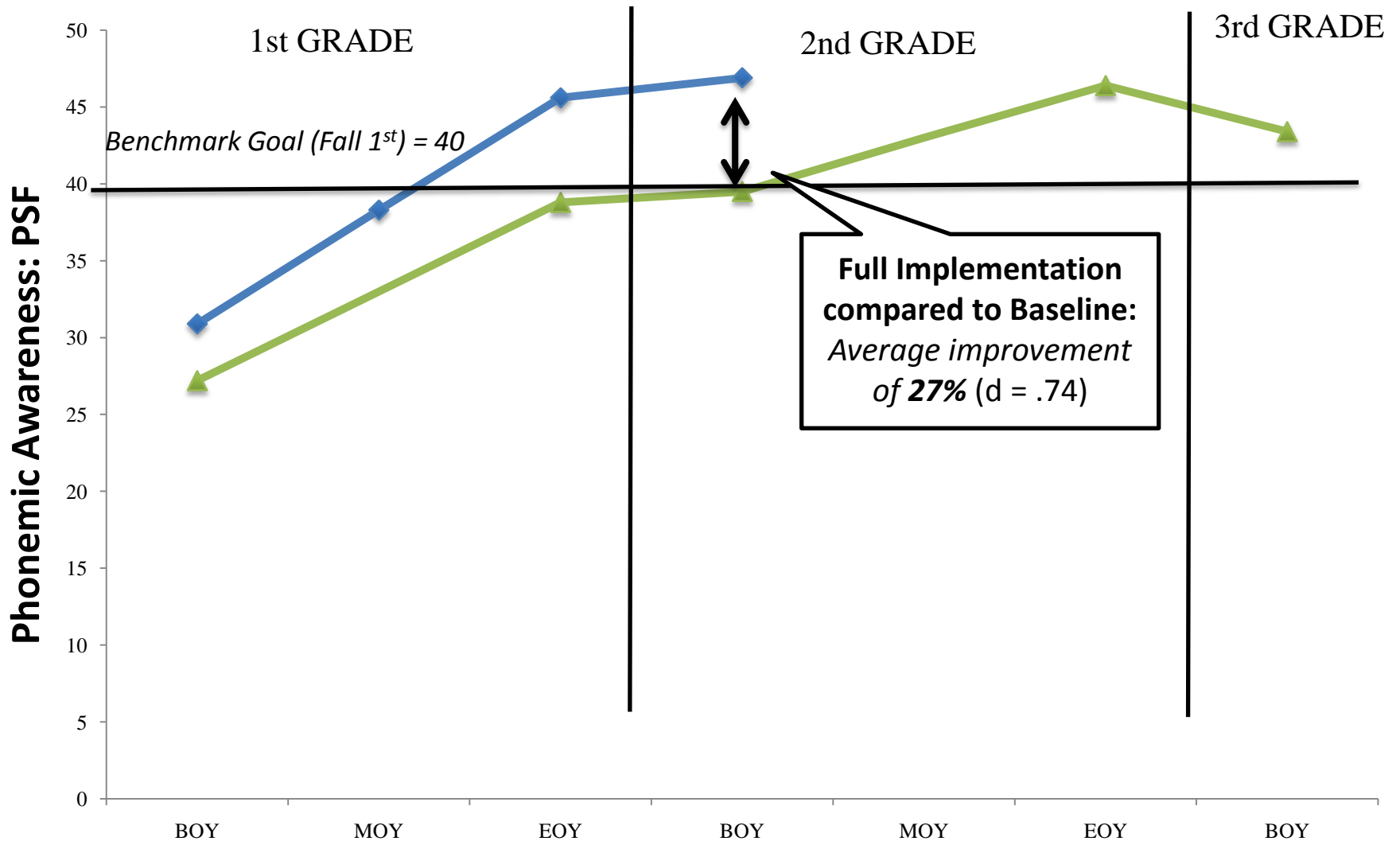


Students (N = 207) entering 1st in 2013 (*Year 1 Full K-3 Implementation*)



Students (N = 172) entering 1st in 2013 (*Year 2 of Full K-3 Implementation*)

Effects of K-3 Reading Model



Students (N = 169) entering 1st in 2012 (*Baseline: Partial K-3 Implementation*)

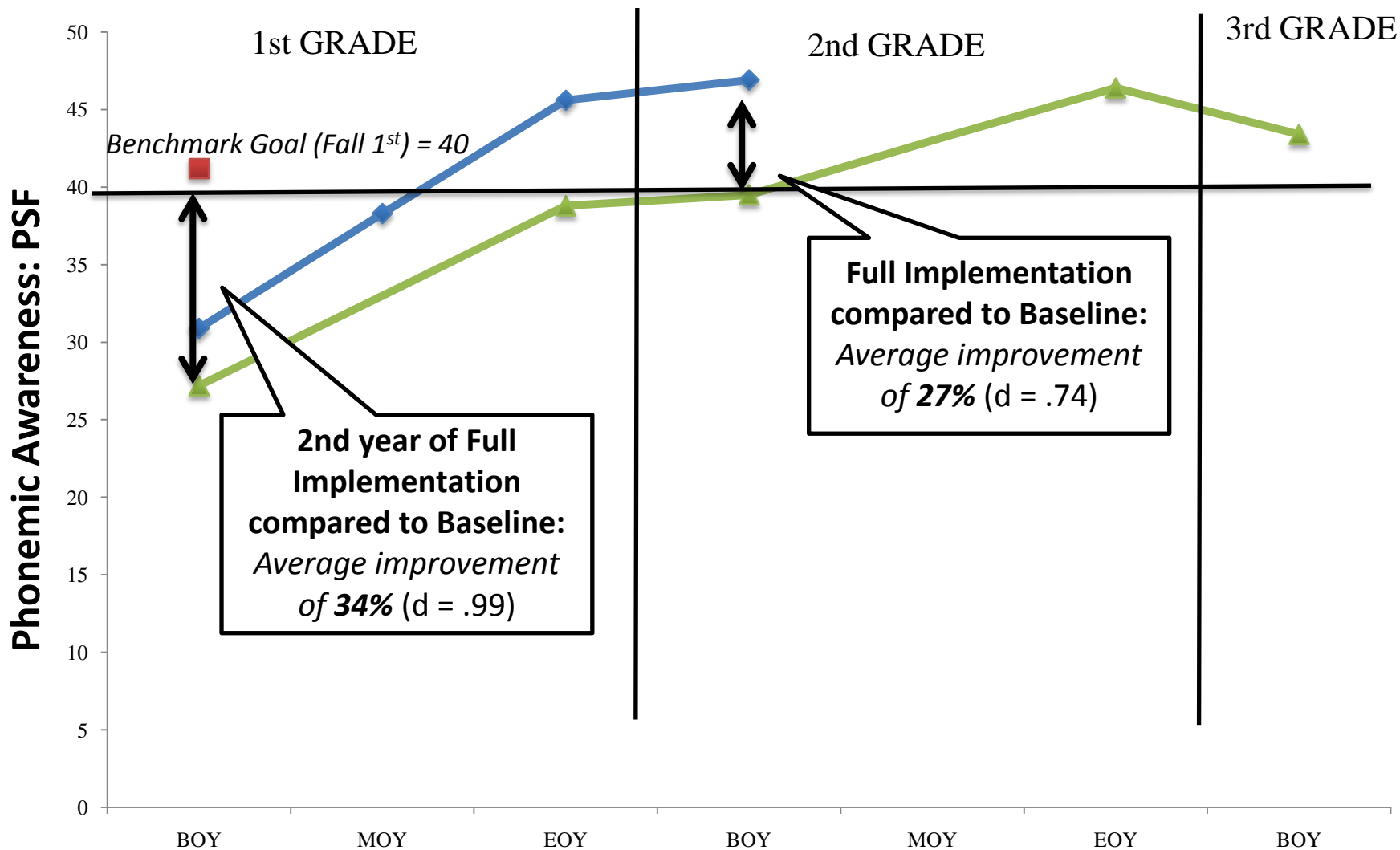


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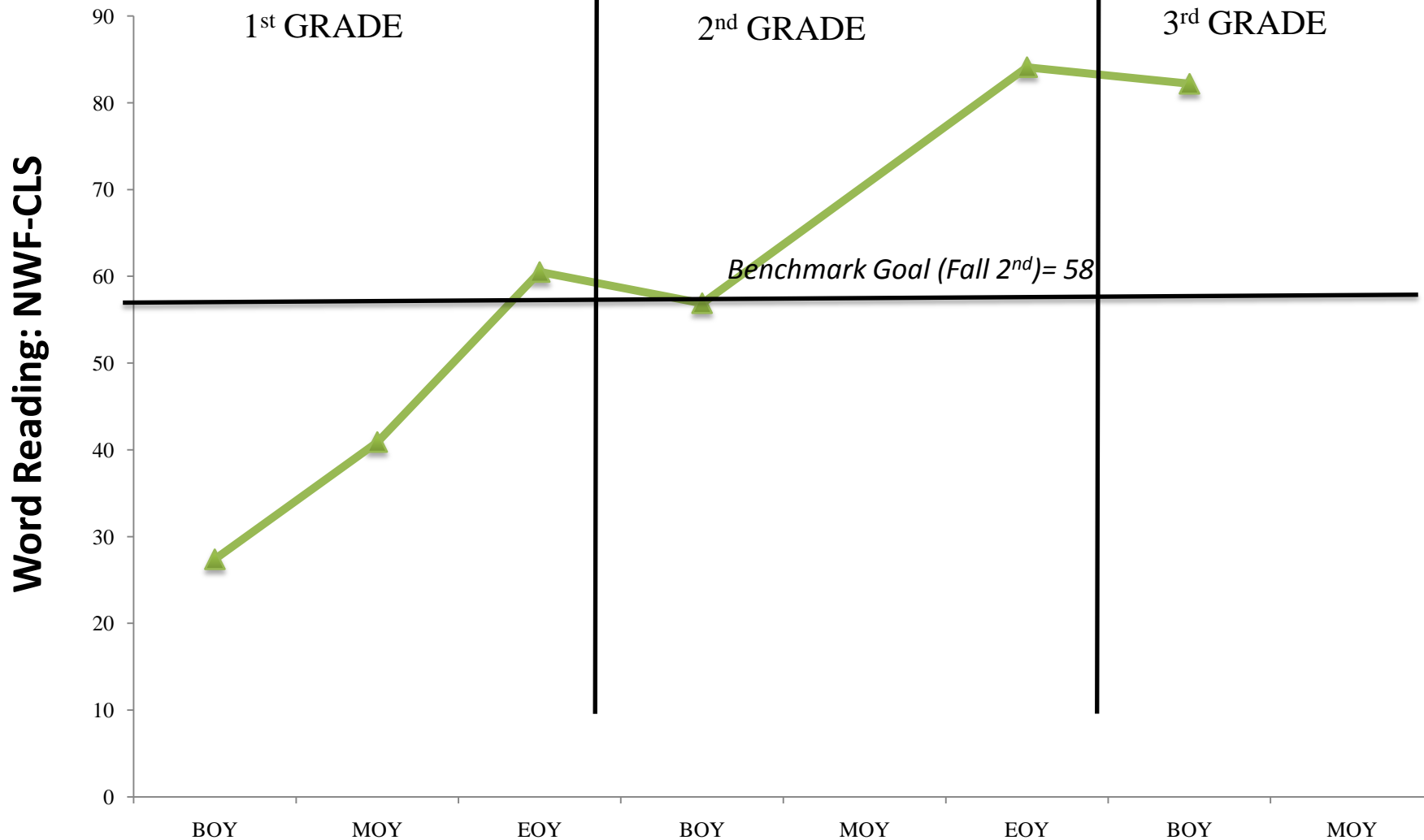
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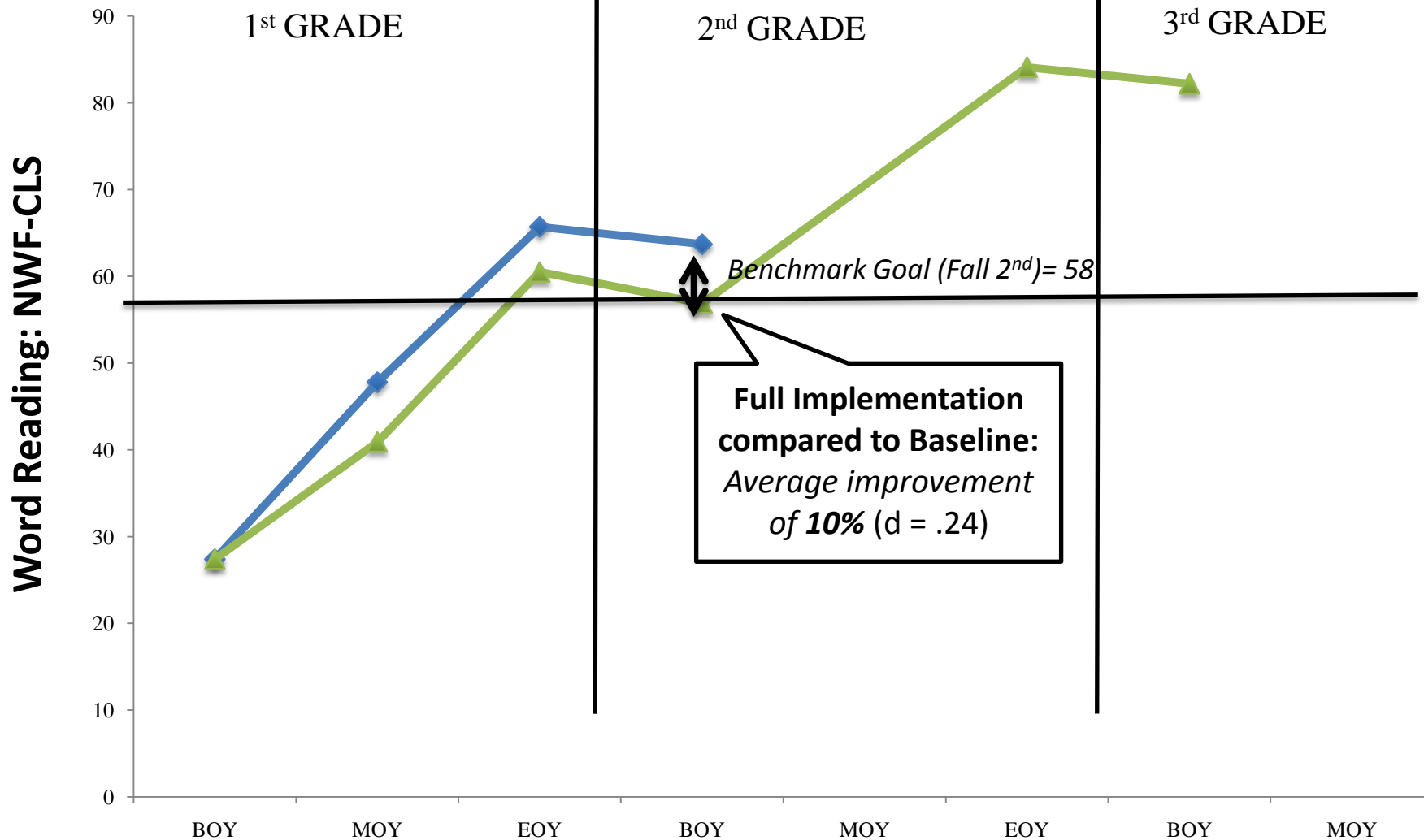


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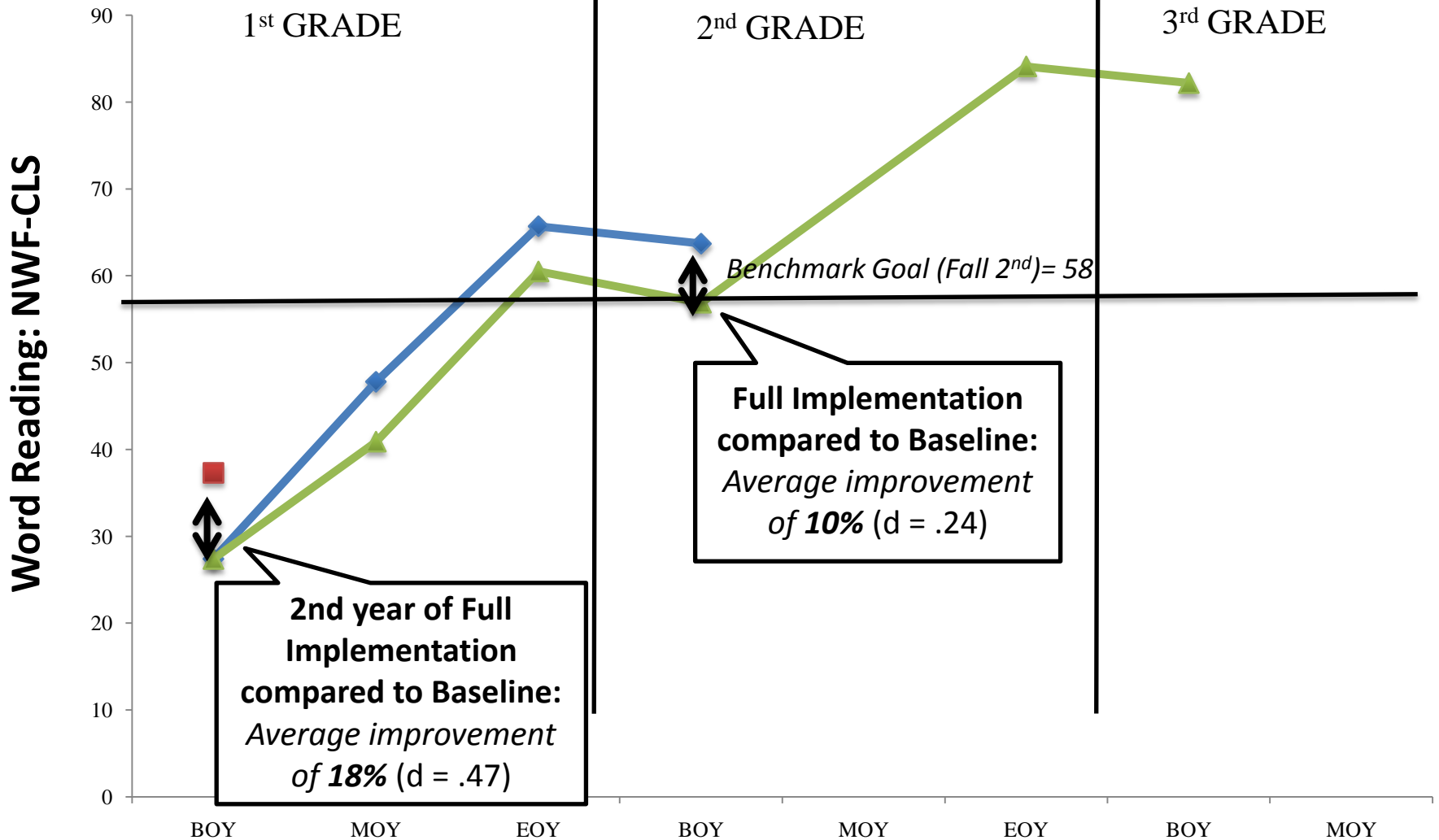
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Summary of Findings

- Students who receive the full K-3 Reading Model demonstrate greater literacy growth and achievement than students who do not receive the full K-3 Reading Model
- The effects of receiving the K-3 Reading Model on early literacy outcomes are educationally meaningful
- On average, students who receive the full K-3 Reading Model meet important literacy benchmarks earlier than students who do not receive the full K-3 Reading Model
- Students who receive multiple years of the K-3 Reading Model demonstrate greater literacy growth and achievement than students who receive fewer years of the K-3 Reading Model – so effects are cumulative over time

“I see a big improvement. In his first school he didn’t like to learn. He didn’t want to go to school. He would cry and chase me down the hall. He’d just say, ‘I don’t know.’ Now he’s excited. He comes home and tells me what he learns every day. He’s constantly trying to read things. Look Daddy...this is what this says.”

Parent of a 1st Grader

- *“I’m reading bigger words. When it doesn’t make sense, I reread.”* Angelie, grade 2
- *“My mom and grandma were really worrying about my reading and so was I. Now I’m becoming a better reader and it feels good.”* JT, grade 2
- *“I like how we stay together as a team, try our best, and I want to be in this reading group forever.”*
Derek, grade 1

"I sound out words. I do this at home and school. I'm a good reader now." Melanie, grade 2

"I got better at reading since working with Mrs. B. I read at bedtime." Leilani, grade 2

"I was having trouble. I didn't know how to read hard words. Now I sound them out and I got it. Now...I'm reading even hard words in the books. I feel kinda happy 'cause I know how to read the hard words." Thomas, grade 1

"Every time when Mrs. M gives me a book I go home and read it. I like to read now."

Jenalis, grade 2