The Effects of FBA-BIPs on Academic Engagement of Students with Behavioral Concerns and Classroom Peers

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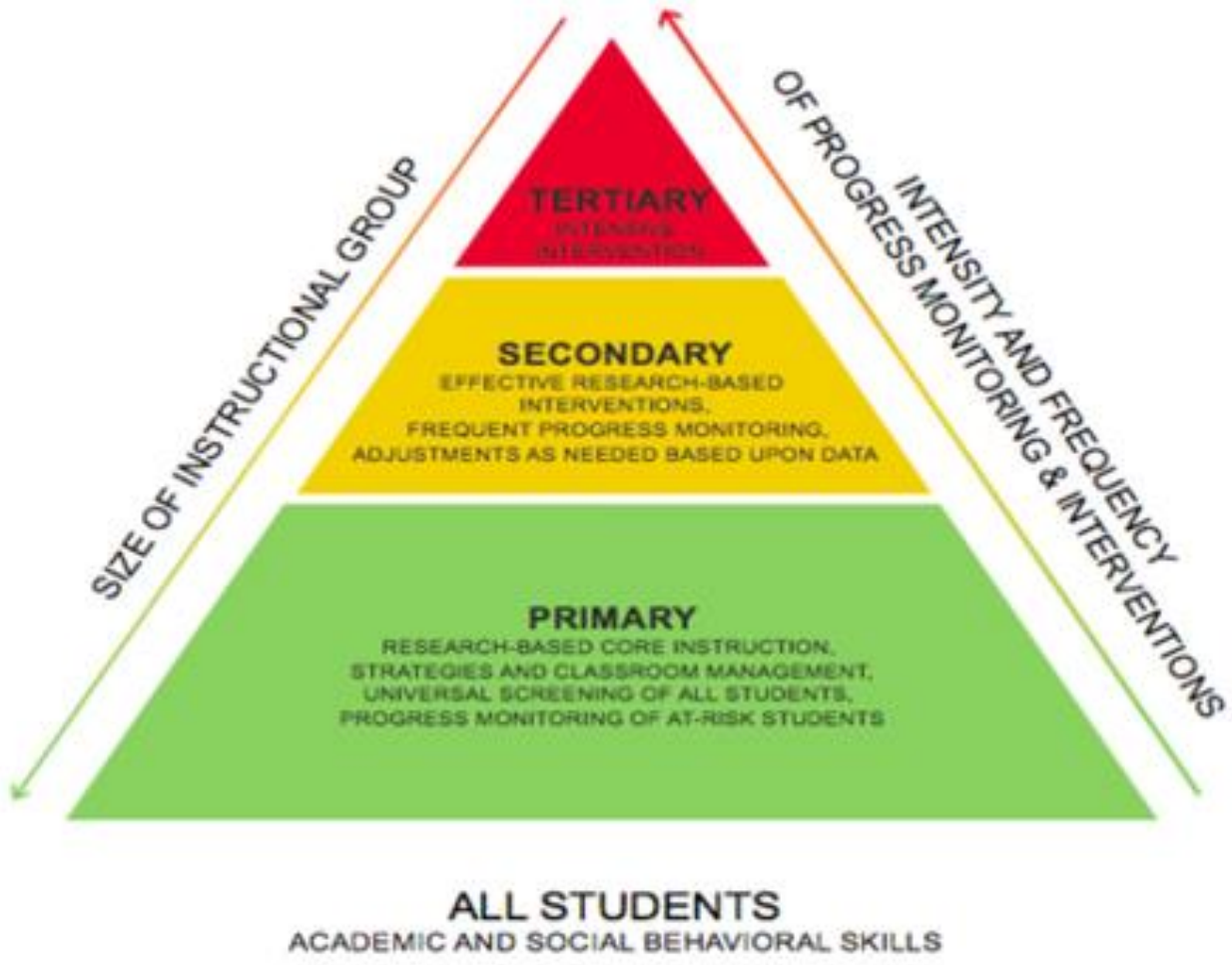
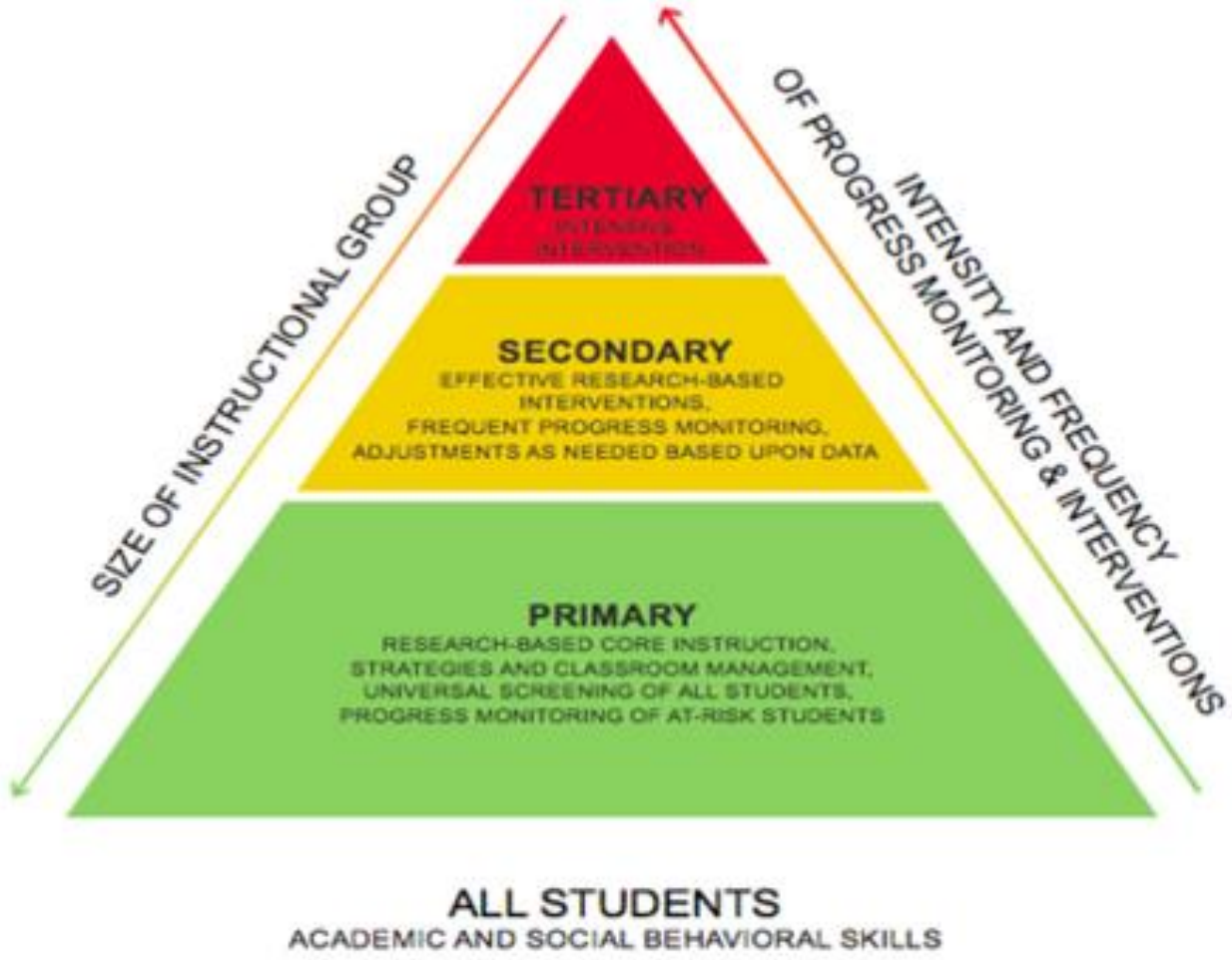
Background Information on Multi-tiered Supports & Functional Behavioral Assessments



Rationale for Supporting Target Students and Peers

Case Examples

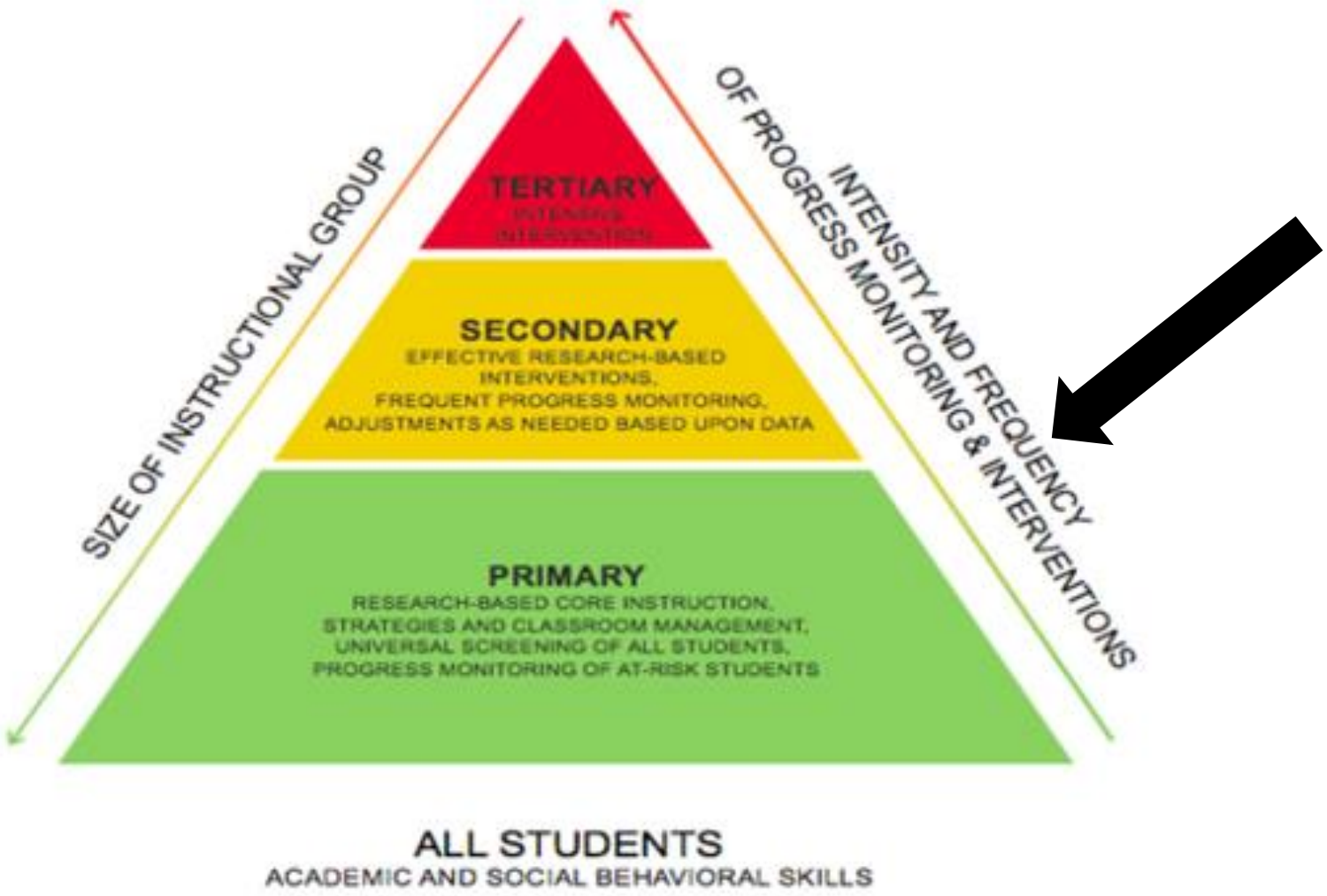
Background Information on Multi-tiered Supports & Functional Behavioral Assessments



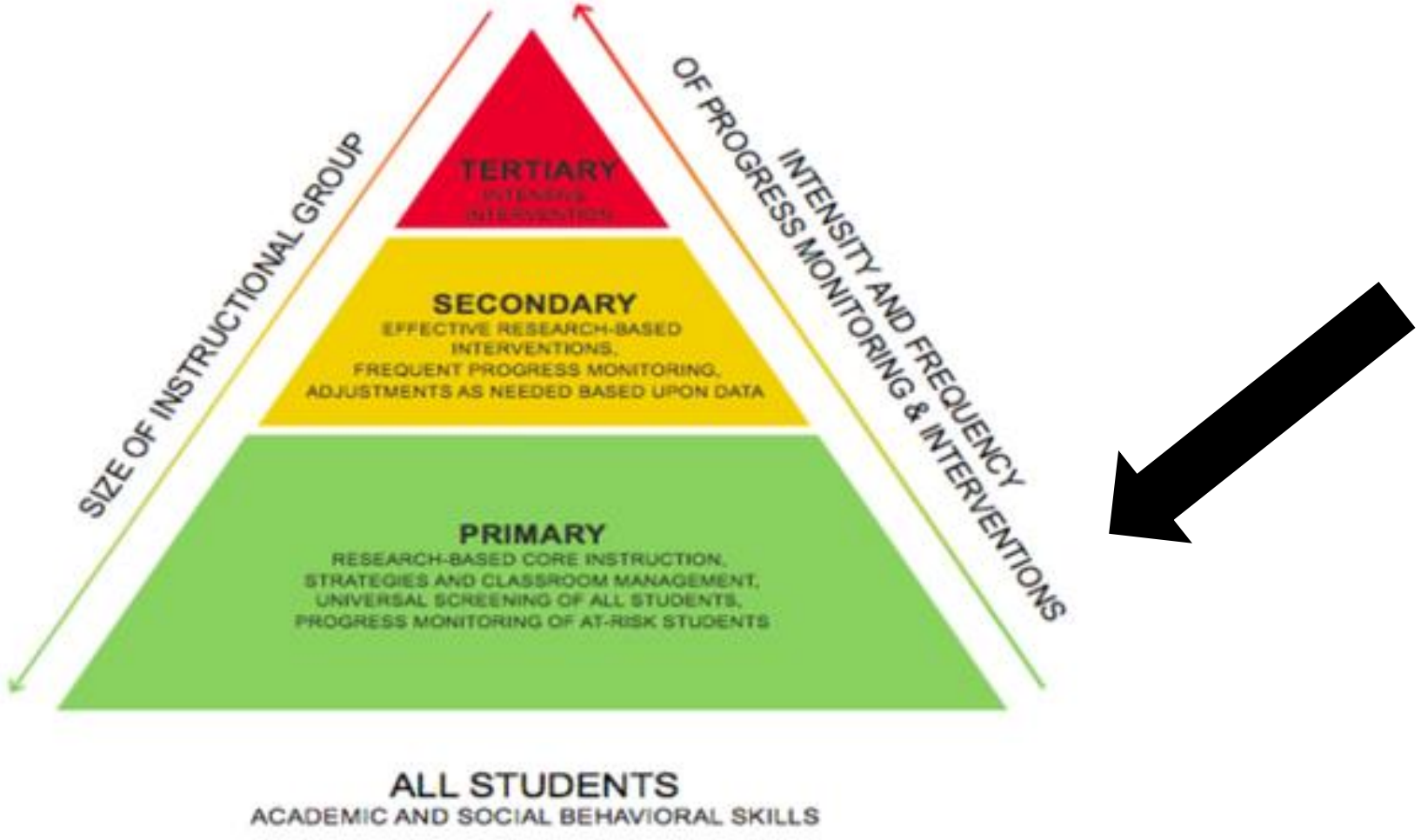
Tier I: Proactive and Preventative

Effective classroom management practice is a Tier I preventive practice.

"Classroom management consists of the practices and procedures a teacher uses to maintain the environment in which instruction and learning can take place." (Wong & Wong, 2014)

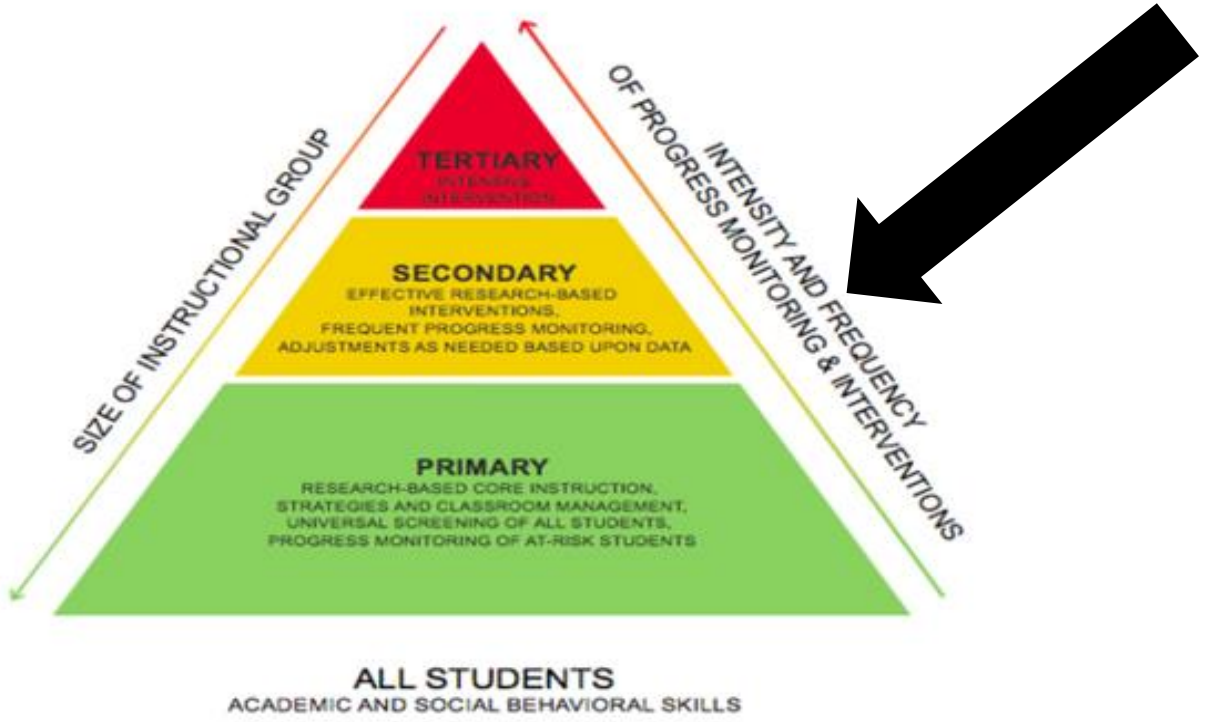


Schoolwide PBIS Framework



- Tier I
  - Explicit Expectations and Procedures
  - Precorrections
  - Active Supervision
  - Attention Signal
  - Behavior Specific Praise (BSP)
  - Increasing Opportunities to Respond (OTR)
  - Choice

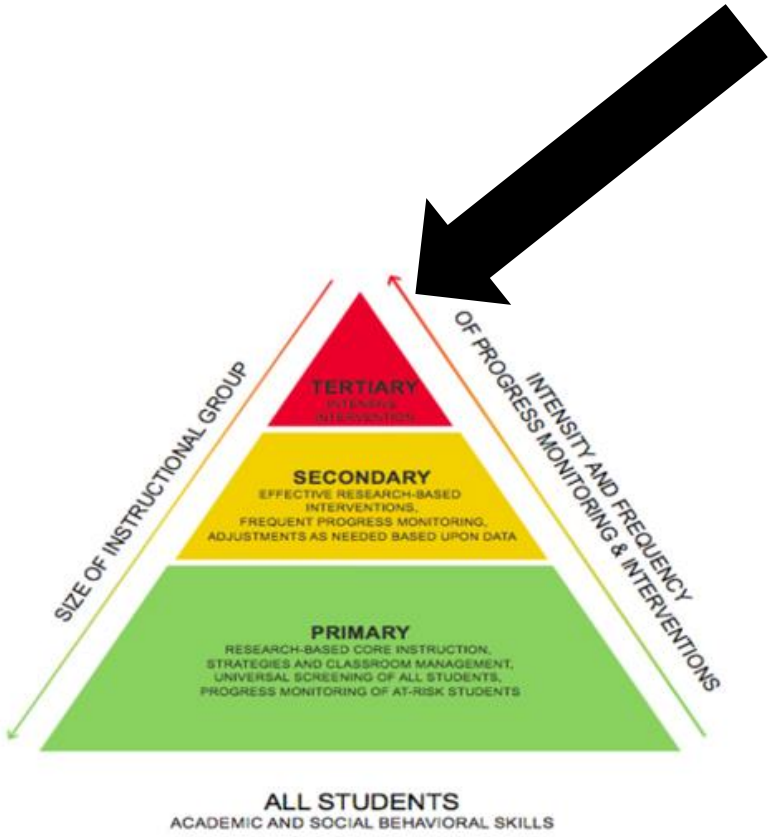
Tier 2: Small group or manualized interventions



Schoolwide PBIS Framework

"Tier 2 interventions will only be successful in environments where a strong foundation of behavior support is in place." (Simonsen & Meyers, 2015).

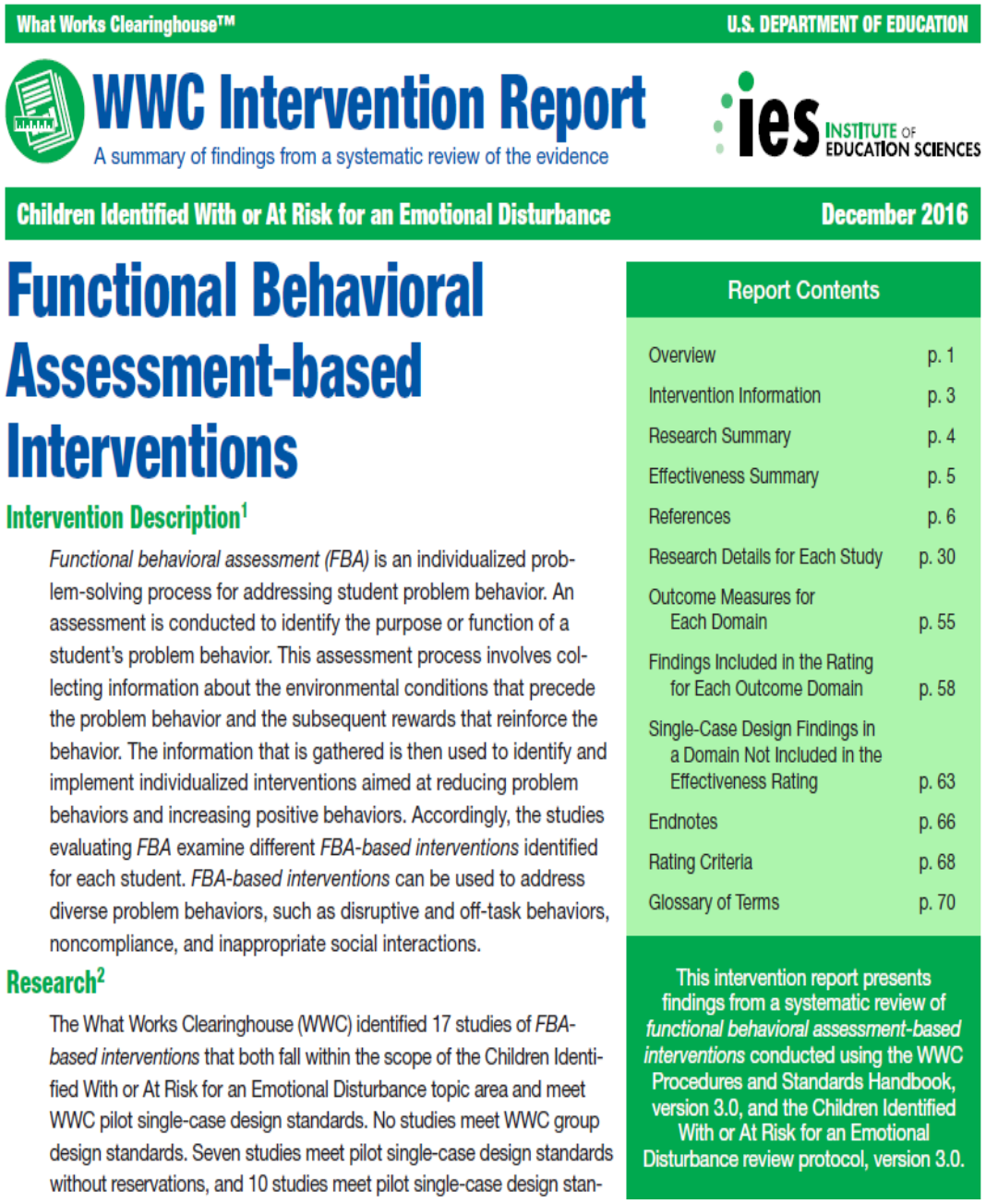
Tier 3: Targeted Interventions



- Approximately 5-7% of the student body may need tertiary-level supports
- Tertiary interventions require more extensive monitoring and are reserved for students with complex, long-term, resistant behavioral or academic issues (Kern & Manz, 2004)
  - FBAs may be necessary or required (per IDEA)

Validity of FBAs

- In 2016, FBA-based interventions were identified as a promising practice for addressing school engagement and problem behavior for students with or at risk for ED (U.S. Department of Education).



What Works Clearinghouse™ U.S. DEPARTMENT OF EDUCATION

WWC Intervention Report

A summary of findings from a systematic review of the evidence

ies INSTITUTE OF EDUCATION SCIENCES

Children Identified With or At Risk for an Emotional Disturbance December 2016

Functional Behavioral Assessment-based Interventions

Intervention Description[1]

Functional behavioral assessment (FBA) is an individualized problem-solving process for addressing student problem behavior. An assessment is conducted to identify the purpose or function of a student's problem behavior. This assessment process involves collecting information about the environmental conditions that precede the problem behavior and the subsequent rewards that reinforce the behavior. The information that is gathered is then used to identify and implement individualized interventions aimed at reducing problem behaviors and increasing positive behaviors. Accordingly, the studies evaluating *FBA* examine different *FBA-based interventions* identified for each student. *FBA-based interventions* can be used to address diverse problem behaviors, such as disruptive and off-task behaviors, noncompliance, and inappropriate social interactions.

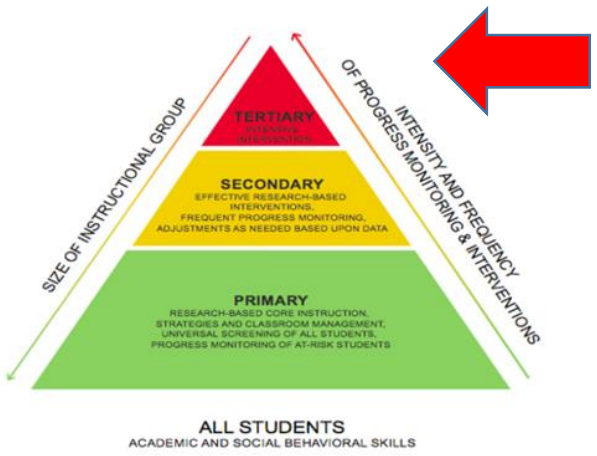
Research[2]

The What Works Clearinghouse (WWC) identified 17 studies of *FBA-based interventions* that both fall within the scope of the Children Identified With or At Risk for an Emotional Disturbance topic area and meet WWC pilot single-case design standards. No studies meet WWC group design standards. Seven studies meet pilot single-case design standards without reservations, and 10 studies meet pilot single-case design stan-

Report Contents

This intervention report presents findings from a systematic review of *functional behavioral assessment-based interventions* conducted using the WWC Procedures and Standards Handbook, version 3.0, and the Children Identified With or At Risk for an Emotional Disturbance review protocol, version 3.0.

What is FBA?



A systematic process for determining factors that

- contribute to the occurrence & maintenance of problem behavior, and
- more importantly, serve as basis for developing proactive & comprehensive behavior support plans

FBAs: What's Involved

Identify the behavior you want to change

Assess the target (problem) behavior, determine function for behavior of the target behavior and create a

Identify a replacement behavior.

Determine whether the student can perform the replacement behavior.

Determine whether the antecedent conditions represent effective strategies in the environment.

Design Intervention with a focus on the Environment

Previous FBA-BIP Research

Populations

- Severe disabilities (Dunlap et al., 1991)
- Attention deficit disorders (Ervin, DuPaul, Kern, & Friman, 1998)
- Emotional and behavioral problems (Kern et al., 2001)
- At-risk students (Lewis & Sugai, 1996; Umbreit et al., 2004)

Settings

- Preschools (Umbreit, 1996)
- General education classrooms (Kern et al., 2001; Umbreit et al., 2004)
- Self-contained settings (Lane et al., in press)
- Job share classrooms (Lane, Eisner et al., 2009)

Behaviors

- Decreases in off-task and inappropriate behavior (Umbreit & Blair, 1997)
- Reduction in skin picking (Lane et al., 2009)
- Increases in levels of task engagement (Umbreit et al., 2004)

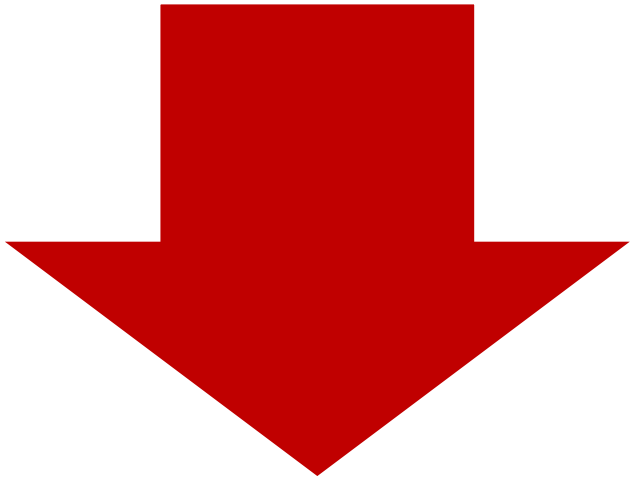
Collateral Effects:

- When students with behavior problems are provided classroom interventions that result in desired behavioral changes and improved interactions with peers and adults.
- Collateral effects such as increased academic engagement and decreases in problem behavior also may occur for students not receiving intervention.

(Sprague & Perkins, 2009)

The Problems

A majority of students with disabilities and behavioral challenges are taught in general education classrooms.



Rarely are general educators trained in the FBA-BIP process, and many of them report feeling unprepared to conduct an FBA (Gable, Tonelson, Sheth, Wilson, & Park, 2012)

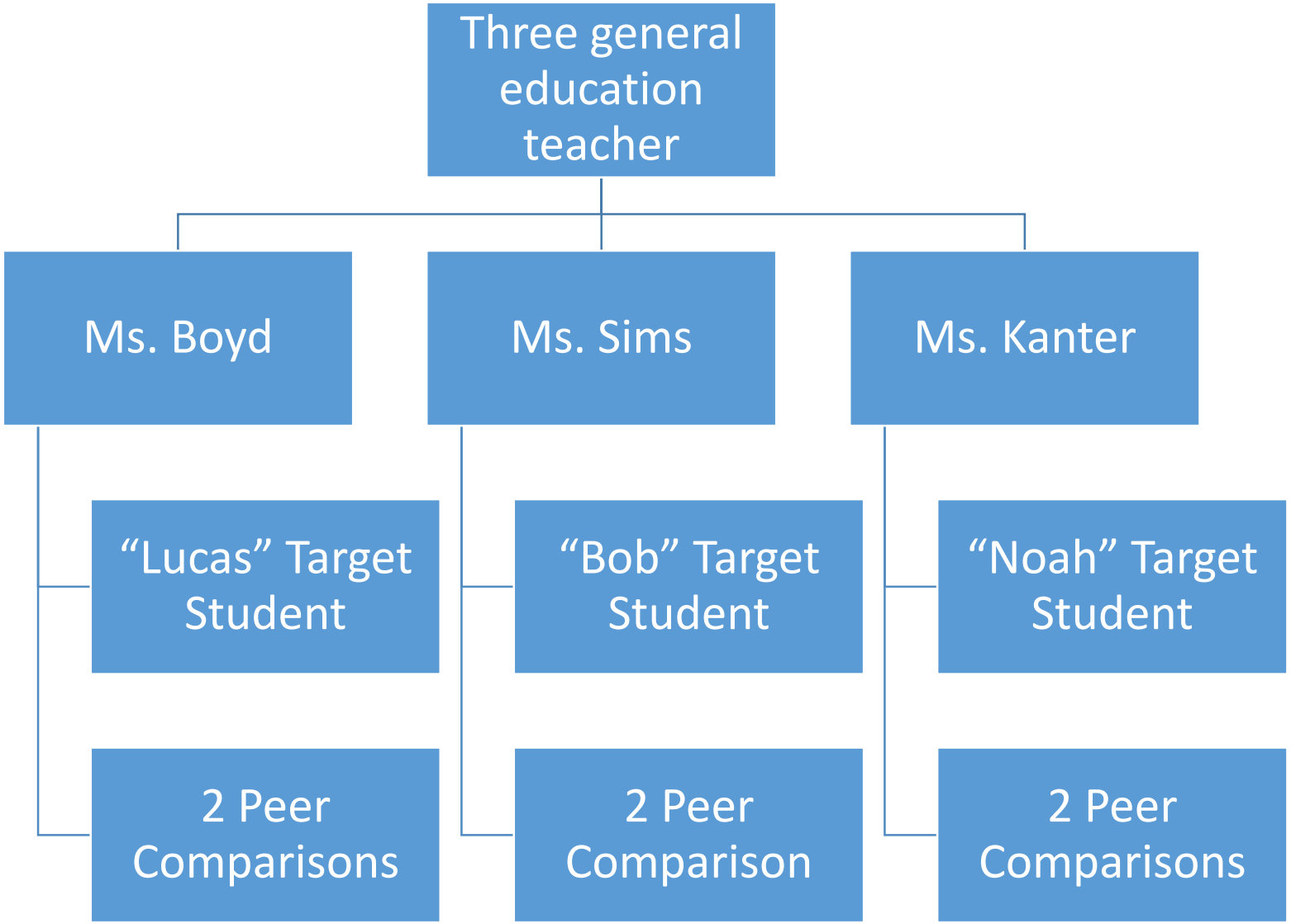
Case Example

Research Questions

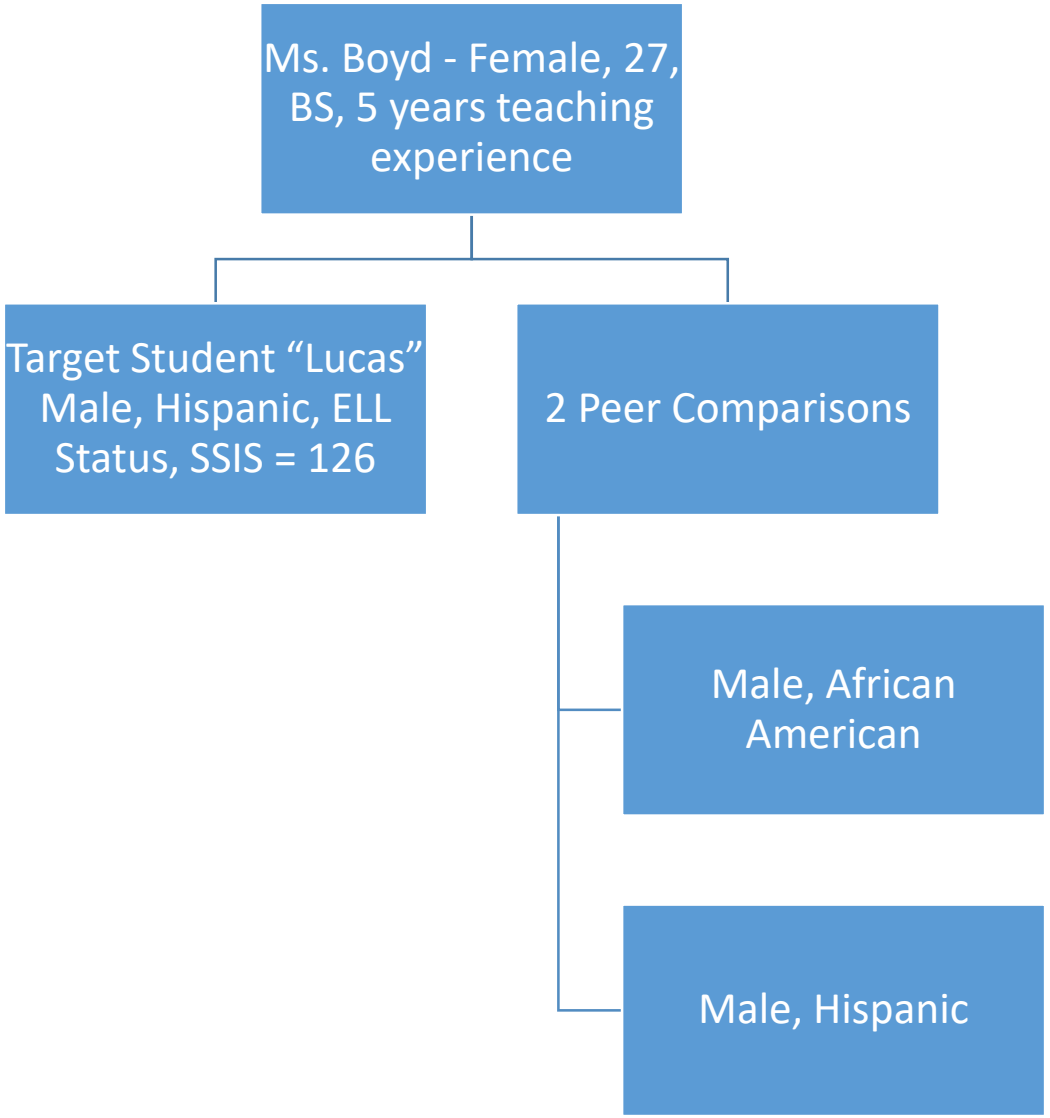
- Whether implementing an FBA-BIP process in general education classrooms in collaboration with general education teachers would increase academic engagement of target students.

- Whether changes in the behavior of the target students would be accompanied by collateral changes in academic engagement of comparison peers who had similar challenging behavior.

Study Design - Participants



Study Design - Participants



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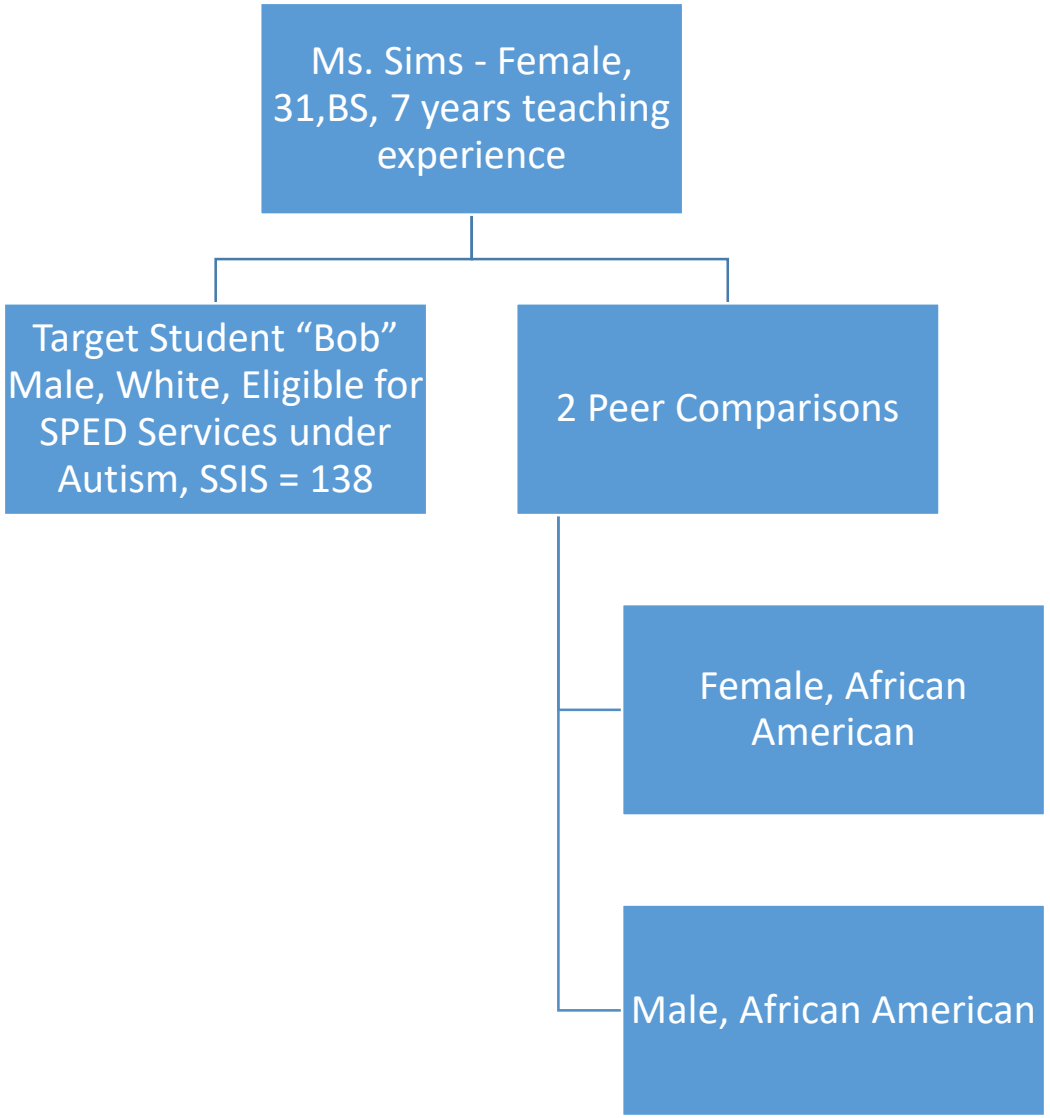
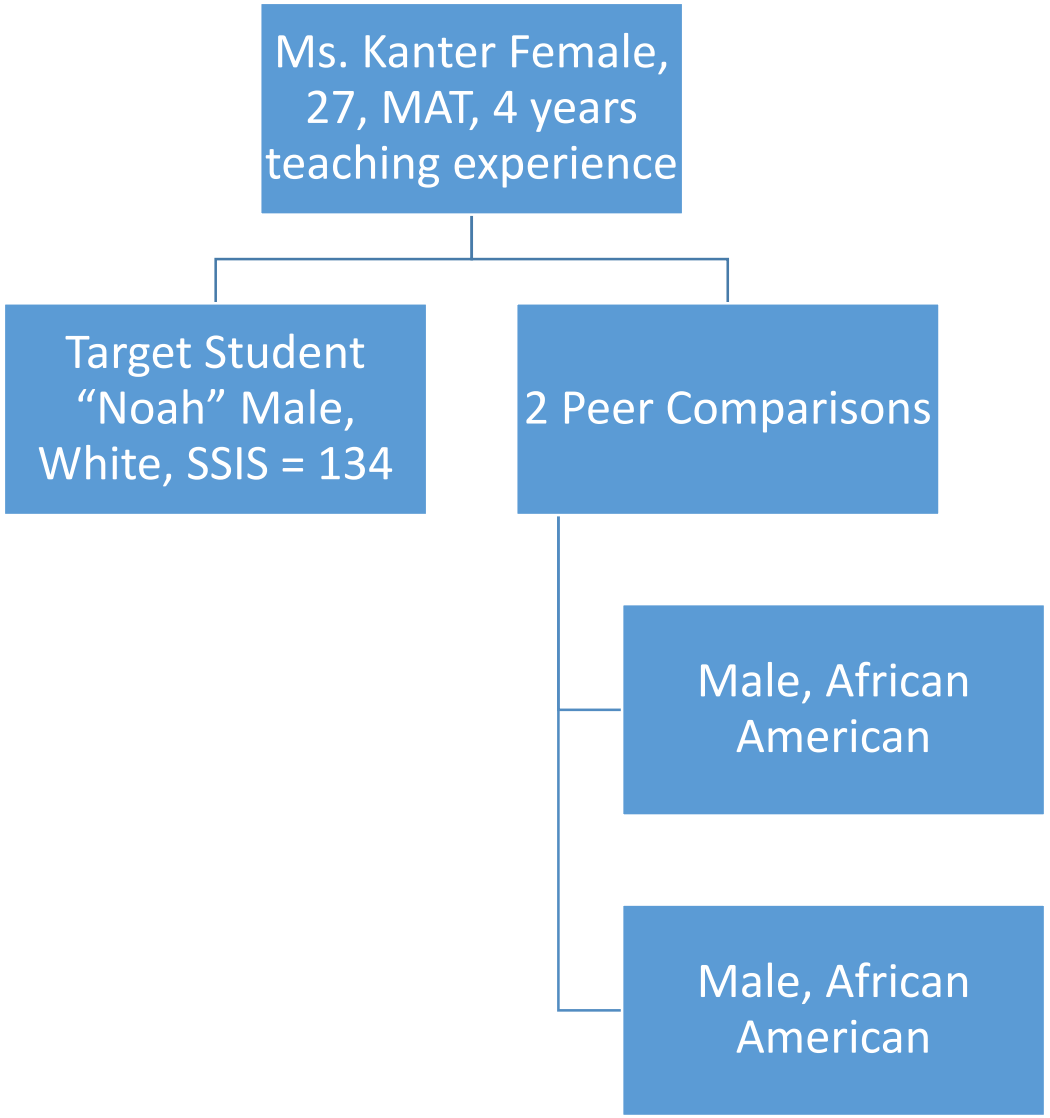


Study Design - Participants



Study Design - Setting

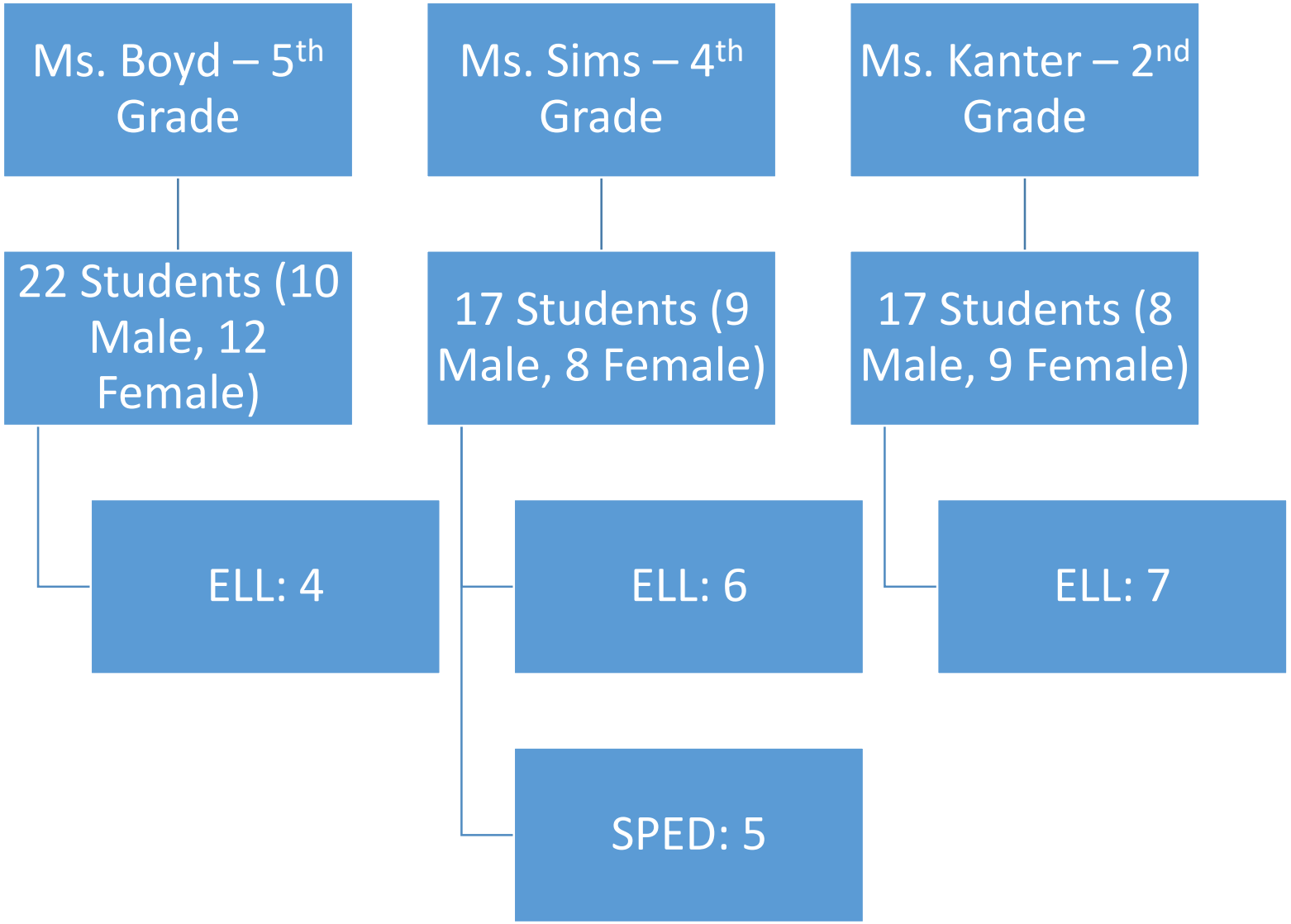
A public elementary school in a small city in the Southeastern US.

Title 1 school with 743 K-5th grade students

39.4% African America, 18.8% Caucasian, 35.3% Hispanic, 6% two or more races, 0.4% Alaskan Native, and 0.1% Asian

The school provides 16.5% (*n* = 123) of students with special education and speech services; 25.1% (*n* = 188) of students receive English Language Learner (ELL) services.

Study Design - Setting



Primary Dependent Variable

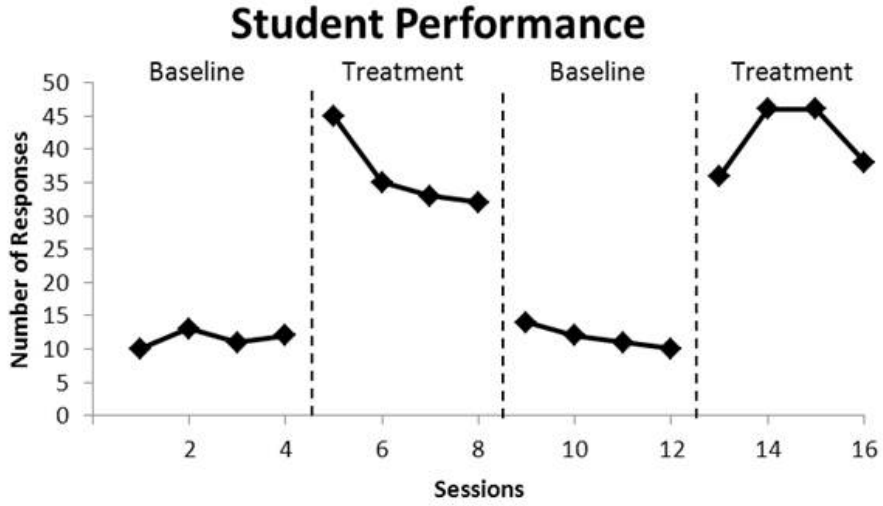
Direct Observation of Target Students and Peers

- **Academic Engagement**
  - Student engaging with instructional content through choral response, raising hand, responding to teacher instruction, orientating to teacher or peer (if appropriate), writing, reading with tracking, highlighting, or otherwise completing assigned task.
- Observations of target students and their peer comparisons occurred once a day for 30 minutes (3 days a week)
  - 5-sec momentary time sampling. At an audio prompt, the observers checked the student to determine if she or he was engaged; at the next prompt, the observer rotated to the next student in the sequence, starting again when all students had been assessed.

Experimental Design

- A single-subject reversal design was used to evaluate the effects of the teacher-created FBA-BIPs on the academic engagement of students with behavioral concerns and their comparable peers (Cooper et al., 2007).
- The baseline (A) and intervention (B) phases are repeated for a total of four phases (i.e., ABAB), allowing for three opportunities to demonstrate an effect (Kazdin, 2013).
- Target students' data were graphed and analyzed visually for a functional relation.

Sample ABAB Graph



Independent Variable

- **Practice-Based Professional Development** on FBAs-BIPs and Classroom Management
- Initial Meeting- 3 Hours
- 2 Follow up Meetings– 1 hour

Assess prerequisite knowledge & skills

Contextualize PD for teachers' current needs

Contextualize PD for teachers' current needs

12 Classroom Management Practices

Antecedent Strategies

- Physical Arrangement
- Post, teach, review, and provide feedback on expectations
- Daily schedule is posted and clearly visible to students
- Classroom routines are systematically taught, reinforced, and monitored

Teaching Behaviors

- Active supervision
- High rate of opportunities to respond
- Response cards
- Direct instruction

Consequence Based Strategies

- Specific and/or contingent praise
- System to acknowledge appropriate behavior (e.g., token economy)
- Continuum of consequences to discourage rule violations (e.g. planned ignoring)
- Performance feedback

(Epstein et al., 2008; Oliver and Reschly, 2007; Simonsen et al. 2008)

Ms. Sims (4th Grade)

Component	Bob
FACTS Interview	
Antecedent	Teacher gives a task
Behavior	Refusal to do work, argue with teacher, play with materials
Consequence	Access preferred activities
ABC Observation	Access peer attention, avoid non-preferred activities.
Hypothesis Derived from Function Matrix[1]	When non-preferred activities occur, Bob talks to peers, yells out, refuses to work (argues with teacher, plays with materials) refuses to work to avoid work and access attention (teacher and peer).

Note. FACTS = Functional Assessment Checklist for Teachers and Staff, ABC Observation = Antecedent-Behavior-Consequence Direct Classroom Observation. [1]Function Matrix (Umbreit et al., 2007)

	Method*	Antecedent Adjustments	Reinforcement	Extinction
Bob	Method 1 & 2 Teach the Replacement Behavior and Improve the Environment	▪ Provide non-contingent attention, brief check-in. ▪ Teacher wear MotivAider to increase praise (FI-3) ▪ Alter the students goal setting sheet ▪ Teach all students how to follow directions ▪ Use a PowerPoint clicker to increase proximity throughout the classroom**	▪ Provide high rates of BSP ▪ Set aside time for a morning and afternoon check-in with Bob	▪ Brief redirects and reminders that "You are earning" ▪ Reminding of the appropriate behavior ▪ Ignoring off-task behavior while praising other students who are on-task ▪ Teach students how to ignore inappropriate behavior.

Ms. Boyd (5th Grade)

Component	Lucas
FACTS Interview	
Antecedent	Transitions, independent work
Behavior	Out of area, talking to peers, refusing to work (ignoring task)
Consequence	Access to attention and escape academic tasks
ABC Observation	Accessing teacher and peer attention
Hypothesis Derived from Function Matrix[1]	When independent work occurs, Lucas talks to peers, yells out, refuses to work to avoid work and access attention (teacher and peer).

Note. FACTS = Functional Assessment Checklist for Teachers and Staff, ABC Observation = Antecedent-Behavior-Consequence Direct Classroom Observation. [1]Function Matrix (Umbreit et al., 2007)

	Method*	Antecedent Adjustments	Reinforcement	Extinction
Lucas	Method 3: Adjust the Contingency	▪ Rearrange seating to provide Lucas with seating closer to instruction next and an engaged peer ▪ Teacher wear MotivAider to provide attention (FI-3) to Lucas ▪ Use revised behavior chart to explicitly state behavioral goals and rewards ▪ Morning check-in to review expectations ▪ Increase opportunities to respond	▪ Provide Lucas non-contingent attention in the morning ▪ Allow Lucas to stay after school, when possible to give more attention. ▪ Provide BSP for engagement	▪ Ignore and redirect Lucas if he engages in problem behavior.

Ms. Kanter (2nd Grade)

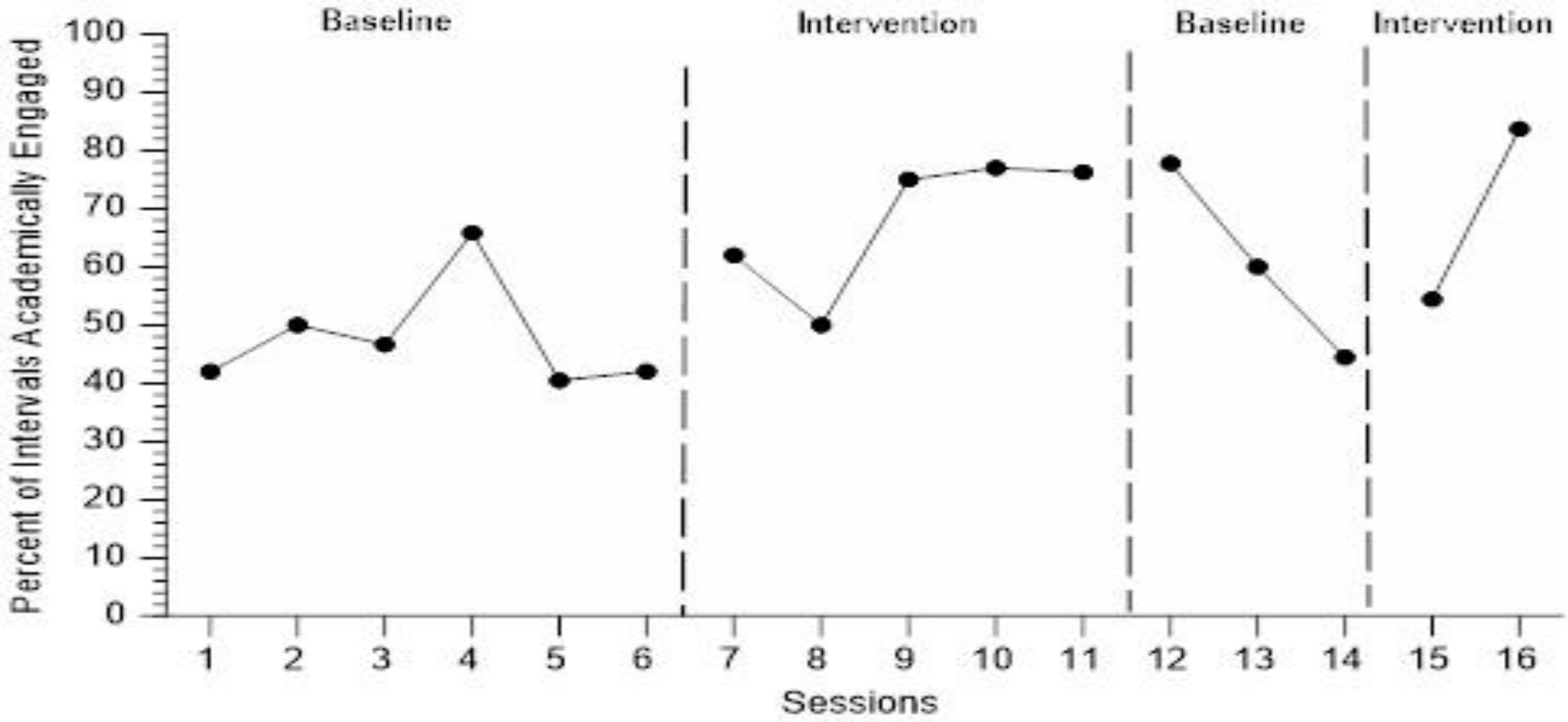
Component	Noah
FACTS Interview	
Antecedent	Whole class instruction and activities, transitions, unstructured activities
Behavior	Off-task, yelling at peers, throwing materials
Consequence	Access to peer and adult attention
ABC Observation	Access to teacher and peer attention
Hypothesis Derived from Function Matrix[1]	When whole class activities and transitions occur, Noah engages in off task behavior (yelling, throwing materials) to access attention (teacher and peer).

Note. FACTS = Functional Assessment Checklist for Teachers and Staff, ABC Observation = Antecedent-Behavior-Consequence Direct Classroom Observation. [1]Function Matrix (Umbreit et al., 2007)

	Method*	Antecedent Adjustments	Reinforcement	Extinction
Noah	Method 1 & 2 Teach the Replacement Behavior and Improve the Environment	▪ Alter goal setting sheet – separate AM and PM, add explicit expectations on the point sheet, new reward menu ▪ Teacher wear MotivAider during instruction to increase BSP (FI-3) ▪ Increase opportunities to respond ▪ Teach all students how to follow directions	▪ Revise reward menu (e.g., sit with a friend at lunch) ▪ When Noah meets his daily goal, notify his family (e.g., email, call)	▪ Brief redirects and reminders that “You are earning” ▪ Reminding of the appropriate behavior ▪ Teach students how to ignore inappropriate behavior.

Results

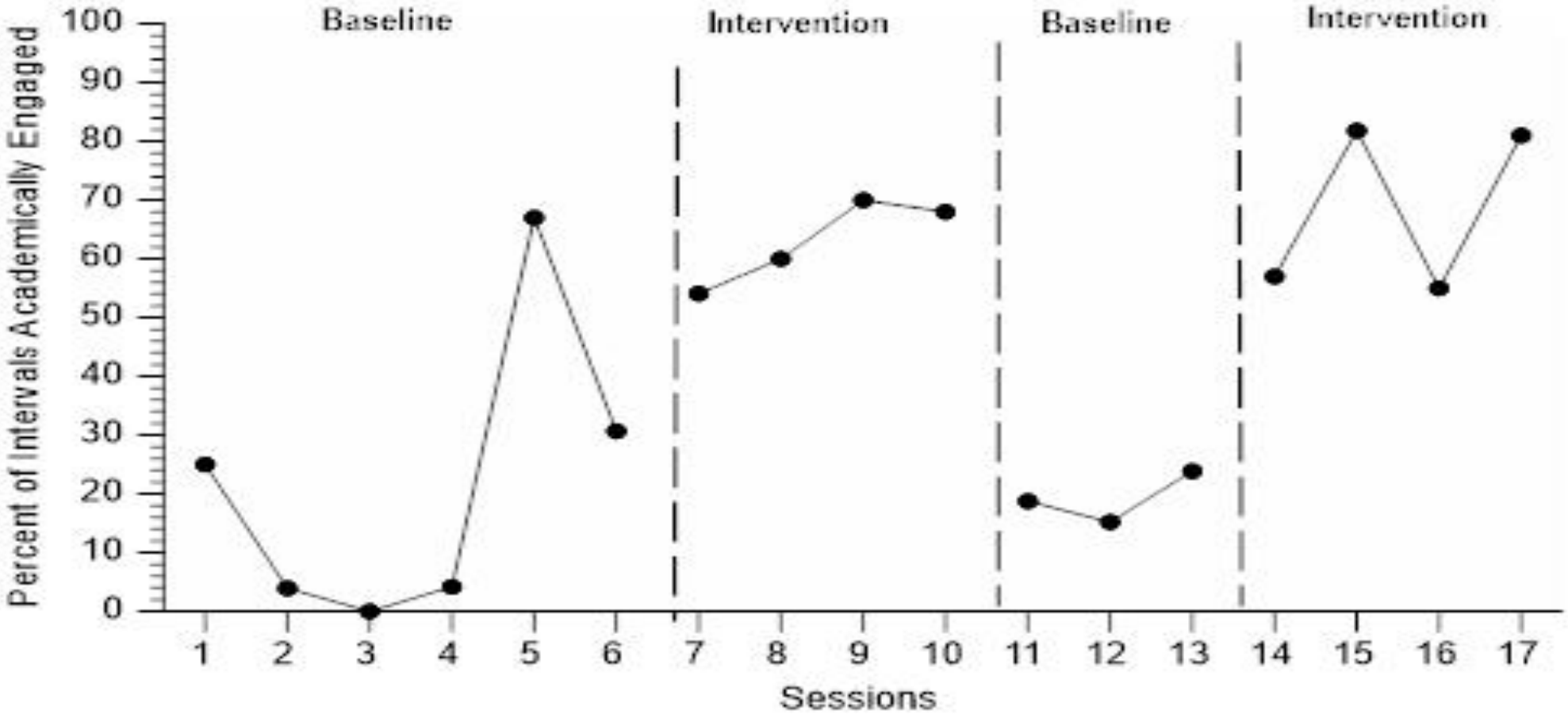
Lucas (Ms. Boyd)



Ms. Boyd's Students

	Baseline	Intervention	Baseline	Intervention
Lucas	47.8 (8.7)	68.1 (10.6)	60.7 (13.6)	69.1 (14.6)
Peer 1	48.3 (17.3)	52.9 (20.8)	43.7 (15.9)	52.7 (16.8)
Peer 2	65.1 (26.2)	70.2 (3.6)	57.2 (12.8)	50.1 (12.8)

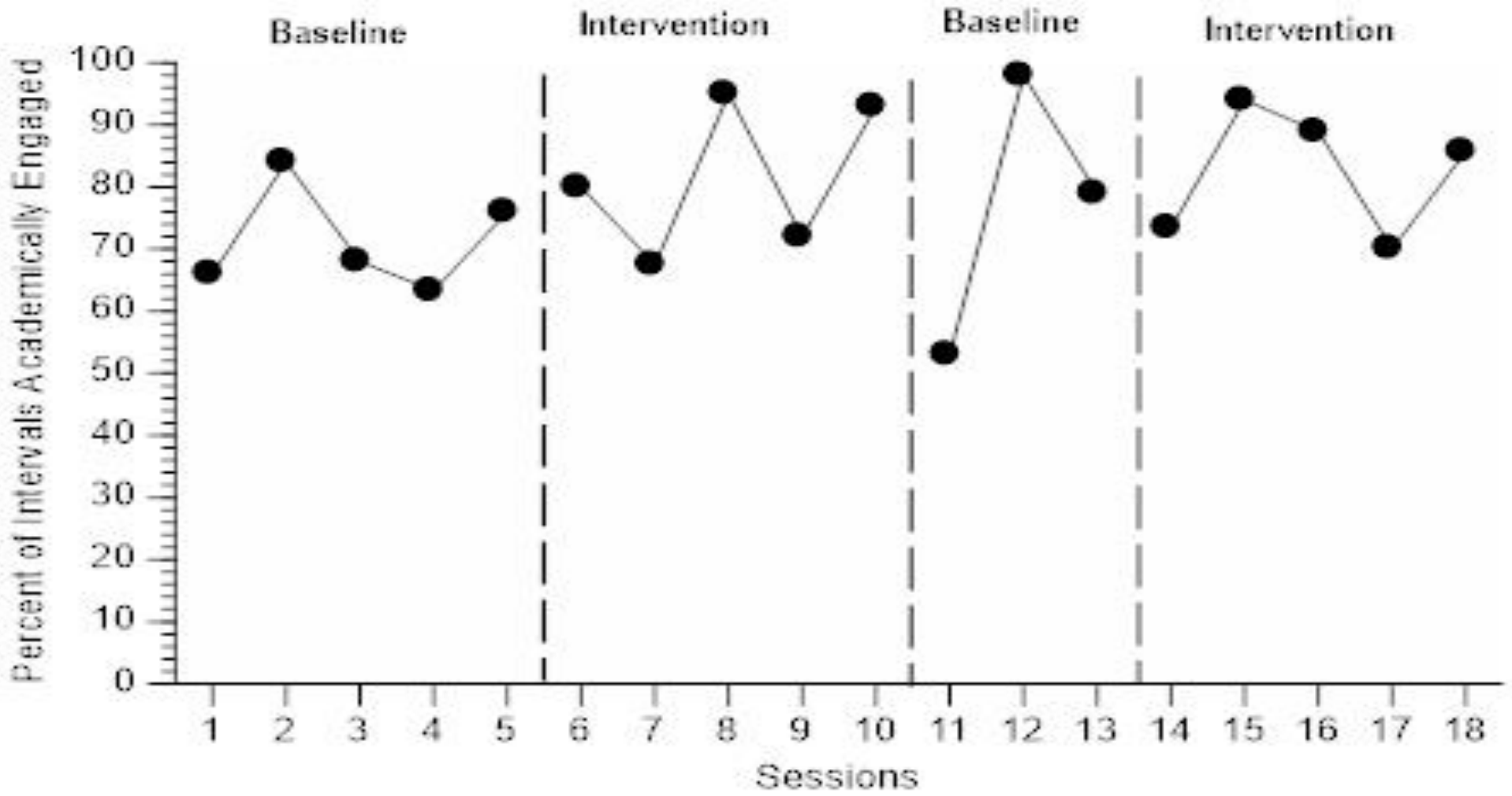
Bob (Ms. Sims)


Baseline
Intervention
Baseline
Intervention
Percent of Intervals Academically Engaged
100
90
80
70
60
50
40
30
20
10
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
Sessions

Ms. Sims' Students

	Baseline	Intervention	Baseline	Intervention
Bob	21.8 (23.2)	63.02 (6.4)	19.3 (3.6)	68.7 (12.7)
Peer 1	56.5 (17.2)	52.03 (23.3)	59.9 (16.6)	78.7 (13.1)
Peer 2	47.8 (18.0)	64.19 (15.1)	60.8 (23.2)	60.3 (21.5)

Noah (Ms. Kanter)



Ms. Kanter's Students

	M (SD)	M (SD)	M (SD)	M (SD)
Noah	71.5 (7.6)	81.5 (11.0)	76.7 (18.5)	82.4 (9.2)
Peer 1	70.0 (8.8)	81.1 (11.3)	89.3 (6.2)	73.8 (12.1)
Peer 2	90.2 (4.5)	86.0 (20.7)	68.0 (32.6)	86.4 (14)

Implications

This study demonstrated general education teachers can be trained to design and implement FBA-BIPs successfully.

Though FBA-BIPs may improve target students' engagement, we were unable to show these practices resulted in improvements for students in the same classrooms who demonstrated comparable problems.

For teachers who have multiple students with challenging behavior in a general education classroom, one implication of this study's findings is that each student may need an individualized intervention.

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