

Direct Behavior Rating in Behavior Assessment within a Problem-solving Model

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Presentation for NASP 2011





Purpose:

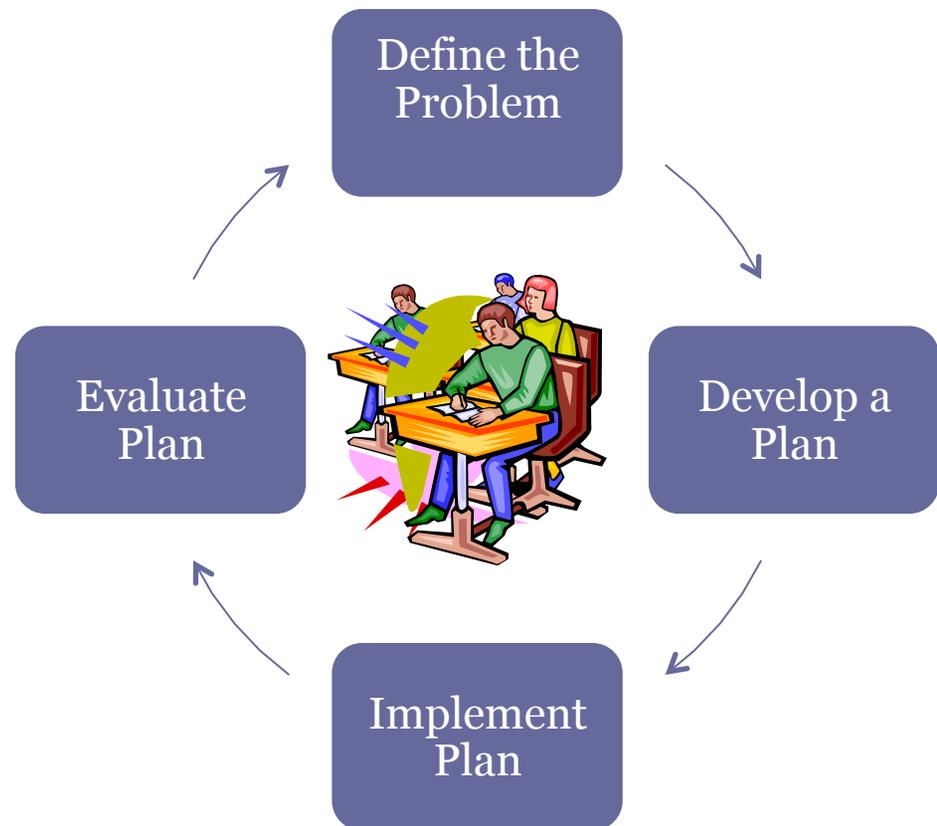
- To review options in student behavior assessment, evaluating strengths and weaknesses within a problem-solving model.
- To define Direct Behavior Rating (DBR) and illustrate how it may be integrated within a problem solving model (e.g., RTI).
- To consider how DBR might be utilized in practice for different assessment purposes and tiers.
- To review materials available for online access.

What is “response to intervention”?

BASIC QUESTION: How do we know if X is working?

- Foundations within *data-based decision making*
- Roots of data-based decision making come from *the problem-solving model*
- Model became clearly articulated within psychology and then education through applied behavior analysis --- behavioral consultation or pre-referral teams
- Initial focus on the individual “case” but now applied to multi-tiered frameworks (“all cases”)

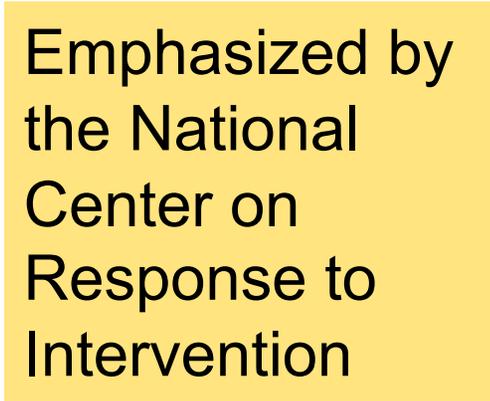
(Bergan, 1977, Bergan&Kratochwill, 1990; Tilly, 2009; Reschly& Bergstrom, 2009)



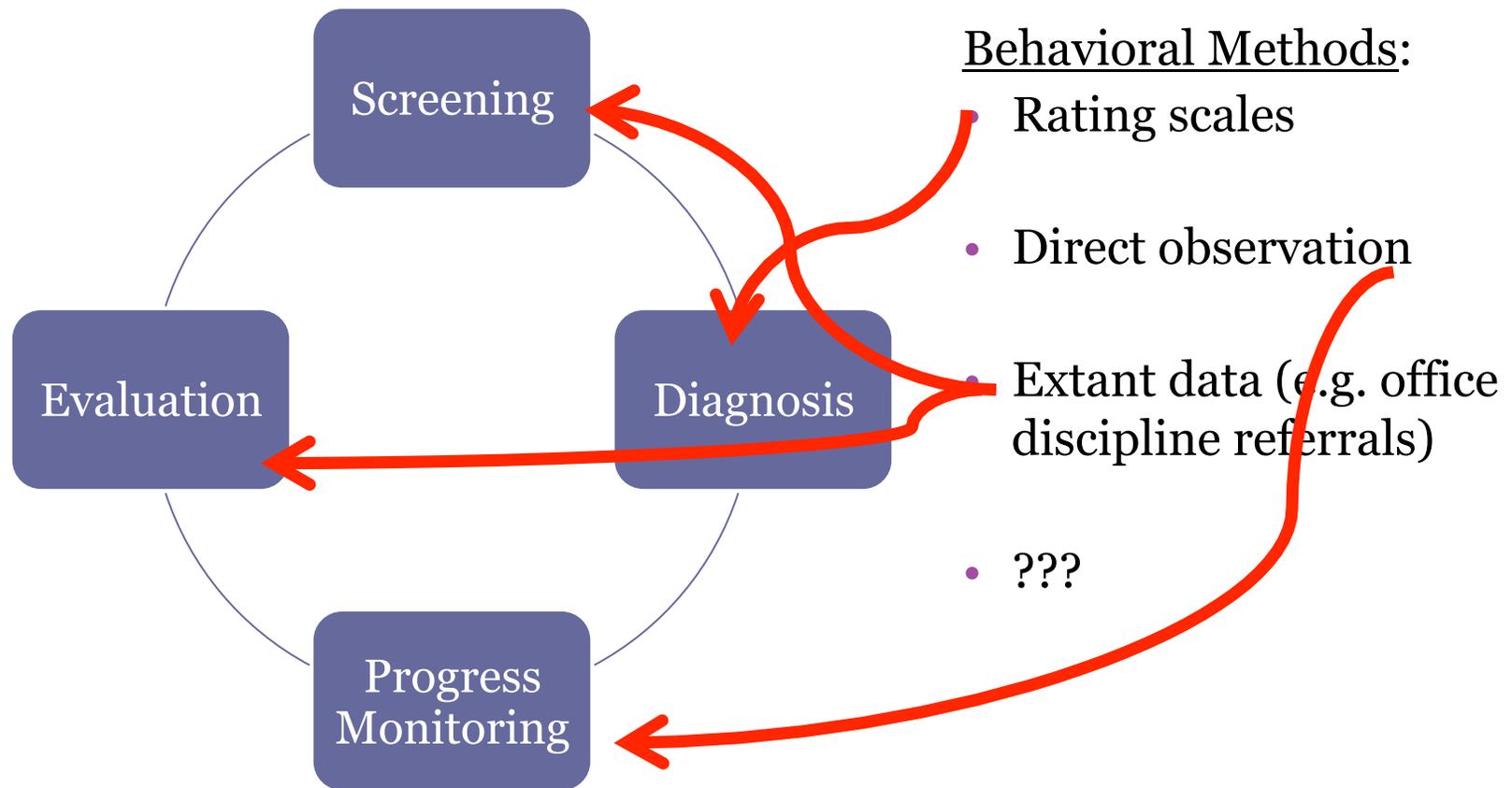
Purposes of Assessment

- **Screening**
 - Who needs help?
- **Diagnosis**
 - Why is the problem occurring?
- **Progress Monitoring**
 - Is intervention working?
- **Evaluation**
 - How well are we doing overall?

Emphasized by
the National
Center on
Response to
Intervention



How does this work for behavioral domains of student functioning?



School-based behavior assessment: THE PROBLEM FOR RESEARCH

- Current methods of behavior assessment were not built for utility in problem-solving assessments
- There is need to develop and evaluate of new options that possess desirable characteristics...

(Chafouleas, Volpe, Gresham, & Cook, 2010)

Desirable Characteristics

- **Defensible**
 - established through psychometric research to provide evidence of reliability and validity for interpretation and use
- **Flexible**
 - established by methods useful in guiding a variety of assessment questions and situations
- **Efficient**
 - established by methods that require relatively few resources (feasible and reasonable)
- **Repeatable**
 - established by methods that yield necessary time series to evaluate intervention effectiveness

Source: Chafouleas, Riley-Tillman, & Christ, 2009; Chafouleas, Riley-Tillman, & Sugai, 2007; Christ, Riley-Tillman, & Chafouleas, 2009)

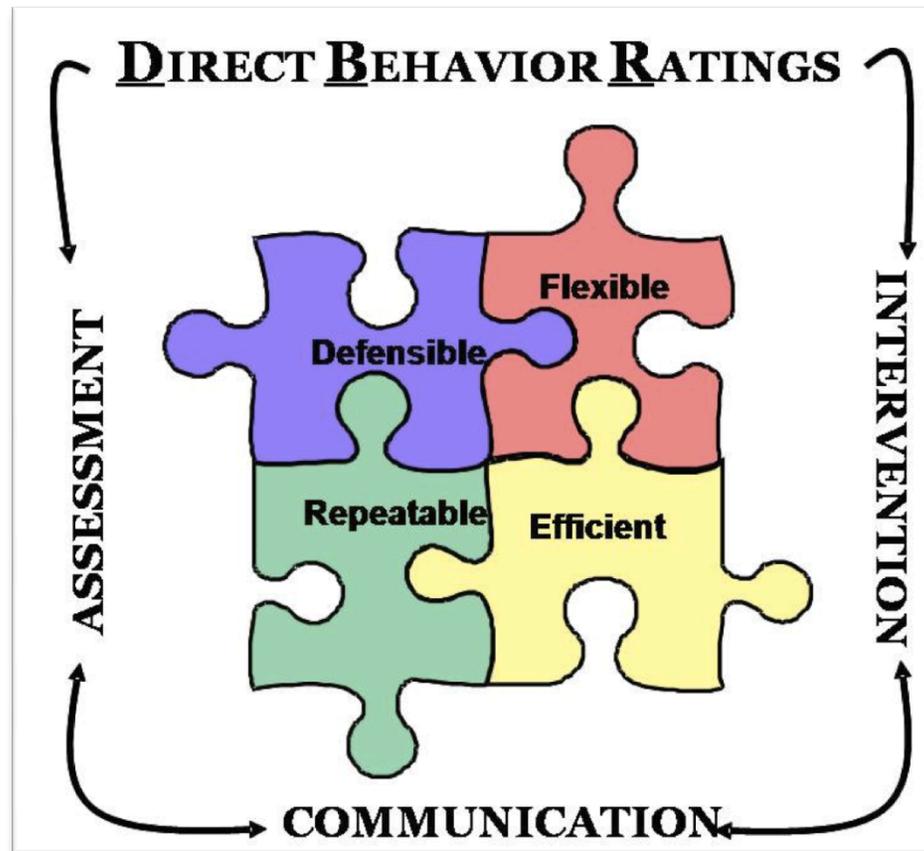
School-based behavior assessment and RTI: THE PROBLEM FOR YOU

Solution?

RTI means service accountability for all = MORE cases with same resources

The traditional assessment and intervention orientation is *not feasible or flexible* for a multi-tiered framework

- Quickly design interventions at all tiers
- Collect relevant formative data in a highly feasible manner
- Include a consistent way to analyze data that is quick and easy for anyone to do

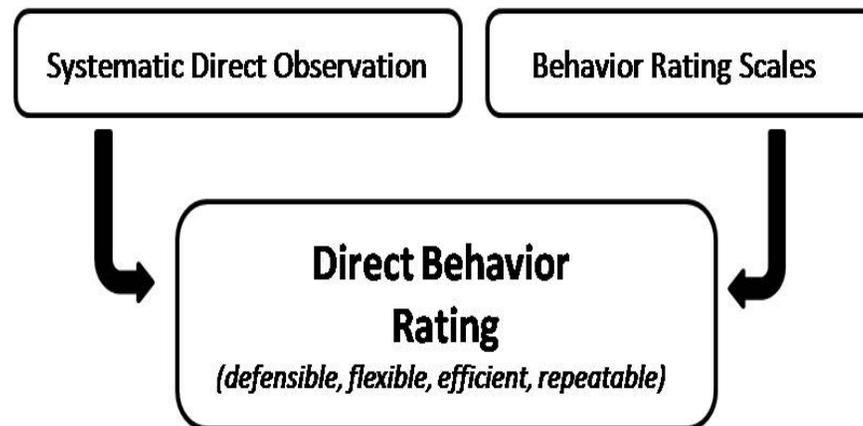


What is
Direct
Behavior
Rating?

DIRECT BEHAVIOR RATING :

What is DBR?

An emerging alternative to systematic direct observation and behavior rating scales which involves *brief rating* of target behavior following a specified observation period

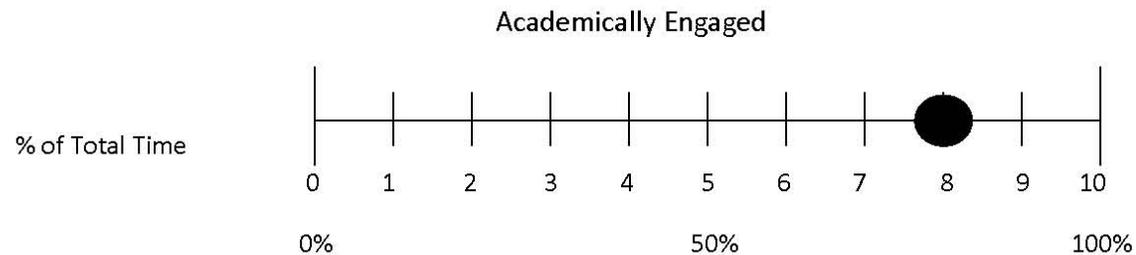


Chafouleas, Riley-Tillman, & Christ (2009); Chafouleas, Riley-Tillman, & Sugai (2007); Chafouleas, Riley-Tillman, & McDougal (2002); Christ, Riley-Tillman, & Chafouleas (2009)

Example Scale Formats for DBR

Source: Chafouleas,
Riley-Tillman, &
Christ (2009)

Single Item Scale



Interpretation: The student displayed academically engaged behavior during 80% of the observation period.

Multi-Item Scale

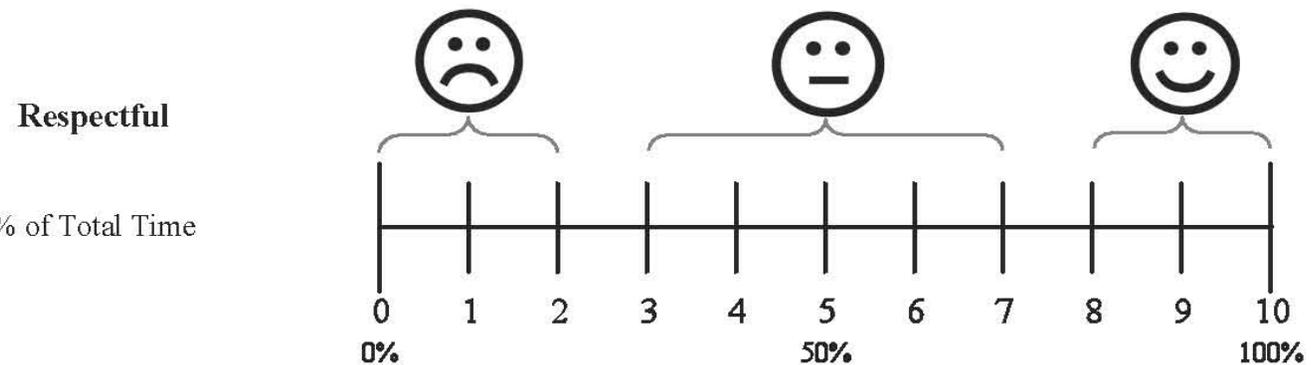
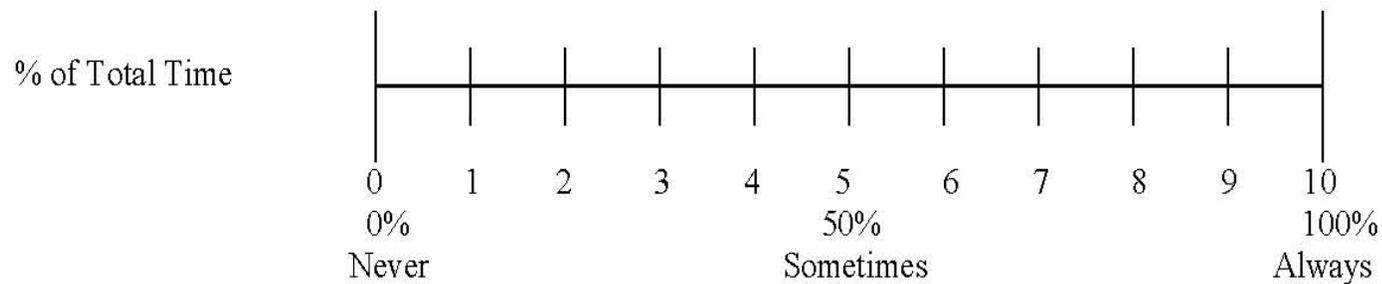
	<u>Never</u>		<u>Always</u>
Did the student follow class rules?	0	①	2
Did the student follow teacher directions?	0	1	②
Did the student do his/her best work?	0	1	②
Total number of points earned:	_____ 5 _____		

Interpretation: The student earned 84% (5/6) of possible points during the observation period.

Our DBR-SIS Scale

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.

Academically Engaged

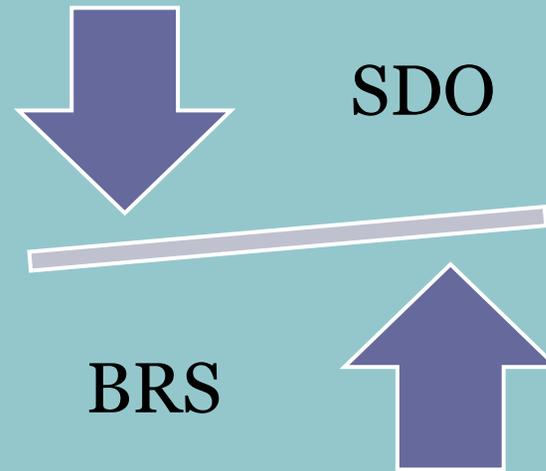


A little background...

Other Names for DBR-like Tools:

- Home-School Note
- Behavior Report Card
- Daily Progress Report
- Good Behavior Note
- Check-In Check-Out Card
- Performance-based behavioral recording

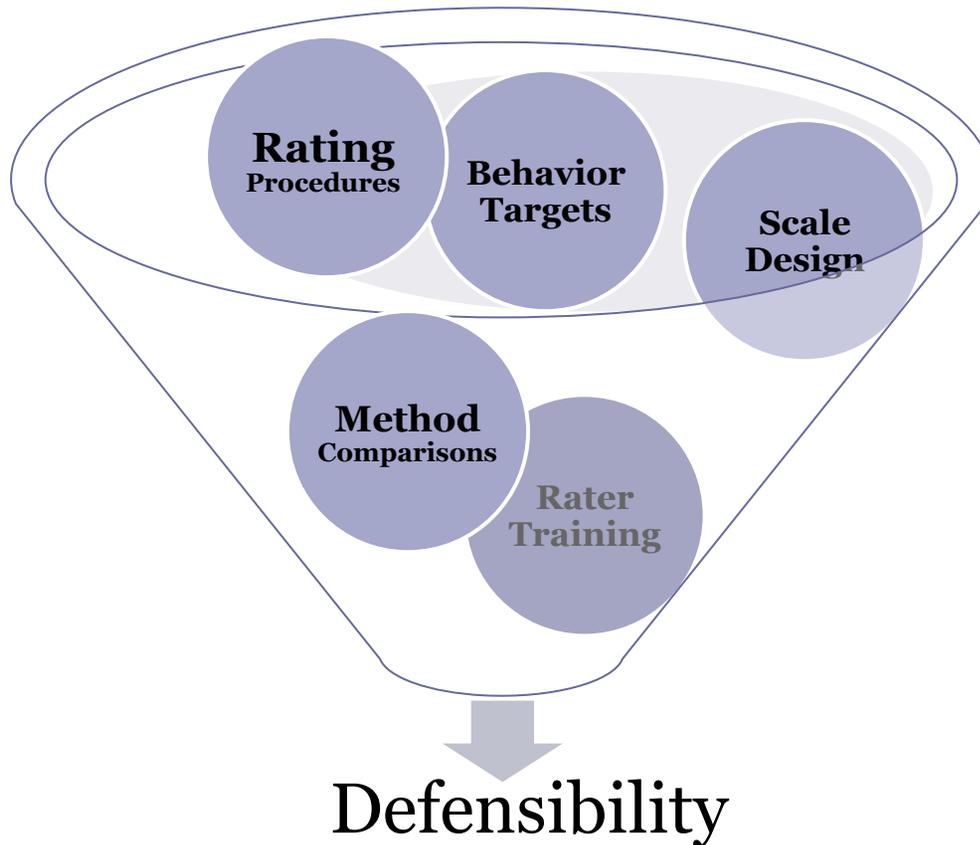
Contemporary Defining Features:



Used repeatedly to represent behavior that occurs over a specified period of time (e.g., 4 weeks) and under specific and similar conditions (e.g., 45 min. morning seat work)

Project VIABLE (2006-2011)

Develop instrumentation and procedures, then evaluate defensibility of DBR in decision-making



Funding provided by the
**Institute for Education
Sciences**, U.S. Department of
Education



DBR-SIS Targets:

“The Big 3” General Outcomes

Academic Engagement:

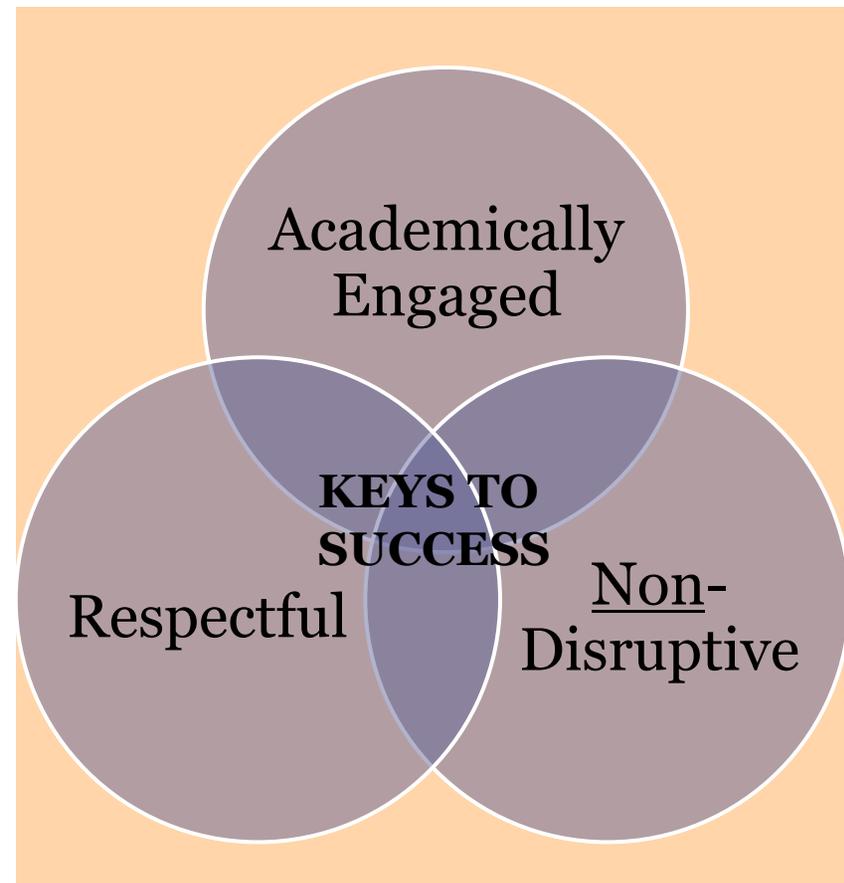
Actively or passively participating in the classroom activity.

Respectful:

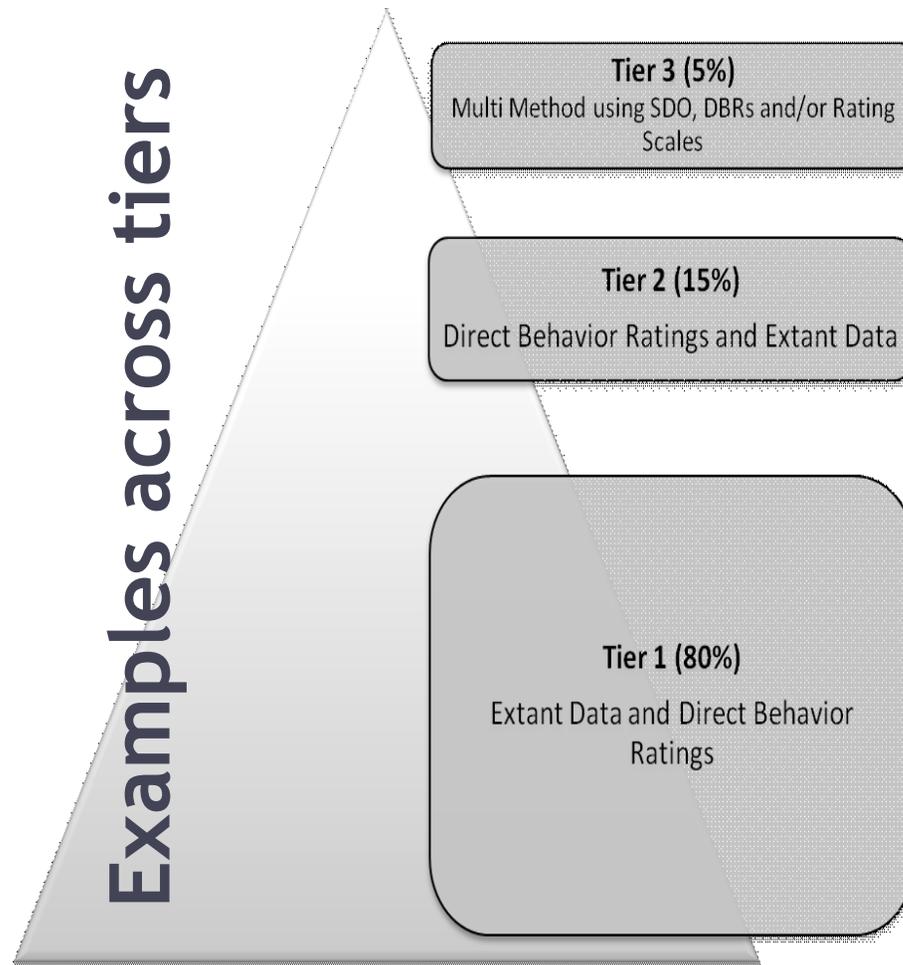
Compliant and polite behavior in response to adult direction and/or interactions with peers and adults.

Disruptive Behavior:

A student action that interrupts regular school or classroom activity.



Possible Applications for DBR-SIS



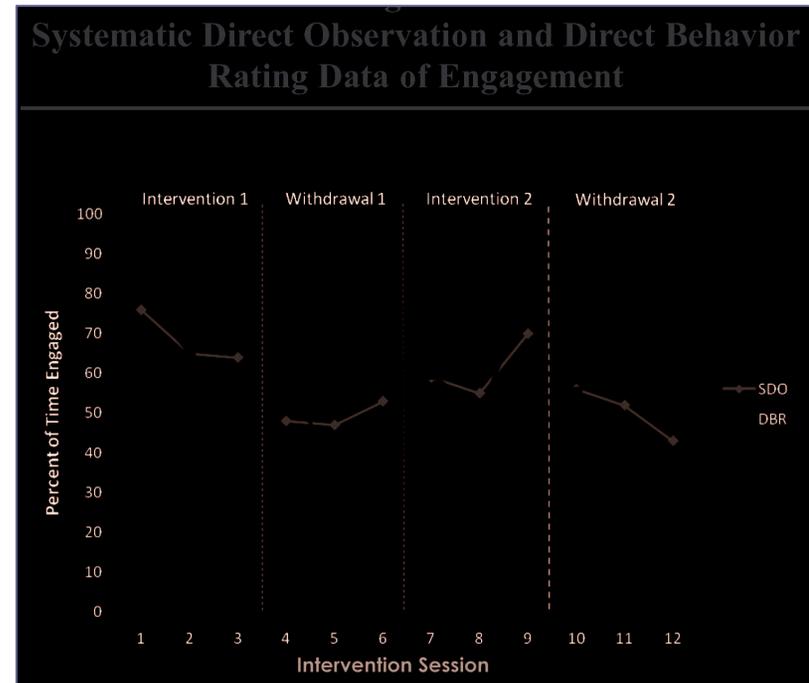


Tier I

Case Study: Method Comparison in Classwide Assessment

Riley-Tillman, Methe, & Weegar (2009)

- Sample: First grade classroom with 14 students
- Design: B-A-B-A
- Intervention: modeling and prompting of silent reading
- Measures: researcher-completed SDO, teacher-completed DBR-SIS
- Conclusion: DBR data can be sensitive to classroom-level intervention effects, maps closely to resource-intensive SDO



	Phase Mean			
	B1	A1	B2	A2
DBR	72	45	63	42
SDO	68	49	61	50

Kindergarten Students at Pine Grove

- While reviewing discipline referral data over the past three months, the principal at Pine Grove School notices that Bus #7 has a disproportionate number relating to compliance with adult request. The principal speaks with the driver, who reports difficulty maintaining an acceptable level of noise on the bus. Because “all” the students on his bus are much too loud and do not listen to him when asked to lower their voices, he has been handling the problem by writing office referrals for disrespectful behavior. Both the principal and the bus driver agree this problem should be addressed through a plan targeting all students on bus #7.

Initial evaluation of DBR-SIS in screening assessment

**Chafouleas, Kilgus,
Jaffery, & Riley-Tillman
(in prep)**

Sample: 66 teachers, over 1000 students in grades K-8

Measures: DBR-SIS completed 2x/day over 5 days, 2 standardized behavior screening measures

Analyses: Receiver operating characteristics (ROC) and correlations

Conclusion: Initial work suggests greater accuracy at lower grades, but strengths of various targets change by grade

Cut Scores Yielding Best Diagnostic Accuracy Statistics		
Behavior	Grade Grouping	Cut Score (0-10)
Disruptive	Early elem.	2
	Late elem.	1
	Middle	1
Academic Engagement	Early elem.	8
	Late elem.	8
	Middle	9
Respectful	Early elem.	9
	Late elem.	9
	Middle	9

As students get older...



Academic Engagement

Disruptive:





Tier II

DBR-SIS in Behavior Consultation Cases

Chafouleas, Sanetti, Kilgus, & Maggin (under review)

Sample: 20 teacher-student dyads in elementary grades

Design and Intervention: A-B intervention involving behavioral consultation and DRC-based intervention. Five options for “change metrics” were calculated.

Measures: researcher-completed SDO, teacher-completed DBR-SIS

Conclusion: Change (in expected directions) in student behavior across phases and sources. High correspondence between DBR-SIS and BOSS absolute change metrics suggests that students were ranked similarly across the two measures with regard to intervention responsiveness. Provides preliminary support for the use of DBR-SIS to differentiate between those who have or have not responded to intervention.

<i>Descriptive statistics across scales and phases</i>				
			Mean	SD
DBR-SIS	Disruptive Behavior	Baseline	4.26	1.97
		Intervention	2.58	1.41
	Academic Engagement	Baseline	4.97	2.28
		Intervention	6.82	1.50
	Compliance	Baseline	5.74	1.93
		Intervention	7.34	1.31
BOSS	On-task	Baseline	69.98	19.76
		Intervention	81.94	14.22
	Off-task	Baseline	44.82	21.01
		Intervention	28.69	18.54

DBR-SIS in Classwide Self-Management

Chafouleas, Sanetti, Jaffery & Fallon (under review)

- Sample: 8th grade, 2 teachers and 3 classrooms (17-24 students)
- Design: Multiple baseline across classrooms
- Intervention: Self-monitoring and a group contingency package, implemented over about 2 months
- Measures: student-completed DBR (teacher-checked), researcher-completed SDO
- Conclusion: Classwide intervention overall effective, think about target identification and need for supports based on baseline

DBR-SM and SDO Data Across Classes					
		Baseline	Intervention		
		M (SD)	Phase 1 M (SD)	Phase 2 M (SD)	
Ms. S - Period 5					
DBR-SM	Prepared.	7.9 (2.03)	7.6 (1.95)	8.8 (1.33)	↑
	Engagement	6.4 (2.80)	6.8 (2.31)	8.0 (1.71)	
SDO	Engagement	36.2 (12.51)	79.0 (5.08)	83.1 (.34)	↑↓
	Off-Task	70.4 (7.60)	30.7 (6.30)	21.7 (8.16)	
Ms. B - Period 3					
DBR-SM	Prepared.	9.6 (1.05)	9.9 (0.48)	9.9 (0.24)	↔
	Engagement	8.6 (1.36)	9.3 (0.99)	9.6 (0.76)	
SDO	Engagement	75.9 (5.68)	86.7 (2.36)	86.7 (5.87)	↑↓
	Off-Task	34.7 (4.58)	19.2 (5.53)	16.7 (6.41)	
Ms. S - Period 1					
DBR-SM	Prepared.	8.1 (1.90)	8.3 (1.35)	8.9 (0.92)	↑
	Engagement	7.4 (2.02)	7.8 (1.59)	8.1 (1.35)	
SDO	Engagement	57.9 (7.75)	71.0 (13.86)	80.6 (14.94)	↑↓
	Off-Task	47.5 (5.00)	34.6 (20.78)	28.9 (14.18)	



Susie, Sally, and Sandy

- Susie, Sally, and Sandy have been exhibiting significant amounts of in-class verbal aggression (e.g., name-calling, teasing) in Mr. Simon's class, and each student has been sent to the principal's office on numerous occasions. After consulting with the student services team, an assessment and intervention plan is discussed, with emphasis on collecting data for progress monitoring.



TIER III

DBR-SIS in Targeted Intervention for Students with ADHD

Vujnovic, Fabiano, Chafouleas, & Sen (under review)

- Sample: 13 boys with diagnosis of attention-deficit hyperactivity disorder
- Intervention: DRC-based intervention
- Design: Point, level, slope comparisons over 20 data collection days with both measures
- Measures: teacher-completed DBR-SIS (once at end of day) and DBR-MIS (completed multiple times each day)
- Conclusion: DBR instrumentation and procedures can be flexibly determined to match assessment situation

Point, Level, and Slope Estimates for DBR

	Mean (SD)
DBR-MIS	
point	71.67(31.68)
level	79.18(18.52)
slope	-0.19 (0.61)
DBR-SIS: Academic Engagement	
point	7.13(2.19)
level	7.57(1.36)
slope	-0.04 (0.05)
DBR-SIS: Non-Disruptive	
point	8.05(2.54)
level	7.66(2.30)
slope	-0.06(0.08)

DBR-SIS

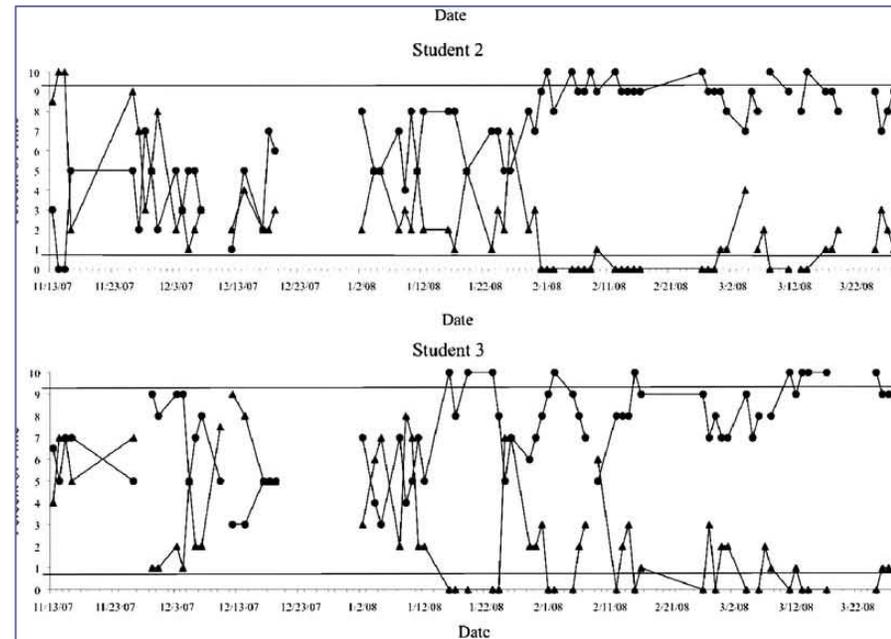
	AE	Non-DB
	Point	.854**
	Level	.830**
DBR-MIS	Level	.715**
	Slope	.758**

DBR-SIS for Monitoring Students At-Risk

Chafouleas, Kilgus, & Hernandez (2009)

- Sample: full day K inclusive classroom, 2 teachers and 22 students
- Measures: teacher-completed DBR-SIS following am and pm over Nov-March for ALL students
- Conclusion: “Local” cut-score comparisons can be useful in examining individual student performance. Periodic re-assessment of all may be needed to re-confirm appropriate comparison

Target Behavior	Rating Time	FALL M (SD)	SPRING M (SD)
Academic	AM	8.72 (1.31)	9.40 (0.63)
Engagement	PM	8.25 (2.03)	9.37 (0.88)
Disruptive Behavior	AM	1.30 (1.47)	0.60 (0.62)
	PM	1.61 (2.08)	0.42 (0.52)



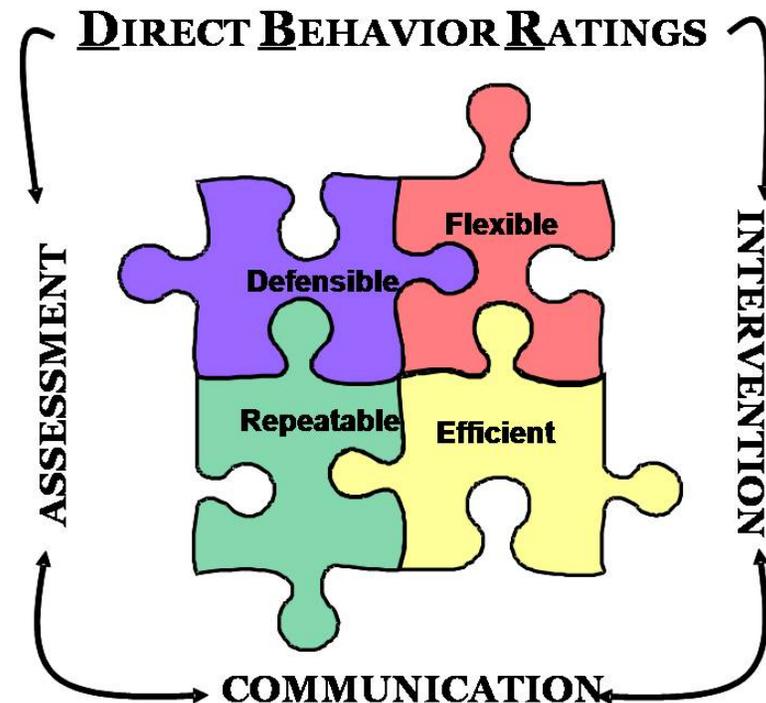
Chris

- Recently, Chris has been exhibiting high levels of off-task behavior in Ms. Wilson's 7th grade English class. Although Ms. Wilson does not describe this behavior as highly problematic, she wants to address it preventively. After consultation with the 7th grade team of teachers working with Chris, a tentative intervention plan is discussed and data collection tools are considered. Ms. Wilson makes it clear that she is not interested in highly invasive, resource intensive data collection strategies. Additionally, the 7th grade team decides it would like information about how his behavior compares to other students across settings.

Summary: How might DBR within problem-solving assessment?

Similar to Curriculum-based Measurement (e.g., DIBELS)...

- DBR-SIS offers an **efficient** option for assessment.
- DBR-SIS allows for **defensible** decision making about student risk and progress through **repeated** measurement.
- DBR-SIS allows for standard general outcome measures that are relevant to student success. Unlike CBM, DBR-SIS affords additional **flexibility** in individualized target selection.





Other Random Information...

- DBR training
- DBR in linking assessment and intervention
- DBR free materials on the web

DBR-SIS: 3-Part On-Line Training Module



Direct Behavior Ratings

Assessment • Communication • Intervention

TRAINING SITE

Direct Behavior Rating: Use in Assessment of Student Behavior



DIRECT BEHAVIOR RATINGS

Project Directors:
Sandra M. Chafouleas, T. Chris Riley-Tillman, Theodore J. Christ, & George Sugai

Design & Development:
Rose Jaffery & Jamison Judd

This project was supported in part by a grant from the Institute for Education Sciences, U.S. Department of Education (R324B060014). Opinions expressed herein do not necessarily reflect the position of the U.S. Department of Education, and such endorsements should not be inferred.

August 2009

00:02/10:50

Click to continue [Next >>](#)



Direct Behavior Ratings

Assessment • Communication • Intervention

TRAINING SITE

Following the video, we will rate
Tyler's Disruptive Behavior



00:30/09:09

Correct Score: **AE** **RES** **DB**
 9 **10** **0**

Academically Engaged (AE)

Never (frowny face) | 1 | 2 | 3 | 4 | 5 (50%) | 6 | 7 | 8 | 9 | Always (smiley face)

Respectful (RES)

Never (frowny face) | 1 | 2 | 3 | 4 | 5 (50%) | 6 | 7 | 8 | 9 | Always (smiley face)

Disruptive (DB)

Never (smiley face) | 1 | 2 | 3 | 4 | 5 (50%) | 6 | 7 | 8 | 9 | Always (frowny face)





Direct Behavior Ratings

Assessment • Communication • Intervention

www.directbehaviorratings.com/index.html

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News

Upcoming Special Issue of the Journal Assessment for Effective Intervention:

- Direct Behavior Rating (DBR): An Emerging Method for Assessing Social Behavior within a Targeted Intervention System

Upcoming DBR Presentations

Current/Recent Research Studies:

- Preschool intervention study that use Direct Behavior Ratings as a communication tool
- Direct Behavior Ratings direct training study looking at the effects of direct training with corrective feedback on raters.

[click for more](#)

Allows for feasible and effective assessment of behavior

"I was surprised at how easy it was to complete the Direct Behavior Rating forms. This information is really valuable in helping me understand what's happening in my classroom." Sue, Kindergarten teacher

About Us

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[click for more](#)

What is Direct Behavior Rating (DBR)?

DBR involves rating of behavior following a specified observation period, and then sharing of that information to inform decisions. As an example, a teacher might use DBR to rate how well Johnny paid attention in math class. Then, that teacher might share that rating with Johnny and, as part of an intervention, link a consequence (e.g., sticker) to that rating. DBR tools have a long history of use as a component of a behavior support plan (e.g., self-management, behavior contract), as well as the method for collecting information about behavior change over time (e.g., monitoring effects of medication for ADHD). Other common terms for DBR tools have included home-school note, good behavior note, behavior report card, etc...

Why use Direct Behavior Rating?

DBR can facilitate communication among students, parents, and teachers because ratings can provide a simple, inexpensive, and flexible way to provide frequent feedback about behavior. DBR is also appealing given a connection between data collection and intervention – DBR may serve both purposes! For example, DBR can be used to monitor behavior in response to an intervention while at the same time serving as an intervention tool to teach and reinforce expectations regarding behavior.

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DBR for Assessment

DBR use in assessment provides information to evaluate child behavior and guide decisions related to behavior supports. For instance, a DBR may be used to answer the question, "What percentage of time is Sarah disruptive during math class?" or "What percentage of the time is Immanuel compliant with adult instructions?"

How can I use a DBR in assessment?
It's simple and quick! Print out a DBR form and complete the top section.

1. Determine the behaviors of interest, either by selecting from among the possible pre-defined target behaviors or identify your own target behavior.
2. Decide who, where, and how often to collect behavior ratings with DBR (e.g., daily, weekly). Ratings can be completed in a matter of seconds.
3. Collect multiple ratings across different occasions (e.g. periods, days) (see [DBR Standard Instructions](#)).
4. Plot data graphically, and evaluate child behavior (see [DBR Graphing and Interpretation](#)).

Who can use a DBR for assessment?
DBR can be used by parents, teachers, students, administrators, and intervention teams to collect information and make decisions regarding a child's behavior. It's a great tool for everyone because it is quick, flexible, and evidence-based.

Additional Resources

- PowerPoint: DBR for Assessment
- DBR Standard Form
- DBR Standard Form Instructions
- DBR Graphing and Interpretation
- Other Resources

Questions, comments, and thanks...

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