



# Data-Based Individualization to Increase Literacy Achievement: What we are doing in New York City

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# DBI Initiative Team



## Special Education Office Literacy Supports Instructional Team

- > Jason Borges
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- > Wynta Nivens
- > Crystal Stewart
- > Sarah Benstraum

## External PD Providers

Devin Kearns

- > University of Connecticut

Melodee Walker

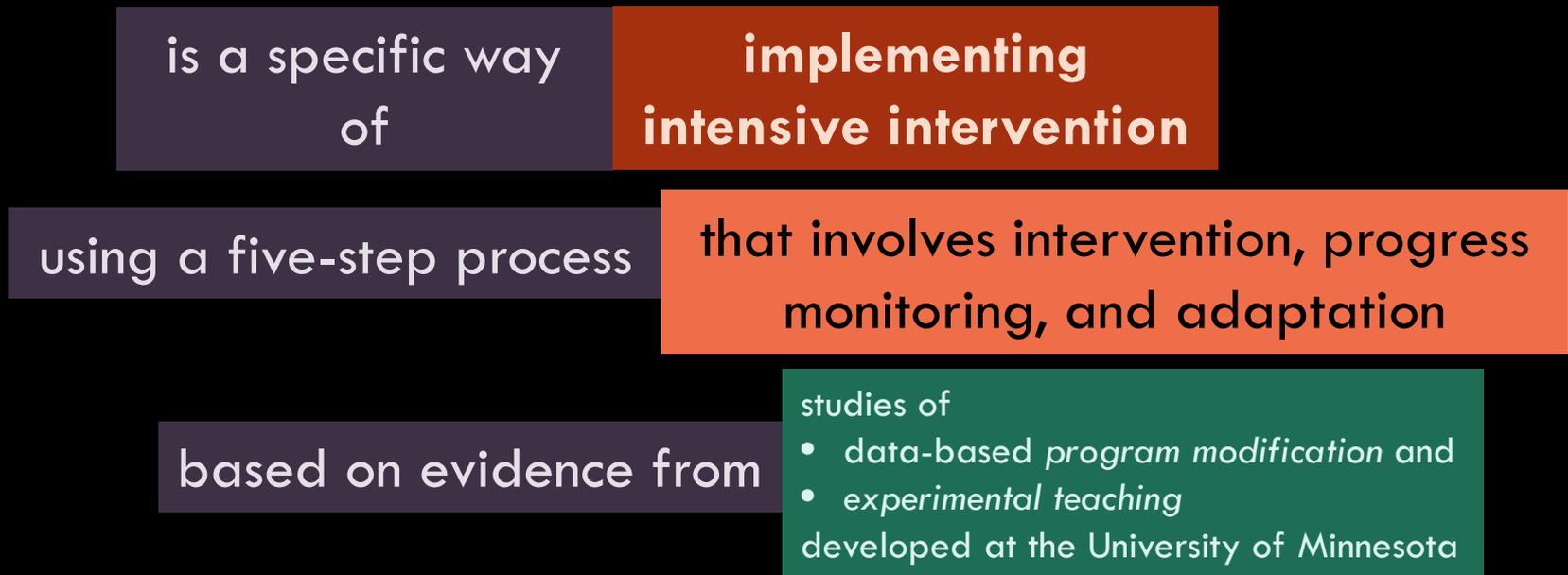
- > Boston University

# Presentation Overview

- Data-Based Individualization Defined (DBI)
- Elements of DBI Implementation
- DBI Implementation in the NYC DOE
- Successes and Next Steps

# Data-Based Individualization Defined (DBI)

# What is **Data-Based Individualization**?



## Examples:

Capizzi & Fuchs, 2005  
Deno & Mirkin, 1977  
Fuchs, Deno, & Mirkin, 1984  
Fuchs, Fuchs, & Hamlett, 1989

# Intensive intervention has positive effects on reading outcomes across levels

Student Outcome	Early Elementary K–3		Upper Grades 4–9	
	Mean ES	Number of Effects	Mean ES	Number of Effects
<b>Comprehension</b>	0.46	25	0.09	37
<b>Reading Fluency</b>	0.34	11	0.12	8
<b>Word Reading</b>	0.56	53	0.20	22
<b>Spelling</b>	0.40	24	0.20	5

Note: ES = effect size; data from Wanzek et al. (2013)

# Why is DBI essential?

## during school

US elementary-age children with LD below 20th percentile on comprehension

64%

3.4

years below reading grade-level among high school students with LD

Number that have failed at least one course in secondary school

7 in 10

1/5

Fraction of high school students with LD who drop out

## post-secondary

Percentage of students with LD with paid employment, 2 years post-secondary

46%

double unemployment rate compared with people without LD

Adults with criminal justice involvement

(< 8 years post-secondary, estimated)

2 million

\$25 thousand

Highest income for 67% of adults with LD

# Data-Based Individualization (DBI)

- ⬡ The use of a validated secondary-prevention program
- ⬡ Frequent progress monitoring
- ⬡ Diagnostic assessment when students do not respond
- ⬡ Adaptations based on identification of needs using the taxonomy of adaptations
- ⬡ Iterations of the monitoring-diagnosing-adapting cycle

# What is DBI and what is it not?

a program?

no ... it's an *approach*

a one-time fix?

no ... it's an on-going process

differentiation?

no ... differentiation involves adapting the core curriculum

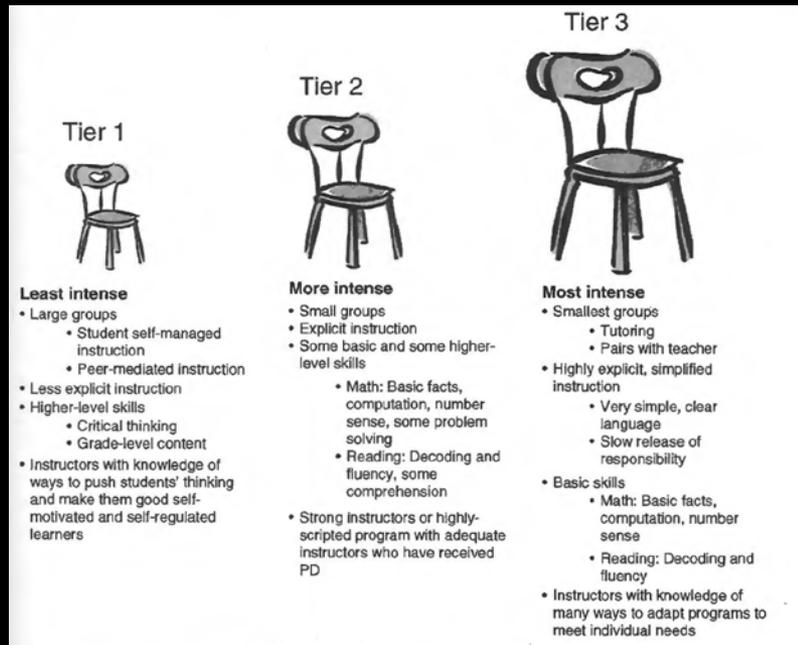
systematic?

yes ... it uses research-based procedures

# Where does DBI fit into a tiered intervention system?

## DBI in Tier 3: Just right for some

(Kearns, Lemons, Fuchs, & Fuchs, 2014)

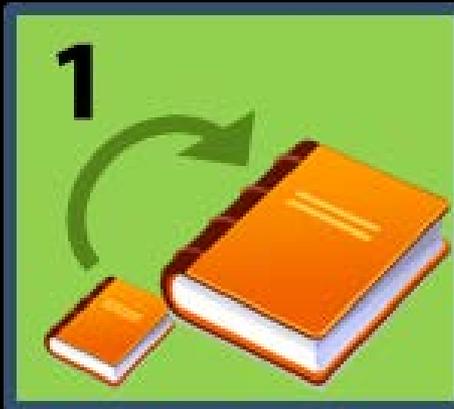


## DBI within an MTSS/RTI System

- occurs in Tier 3
- can be part of special education
- does not have to be part of special education
- has the goal of providing the “just-right” level of support



# 1. Secondary Prevention With Greater Intensity



1. Secondary intervention program
2. Progress monitoring
3. Diagnostic assessment
4. Adaptations using a taxonomy of intervention adaptations
5. Continued progress monitoring, with adaptations occurring as needed to ensure adequate progress

# What are secondary prevention programs?

- Standardized, research-based interventions designed for students who do not meet grade-level expectations
- Programs referred to as
  - Tier 2 interventions
  - Strategic interventions
  - Remedial curricula
  - Basic-skill programs
- “Examples”
  - *Let’s Learn to Read: Beginning Reading Support Program*
  - *Words Everywhere: Literacy Fundamentals*

**Let’s Learn to Read!**  
Beginning Reading Support  
Program

**Words Everywhere!**  
Literacy Fundamentals

# “Tier 3” programs are secondary prevention programs

- Often, people identify certain programs as “Tier 3” programs
  - Require long lessons or long duration
  - Cover foundational skills in great detail
- These are still considered secondary prevention programs for our purposes
  - They could still be used in Tier 2
  - It is often hard to separate the types (some programs have been called Tier 1, Tier 2, and Tier 3)



# Characteristics of a *standardized* secondary prevention program

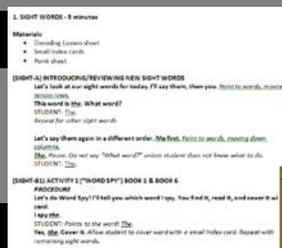
- ❑ Research-based:
  - Has been studied using rigorous methods
  - Has been shown to be effective in those studies
- ❑ Explicit:
  - provides instructions for the teacher (maybe scripted)
  - uses a model and practice instructional approach
- ❑ Systematic:
  - reflects the entire continuum of target skills
  - has enough lessons to be valuable
- ❑ Generally effective:
  - includes skills most students need
  - allows us to be sure that any student problem is not the result of changes to the program
- ❑ Focused on foundational skills:
  - addresses standards *or* skills underpinning standards
  - supports (but is likely not the same as) grade-level standards

# An example: The Nashville Early Reading Project

Designed by Fuchs, Kearns et al. (2012) for first graders

Tested in a large-scale randomized control trial  
Had positive effects on word reading and comprehension

Included structured lessons with  
scripts and materials

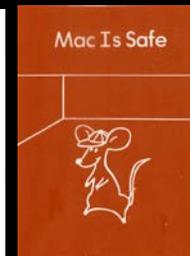
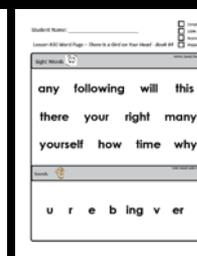


Lesson #	Sound spelling
1	egg, snake, drink, apple, monkey
2	the, under, my
3	my, under, under
4	the, under, my
5	the, under, my
6	the, under, my
7	the, under, my
8	my
9	digraph review with ck/ck
10	SKIP
11	digraph review with ck/ck
12	SKIP
13	digraph review with th/th
14	SKIP
15	
16	
17	digraph review with ck/ck
18	SKIP
19	SKIP
20	digraph review with ck/ck
21	SKIP
22	digraph review with ck/ck

Organized in a linear way reflective of  
development and the nature of English

Tested with students needing intensive intervention one-to-one

Involves instruction in...  
Decoding and sight word reading  
Spelling  
Reading level-appropriate texts



# Is differentiation of the core curriculum a secondary prevention program?

- ◇ **Differentiation** of the core (Tier 1) curriculum
  - ◇ is **part of core curriculum instruction**
  - ◇ provides **direct access to grade-level** standards/skills
  - ◇ is usually **designed by the teacher** in response to immediate need
- ◇ **A secondary prevention program**
  - ◇ is designed and **tested by program developers**
  - ◇ explicit, systematic, and **focused on foundational skills**
  - ◇ **supplements**—but does not replace—grade-level instruction
  - ◇ will **lead toward grade-level** standards but may not address them

**Differentiation  $\neq$  Secondary Prevention**



## 2. Progress Monitoring



1. Secondary intervention program, delivered with greater intensity
2. **Progress monitoring**
3. Diagnostic assessment
4. Adaptations using a taxonomy of intervention adaptations
5. Continued progress monitoring, with adaptations occurring as needed to ensure adequate progress

# Function of different assessments

	Formative	Progress-Monitoring	Summative
Purpose	Instructional	Predictive	Evaluative
Frequency of data collection	Daily	Weekly	One or a few times per year
Examples	<ul style="list-style-type: none"> <li>• Teacher-made tests</li> <li>• Work samples</li> <li>• Teacher observations</li> </ul>	<ul style="list-style-type: none"> <li>• General-outcome measures</li> <li>• Mastery measures</li> </ul>	<ul style="list-style-type: none"> <li>• Standards assessments</li> <li>• Benchmark tests</li> <li>• District-wide unit assessments</li> </ul>
Question answered			

Did the student understand what I taught?

How well is instruction going?

What have you learned overall?

# Function of different assessments

	Formative	Progress-Monitoring	Summative
Purpose	Instructional	Predictive	Evaluative
Frequency of data collection	Continuous	Weekly	One or a few times per year
Examples	<ul style="list-style-type: none"> <li>• Teacher-made tests</li> <li>• Work samples</li> <li>• Teacher observations</li> </ul>	<ul style="list-style-type: none"> <li>• General-outcome measures</li> <li>• Mastery measures</li> </ul>	<ul style="list-style-type: none"> <li>• State assessments</li> <li>• Benchmark tests</li> <li>• District-wide unit assessments</li> </ul>
Question answered	Did the student understand what I taught?	How well is instruction going?	What have you learned overall?

Is the student making adequate progress?

Is the student likely to meet their goal?

Did the student understand what I taught?

How well is instruction going?

What have you learned overall?

# Progress Monitoring tools have one essential purpose

**They can tell you *whether* instruction is working**  
Most other tests cannot

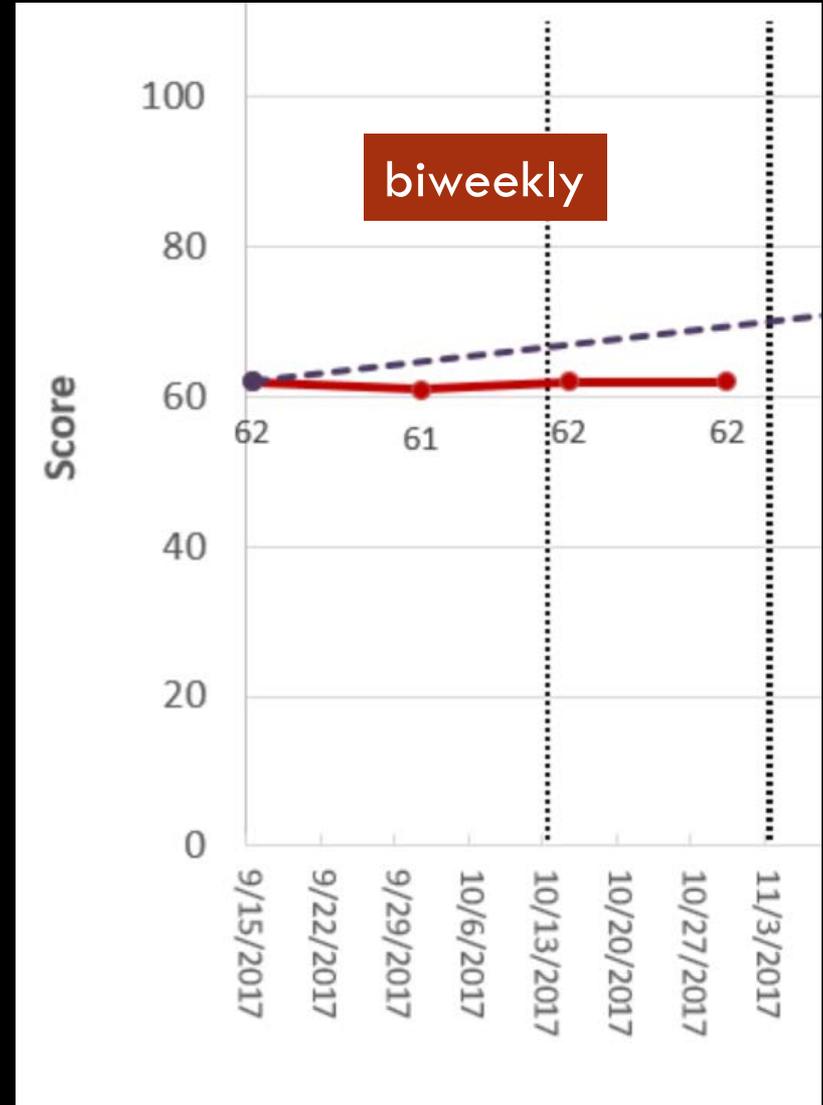
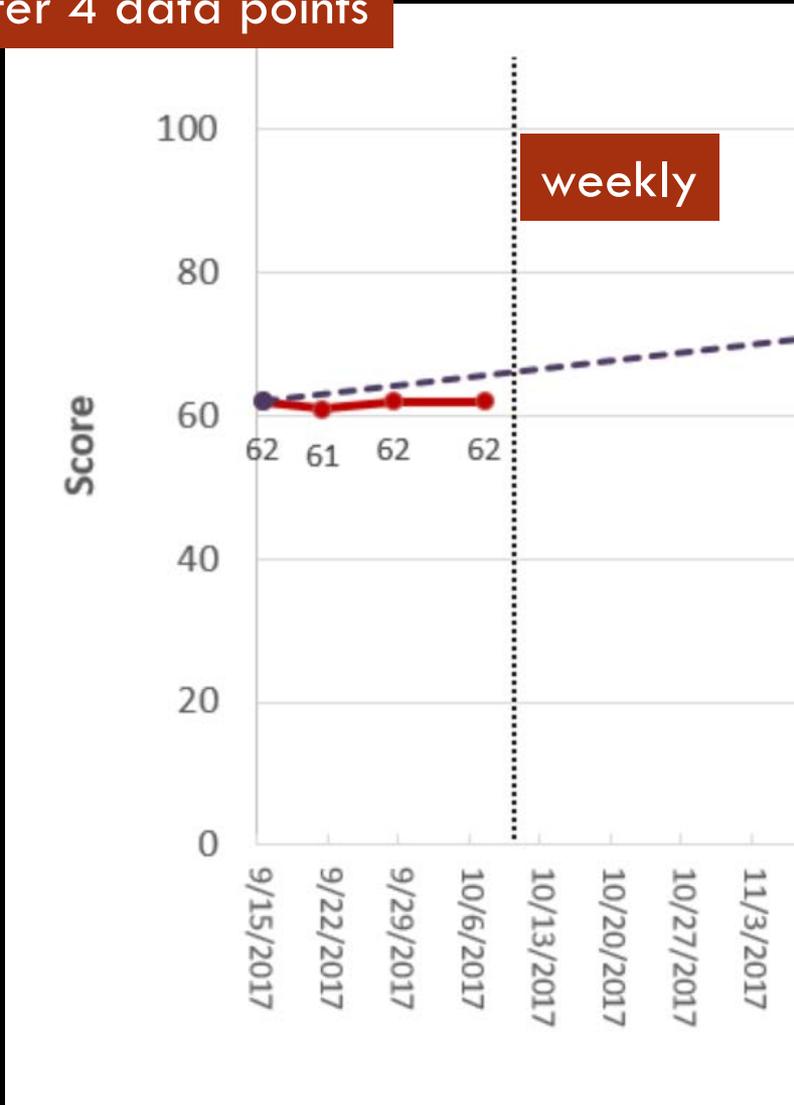


# Characteristics of progress monitoring measures

- Regular checks of student progress
- Measures of important academic outcomes
- Tests with many forms of equivalent difficulty
- Tools that can be administered quickly

# Regular usually means weekly

after 4 data points

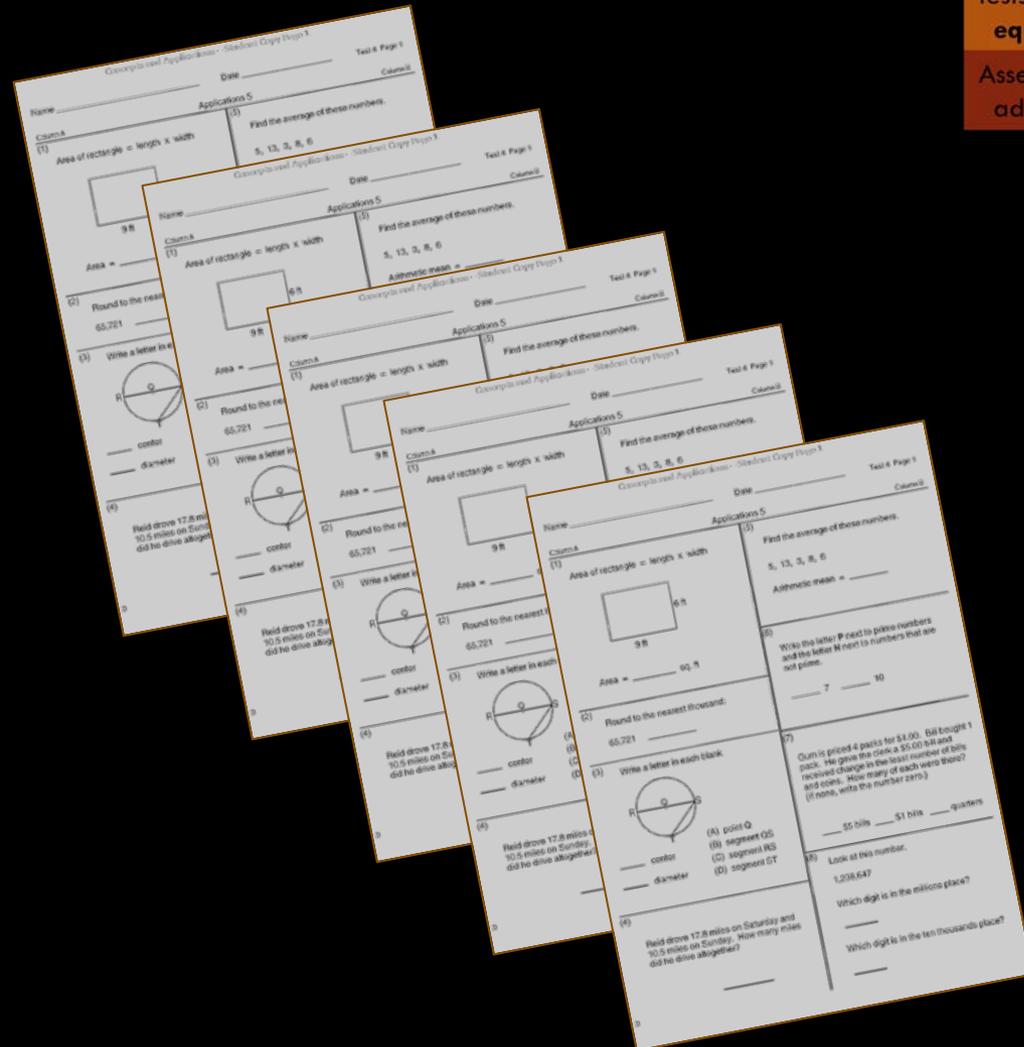


# General Outcome Measures in Reading

Measure	Grade
<ul style="list-style-type: none"><li>• Letter Naming Fluency (LNF)</li><li>• Letter Sound Fluency (LSF)</li><li>• First/Initial Sound Fluency (FSF/ISF)</li><li>• Phoneme Segmentation Fluency (PSF)</li></ul>	K
<ul style="list-style-type: none"><li>• Nonsense Word Fluency (NWF)</li></ul>	Late K, 1
<ul style="list-style-type: none"><li>• Word Identification Fluency (WIF)</li></ul>	1
<ul style="list-style-type: none"><li>• Passage Reading Fluency (PRF), also called Oral Reading Fluency (ORF)</li></ul>	Late 1, 2, 3, 4 (and sometimes beyond)
<ul style="list-style-type: none"><li>• Maze or Maze Fluency</li></ul>	4, 5, 6 (and beyond)

# Have forms of equivalent difficulty

◇  $1 = 2 = 3 = 4 = 5$



Regular checks of student progress

Measures of important academic outcomes

Tests with many forms of equivalent difficulty

Assessments that can be administered quickly

# Assessments that do not have forms of equivalent difficulty

- Assessments to measure progress within a given curriculum
- Running records from books
- Published running record systems

# Can be administered quickly

- ◇ The test is as brief as possible
- ◇ It should never exceed 20 minutes (most do not exceed 5)
- ◇ Shorter is better

**Regular** checks of student progress

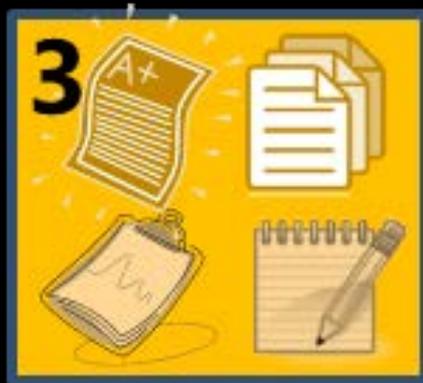
Measures of important **academic outcomes**

Tests with many forms of **equivalent difficulty**

Assessments that can be administered **quickly**



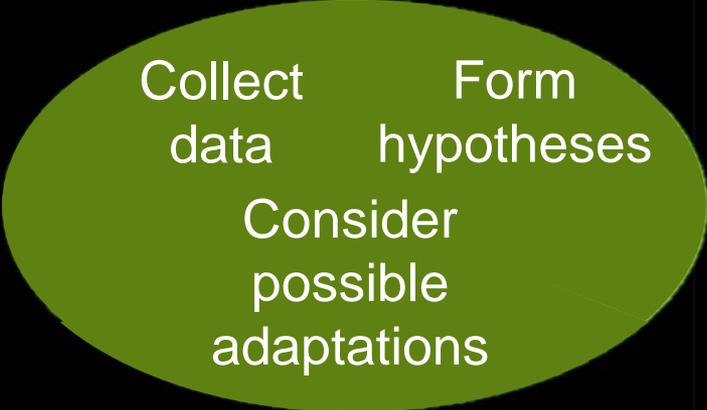
# Diagnostic Assessment



1. Secondary intervention program, delivered with greater intensity
2. Progress monitoring
3. **Diagnostic assessment**
4. Adaptations using a taxonomy of intervention adaptations
5. Continued progress monitoring, with adaptations occurring as needed to ensure adequate progress

# Selecting and Interpreting Diagnostic assessments

- ◇ When do we use diagnostic assessment?
- ◇ Progress monitoring data show a lack of response
- ◇ Now, we need to discuss what is happening as a team
  - ◇ What sources of information do we have?
  - ◇ What do we think is causing the lack of response?
  - ◇ What are some options for improving outcomes?
  - ◇ **OK, here's what we'll do**



Collect data      Form hypotheses  
Consider possible adaptations

# Selecting and Interpreting Diagnostic Assessments





# Adaptations and Iterations



1. Secondary intervention program, delivered with greater intensity
2. Progress monitoring
3. Diagnostic assessment
4. Adaptations using a taxonomy of intervention adaptations
5. Continued progress monitoring, with adaptations occurring as needed to ensure adequate progress



# Adaptations and Iterations



## ○ Adaptations

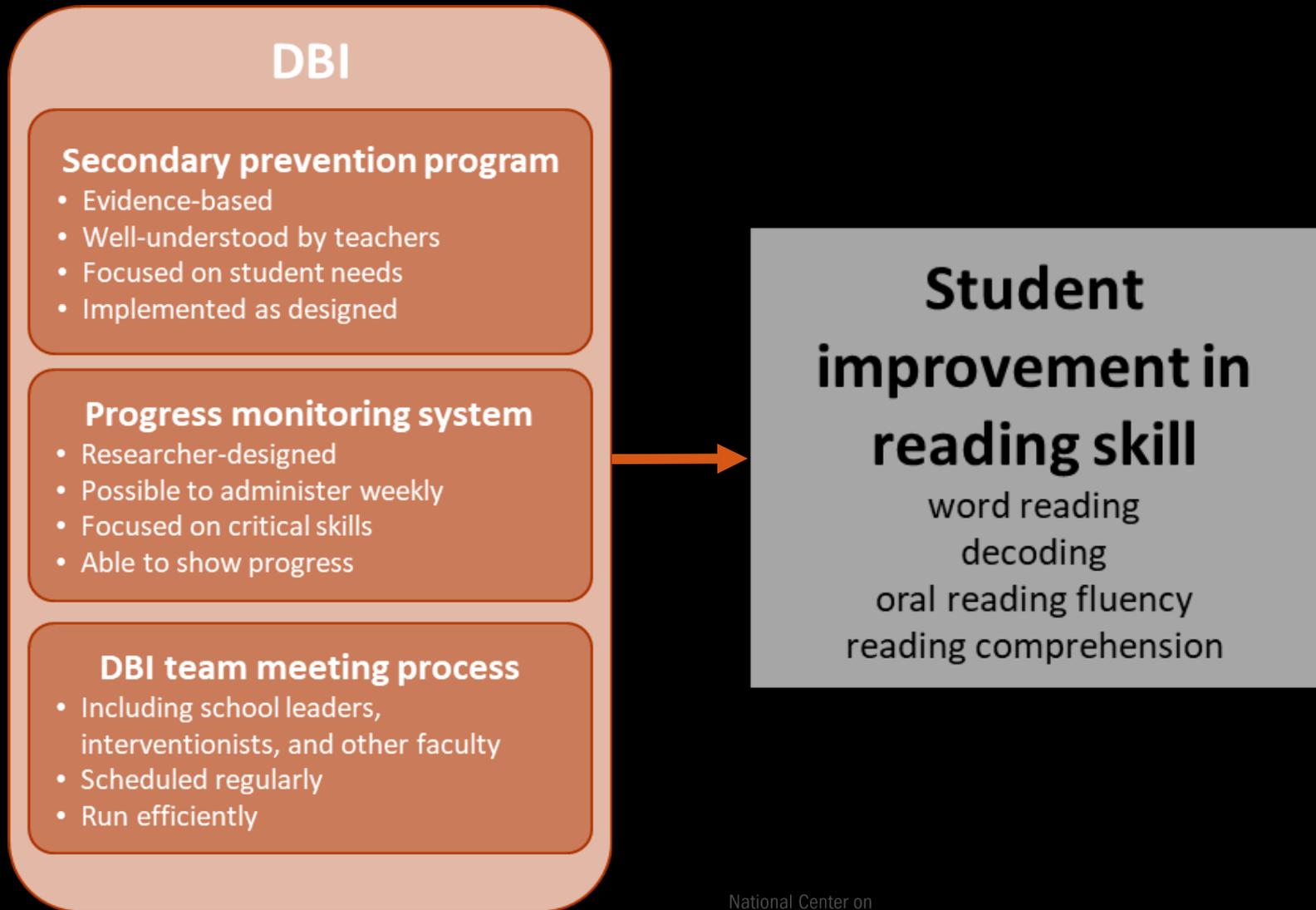
- made based on hypotheses from diagnostic assessment
- selected from the taxonomy

## ○ Iterations

- cycling through progress monitoring, diagnostic assessment, and adaptation
- not needed if student maintains adequate progress toward the goal (along the aim line)

# Elements of DBI Implementation

# DBI Implementation Model

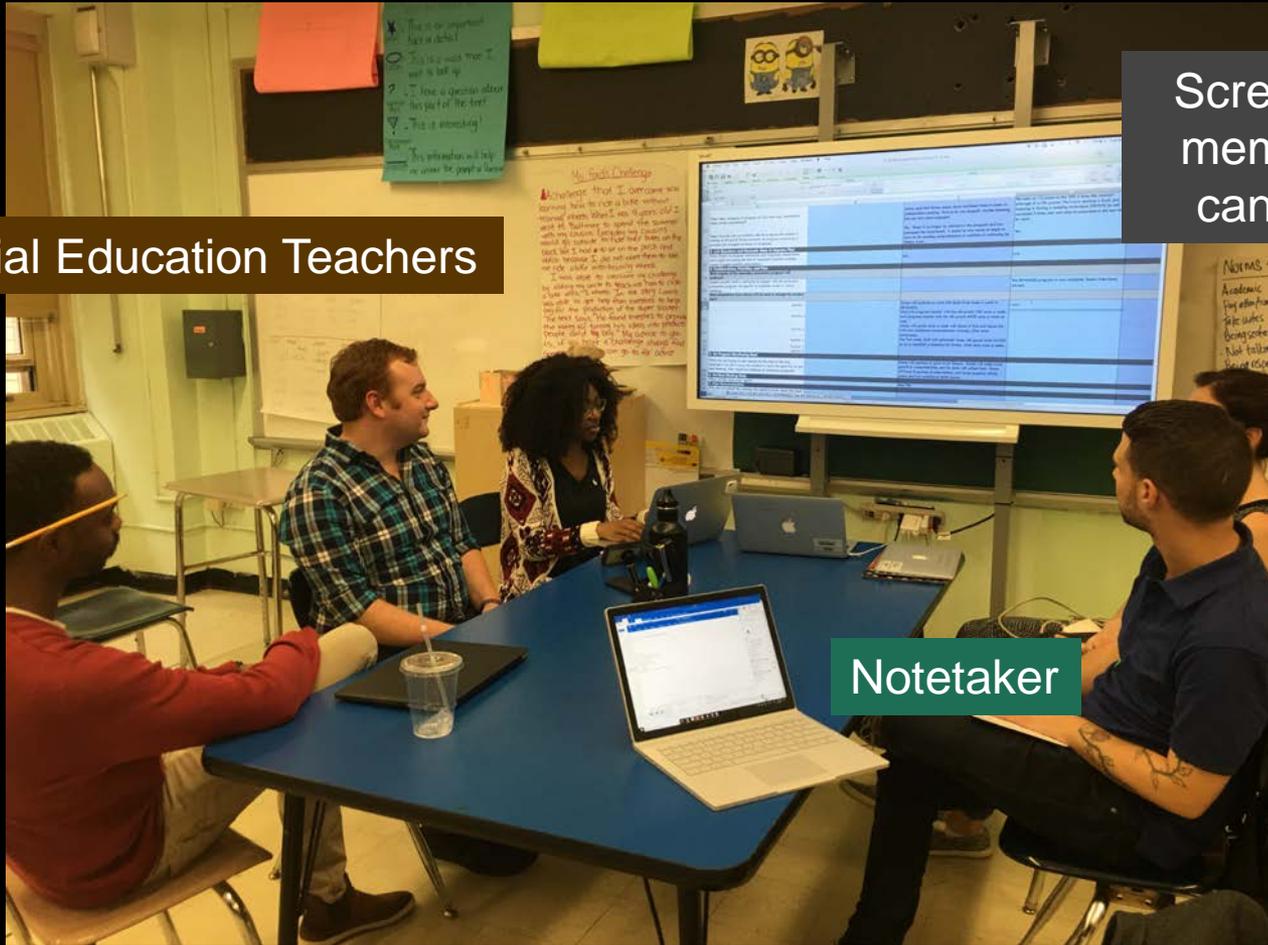




# Team Meeting Process

- ❑ Technology to
  - collect student progress data and document meetings
  - display student data during meetings
- ❑ Team members including
  - an instructional leader who can change schedules and reconfigure teacher responsibilities
  - educators who work with students who need DBI
- ❑ Clear roles and guides for implementation

# Team Meeting Process



Special Education Teachers

Screen all members can see

Assistant Principal

Notetaker

# How does the team collect information and maintain progress?

## The DBI Meeting Template: A Google Sheet

The screenshot displays a Google Sheet titled "Template DBI Plan V0.16" with the following structure:

	A	B	C	D	E	F	G	H
1	<b>Student Introductory Planning for Progress Monitoring (PM) and Program</b>							
2		Date:						
3		Meeting Attendees:						
4	<b>1. Student Information</b>							
5	Name							
6	Age							
7	Grade							
8	English Learner status							
9	Other information							
10	<b>Teachers and Service Providers:</b>							
11	General educators							
12	Specialists (reading, math, writing)							
13	Special educators							
14	Other service providers							
15	<b>Key Background Information:</b>							
16	What were the results of most recent <i>vision</i> and <i>hearing</i> checks?							
17	Does the student have an IEP, a 504 plan, an RTI/MTSS plan, or another targeted assistance plan? If so, what is the focus of the plan?							
18	What do you know about the student's strengths and interests?							
19	What academic concern has led to selecting this student for the DBI process?							
20	When, where, for how long, and with whom is the student currently provided instruction in the area of need?							
21	<b>2. Progress Monitoring (PM) Information:</b>							
22	What progress monitoring measure best measures progress in the area of need?							
23	What is the student's approximate instructional level? What grade level will you							

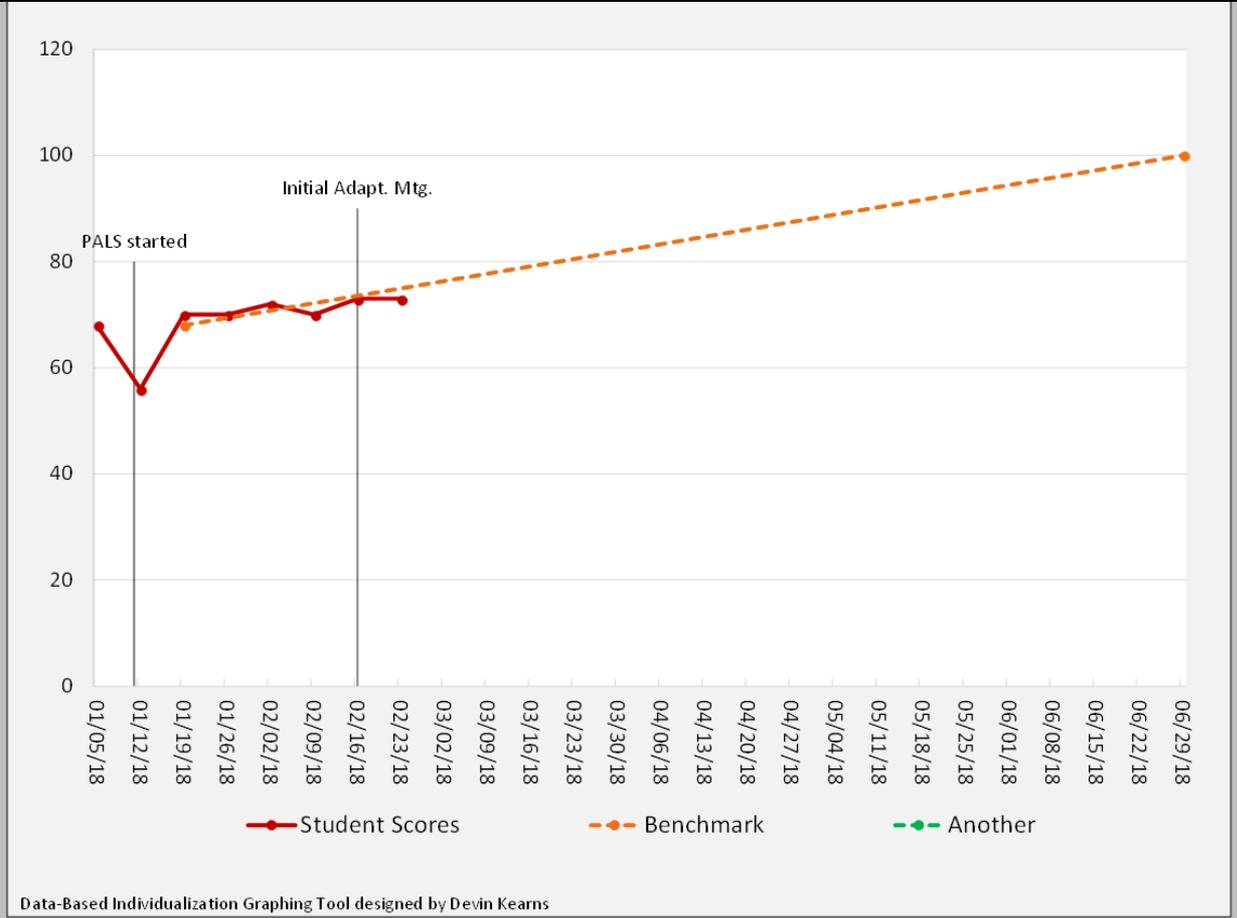
# Introductory Planning

Student Introductory Planning for Progress Monitoring (PM) and Program	
	<b>Date:</b>
	<b>Meeting Attendees:</b>
<b>1. Student Information</b>	
Name	
Age	
Grade	
English Learner status	
Other information	
<b>Teachers and Service Providers:</b>	
General educators	
Specialists (reading, math, writing)	
Special educators	
Other service providers	
<b>Key Background Information:</b>	
What were the results of most recent <i>vision</i> and <i>hearing</i> checks?	
Does the student have an IEP, a 504 plan, an RTI/MTSS plan, or another targeted assistance plan? If so, what is the focus of the plan?	
What do you know about the student's strengths and interests?	
What academic concern has led to selecting this student for the DBI process?	



# Progress Monitoring Data Entry

Provide Student Information	
Student Name	
Current Grade	
Name of Measure	
Grade-Level of Measure	
End-of-Year Benchmark	
Expected Rate-of-Improvement	
Intensive intervention end date	
Enter Progress Monitoring Data	
Date (MM/DD/YY)	Score
01/05/2018	
01/12/2018	
01/19/2018	
01/26/2018	
01/26/2018	
02/02/2018	
02/09/2018	
02/16/2018	
02/23/2018	



# Adaptation Meeting Guide

## DBI Initial Adaptation Meeting

### DMK

Date:

Meeting Attendees:

### 1. Describe Student and Review Interventions and Progress Monitoring

#### Student Description:

Has anything changed about the student (e.g., new glasses, new academic difficulties, new behavior challenges) since making the original decisions? Is there any information we should add from that meeting?

#### Current Program:

Has the implementation of the secondary prevention changed since choosing it for the student?

Are all components being used? If not, which are being used?

What changes to the secondary prevention program have already been made?

#### Progress monitoring:

What is the current PM measure and grade level?

Is the PM measure appropriate? Does it align with the student's area of need? Is it the right level (not too hard or easy)?

Has PM been administered under the same circumstances (time, location, person administering) each time?

# Fidelity (to your plan) Tracker

## DBI Adaptation Self-Fidelity Checklist

### DMK

#### After Initial Meeting

Plan Elements		Person					
Activity 1							
Activity 2							
Activity 3							
Activity 4							
Activity 5							
Activity 6							

Was activity done (Y) or not (N)?

Day	Date	Notes	1	2	3	4	5	6
M								
T								
W								
R								
F								
M								
T								
W								
R								
F								

# DBI Implementation in the NYC DOE



# Introductions and Context

## DBI School Selection Process

- Within each borough are Borough Support Centers (BSC). In collaboration with BSCs, the team selected schools to partner with on the DBI initiative.



NYC Department of Education  
Map of School Districts

**Manhattan FSC**  
*Districts 1,2,3,4,5,6*

**Brooklyn North FSC**  
*Districts 13,14,15,16,19, 23, 32*

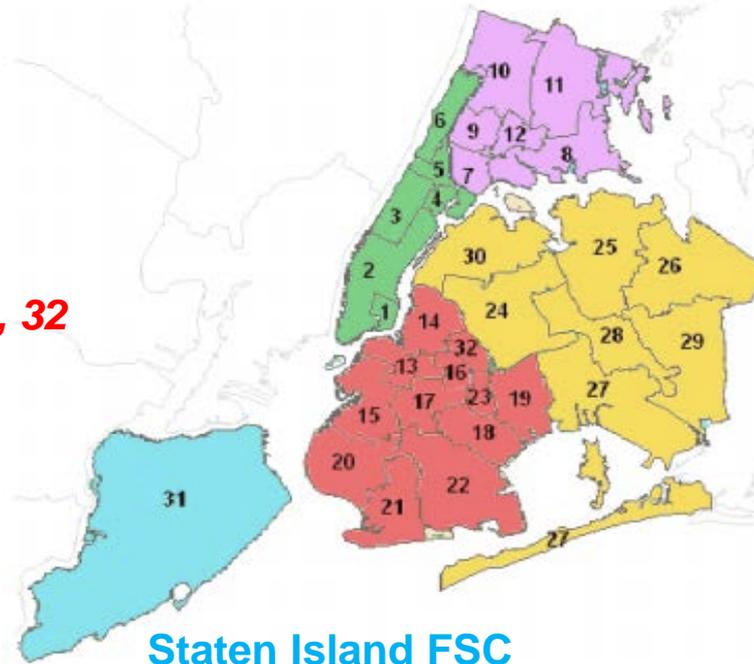
**Brooklyn South FSC**  
*Districts 17,18, 20, 21, 22*

**Bronx FSC**  
*Districts 7,8, 9,10,11,12*

**Queens North FSC**  
*Districts 24, 25, 26, 30*

**Queens South FSC**  
*Districts 27, 28, 29*

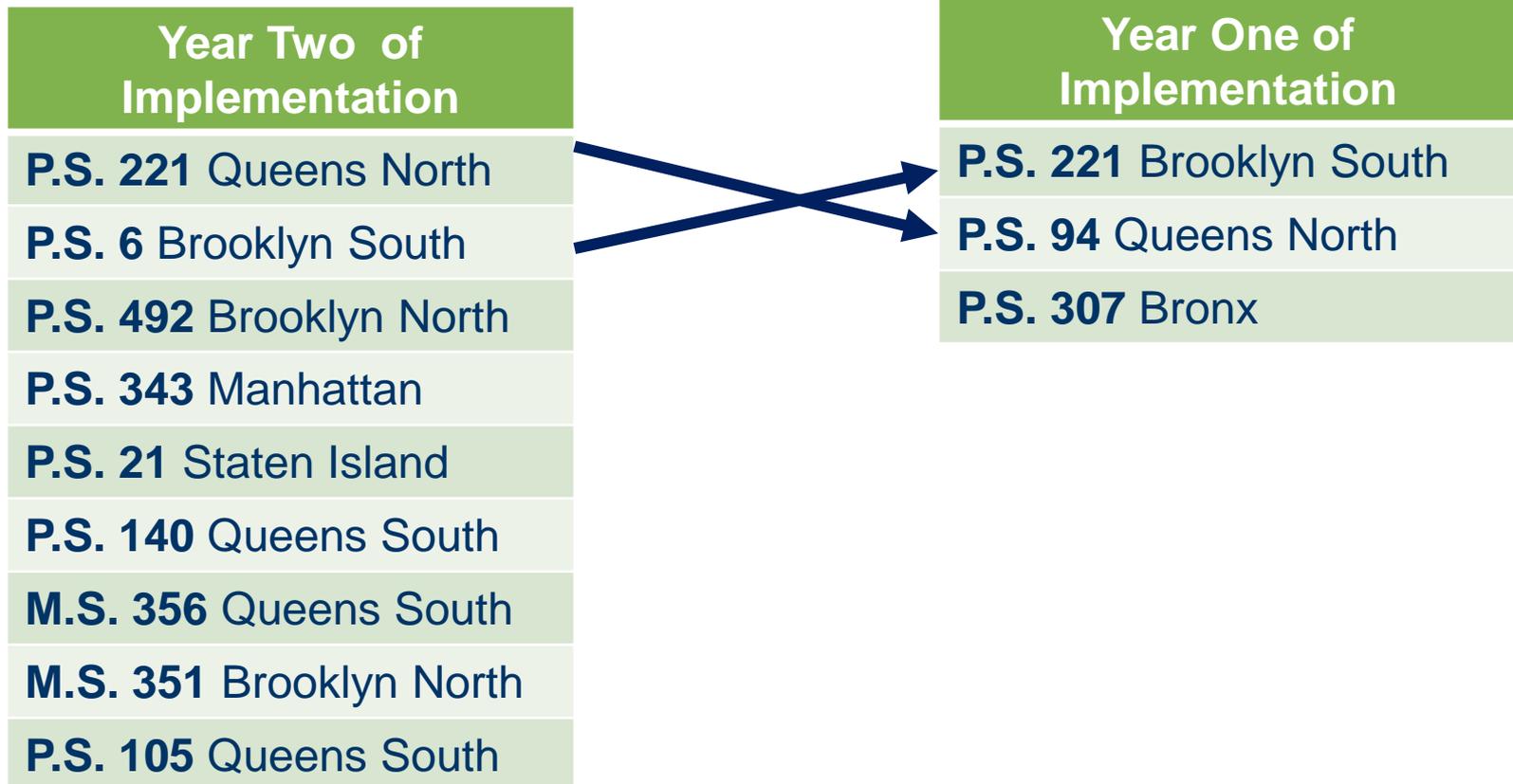
**Staten Island FSC**  
*District 31*



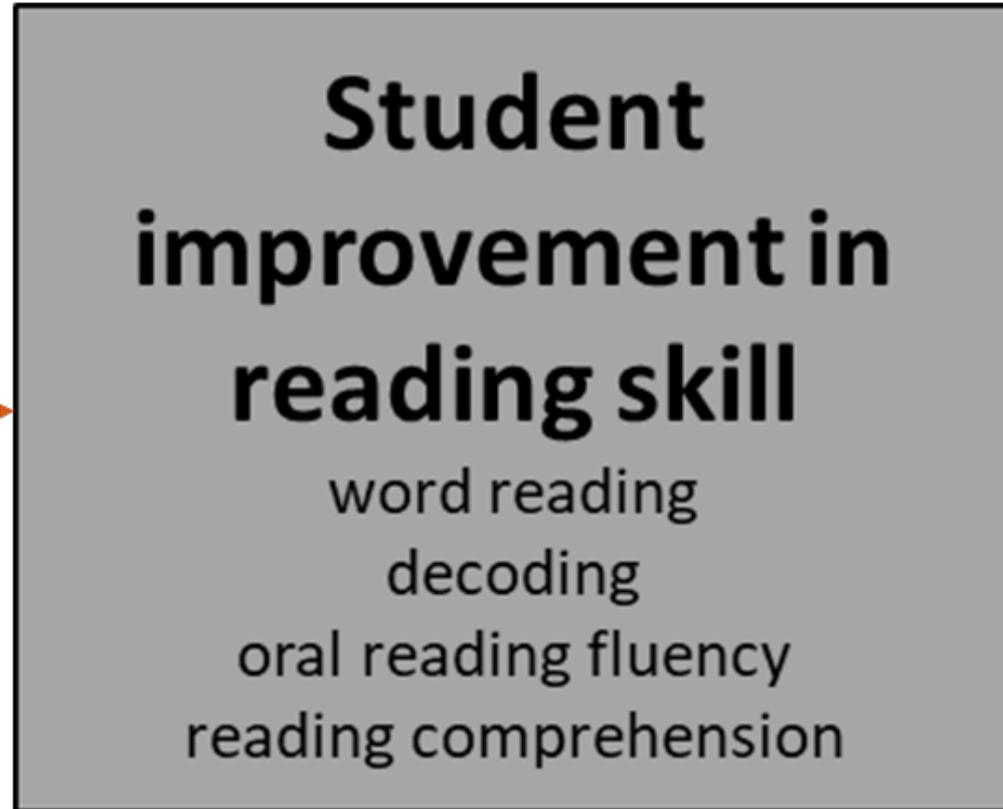
# Introductions and Context

## Composite of schools selected

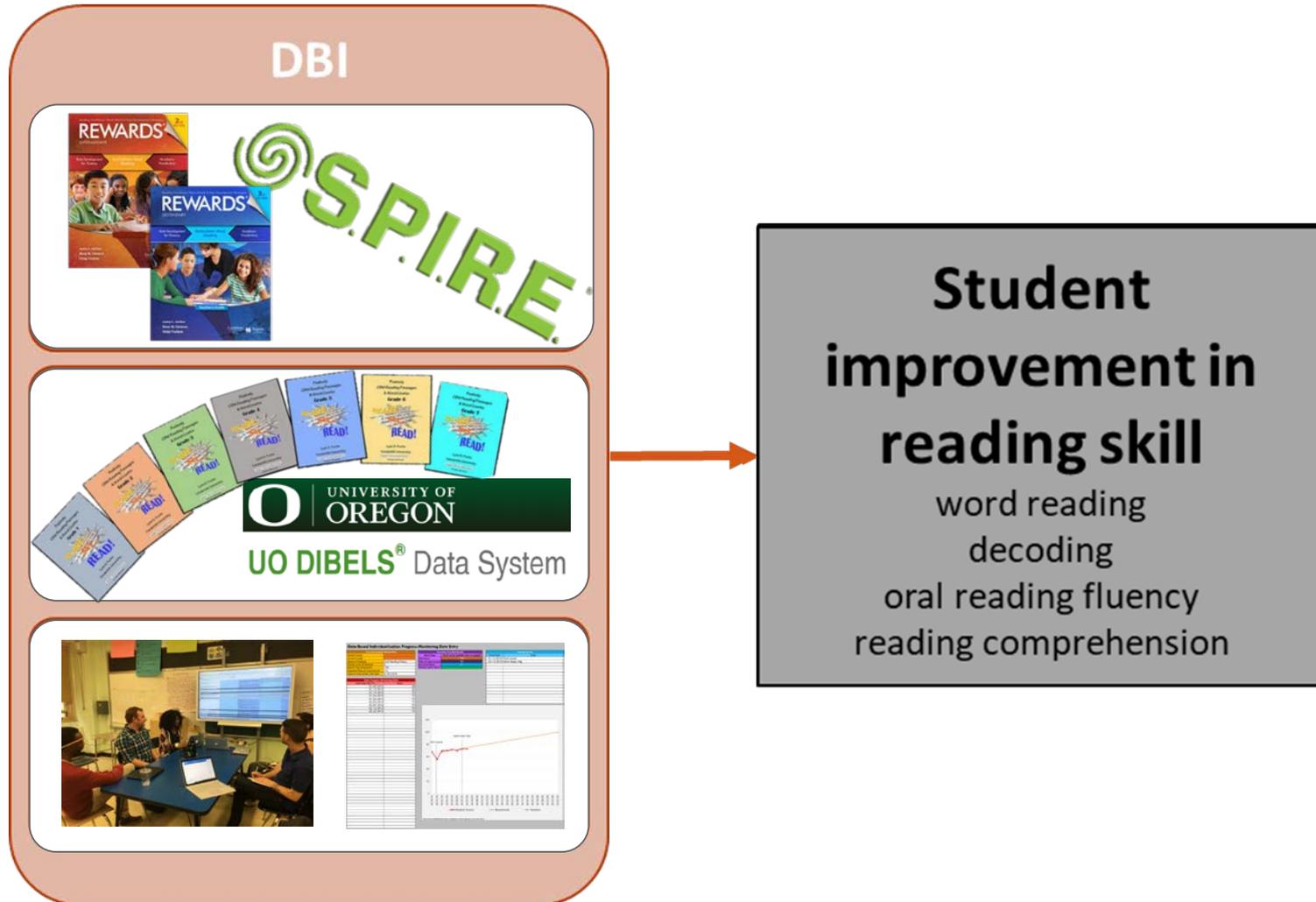
- Twelve schools across the five boroughs are currently implementing DBI.



# DBI Implementation Model: Key Drivers



# DBI Implementation Model: Key Drivers



# DBI Implementation Model: Key Drivers

## DBI Experts



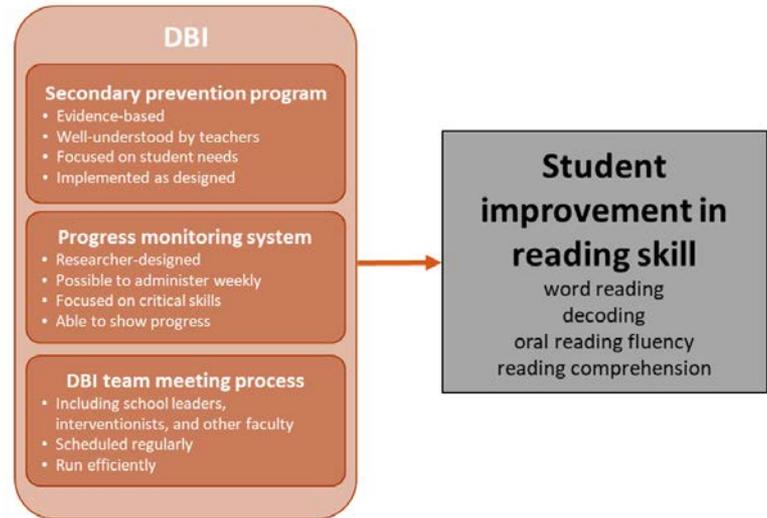
Devin Kearns



Melodee Walker

## Department of Education Team

- Jason Borges
- Meghan Duffy
- Sarah Benstraum
- Wynta Nivens
- Rebecca Vitali-Decola



# Professional Development Model

<b>Progress Monitoring Days</b>	Two day training on Acadience Reading <ul style="list-style-type: none"><li>• Overview of progress monitoring measures</li><li>• Practice with administering each measure</li></ul>
<b>Secondary Prevention Programs</b>	Training in research validated secondary prevention programs on a need basis
<b>Teacher Support Days</b>	<u>Day One</u> : Diagnostic Assessment  <u>Day Two</u> : Explicit Instruction
<b>Leadership Support Days (District and School level Administrators)</b>	<u>Day One</u> : Increasing Knowledge of DBI  <u>Day Two</u> : Progress monitoring

# Data-Based Individualization Implementation Logistics



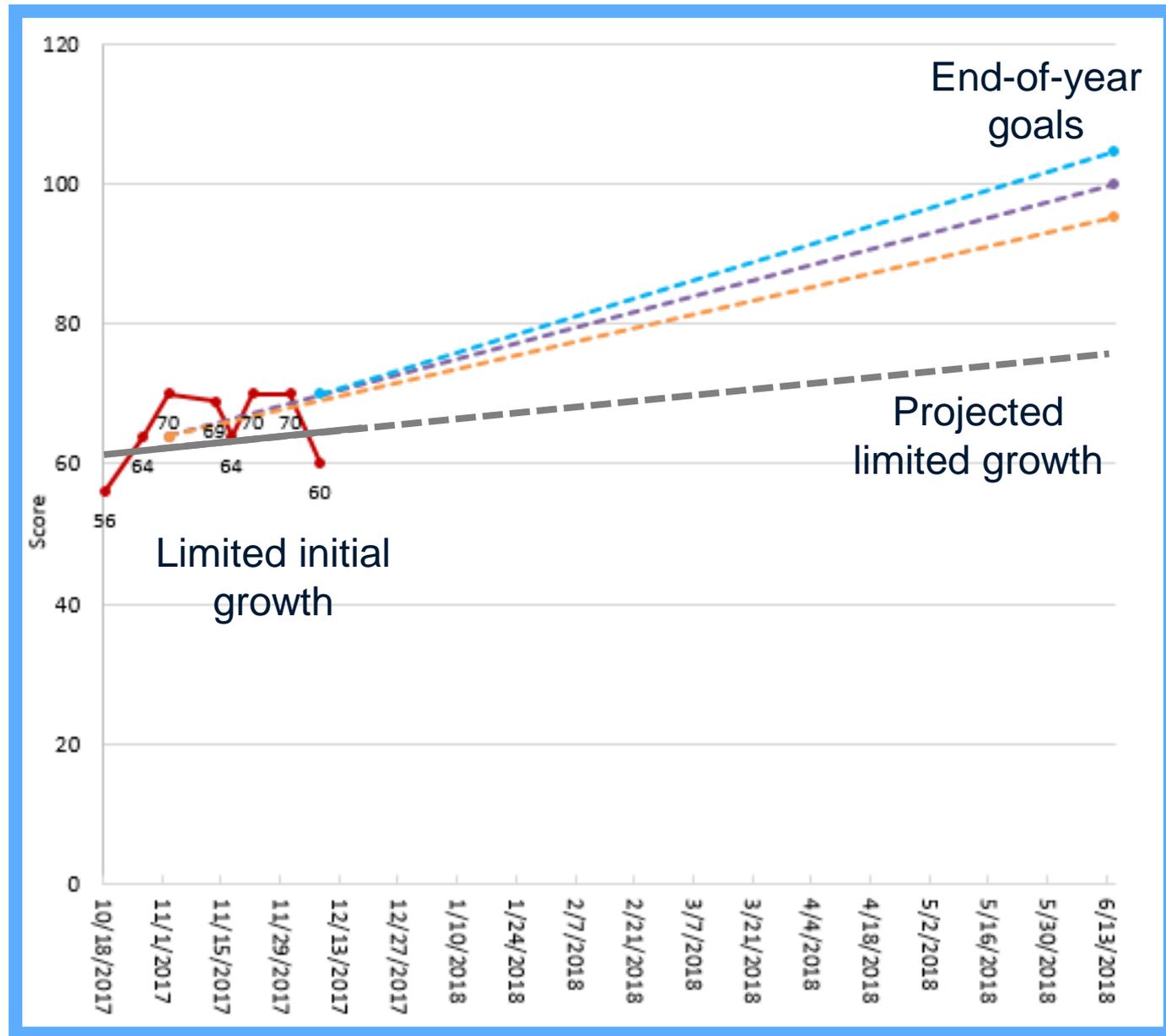
# Case Studies

# Case Study: Vincent

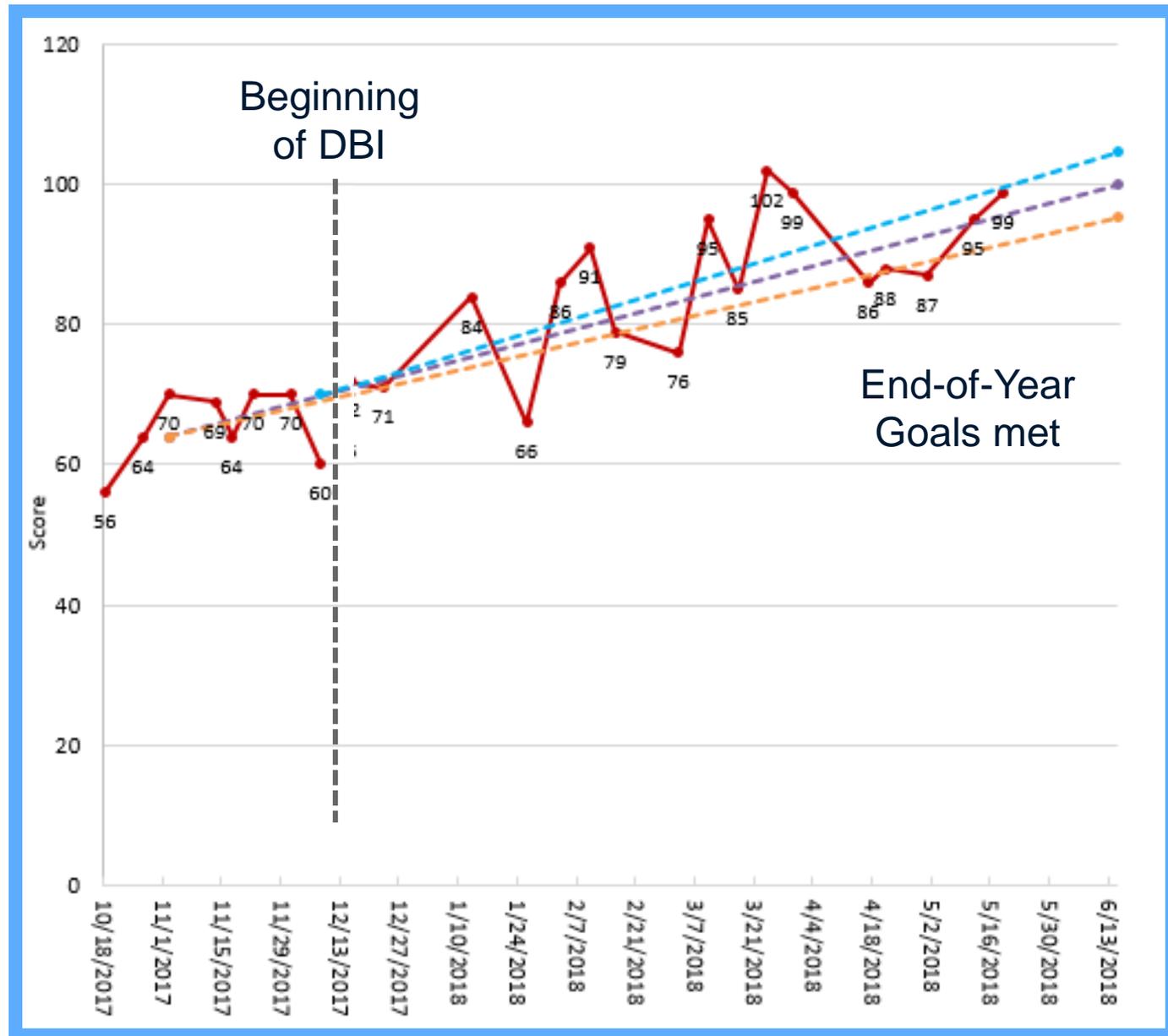


- **Student:** Vincent (5<sup>th</sup> Grade Student)
- **Instructional Level:** Third Grade
- Explicit, Systematic Instruction using an Orton Gillingham based Intervention Program **4x per week** with Ms. H (IEP teacher)
- Orton Gillingham based reinforcement with fluency practice/repeated readings **5x per week** with Ms. M (Special Education Teacher in ICT classroom)
- **Progress Monitoring:** Third Grade Oral Reading Fluency

# Vincent's Weekly Progress Monitoring Data Before DBI



# Vincent's Weekly Progress Monitoring Data with DBI



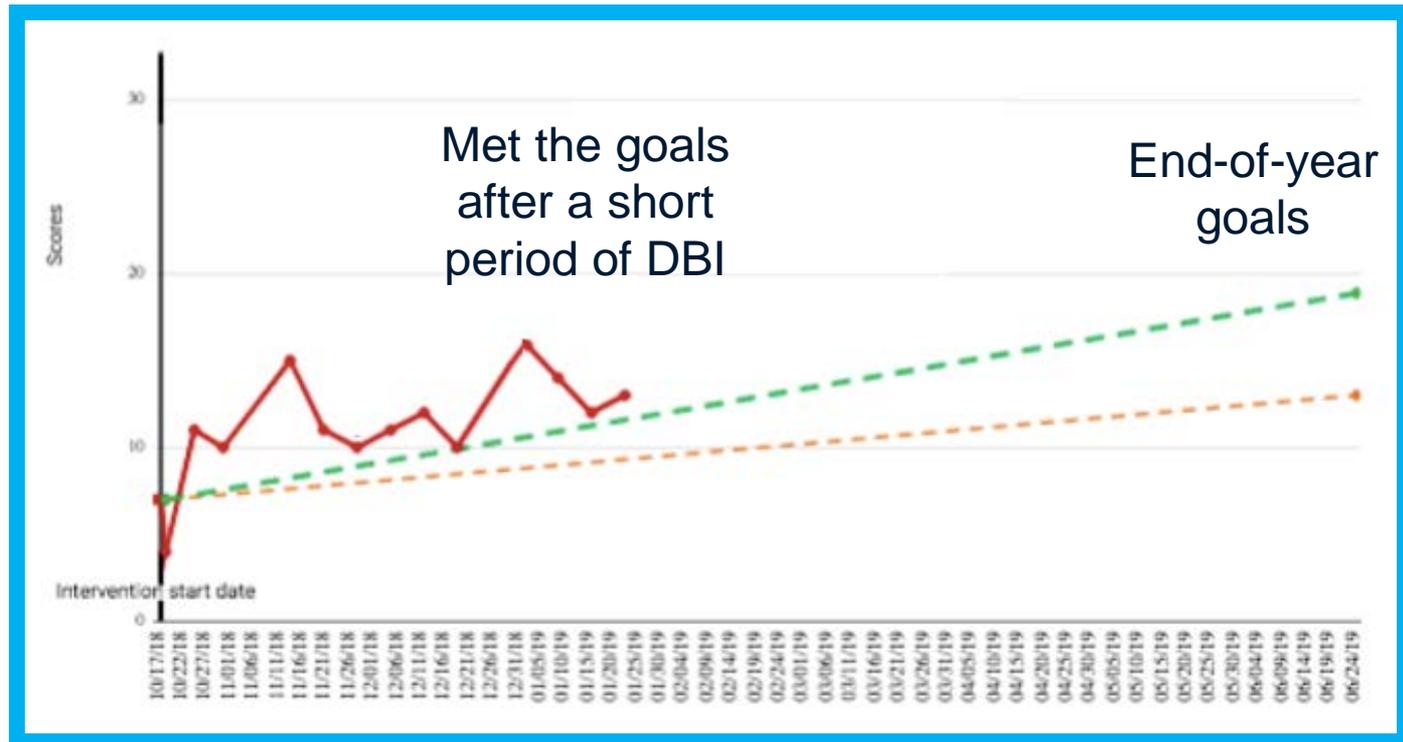
# Case Study: Kyle



- **Student:** Kyle (5<sup>th</sup> Grade Student)
- **Instructional Level:** First Grade (*September 2018*)  
Second Grade (*January 2019*)
- Explicit, Systematic Instruction using an Orton Gillingham based Intervention Program **3x per week for 45 minutes**
- **Progress Monitoring:**
  - *October 2018:* Nonsense Word Fluency (NWF)
  - *November 2018:* First Grade Oral Reading Fluency (ORF)
  - *January 2019:* Second Grade Oral Reading Fluency (ORF)

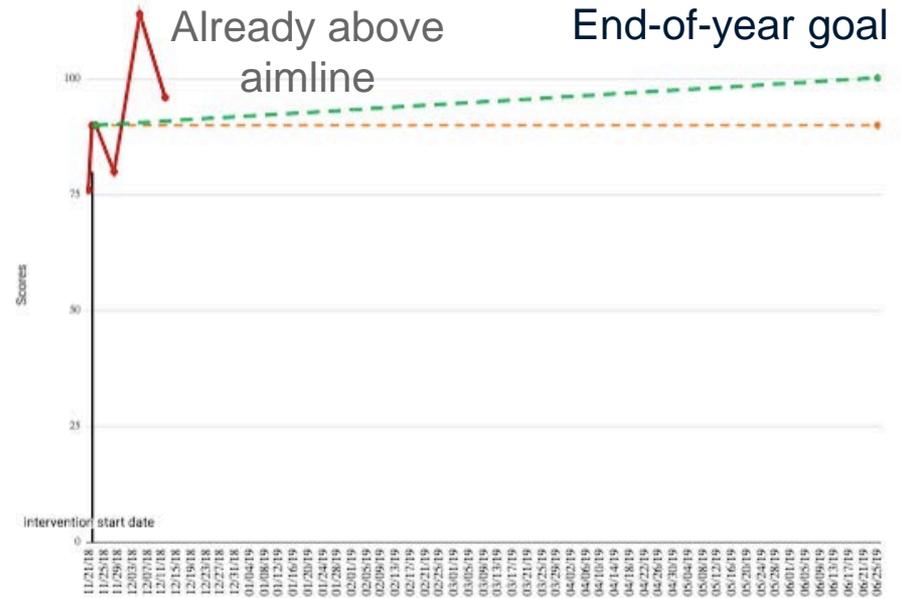
# Kyle's Weekly Progress Monitoring Data Beginning 10/2018

## Nonsense Word Fluency (NWF)



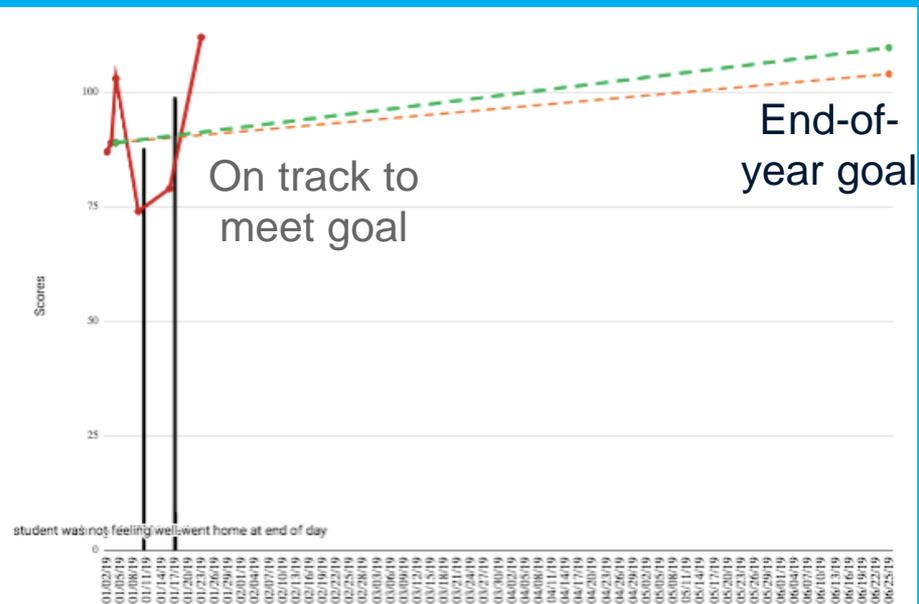
# Kyle's Weekly Progress Monitoring Data Beginning 11/2018

## First Grade Oral Reading Fluency



# Kyle's Weekly Progress Monitoring Data Beginning 1/2019

## Second Grade Oral Reading Fluency

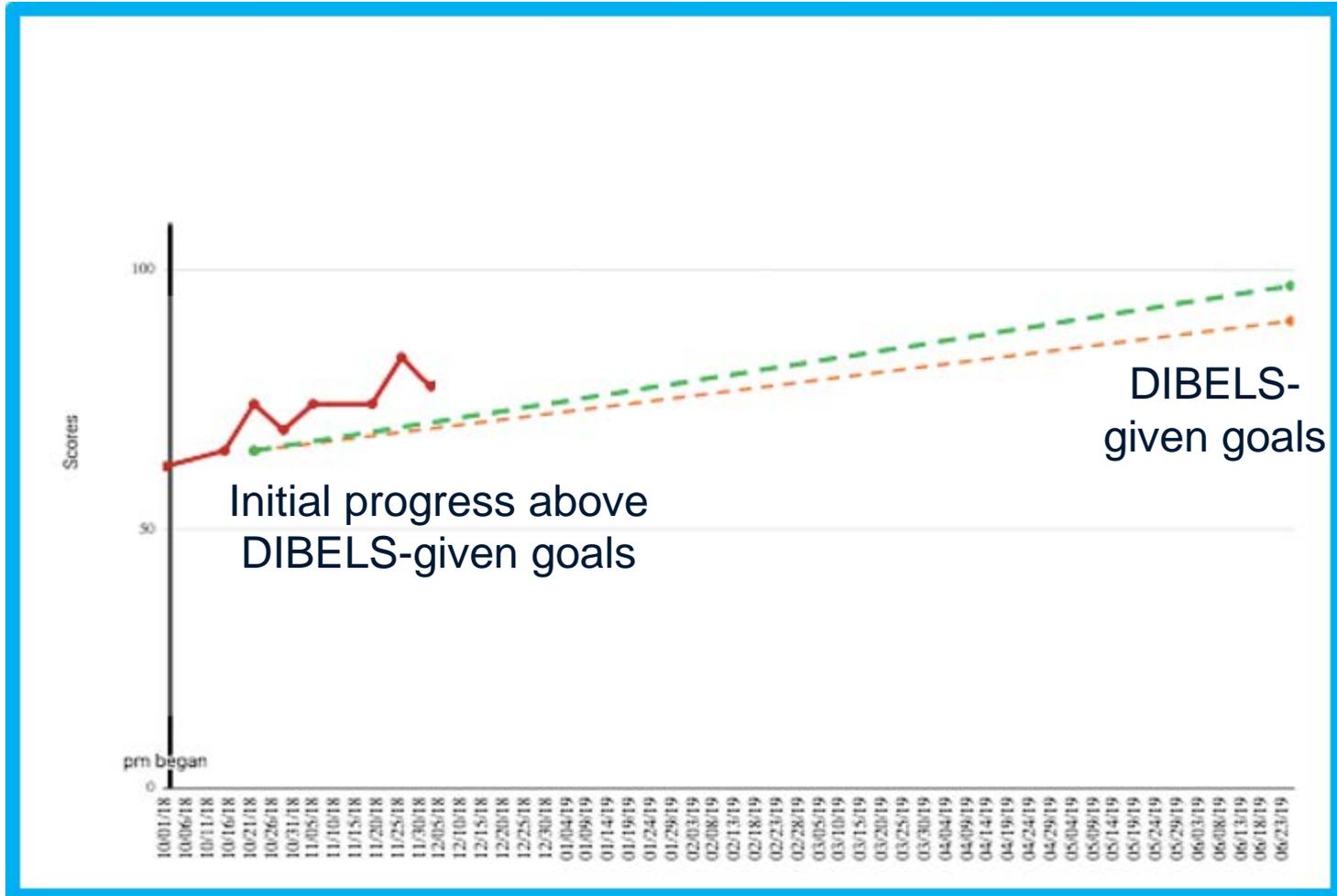


# Case Study: Mary

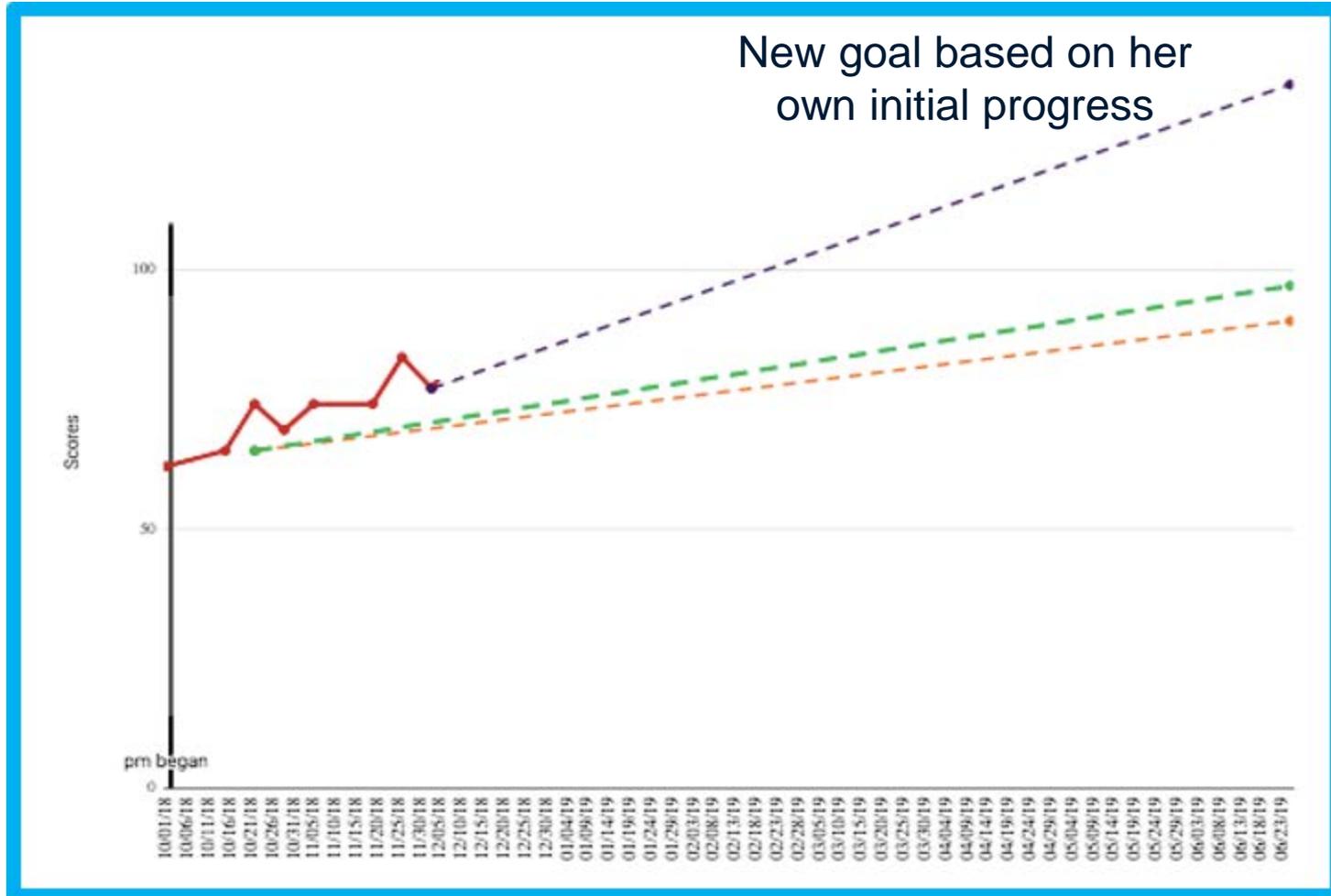


- **Student:** Mary (2<sup>nd</sup> Grade Student)
- **Instructional Level:** First Grade (*September 2018*)
- Explicit, Systematic Instruction using an Orton Gillingham based Intervention Program **4x per week for 45 minutes**
- **Progress Monitoring:** First Grade Oral Reading Fluency

# Mary's Weekly Progress Monitoring Data Beginning 10/2018



# Mary's Weekly Progress Monitoring Data Beginning 10/2018



# Mary's Weekly Progress Monitoring Data Beginning 10/2018



# Summary

- **Vincent**

- > Weak progress prior to DBI
- > On-track to meet goals after DBI started

- **Kyle**

- > Began at a 1<sup>st</sup> grade level
- > Advanced to 2<sup>nd</sup>-grade level work after just a few months

- **Mary**

- > Goals set based on her own early progress
- > With DBI, she exceeded goals based on her own early scores

# Successes and Next Steps

# Summary of Successes

- **Students**

- > meeting ambitious goals
- > exceeding goals
- > reaching grade level

- **Schools**

- > participating for multiple years
- > continuing to implement interventions
- > doing progress monitoring
- > holding DBI team meetings

# What we found that leads to successful implementation of DBI?

- Start small
- Build understanding using case studies of students
- Interview school leaders prior to committing to the process
- Train school teams prior to engaging or at the onset of engaging in the process

# Supporting Future Successful Implementation

- **Building Knowledge and Awareness of DBI**
  - > Workshops for Executive Superintendents, Superintendents, and School Leadership
- **Building Instructional Expertise for Intensive Intervention**
  - > Training in secondary prevention programs
  - > Progress monitoring
  - > Explicit Instruction
  - > Advanced course on intensive intervention
- **Professional Learning Network of DBI Sites**
  - > Continue to grow DBI sites across boroughs
  - > Train borough support staff in becoming DBI coaches
  - > Include more secondary schools

# Attend Related ER Sessions

## Meghan Duffy

- Specially Designed Instruction in Reading: Intensify Reading Interventions
- Room 8301
- Monday 1:50-3:00 P.M.

## Devin Kearns

*Led by Katharine Miles*

- An Analysis of the Regularity of “Sight Words”
- Room C202
- Tuesday 12:10-1:20 P.M.

# Thank you!

## Contact Information

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- **Meghan Duffy** 
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## More Information

- **National Center on Intensive Intervention**
  - > [Intensiveintervention.org](https://intensiveintervention.org)
- **Devin's Website**
  - > [devinkearns.org](https://devinkearns.org)
    - Kearns et al. (2018) DBI paper
    - This presentation