

Using Direct Behavior Rating Methods Within a Behavioral Consultation Framework

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Agenda

- ▶ Highlight applications for DBR methods within both assessment and intervention contexts by reviewing a series of single-case design studies designed to improve student classroom behavior.
- ▶ Explore nuances between cases that impacted intervention effectiveness.
- ▶ Discuss data sources and impacts on data-based decision-making.

Objectives

- ▶ Identify key features of Direct Behavior Rating methods
- ▶ Understand applications of DBR methods within behavioral consultation
- ▶ Discuss the features of high-quality Daily Behavior Report Cards
- ▶ Understand how different data-sources impact decision-making

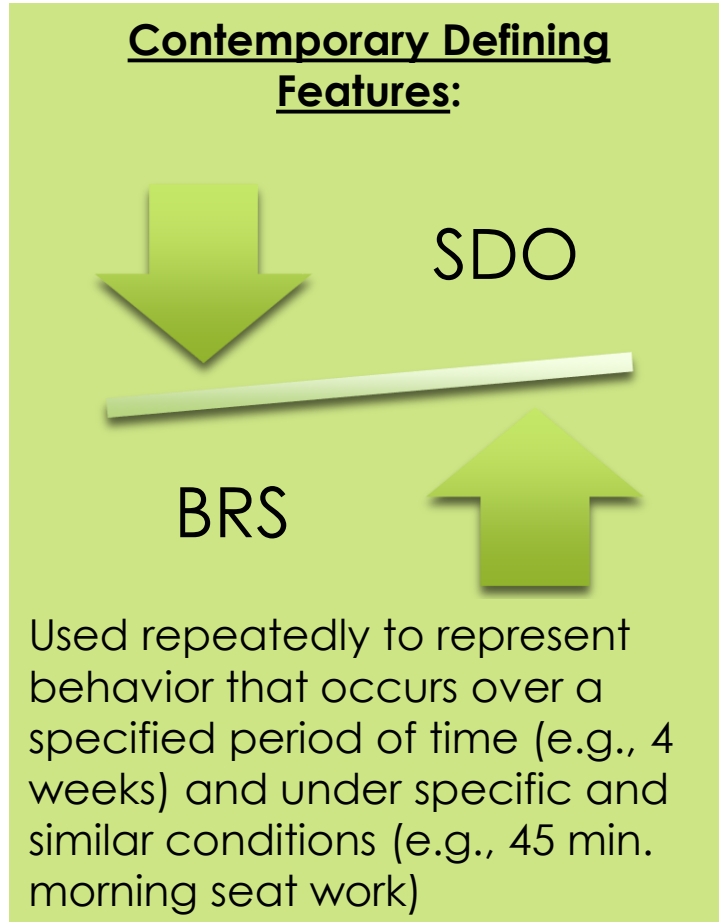


Background

- ▶ Direct behavior rating (DBR) methods have received increased attention in recent years.
- ▶ Well aligned to our consultation role.
- ▶ Evidence based practices.



A little background....



Daily Behavior Report Card

School Home Note

Behavior Point Sheets

Direct Behavior Rating

Behavioral Consultation

Problem Identification

Problem Analysis

Treatment Implementation

Treatment Evaluation

Assessment

Intervention



Measurement



High
Inference



Low
Inference



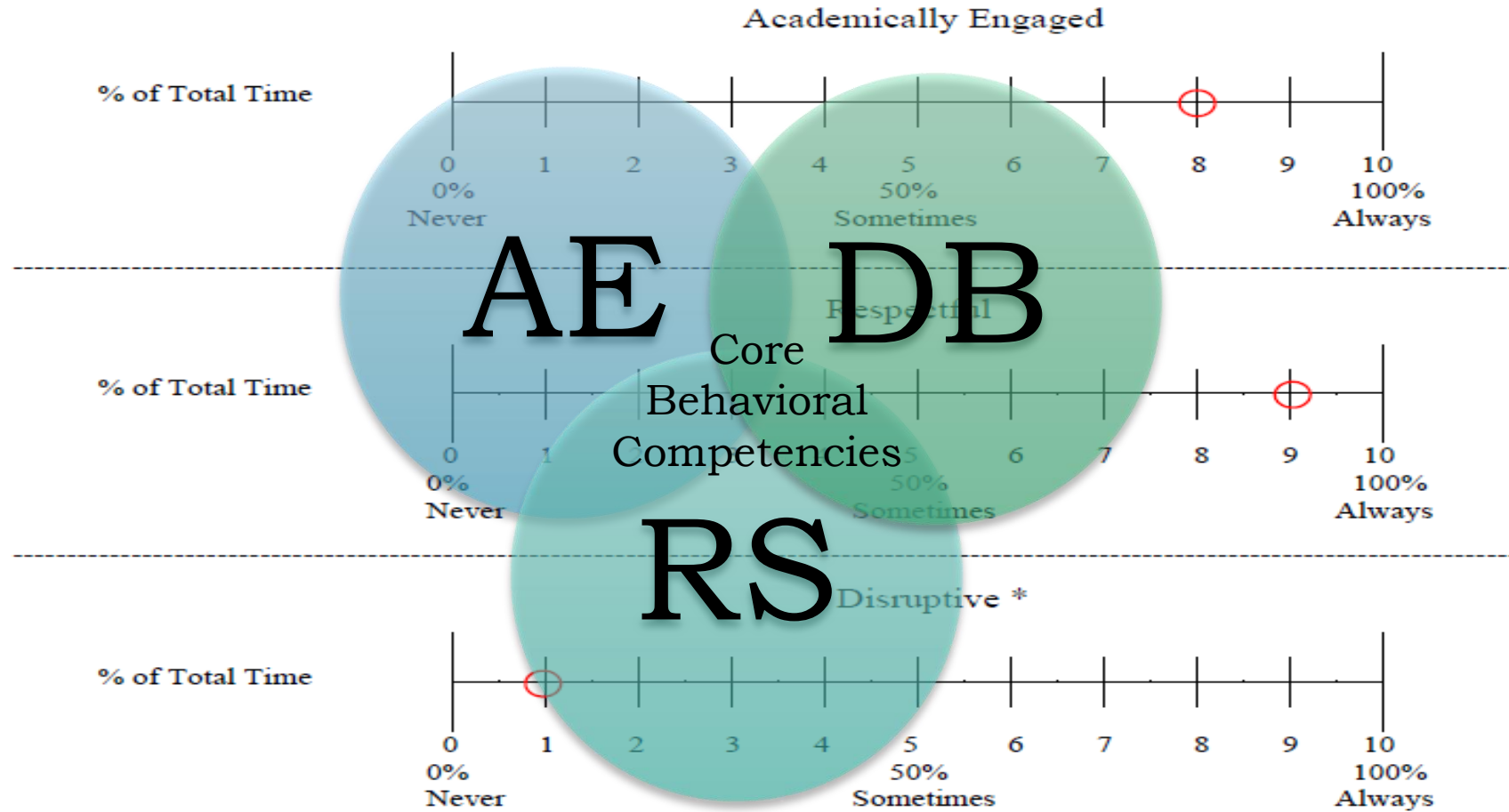
• DBR-SIS



• SDO

DBR-SIS

Directions: Place a mark along the line that best reflects the percentage of total time the student exhibited each target behavior. Note that the percentages do not need to total 100% across behaviors since some behaviors may co-occur.



* Remember that a lower score for "Disruptive" is more desirable.

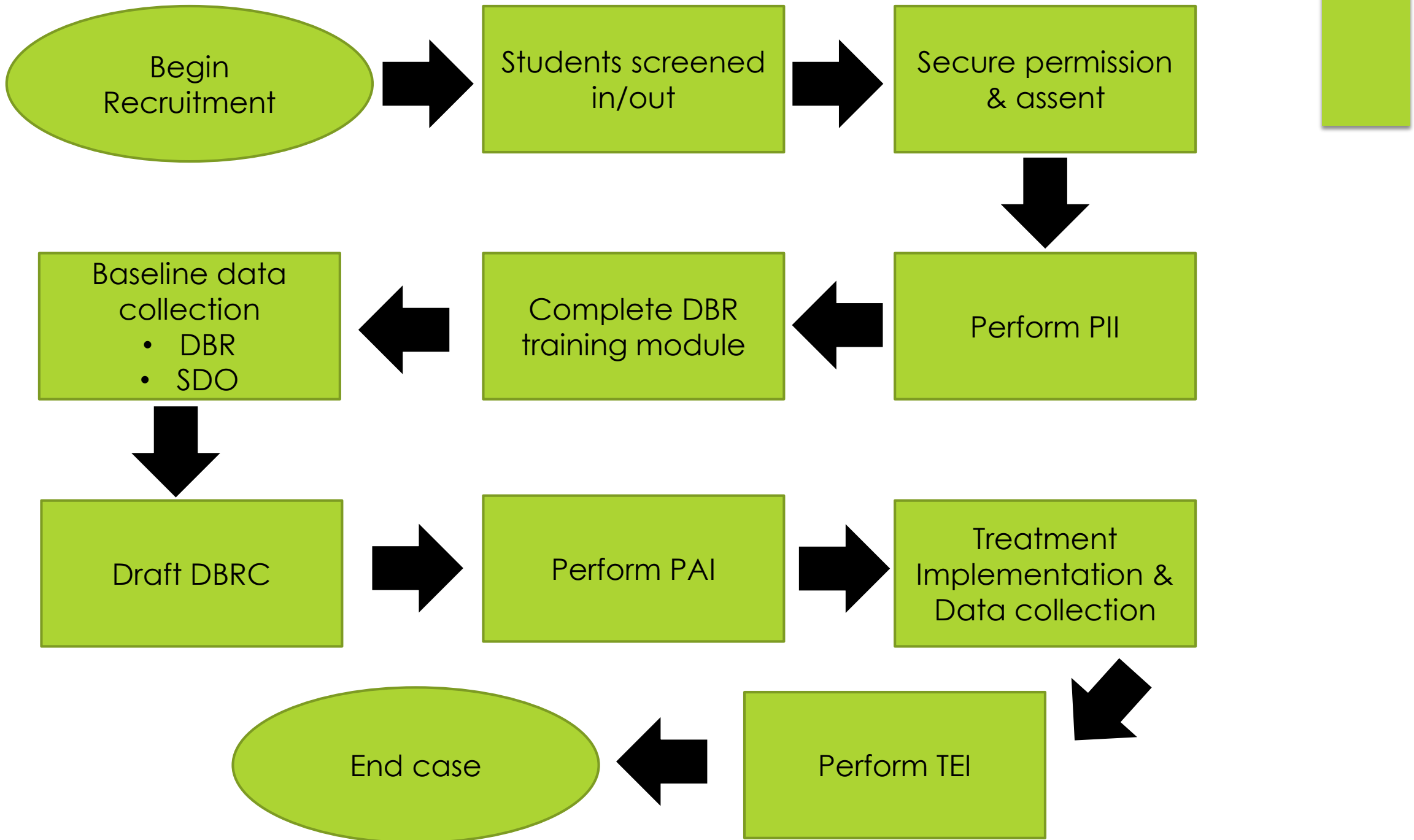
DBRC: Evidence-Based Intervention

DBRC defined as having:

- (a) a clear target behavior or behavior constellation,
- (b) periodic judgment of behavior with a simple value-laden summary embedded in the scale,
- (c) a system of daily behavior monitoring,
- (d) a communication component between the student's teacher and home

Vannest, Davis, Davis, Mason & Burke, 2010

- ▶ Higher effect sizes when a strong home component was included
- ▶ Stronger effects for more than an hour of use per day
- ▶ Qualitative scaling components more effective than purely quantitative (e.g., counting incidents)





Study 1: New York

Fabiano, Pyle, & Kelty

Participants

- ▶ Participants were enrolled within elementary schools in Western New York.
- ▶ Referred by study flyers sent home to parents.
- ▶ All parents signed a permission form and informed assent was obtained from children.

Case 1: C.P.

- ▶ 9-year, 5-month-old Caucasian male attending a 4th grade general education class at a public school.
- ▶ He did receive a number of academic supports, including small-group, pull-out classes for math (every other day) and reading (every day).
- ▶ Referred for poor class work and homework completion, and a need for extensive prompting to stay on task.
- ▶ C.P.'s teachers noted that in class he would often fall asleep, fail to follow directions, and turn in incomplete seat work, especially in Math.
- ▶ At the beginning of the study, C.P. had not completed any homework, except for those assignments done with the teacher at school.

Case 2: M.S.

- ▶ 11-year, 9-month-old Caucasian male attending a 5th grade, general education class at a private Catholic school.
- ▶ Had a 504 Plan that included small-group classes for English (every other day), math (once a week), and reading (once a week). M.S. also regularly met with counselors at the school.
- ▶ Referred because of disruptive classroom behavior, difficulty initiating and completing seat work, and a need for extensive prompting to stay on task.
- ▶ In a group setting, would often refuse to open his book or would joke loudly with his friends while the teacher was speaking.

Case 3: N.I.

- ▶ 9-year, 10-month-old Hispanic male attending a 4th grade general education class at a private Catholic school.
- ▶ Enrolled in an Academic Intervention Support (AIS) class for reading, in an earlier part of the school year.
- ▶ N.I. was initially referred for disruptive behaviors, including wrestling in class, and a need for multiple prompts to stay on task.

Targeted Behaviors

- ▶ C.P.: (1) Returning completed homework, (2) Completing [class] assignments within the time provided, and (3) Attending to the lesson without extensive prompting.
- ▶ M.S.: (1) Interrupting other students, (2) Seatwork completion, (3) Attending to the lesson, and (4) Raising his hand and answering a question correctly.
- ▶ N.I.: (1) Keeping his hands and feet to himself, (2) Turning and talking to others, (3) Making smart choices about who to line up with, and (4) Making smart choices about partners for small-group class work.

Home-based Rewards

- ▶ C.P.: Home-based rewards included time on his devices, including his Xbox, and being able to choose weekend activities, such as renting a new game or movie.
- ▶ M.S.: A home-based reward menu was created in collaboration with M.S.'s mother. The rewards included small tangibles, such as snacks and toys, quality time with mom, and time on his devices, including his Xbox.
- ▶ N.I.: Home-based rewards included small tangibles, including a sticker or pencil, extra screen-time, including TV and iPod use, and quality time with parents, including reading books at bedtime.

Daily Report Card

	Math	
1. Returns completed math homework	Y	N
2. Keeps hands and feet to self with no more than 2 reminders	Y	N
3. Attends to lesson with 1 or fewer prompts	Y	N

OTHER

1. Returns signed Daily Report from yesterday YES NO

Total Number of Yeses _____ Total Number of Nos _____ Percentage of Yeses

Comments: _____

Parent: Please record reward provided _____

Parent: Please sign and return to teacher _____

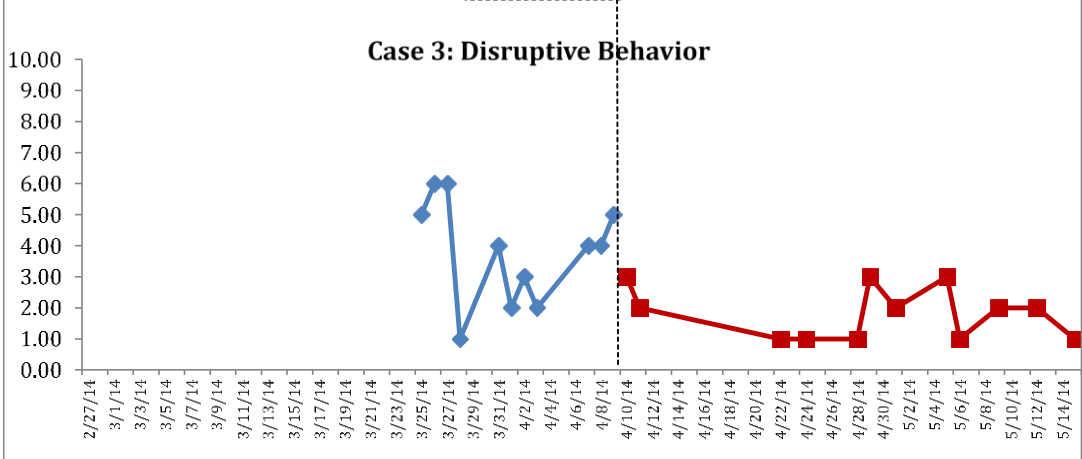
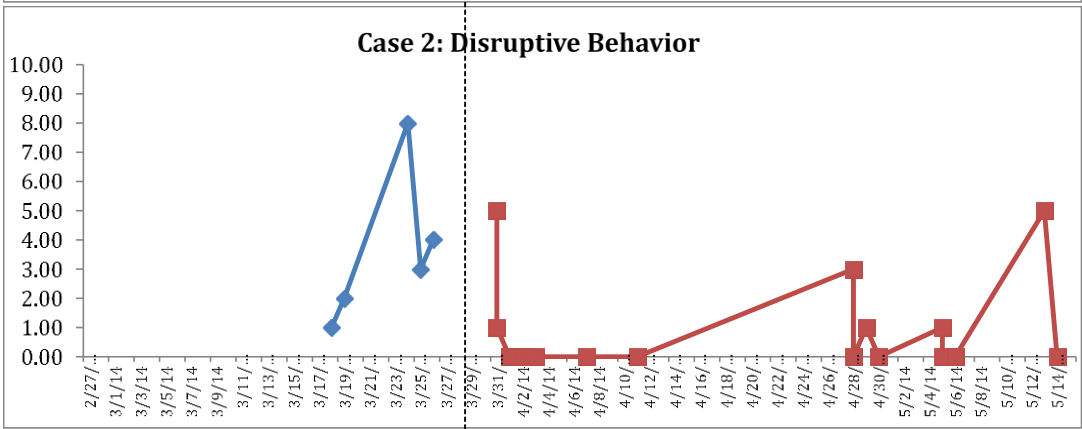
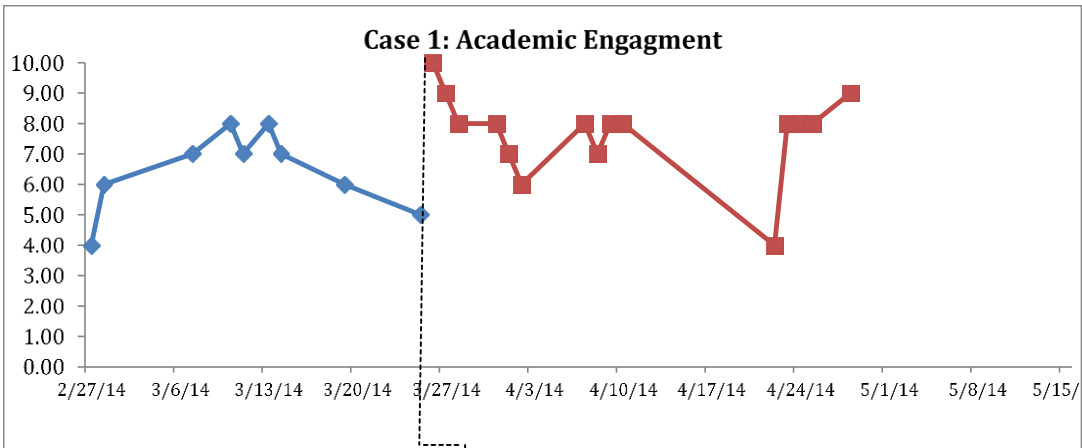


Table 1. Comparison of different metrics for illustrating intervention effect.

		DBR-AE Mean (SD)	DBR-DB Mean (SD)	SDO-AE Mean (SD)	SDO-DB Mean (SD)
Case 1	Baseline	6.80 (1.69)		57.33 (24.95)	
	Intervention	7.27 (1.71)		52.67 (36.50)	
Case 2	Baseline		3.80 (2.59)		23.77 (11.81)
	Intervention		0.84 (1.64)		7.33 (12.70)
Case 3	Baseline		3.67 (1.67)		13.50 (5.45)
	Intervention		1.96 (0.93)		4.00 (6.08)

Social Validity: Usage Rating Profile – Intervention

	Case 1	Case 2	Case 3
Acceptability	5.8	5.8	4.9
Understanding	6	5	5.3
Home-School Collaboration	6	6	5
Feasibility	5.3	5.3	5.2
System Climate	5.8	5.4	5.2
System Support	2.3	4.3	1.3

Note: A low score on System Support is preferable as it indicates a low need for additional supports to successfully use the intervention.



Study 2: Missouri Riley-Tillman & Sims

Study 2: Participants

- ▶ 5 Teacher and Student Combinations
- ▶ Grades 3 – 5
- ▶ Class sizes approximately 25 students per room
- ▶ Rural Midwestern Elementary School
- ▶ Homogenous sample
- ▶ Low-middle to middle class SES community
- ▶ 1 of 4 schools serving approximately 3,500 students
Pre K – Graduation

Study 2: Case 1

▶ Teacher

- ▶ 4th Grade
- ▶ Caucasian
- ▶ Female
- ▶ 2+ years experience
- ▶ Bachelor's level training

▶ Student

- ▶ 4th Grade
- ▶ Caucasian
- ▶ Male
- ▶ Target Behavior(s)
 1. Following Directions

Study 2: Case 2

▶ Teacher

- ▶ 3rd Grade
- ▶ Caucasian
- ▶ Female
- ▶ 10+ years experience
- ▶ Master's level training

▶ Student

- ▶ 3rd Grade
- ▶ Caucasian
- ▶ Male
- ▶ Target Behavior(s)
 1. Calling out
 2. Off-task

Study 2: Case 3

▶ Teacher

- ▶ 5th Grade
- ▶ Caucasian
- ▶ Female
- ▶ 10+ years experience
- ▶ Master's level training

▶ Student

- ▶ 5th Grade
- ▶ Caucasian
- ▶ Male
- ▶ Target Behavior(s)
 1. Talking to Peers
 2. Calling Out
 3. Following Directions

Study 2: Case 4

▶ Teacher

- ▶ 4th Grade
- ▶ Caucasian
- ▶ Female
- ▶ 5+ years experience
- ▶ Bachelor's level training

▶ Student

- ▶ 4th Grade
- ▶ Caucasian
- ▶ Male
- ▶ Target Behavior(s)
 1. Talking to Peers
 2. Out of Seat
 3. Defiance/Disrespect

Study 2: Case 5

▶ Teacher

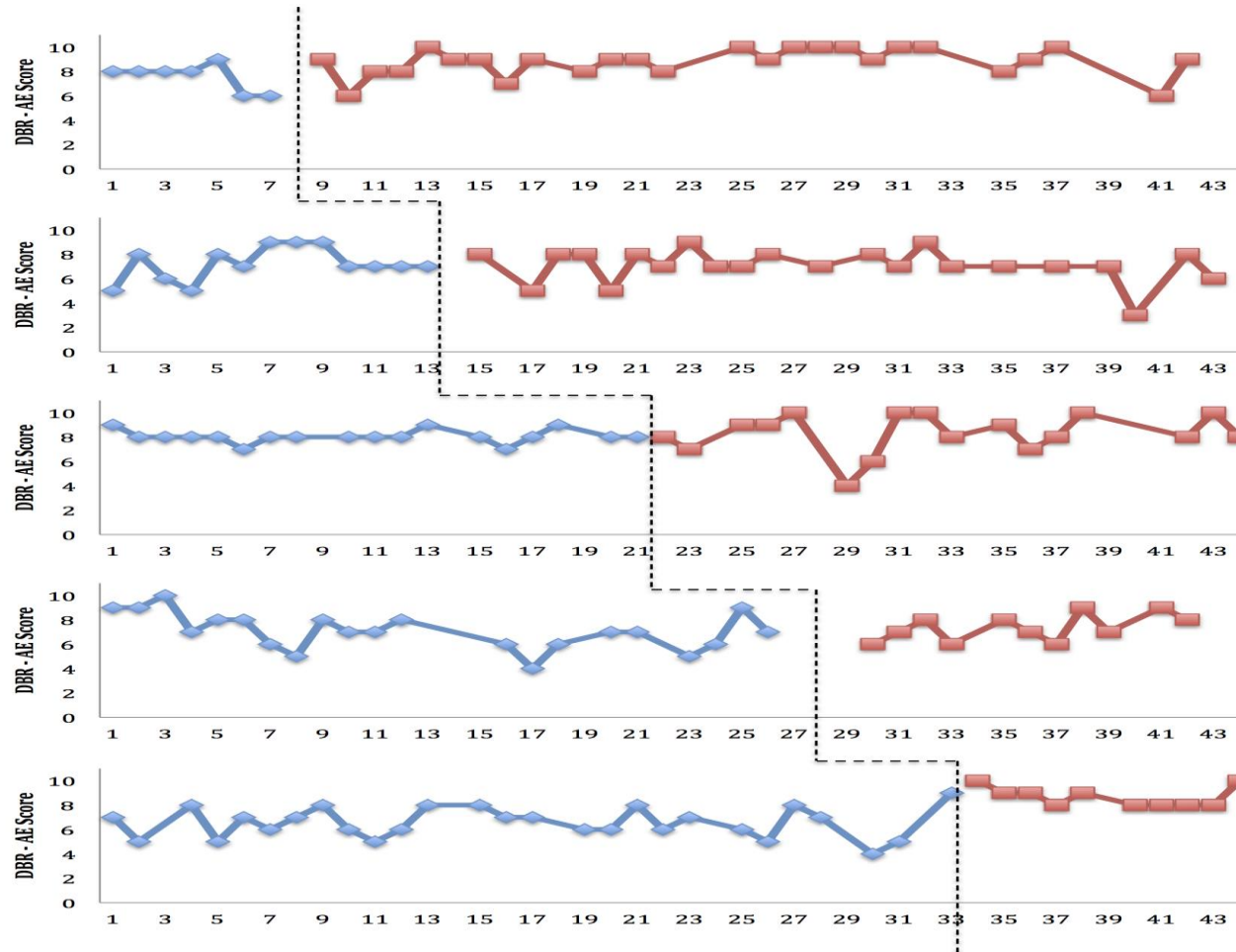
- ▶ 5th Grade
- ▶ Caucasian
- ▶ Female
- ▶ 3+ years experience
- ▶ Bachelor's level training

▶ Student

- ▶ 5th Grade
- ▶ Caucasian
- ▶ Male
- ▶ Target Behavior(s)
 1. Disruptive
 2. Off-task

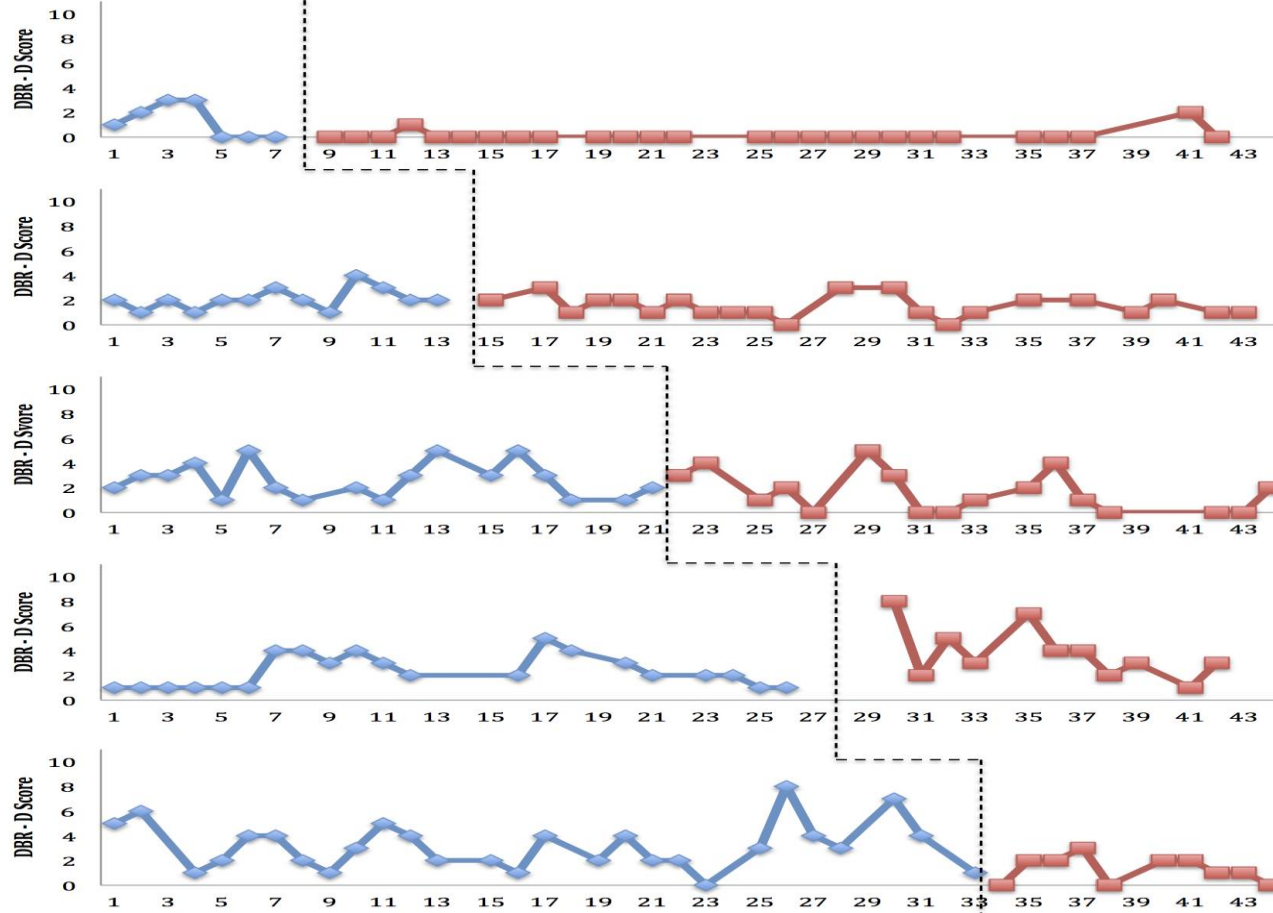
Study 2: Results

DBR - AE



Study 2: Results

DBR - DB



DBR vs. SDO

Table 1. Comparison of different metrics for illustrating intervention effect.

		DBR-AE Mean (SD)	DBR-DB Mean (SD)	SDO-AE Mean (SD)	SDO-DB Mean (SD)
Case 1	Baseline	7.60 (1.13)	1.3 (1.38)	73% (11)	13% (13)
	Intervention	8.8 (1.17)	.1 (0.43)	77% (12)	1% (4)
Case 2	Baseline	7.2 (1.36)	2.1 (0.87)	75% (13)	11% (9)
	Intervention	7.1 (1.38)	1.5 (0.86)	84% (11)	3% (3)
Case 3	Baseline	8.1 (0.54)	2.6 (1.42)	84% (12)	8% (3)
	Intervention	8.3 (1.65)	1.6 (1.66)	90% (-)	1% (-)
Case 4	Baseline	7.1 (1.51)	2.3 (1.31)	69% (20)	13% (11)
	Intervention	7.4 (1.12)	3.8 (2.14)	72% (-)	30% (-)
Case 5	Baseline	6.6 (1.25)	3.2 (1.92)	72% (14)	27% (35)
	Intervention	8.7 (0.82)	1.3 (1.06)	98% (7)	0% (0)

Note. (-) Denotes phases in which only one data point was available

Social Validity: Usage Rating Profile – Intervention Revised

Usage Rating Profile, Intervention Revised

	Case 1	Case 2	Case 3	Case 4	Case 5	ALL
Acceptability	5.8	5.7	5.3	5.9	6.0	5.7
Understanding	6.0	5.0	6.0	5.7	6.0	5.7
Home-School Collaboration	3.7	4.0	5.0	3.7	3.0	3.9
Feasibility	5.8	5.5	5.3	5.7	5.8	5.6
System Climate	5.8	5.8	5.4	6.0	6.0	5.8
System Support	3.7	5.7	5.3	5.5	5.8	5.2

Note: A low score on System Support is preferable as it indicates a low need for additional supports to successfully use the intervention.



Study 3: Connecticut Miller & Crovello

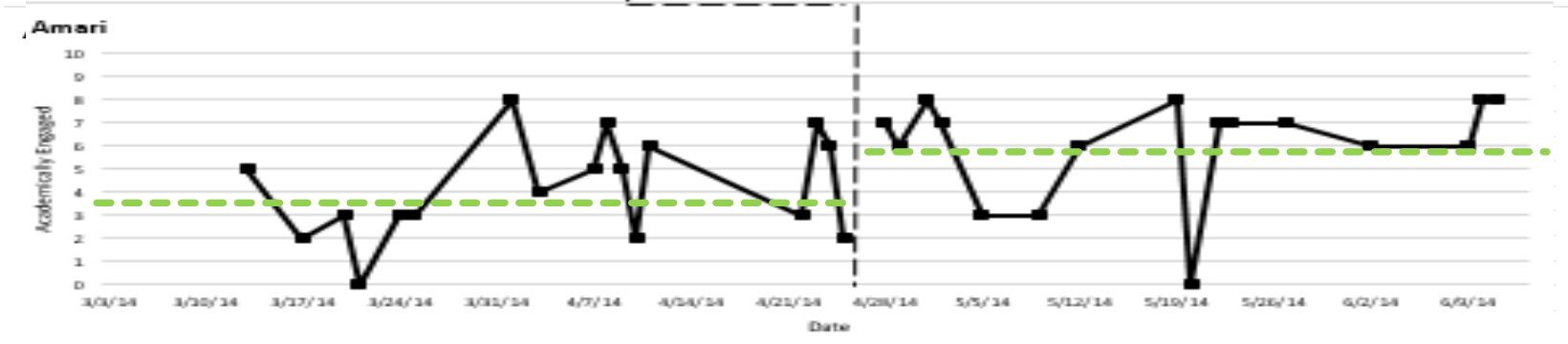
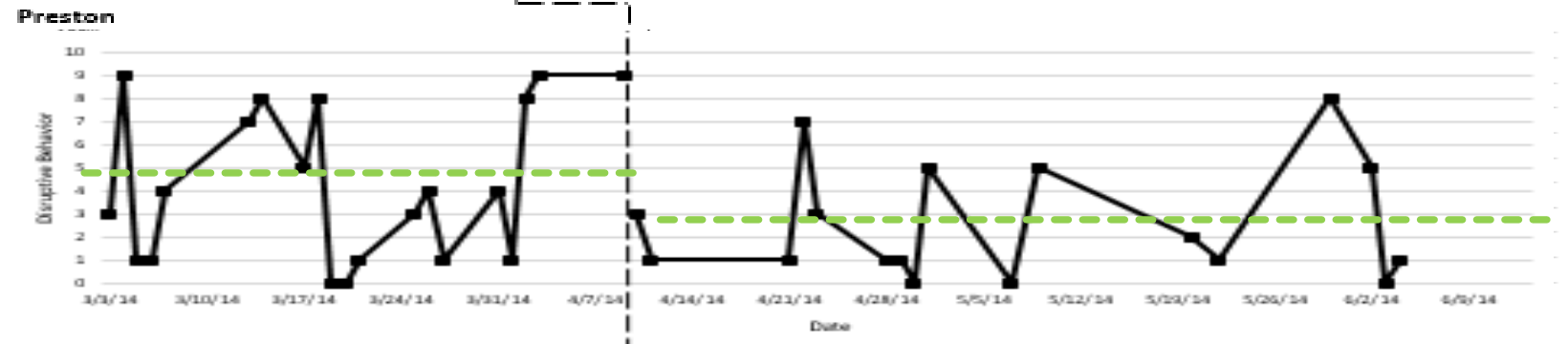
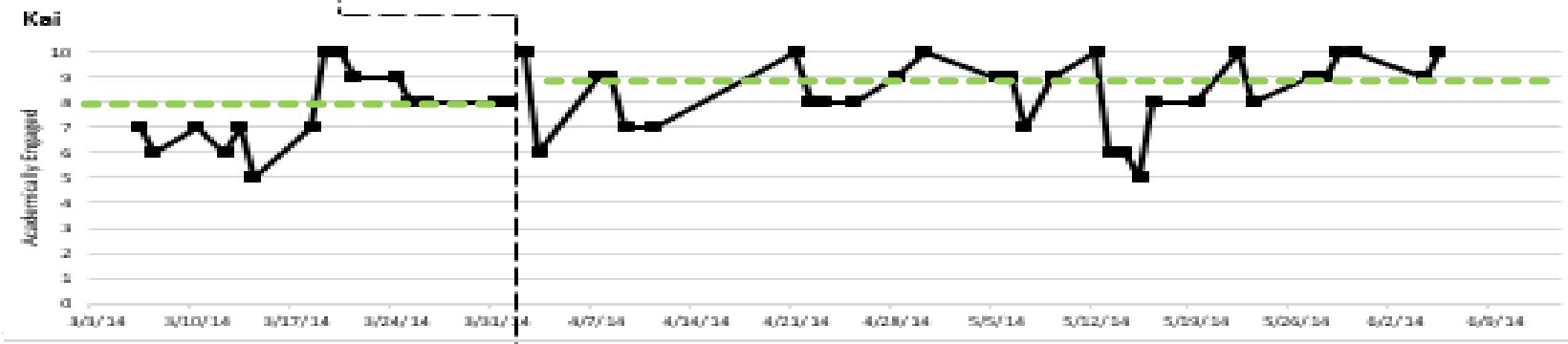
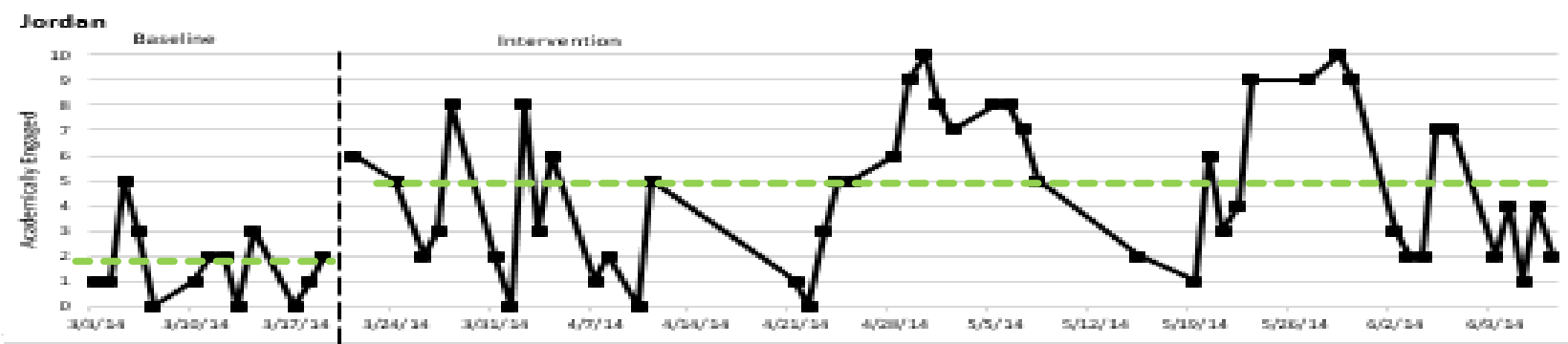
Sample 1: Setting

- ▶ Large suburban district
- ▶ Magnet elementary school
- ▶ 35% FRL
- ▶ Student demographics
 - ▶ 36% White
 - ▶ 25% Hispanic
 - ▶ 24% Black
 - ▶ 10% Asian or Pacific Islander
 - ▶ 5% Multi-racial

Sample 1: Participants

Pseudonym	Grade	Gender	Race	ODRs	Target Activity	Target Behaviors
Jordan	K	Male	Black	37	Reading	Ready for reading, listening
Kai	K	Male	Black	66	Morning meeting	Following directions, being quiet
Preston	1	Male	White	16	Reading	Following directions, kind to peers
Amari	1	Male	Black	48	Writing	Staying seated, completing tasks

Study 3: Sample 1



Study 3: Sample 1

Table 1. Comparison of different metrics for illustrating intervention effect.

		DBR-AE Mean (SD)	DBR-DB Mean (SD)	SDO-AE Mean (SD)	SDO-DB Mean (SD)
Jordan	Baseline	1.6 (1.8)		47% (14)	
	Intervention	4.8 (2.9)		75% (15)	
Kai	Baseline	7.7 (1.5)		67% (10)	
	Intervention	8.4 (1.4)		79% (16)	
Preston	Baseline		4.3 (3.3)		12% (15)
	Intervention		2.6 (2.5)		7% (11)
Amari	Baseline	4.2 (2.2)		38% (26)	
	Intervention	6.1 (2.2)		58% (17)	

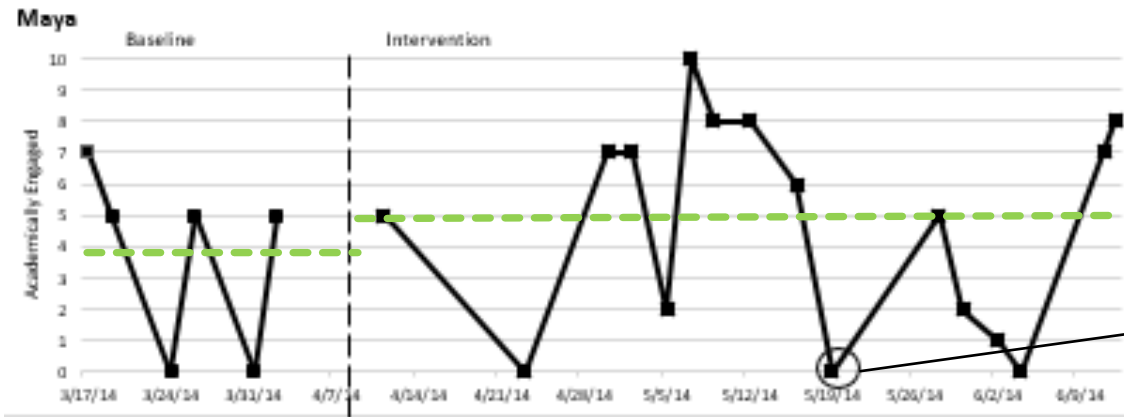
Sample 2: Setting

- ▶ Large suburban district
- ▶ Magnet secondary school
- ▶ 58% FRL
- ▶ Student demographics
 - ▶ 34% Black
 - ▶ 30% Hispanic
 - ▶ 24% White
 - ▶ 8% Asian or Pacific Islander
 - ▶ 3% Multi-racial

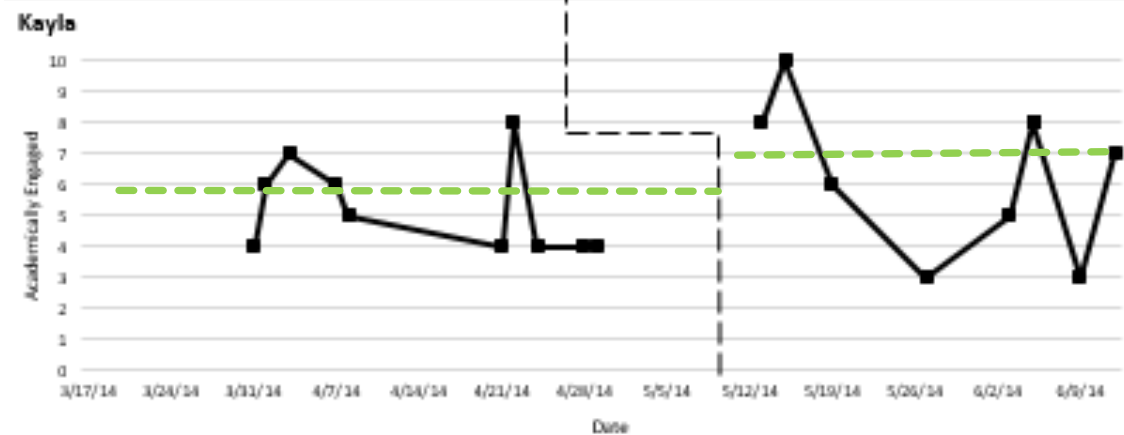
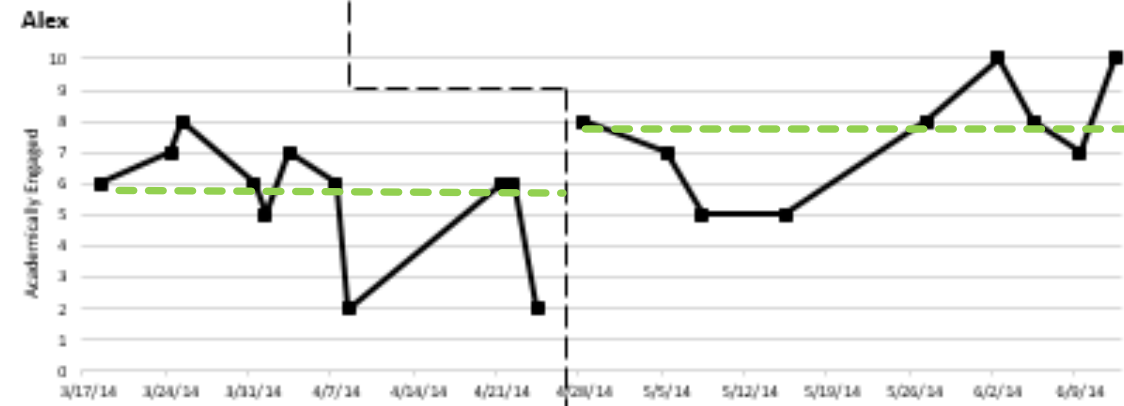
Sample 1: Participants

Pseudonym	Grade	Gender	Race	ODRs	Target Activity	Target Behaviors
Maya	11	Female	Black	11	Chemistry	Engagement, Work completion
Alex	10	Male	Black	5	Math	Engagement
Kayla	10	Female	Black	6	Medical science	Engagement

Study 3: Sample 2















Student told not graduating on time



Study 3: Sample 2

Table 1. Comparison of different metrics for illustrating intervention effect.

		DBR-AE Mean (SD)	SDO-AE M (SD)
Maya	Baseline	3.7 (2.9) 	56% (40) 
	Intervention	4.8 (3.4) 	41% (27) 
Alex	Baseline	5.5 (1.9) 	88% (6) 
	Intervention	7.6 (1.8) 	83% (12) 
Kayla	Baseline	5.2 (1.5) 	77% (17) 
	Intervention	6.3 (2.5) 	68% (21) 

Social Validity: Usage Rating Profile – Intervention Revised

Secondary Teachers

Elementary Teachers

Subscale	1	2	3	1	2	3	4
Acceptability	4.89	6	5.33	5.67	4.11	5	5
Understanding	5	5.67	6	5.33	5.67	5	5
Home-School Collaboration	4.67	4.33	1.33	3.67	1	5	2
Feasibility	5	5.83	6	5	4.83	5	5
System Climate	4.8	5.8	6	5	5.60	5	5
System Support	4	3.67	1	2	1	3	2

Note: A low score on System Support is preferable as it indicates a low need for additional supports to successfully use the intervention.



Tying it all together...

Tau non-overlap

Site	Case	AE	DB	Average
New York	Case 1	.56	-	.64
	Case 2	-	-.68	
	Case 3	-	-.68	
Missouri	Case 1	.59	-.52	.11
	Case 2	-.02	-.35	
	Case 3	.20	.20	
	Case 4	.10	.45	
	Case 5	.86	.86	
Connecticut: Sample 1	Jordan	.64	-	.44
	Kai	.31	-	
	Preston	-	-.29	
	Amari	.51	-	
Connecticut: Sample 2	Maya	.31	-	.38
	Alex	.57	-	
	Kayla	.25	-	
Total		.41	-.13	.39

	10%	25%	50%	75%	90%
Tau	.00	.36	.63	.93	1.0

Parker et al., 2011

Conclusions

- ▶ DBRC effectiveness
 - ▶ Vannest et al. (2010)
 - ▶ Owens et al. (2012)
- ▶ Data-based decision-making





Questions/Comments

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www.directbehaviorratings.com