Beyond CBM: Behavior Assessment for Measuring a Child's Response to Intervention

T. Chris Riley-Tillman, Ph.D.

Agenda

- Discuss the context of behavior assessment
  - RTI, EBI and a lack of any real discussion
- Look at the classes of social behavior assessment in relation to measuring progress
  - Extant Data
  - Rating Scales
  - Systematic Direct Observation
- Review Direct Behavior Ratings
  - Background
  - Research

Context of Modern Behavior Assessment
The Current Dilemma for Educational Professionals

1) Problem Solving Models (RTI or PBS) essentially mean interventions for everyone in need
   - Essentially any child not responding is considered in need.
2) No Child Left Behind and IDEIA mandate accountability, or that we have defensible outcome data on all interventions
3) Traditional models have been focused on spending a great deal of time coming up with recommendations about a child's needs
   - Assessment orientation – Hours of assessment and report writing followed by meeting time
   - Traditional Consultation orientation – A number of consultation sessions allowing a consultee to come up with intervention idea

The Current Dilemma for Educational Professionals

- So…
  - More cases
  - Higher levels of accountability
  - And traditional methods assume there is lots of time…

Only Solution

- Design interventions at Tier 1, 2 and even 3 quickly
- **Collect data in a highly feasible manner**
- A consistent manner of data analysis that is efficient and easy for anyone to do

Focusing on the "Data"

- Almost all discussion to date focuses on "academic" outcome data both for RtI purposes (e.g. CBM) and NCLB (state tests)
- What about behavior?

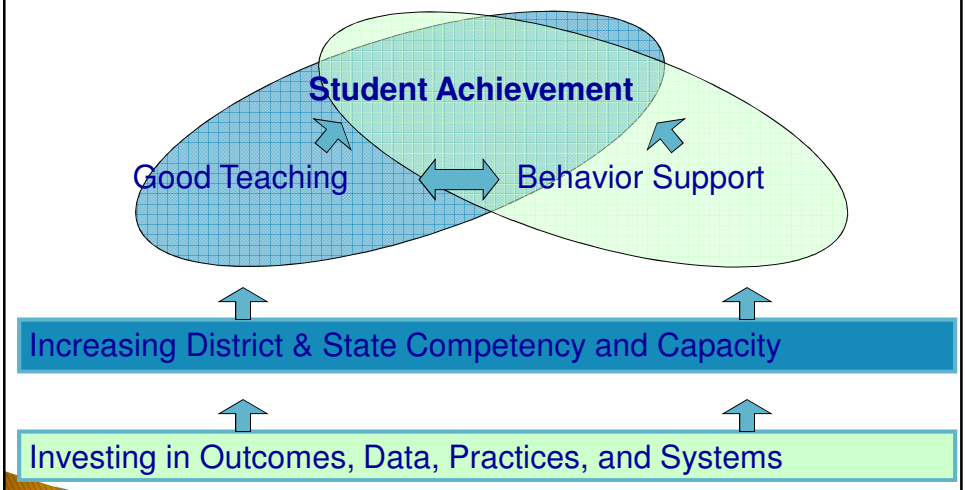
Why Should We Care About Social Behavior Outcomes?

Educators indicate spending a disproportionate amount of time responding to significant behavior challenges presented by a small number of students (U.S. Dept. of Ed., 2000)

School discipline is a top concern by the American public (Rose & Gallup, 2005)

....

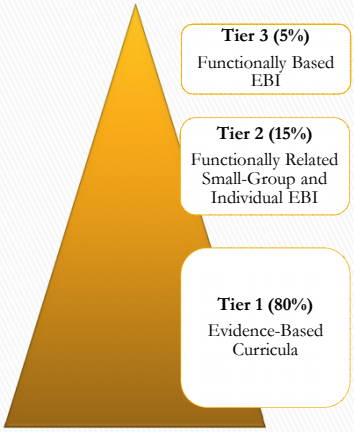
Main Message within an RtI Model



What are EBI in Schools?

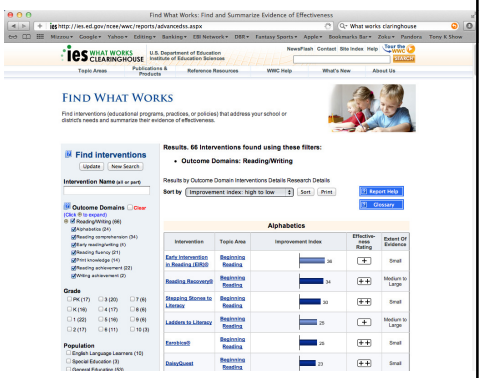
- Tier I EBI – Whole school best practices
- Tier II EBI – Functionally Related Small Group and Individual Practices
- Tier III - Individually Functionally Based EBI

- NOTE – EBI are a very different thing in Tiers 1 and 2 than Tier 3! This is a critical and not well understood issue…



Where is the evidence for Tier 1 (Whole School) and 2 EBI (Small Group)?

- Doing What Works by the US Department of Education
- What Works Clearinghouse (http://ies.ed.gov/ncee/wwc/) by the USDOE Institute of Education Sciences



Individual Child EBI Fine Print I

- EBI are validated for a specific purpose with a specific population
- Implication
  - EBI are only useful for a range of problems and as such, must be pair up with the right situation
    - A hammer is an effective tool, but not with a screw

Individual Child EBI Fine Print II

- EBI assumes implementation integrity
- Implication
  - Changing parts of an intervention, while typical, can invalidate the EBI
  - Ways to change an intervention
    - Frequency
    - Materials
    - Target
    - Style
    - On and on and on….

Individual Child EBI Fine Print III

- EBI are typically validated with large group research, or a series of small group studies
- Implication
  - EBI have been documented as likely effective, not surely effective
  - Even the most effective interventions are often ineffective with a specific case
  - As such, you can't assume an EBI will work

Implications of the Fine Print

- A list of EBI is just a good place to start but even if selected carefully will often not be effective.
- Additional steps are necessary
  - Need to select EBI that make sense for the current case
  - Need to implement the EBI with integrity
  - Need to collect outcome data
  - Need to evaluate the effectiveness in some manner to see if it worked

EBI – RTI - Assessment

- RTI is based on the assumption that we can state if child has or has not responded to and "evidence based" intervention.
- Unfortunately, we don't even know if an evidence based intervention is "evidence based" till we try it out and observe the results.
  - Consider Check in Check Out and an Escape
- For RTI to work – we need multiple behavior assessment options.

Back to the Basics – Statement of the Problem

Developing evidence-based assessment (EBA) begins through *a priori* delineation of

a) the purposes of assessment, and then

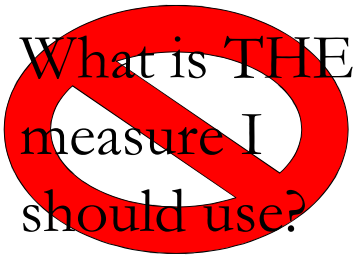
b) identification of the special requirements for each purpose (and associated criteria for stating when requirement is met)

Commentary by Kazdin (2005)

Statement of the Problem

A Few Caveats to Establishing EBA (Kazdin, 2005) for Behavior:

- Absence of a gold standard criterion
- One measure can't do it all
  - Multiple measures are needed to evaluate different facets

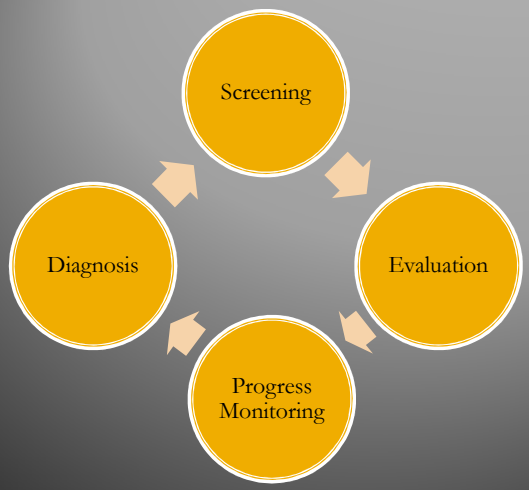


Statement of the Problem

A Few More Caveats to Establishing EBA (Kazdin, 2005) for Behavior:

- Co-morbidity of "problems"
  - What are the most relevant problem features?
- Multiple perspectives are valuable yet agreement may (will) be low!

What Behavioral Data Sources Do You Use?

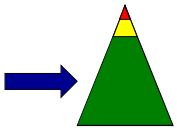


Sources of School-Based Data on Social Behavior

- Extant data
- Standardized behavior rating scales
- Systematic direct observation
- Direct Behavior Rating

Currently dominate in clinic and research

Extant Data



Definition:

- Data sources that already exist within the setting ("permanent products")

Advantages:

- Already available
- Highly contextually relevant
- Natural occurrence can reduce/limit reactivity

(Adapted from Chafouleas, Riley-Tillman, & Sugai, 2007)

Extant Data

- **Examples**:
  - Office discipline referrals (ODRs)
  - Attendance and tardy records
  - Suspension/expulsion data
  - Special education data (e.g. referrals for emotional disturbance)
  - Data from existing behavior management plans (e.g. token economy)

What is an ODR?

"an event in which (a) a student engaged in a behavior that **violated a rule/social norm** in the school, (b) a problem behavior was **observed by** a member of the **school staff**, and (c) the event **resulted in a consequence** delivered by administrative staff who produced a permanent (written) produce defining the whole event" (Sugai, Horner, & Walker, 2000, p. 96)

CMSD OFFICE REFERRAL FORM

Student Name_____ **Date**____/____/____

Time_____**a.m. / p.m.** **Grade: K 1 2 3 4 5 6 7 8**

Location: __**Cafeteria** __**Hallway** __**Classroom** __ **Library** __**Bathroom** __**Music** __**Gym** __ **other**

Others involved: None Staff Teacher Substitute Other

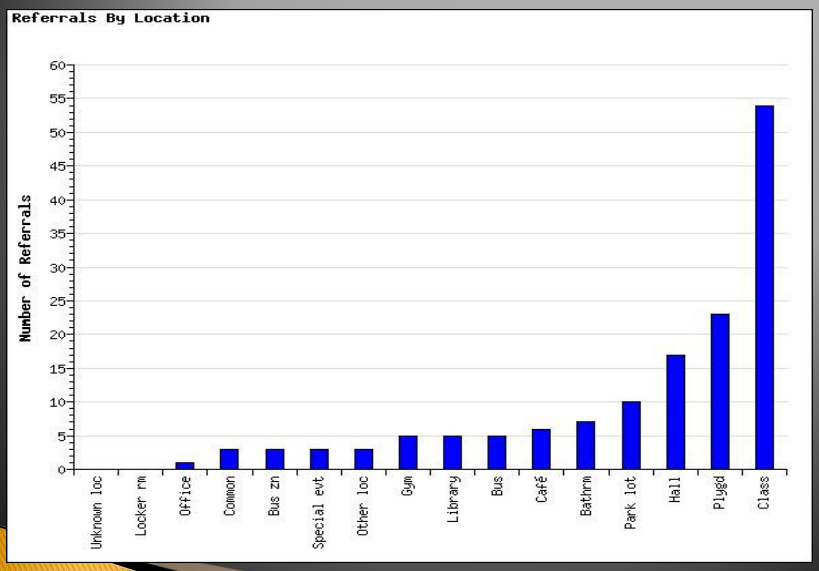
If peers were involved, list them: _____

Referring Staff:_____

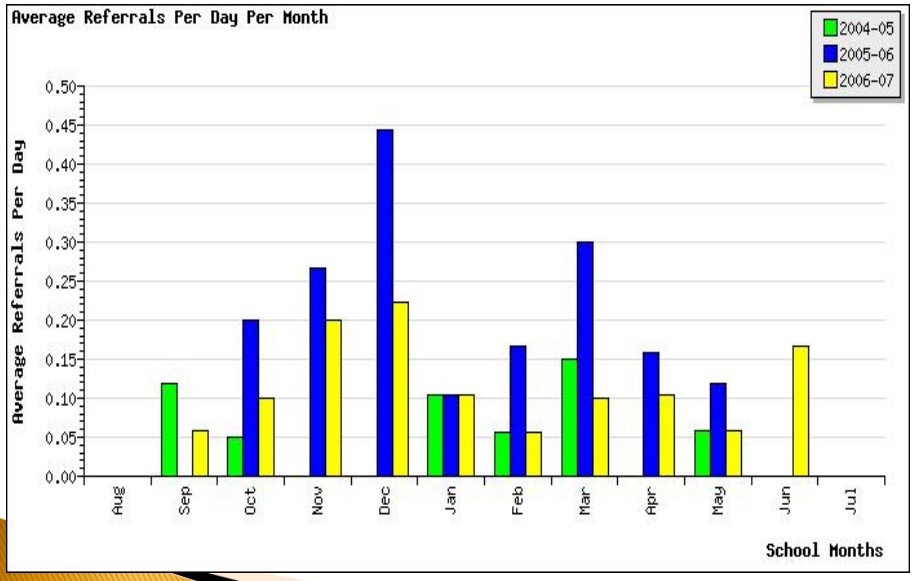
Problem Behavior	Possible Motivation	Action Taken in Classroom
Minor: Classroom Infractions ❑ Inappropriate Verbal Language ❑ Physical Contact ❑ Defiance/Disrespect/Non-compliance ❑ Disruption ❑ Lying/ cheating ❑ Dress Code Violation ❑ Classroom Transition Tardy ❑ Other_____ **Major: Administrative Referral** ❑ Abusive /Inappropriate Language ❑ Fighting /Physical Aggression ❑ Defiance/Disrespect/Noncompliance ❑ Harassment /Bullying ❑ Flagrant Disruption ❑ Skip Class /Truancy ❑ Property Damage ❑ Forgery /Theft ❑ Use /Possession __Tobacco __Alcohol __ Drugs ❑ Vandalism ❑ Bomb Threat/ False Alarm ❑ Arson ❑ Use/ Possession of Weapons ❑ Other Behavior_____ ❑ Unknown Behavior	❑ Obtain Peer Attention ❑ Obtain Adult Attention ❑ To Obtain Items/ Activities ❑ Avoid Adult ❑ Avoid Peer(s) ❑ Avoid Task or Activity ❑ Avoid Work ❑ Unclear/Don't Know ❑ Unknown Motivation ❑ Other Motivation	❑ Loss of Privilege/Points ❑ Conference with Student ❑ Parent Contact ❑ Individualized Instruction ❑ Detention ❑ Mediation ❑ Restitution ❑ Time out ❑ Shuffle ❑ Other (i.e. Contracting)

Additional Comments:

System-Wide Screening



Progress Monitoring



What are Other Examples of Behavioral Extant Data?

Benefits & Limitations of Extant Data

- Complements other sources in providing contextually relevant information
- Source of progress monitoring information
- Less resource-intensive (data readily available!)

- Limited application within prevention
- Tough to establish and maintain consistent/ accurate use.
- Unknown psychometric adequacy
- Challenging to create a system for efficient organization and interpretation

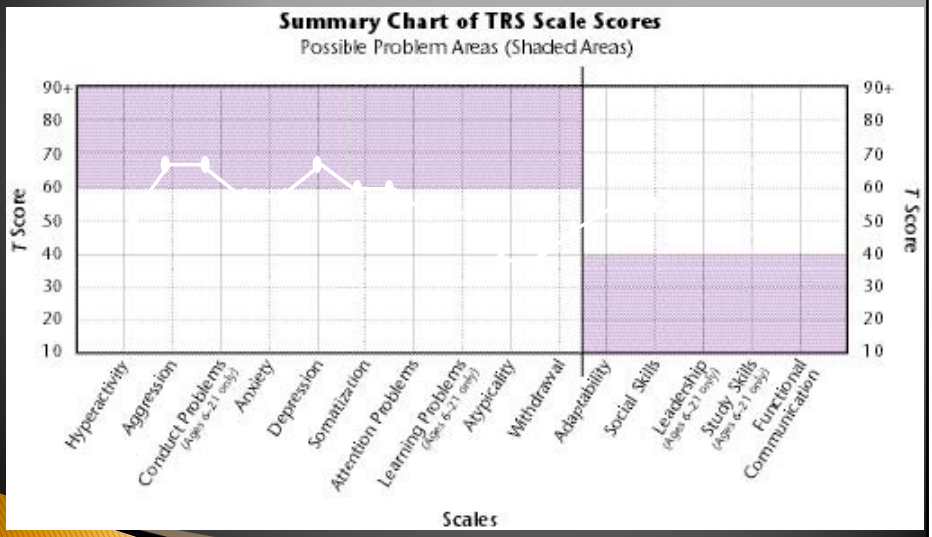
Behavior Rating Scales

- **Definition**:
  Tools that require an individual to rate the behavior of another based on past observation of that person's behaviors (Kratochwill, Sheridan, Carlson, & Lasecki, 1999).
- **Examples**:
  - Behavior Assessment System for Children – 2 (BASC-2)
  - Achenbach System of Empirically-Based Assessment (e.g. CBCL)
  - Conner's Rating Scales – 3
  - Social Skills Intervention System (SSIS)

Scope of the Scale

- **Comprehensive** scales: large number of items (often 100+) that cluster together to assess a wide range of behaviors
  - "General purpose" (Merrell, 2008)
  - Often include broadband and narrow-band syndromes (Ramsey, Reynolds & Kamphaus, 2002).
- **Narrow band** scales: focused on one or two behavioral constructs
  - Attention (Brown ADD Scales; Brown, 2001)
  - Adaptive behavior (Vineland-II; Sparrow, Balla, & Cicchetti, 1984)

Example BASC-2 Score Profile



Example: ASEBA TRF Score Profile

TRF/6-18 - Syndrome Scale Scores for Boys 12-18

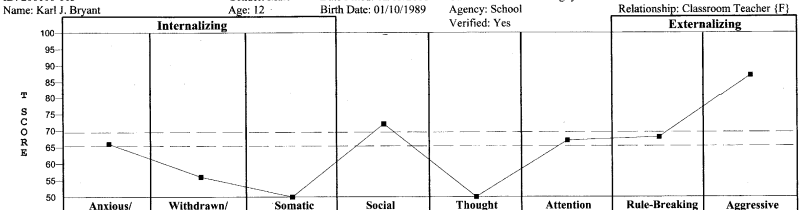
ID: 200106-003
Name: Karl J. Bryant

Gender: Male
Age: 12

Date Filled: 12/03/2001
Birth Date: 01/10/1989

Clinician: Dr. McConaughy
Agency: School
Verified: Yes

Informant: Janet Morehouse
Relationship: Classroom Teacher {F}



	Anxious/ Depressed	Withdrawn/ Depressed	Somatic Complaints	Social Problems	Thought Problems	Attention Problems	Rule-Breaking Behavior	Aggressive Behavior
Total Score	8	2	0	10	0	34	9	32
T Score	66-B	56	50	72-C	50	67-B	68-B	87-C
Percentile	95	73	<=50	>97	<=50	96	97	>97
	1 14.Cries	0 5.EnjoysLittle	0 51.Dizzy	0 11.Dependent	0 9.MindOff	0 1.ActsYoung	2 26.NoGuilt	2 3.Argues
	0 29.Fears	1 42.PreferAlone	0 54.Tired	0 12.Lonely	0 18.HarmSelf	1 2.Noisy	1 28.BreaksRules	2 6.Defiant
	0 30.FearSchool	0 65.Won't Talk	0 56a.Aches	2 25.NotGetAlong	0 40.HearsThings	1 4.FailsToFinish	2 39.BadFriends	2 16.Mean
	0 31.FearDoBad	0 69.Secretive	0 56b.Headaches	2 27.Jealous	0 46.Twitch	2 7.Brags	1 43.LieCheat	2 19.DemAtten
	0 32.Perfect	0 75.Shy	0 56c.Nausea	2 34.OutToGet	0 58.PicksSkin	2 8.Concentrate	1 63.PreferOlder	0 20.DestroyOwn
	1 33.Unloved	0 102.LacksEnergy	0 56d.EyeProb	0 36.Accidents	0 66.RepeatsActs	2 10.SitStill	0 82.Steals	0 21.DestroyOther
	0 35.Worthless	1 103.Sad	0 56e.SkinProb	2 38.Teased	0 70.SeesThings	0 13.Confuse	1 90.Swears	2 23.DisbSchool
	1 45.Nervous	0 111.Withdrawn	0 56f.Stomach	2 48.Not Liked	0 83.StoresUp	2 15.Fidgets	0 96.ThinksSex	2 37.Fights
	1 50.Fearful		0 56g.Vomit	0 62.Clumsy	0 84.StrangeBehav	0 17.Daydream	0 98.Tardy	2 57.Attacks
	0 52.Guilty			0 64.PreferYoung	0 85.StrangeIdeas	1 22.Directions	1 99.Tobacco	0 68.Screams
	0 71.SelfConsc			0 79.SpeechProb		2 24.Disturbs	0 101.Truant	2 76.Explosive
	2 81.NoCriticism					2 41.Impulsive	0 105.AlcDrugs	2 77.Frustrated
	0 91.TalkSuicide					1 49.DiffLearn		1 86.Stubborn
	0 106.AnxPleas					2 53.TalksOut		2 87.MoodChang
	1 108.FearMistk					0 60.Apathetic		1 88.Sulks
	1 112.Worries					2 61.PoorSchool		2 89.Suspicious
						2 67.DisruptDisc		2 94.Teases
						1 72.Messy		2 95.Temper
						2 73.Irresponsible		2 97.Threaten
						2 74.ShowOff		2 104.Loud
						2 78.Inattentive		
						0 80.Stares		
						2 92.Underachiev		
						2 93.TalkMuch		
						1 100.FailsToDo		
						0 109.Whining		

Copyright 2001 T.M. Achenbach *B = Borderline clinical range; C = Clinical range* *Broken lines = Borderline clinical range*

For What Assessment Purpose(s) Do We Typically Use Broadband Scales?

But what about screening and progress monitoring?

BASC-2 Behavioral and Emotional Screening System (BESS)

Instructions:
Listed below are phrases that describe how children may act. Please read each phrase, and mark the response that describes how this child has behaved recently (in the last several months).

Mark N if the behavior **never** occurs.
Mark S if the behavior **sometimes** occurs.
Mark O if the behavior **often** occurs.
Mark A if the behavior **almost always** occurs.

Please mark every item. If you don't know or are unsure of your response to an item, give your best estimate.

A "Never" response does not mean that the child "never" engages in a behavior, only that you have not observed the child to behave that way.

Before starting, please fill in the information in the boxes on the first two pages of this form.

Mark: N—Never S—Sometimes O—Often A—Almost always

1. Pays attention. ..... N S O A
2. Disrupts the play of other children. ..... N S O A
3. Is easily upset. ..... N S O A
4. Hits other children. ..... N S O A
5. Politely asl
6. Has poor s
7. Is sad. .....
8. Is easily di
9. Responds
10. Changes n
11. Worries ab
12. Volunteers
13. Annoys ott
14. Is easily fr
15. Acts out of
16. Defies tea
17. Communic
18. Bothers ot
19. Is able to c
20. Listens to
21. Gets very
22. Is a "good
23. Is negative
24. Shares toy
25. Pouts. .....

T score 61-70 = **elevated risk**
T score 71+ = **highly elevated risk**

Student	Test Date	Form Type	Validity Index Elevation			Scores			Classification
			F	CI	RP	Raw	T	%tile	
Frances, Ferris	10/06/2003	Child/Adol.	A	A	A	11	42	24	Normal
Grace, Gary	01/26/2004	Child/Adol.	A	A	A	17	47	45	Normal
Hughes, Hockum	10/15/2003	Child/Adol.	A	A	A	34	60	82	Normal
Jebson, Jorge	10/08/2003	Child/Adol.	A	A	A	36	61	85	Elevated
Karmelson, Kandy	06/30/2003	Child/Adol.	A	A	A	40	65	92	Elevated
Krackus, Kurt	12/16/2003	Child/Adol.	A	A	A	45	69	95	Elevated
Long, Lenny	01/11/2004	Child/Adol.	A	A	A	49	72	98	Extremely Elevated
Lupe, Lora	06/23/2003	Child/Adol.	C	A	A	54	76	99	Extremely Elevated

SSIS: Screening/Universal Monitoring

control in difficult situations, and empathic or supportive responses to others who experience a problem. For example, children who consistently act in a prosocial manner compromise in conflict situations, invite others to join activities, volunteer to help others, and listen when others are speaking.

5
- excellent skills to initiate and sustain conversations/ interactions with others
- excellent self-control
- a high level of concern for others

Students at this performance level generally do not need additional instruction to improve their social skill level, and their current skill level is considered to be high for their age.

4
Students at this performance level demonstrate most of the following:
- a general competence when communicating or cooperating with others
- adequate skills to initiate and sustain conversations/ interactions with others
- adequate self-control
- an appropriate level of concern for others

Students at this performance level may benefit from additional instruction to improve their social skills, but their current skill level is considered to be appropriate for their age.

3
Students at this performance level demonstrate most of the following:
- occasional difficulty communicating or cooperating with others
- occasional difficulty initiating and sustaining conversations/ interactions with others
- somewhat less than expected self-control
- some concern for others

Students at this performance level are often in need of additional instruction to improve their social skills.

2
Students at this performance level demonstrate most of the following:
- frequent difficulty communicating or cooperating with others
- frequent difficulty initiating and sustaining conversations/ interactions with others
- limited self-control
- little concern for others

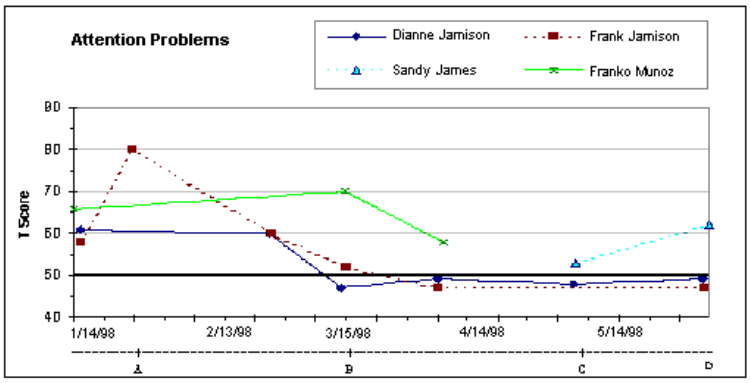
Students at this performance level are often in clear need of additional instruction to improve their social skills.

1
Students at this performance level demonstrate most of the following:
- very limited communication or cooperation skills
- extreme difficulty initiating or sustaining conversations/

5	4	3	2	1	2	
5	4	3	2	1	3	
5	4	3	2	1	4	
5	4	3	2	1	5	
5	4	3	2	1	6	
5	4	3	2	1	7	
5	4	3	2	1	8	
5	4	3	2	1	9	
5	4	3	2	1	10	
5	4	3	2	1	11	
5	4	3	2	1	12	
5	4	3	2	1	13	
5	4	3	2	1	14	
5	4	3	2	1	15	
5	4	3	2	1	16	
5	4	3	2	1	17	
5	4	3	2	1	18	
5	4	3	2	1	19	
5	4	3	2	1	20	
5	4	3	2	1	21	
5	4	3	2	1	22	

BASC Monitor for ADHD Kamphaus & Reynolds (1998)

- 47 items designed to assess scales of Attention Problems, Hyperactivity, Internalizing Problems, Adaptive Skills



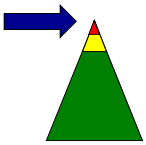
How Short Does a Rating Scale Need to Be to Be Given Over and Over and Over and Over Again?

Benefits & Limitations of Behavior Rating Scales

- May be most helpful in diagnostic assessment.
- Provide a common understanding of the specific behaviors that are indicative of a given cluster term.
- May also be suited for use in screening and evaluative assessment practices.

- May not be sensitive to incremental change.
- May be feasible only for occasional use given time/cost.
- Many clinically-focused (i.e., focus on problem rather than pro-social behavior).
- Do not directly assess behavior –rater bias may be present.

Systematic Direct Observation



- **Definition**:
  - Data collected by an observer watching an environment/person for some period of time
- **Examples**:
  - Percentage of intervals observed to be actively engaged
  - Frequency of positive peer initiations throughout the day
  - Recording how long it takes to transition in the hallway (duration)

- Simple p
- Can be c
- State/Ev
  - Sta
  - Ev
- Child an
  - Te
    ch
- This cor
opportun
  - Pe
  - Pe
  - Total number of outbursts (and when they happen)
  - What the teacher does before – during – and after the child behavior

STATES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	!	%
SW																						
OS																						
LK																						
M																						
PLO																						
SIC																						
SIT																						
OACT																						
EVENTS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	!	%
RH																						
CAL																						
OS																						
OAG																						
AC																						
OCA																						
TEACHER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	!	%
TA/SW																						
TA/OTH																						
DIR-OPP																						
DIR-C+																						
APP																						
DIS																						

SECOS

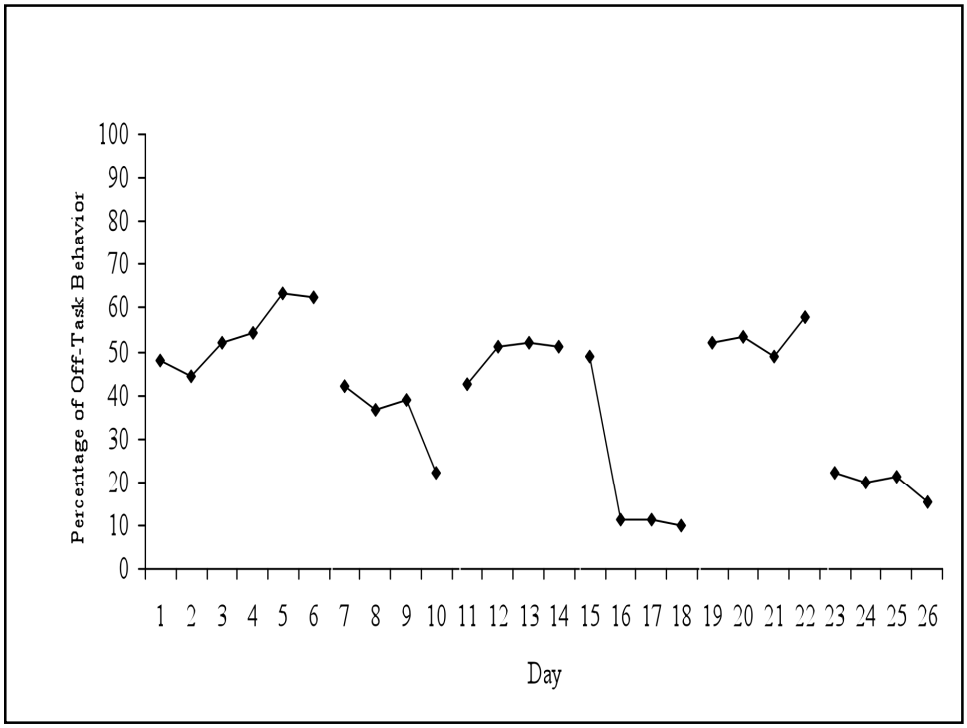
- Definitions of traditional form
  - Note - these can and should be altered for specific situations!

State Behaviors	Behavior Description
School Work	The student has head and eyes oriented towards assigned school work.
Out of Seat	The student is out of his/her seat.
Looking Around	The student is looking around and not engaged in any other activity.
Motor Behavior	The student is engaged in repetitive, stereotyped body movements.
Play with Object	The student is repetitively playing with an object.
Social Interaction with Child	The student is interacting with one or more other students.
Social Interaction with Teacher	The student is interacting with the classroom teacher.
Other Activity	The student is engaged in an activity other than school work.
Event Behaviors	**Behavior Description**
Raise Hand	The student has his her hand raised.
Call Out	The student calls out to the teacher.
Out of Seat	The student is out of his / her seat.
Object Aggression	The student aggress against an object.
Approach Child	The student initiates a contact with the student being observed.
Teacher Approach to School Work	The teacher initiates a contact with the student while the student is engaged in school work.
Teacher Approach to Other Activity	The teacher initiates a contact with the student while the student is not engaged in school work.
Direction-Opposition	The teacher gives a direction which is followed by student non-compliance,
Direction-Compliance	The teacher gives a direction which is followed by student compliance.
Approval	The teacher praises the student's behavior,
Disapproval	Teacher disapproval of student behavior.

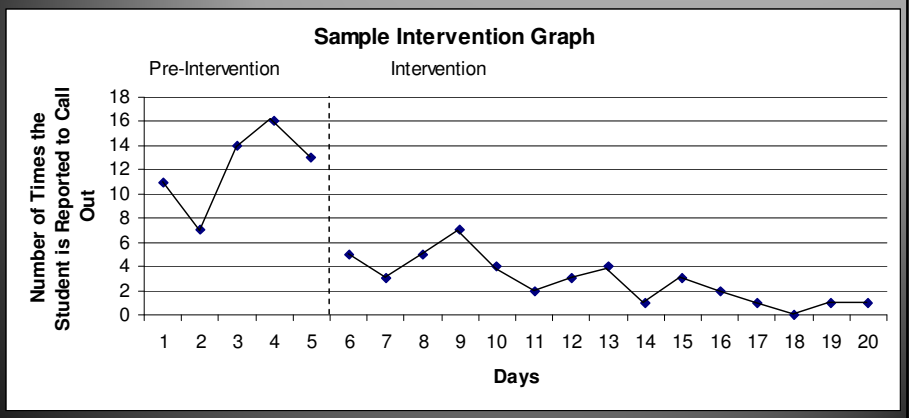
What Exactly is SDO Measuring?

Feasibility

- A single SDO is rather feasible – 10-15min.
- Feasibility though decreases as observation numbers increase
  - Assuming a min number of observations (5), this balloons to 50-75 minutes of observation with additional entry/exit time.
  - Over 100 cases (a rather typical school psychologist yearly load), this is 5,000 – 7,500 minutes, or 83 – 125 hours.



Progress Monitoring: Number of call-outs

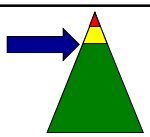


Benefits & Limitations of SDO

- Highly flexible
- Useful in progress monitoring
- Directness
- Standardized procedures
- Minimal cost for materials

- Potential reactivity
- Observer error/drift
- Limited feasibility re: training and intrusiveness
- Difficult to monitor low frequency behaviors
- Generalizability

Direct Behavior Rating



- **Definition**:

  A tool that involves a brief rating of a target behavior following a specified observation period (e.g. class activity) by those persons who are naturally occurring in the context of interest

- **Examples**:
  - Behavior Report Card
  - Home-School Note
  - Daily Progress Report
  - Good Behavior Note
  - Check-In Check-Out Card

We Have Been Here Before

The Emerging Alternative: Curriculum Based Measurement

- Despite general agreement that we should routinely assess the student performance outcomes of instruction, general agreement regarding how this should be done does not exist.
- Commercially distributed achievement tests are not always congruent with curriculum objectives and teachers tend not to value the information obtained from them.
- Informal observation of performance is the approach used and preferred by teachers.
  - Unfortunately, the reliability and validity of teachers' informal observation of student academic performance is unknown.
- An emerging alternative to commercial standardized tests and to informal observations is curriculum-based measurement (CBM) that combines the advantages of both.
  - Through standardizing observation of performance in the curriculum, CBM generates reliable data that is valid with respect to widely used indicators of achievement such as achievement test scores, age, program placement, and teachers' judgments of competence.
  - These data are now being used to make screening, referral, IEP planning, pupil progress, and program outcome decisions. This article provides background on and illustrations of the use of CBM in special education

The Abstract from Curriculum-Based Measurement: The Emerging Alternative, Deno, 1985

Traditional Behavior Ratings Scales or Systematic Direct Observation?

- Traditional Behavior Rating Scales
  - Good at establishing ratings of generalized states of behavior but not built to be responsive to short-term change
    - "He is a hyperactive child"
  - Problem – we know behavior changes based on environment
- Systematic Direct Observation
  - Excellent at establishing exactly what happened in the observation period
    - "He was of-task for 12 of 20 intervals observed"
  - Problems – as behavior changes, knowing what happened in one observation does not give us an idea of what will happen next AND not feasible to observe enough in schools

The Missing Piece – Social Behavior

- Despite general agreement that we should routinely assess the student performance outcomes of **social behavior,** general agreement regarding how this should be done does not exist.
- Commercially distributed **rating scales** are not **ideal for intervention progress monitoring.**
- Informal observation of **social behavior** is the approach used and preferred by teachers.
  - Unfortunately, the reliability and validity of teachers' informal observation of student **social behavior** is unknown.
- An emerging alternative to **behavior rating scales, systematic direct observation** and to **informal observations** is ***direct behavior ratings (DBR)*** which combines the advantages of both.

The Abstract from Curriculum-Based Measurement: The Emerging Alternative, Deno, 1985
Edited (in bold) by Riley-Tillman 2012

Example: DBR-like Tool

The Behavior Reporter — On-Line Behavior Report Card Generator — A service of www.interventioncentral.org

Behavior Report Card

Student: _____ Date: _____

Teacher: _____ Classroom: _____

Directions: Review each of the Behavior Report Card items below. For each item, rate the degree to which the student showed the behavior or met the behavior goal.

The student focused his or her attention on teacher instructions, classroom lessons and assigned work.

Circle the degree to which the student met the behavioral goal:

1.....2.....3...|...4.....5.....6...|...7.....8.....9

Never/Seldom — Sometimes — Usually/Always

The student sat in class without fidgeting or squirming more than most peers.

Circle the degree to which the student met the behavioral goal:

1.....2.....3...|...4.....5.....6...|...7.....8.....9

Never/Seldom — Sometimes — Usually/Always

The student remembered academic instructions and directions without needing extra reminders.

Circle the degree to which the student met the behavioral goal:

1.....2.....3...|...4.....5.....6...|...7.....8.....9

Never/Seldom — Sometimes — Usually/Always

©2004

Example: DBR-like Tool

DBR Smiley Face Form – Choose Your Own Behaviors

Student Name: _____ Date: _____ Day of Week: M T W Th F

Rater Name: _____ Activity: _____

☐ No rating today as I was unable to observe student sufficiently.

Directions: Place a mark along the line that best reflects the percentage of total time the student exhibited the target behaviors. Please note that the percentages DO NOT need to total 100% since some behaviors may co-occur.

(Write behavior definition.)

% of Total Time

0 1 2 3 4 5 6 7 8 9 10

0% 50% 100%

(Write behavior definition.)

% of Total Time

0 1 2 3 4 5 6 7 8 9 10

0% 50% 100%

(Write behavior definition.)

% of Total Time

0 1 2 3 4 5 6 7 8 9 10

0% 50% 100%

V1.0 DBR Smiley Face Form was created by Sandra M. Chafouleas, T. Chris Riley-Tillman & Theodore J. Christ.
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Downloadable from www.directbehaviorratings.org.

Example: Standard Form for Single-item DBR scales

DBR Form

Date: M T W Th F	Student: / Rater:	Activity Description:
Observation Time: Start:_____ End: _____ ☐ Check if no observation today	Behavior Descriptions: **Academically engaged** is actively or passively participating in the classroom activity. For example: writing, raising his/her hand, answering a question, talking about a lesson, listening to the teacher, reading silently, or looking at instructional materials. **Disruptive Behavior** is student action that interrupts regular school or classroom activity. For example: out of his/her seat, fidgeting, playing with objects, acting aggressively, talking/yelling about things that are unrelated to classroom instruction. (If desired) **Optional Behavior** is	

Directions: Place a slash (/) along the line that best reflects (a) % of total time student was academically engaged and (b) % of total time or total # of times student exhibited disruptive behavior during the observation period. If desired, an additional behavior may be included by providing a definition above and then rating on the "optional behavior" line.

Academically Engaged

% of Total Time

0 1 2 3 4 5 6 7 8 9 10

0% Never 50% Sometimes 100% Always

Disruptive Behavior

Circle Type of Rating: % of Total Time or # of Times

0 1 2 3 4 5 6 7 8 9 10+

0% Never 50% Sometimes 100% Always

Optional Behavior

Circle Type of Rating: % of Total Time or # of Times

0 1 2 3 4 5 6 7 8 9 10+

0% Never 50% Sometimes 100% Always

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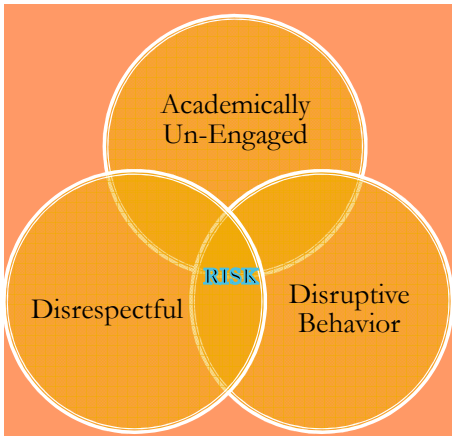
Download:
www.directbehaviorratings.com

What Behaviors Do I Rate?



*Working Risk-Resilience Model
for School-Based Behavior

Academic Engagement:
Actively or passively participating in the classroom activity.

Compliance/Respect:
To initiate/complete a response to an adult request in a timely and socially acceptable manner.

Disruptive Behavior:
A student action that interrupts regular school or classroom activity.

How Do I Use the DBR Form?

1) Complete top portion of the form
   - ✓ Student's name, Date, Rating period(s)
   - ✓ Review behavior definitions and rating directions
2) Have the form ready for completion following each pre-identified activity period
   - ✓ e.g., Reading block, independent seat work
3) Immediately following the activity period, complete the ratings
   - ✓ Do not complete the rating if you aren't confident you directly observed the student for a sufficient amount of time

When Rating, Remember…

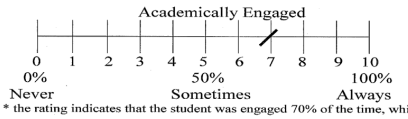
- Ratings should correspond to the proportion of time that you actually observed the student display the target behavior.
  - Complete immediately following the activity period.
  - Do not complete if you did not observe for a sufficient amount of time.
- When rating, each behavior should be considered independently of the other targets. **That is, total ratings across behaviors do not have to equal 100%.**
  - For example, a student may be engaged 50% of the time, and disruptive 20%. A student may also be engaged for 100% of the time, and disruptive for 10%.

What are the Pros and Cons of Systematically Measuring Teacher Perception?

DBR Progress Monitoring

Directions for Direct Behavior Rating (DBR)

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, AM, PM). Ratings can be completed in a matter of seconds.
3. Observe and estimate the amount of time that the behavior occurs during an observation period (e.g., full day, half day, class period).
4. Collect multiple ratings across multiple occasions (see below).
5. Plot data graphically, and evaluate child behavior.



* the rating indicates that the student was engaged 70% of the time, which is equal to a DBR of 7

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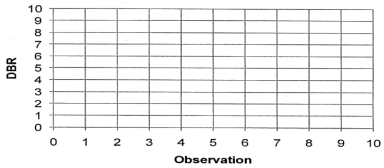
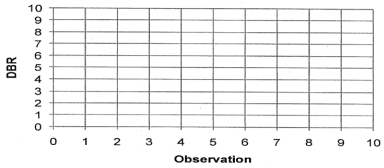
Behavior: _____



Behavior: _____



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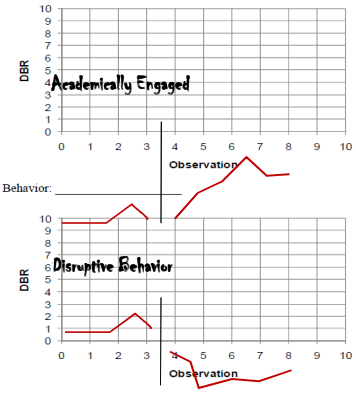
DBR Progress Monitoring

How Often?

We recommend (5 to) **10 datapoints** per phase, but the emphasis is on ideographic analysis *and* high/low stakes decisions

Behavior: _____



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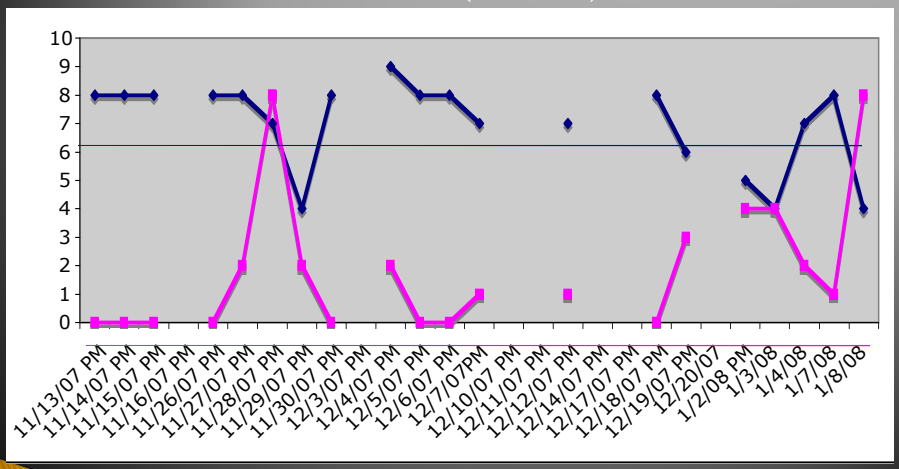
Example DBR Data Profile

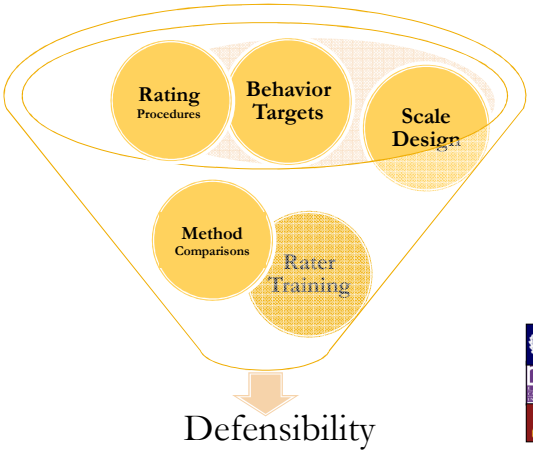
DBR Afternoon (11/13 to 1/8)



The Big Question – What About the Research

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

University of Connecticut
East Carolina University
University of Minnesota

Project VIABLE-II (2011-2015)

Evaluate defensibility and usability of DBR in decision-making at larger scale

Large student/teacher samples assessed at year 1	Smaller student samples followed annually over 4 years across grades/teachers
A handful of behavior intervention cases involving DBR use	Teacher input regarding usability and perceptions

DBR

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

UCONN

Recent DBR Journal Publications (since 2000)

- Christ, T.J., Riley-Tillman, T.C., & Chafouleas, S.M. (accepted with revision). Direct Behavior Rating (DBR): An Evaluation of Alternative Definitions to Assess Classroom Behaviors. *School Psychology Review.*
- Briesch, A.M., Chafouleas, S.M., & Riley-Tillman, T.C. (in press). Generalizability and dependability of behavior assessment methods to estimate academic engagement: A comparison of systematic direct observation and Direct Behavior Rating. *School Psychology Review.*
- *Chafouleas, S.M., Riley-Tillman, T.C., Christ, T.J., & Kilgus, S.P. (in press). Direct Behavior Ratings (DBR): Useful tools for linking assessment, communication, and intervention. In A. Canter, L. Paige, and S. Shaw (Eds), Helping children at home and school III: Handouts for families and educators.Bethesda, MD: National Association of School Psychologists.*
- Christ, T. J., Riley-Tillman, T. C., Chafouleas, S. M., & Boice, C. H. (2010). Generalizability and dependability of Direct Behavior Ratings (DBR) across raters and observations. *Educational and Psychological Measurement,70. doi:10.1177/0013164410366695*
- Riley-Tillman, T.C., Christ, T.J., Chafouleas, S.M., Boice, C.H. & Briesch, A.M. (2010). The impact of observation duration on the accuracy of data obtained from Direct Behavior Rating (DBR). *Journal of Positive Behavior Interventions. doi:10.1177/1098300710361954*
- Chafouleas, S.M., Briesch, A.M., Riley-Tillman, T.C., Christ, T.C., Black, A.C., & Kilgus, S.P. (2010). An investigation of the generalizability and dependability of Direct Behavior Rating Single Item Scales (DBR-SIS) to measure academic engagement and disruptive behavior of middle school students. *Journal of School Psychology, 48, 219-246. doi:10.1016/j.jsp.2010.02.001*
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- Chafouleas, S.M., Riley-Tillman, T.C., & Christ, T.J. (2009). Direct Behavior Rating (DBR): An emerging method for assessing social behavior within a tiered intervention system. *Assessment for Effective Intervention,34, 195-200.doi:10.1177/1534508409340391*
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- Riley-Tillman, T.C., Methe, S.A., & Weegar, K. (2009). Examining the use of Direct Behavior Rating methodology on classwide formative assessment: A case study. *Assessment for Effective Intervention, 34, 242-250. doi:10.1177/1534508409333879*
- Christ, T.J., & Boice, C. (2009). Rating scale items: A brief review of nomenclature, components, and formatting to inform the development of Direct Behavior Rating (DBR). *Assessment for Effective Intervention,34, 242-250. doi:10.1177/1534508409336182*
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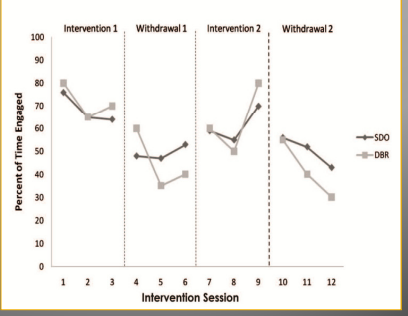
- Riley-Tillman, T.C., Chafouleas, S.M., Christ, T.J., Briesch, A.M., & LeBel, T.J. (2009). The impact of item wording and behavioral specificity on the accuracy of Direct Behavior Ratings (DBRs). *School Psychology Quarterly,24, 1-12. doi:10.1037/a0015248doi:10.1177/1534508409332788*
- Chafouleas, S. M., Christ, T. J., & Riley-Tillman, T. C. (2009). Generalizability of scaling gradients on Direct Behavior Ratings. *Educational & Psychological Measurement, 69, 157-173. doi:10.1177/0013164408322005*
- Riley-Tillman, T.C., Chafouleas, S.M., & Eckert, T. (2009). Daily Behavior Report Cards and Systematic Direct Observation: An investigation of the acceptability, reported training and use, and decision reliability among school psychologists. *Journal of Behavioral Education. 17, 313-327.doi:s10864-008-9070-5*
- Riley-Tillman, T.C., Chafouleas, S.M., Sassu, K.A., Chanese, J.A.M., & Glazer, A.D. (2009). Examining the agreement of Direct Behavior Ratings and Systematic Direct Observation for on-task and disruptive behavior. *Journal of Positive Behavior Interventions, 10, 136-143. doi:10.1177/1098300707312542*

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

Systematic Direct Observation and Direct Behavior Rating Data of Engagement



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

Initial Evaluation of DBR-SIS in Screening Assessment

Chafouleas, Kilgus, Jaffery, Riley-Tillman & Welsh (In Press)

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

Measures: DBR-SIS completed 2x/day over 5 days, 2 standardized behavior screening measures (BESS and SRSS)

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. Late elem. Middle	2 1 1
Academic Engagement	Early elem. Late elem. Middle	8 8 9
Respectful	Early elem. Late elem. Middle	9 9 9

As students get older…

Disruptive:

Academic Engagement

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**	.830**
DBR-MIS	Level	.715**	.741**
	Slope	.415	.758**

DBR-SIS and Training

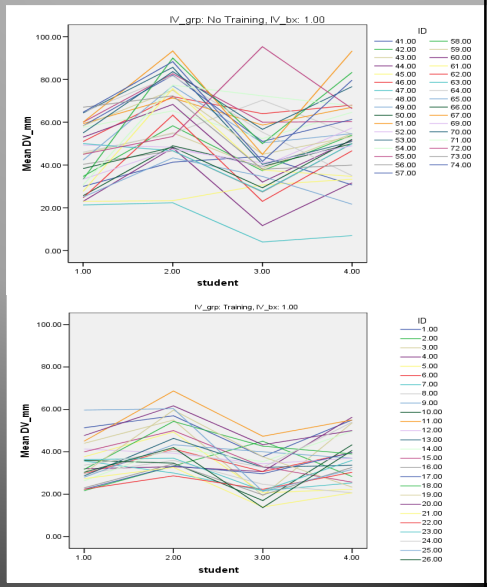
Schlientz, M. D., Riley-Tillman, T. C., Briesch, A. M., Walcott, C. M., & Chafouleas, S.M., (2009)

Sample: 59 Raters for 2 target behaviors

Measures: DBR-SIS completed in practice w

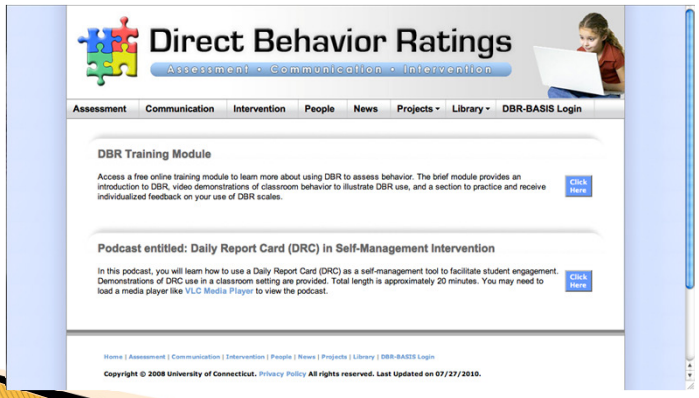
Restults: Significantly more accurate ratings for training condition.

Conclusion: Brief training can result in enhanced accuracy. This study spurred a line of research and an online training program.



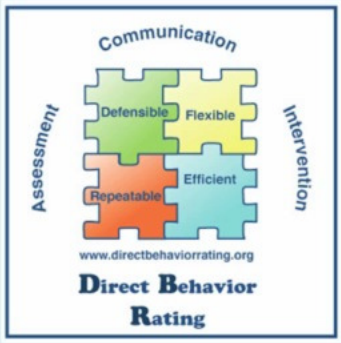
DBR Training for Accuracy

- Access a free online training module to learn more about using DBR to assess behavior. The brief module provides an introduction to DBR, video demonstrations of classroom behavior to illustrate DBR use, and a section to practice and receive individualized feedback on your use of DBR scales.



Direct Behavior Rating:

Use in Assessment of Student Behavior



Project Director:
Sandra M. Chafouleas

Project Co-PIs: Chris Riley-Tillman, Greg Fabiano, Megan Welsh, and Hariharan Swaminathan

Design & Development:
Rose Jaffery, Rishi Saripalle, & Austin Johnson

This project was supported in part by a grant from the Institute for Education Sciences, U.S. Department of Education (R324A110017). Opinions expressed herein do not necessarily reflect the position of the U.S. Department of Education, and such endorsements should not be inferred.

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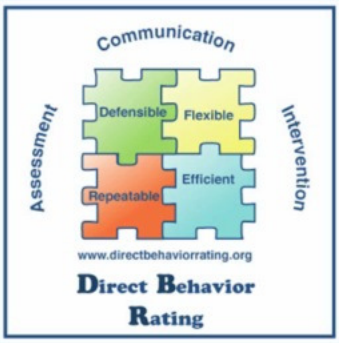
Direct Behavior Rating:

Demonstrating How to Rate Student Behavior



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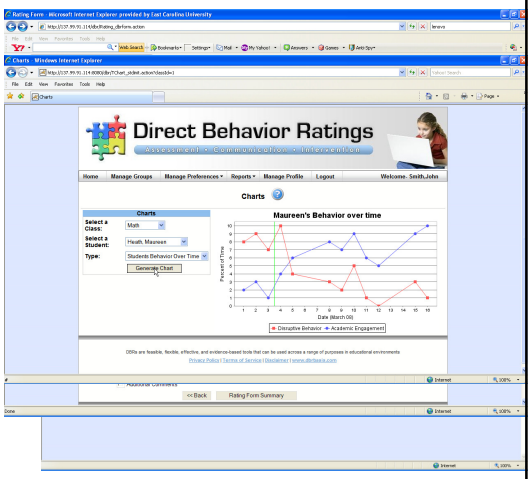
DBR BASIS

- DBR – BASIS (IES Supplemental Grant)
  - A web-based application will serve to increase utility of the DBR in behavioral assessment given ease of data entry, analysis, and presentation.
- DBR BASIS Training Videos



A quick guide to using DBR-BASIS

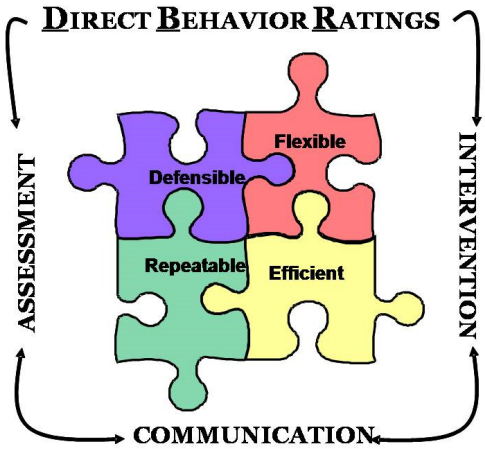
DBR BASIS

DBR Research Directions

Past:
- Establish recommended instrumentation and procedures

Present:
- Establish "training"
- Build web-based application
- Continue technical adequacy

Future:
- Investigate application in screening
- Examine utility in schools and beyond...
- Return to the assessment-intervention link



Benefits & Limitations of DBR

+

- Highly flexible
- Useful in progress monitoring
- Directness
- Potential for standardized procedures
- Minimal cost for materials

−

- Generalizability
- Rater bias is likely present
- Training requirements unknown
- Limited psychometric knowledge beyond DBR-SIS

Why do I need data?

At what level should the problem be solved?
(Primary, Secondary, Tertiary)

What is the purpose of assessment?
(Screening, Progress Monitoring, Evaluation, Diagnosis)

Which data do I need?

Which tools are best matched to assess the behavior of interest?
Contextual relevance

What decisions will be made using these data?
Psychometric Adequacy

What resources are available to collect data?
Usability

Which tools can answer these questions?

Adapted from Chafouleas, Riley-Tillman, & Sugai, 2007

SUMMARY: Behavior Assessment Methods within RTI

ALL BELOW, with emphasis on functional assessment data

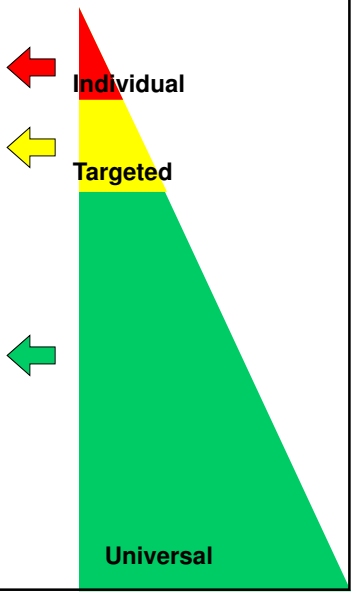
EXTANT DATA

BEHAVIOR RATING SCALES

SYSTEMATIC DIRECT OBSERVATION

DIRECT BEHAVIOR RATING

EXTANT DATA
BEHAVIOR RATING SCALES developed for universal screening
DIRECT BEHAVIOR RATING



Hopefully time for questions and group discussion

Contact Information

T. Chris Riley-Tillman, Ph.D.
Educational, School, and Counseling Psychology
16 Hill Hall
University of Missouri
Columbia, MO 65211

education.missouri.edu/faculty/ESCP/Riley-Tillman_T.Chris.php

Direct Behavior Rating: www.directbehaviorratings.com

Evidence Based Intervention Network: ebi.missouri.edu