

Effectiveness Study of BEST in CLASS: A Tier 2 Intervention in Early Childhood Settings

Society for Prevention Research
31st Annual Meeting

Washington DC, May 2023

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SRI Education



The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R324R210005 to SRI International. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education. We have no conflicts of interest to disclose.

Outline of Presentation



- **Overview** of BEST in CLASS
 - Development process
 - Building the evidence base
- Introduction to the **Systematic Replication Study** of BEST in CLASS

Slides available now at:

studentbehaviorblog.org/presentations

Purpose

Research tells us that persistent challenging behavior has harmful long-term effects.

14-30% of young children demonstrate significant problem behavior

(Barbain, 2007; Feil et al., 2005; Qi & Kaiser, 2003)

Preschoolers are expelled more than 3 times the rate of children in any other grade

(Gilliam, 2005).

Without early intervention, the severity and intensity of problem behaviors increase

(Beyer, Postert, Muller, & Furniss, 2012; Dunlap et al., 2006).

Positive teacher-child interactions can serve as a “protective” factor for social/emotional and academic success

(Bulotsky-Shearer et al., 2012; McCabe & Altamura, 2011; O'Conner & McCartney, 2007)



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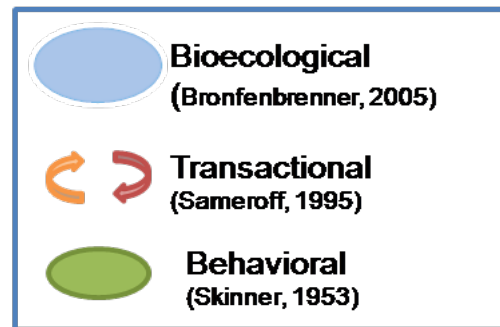
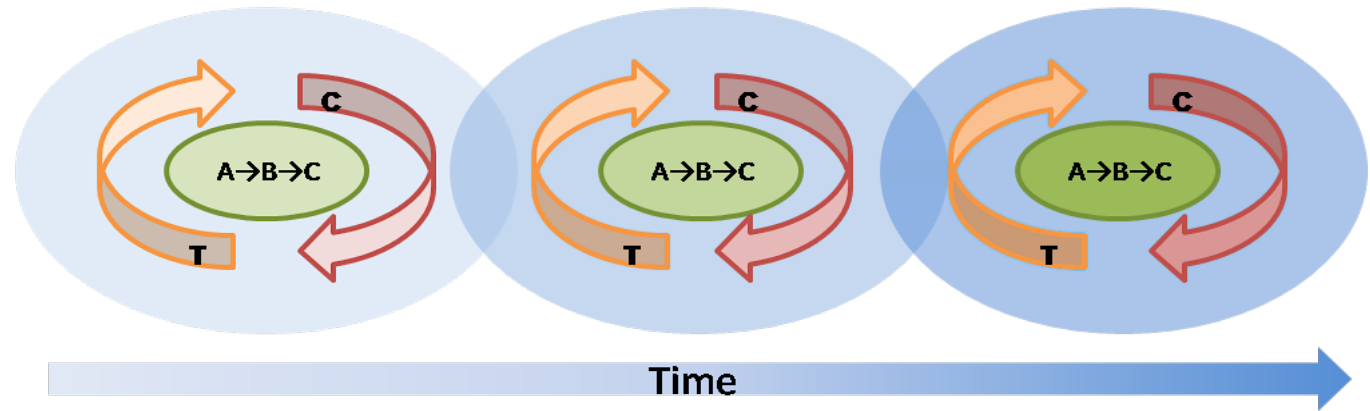
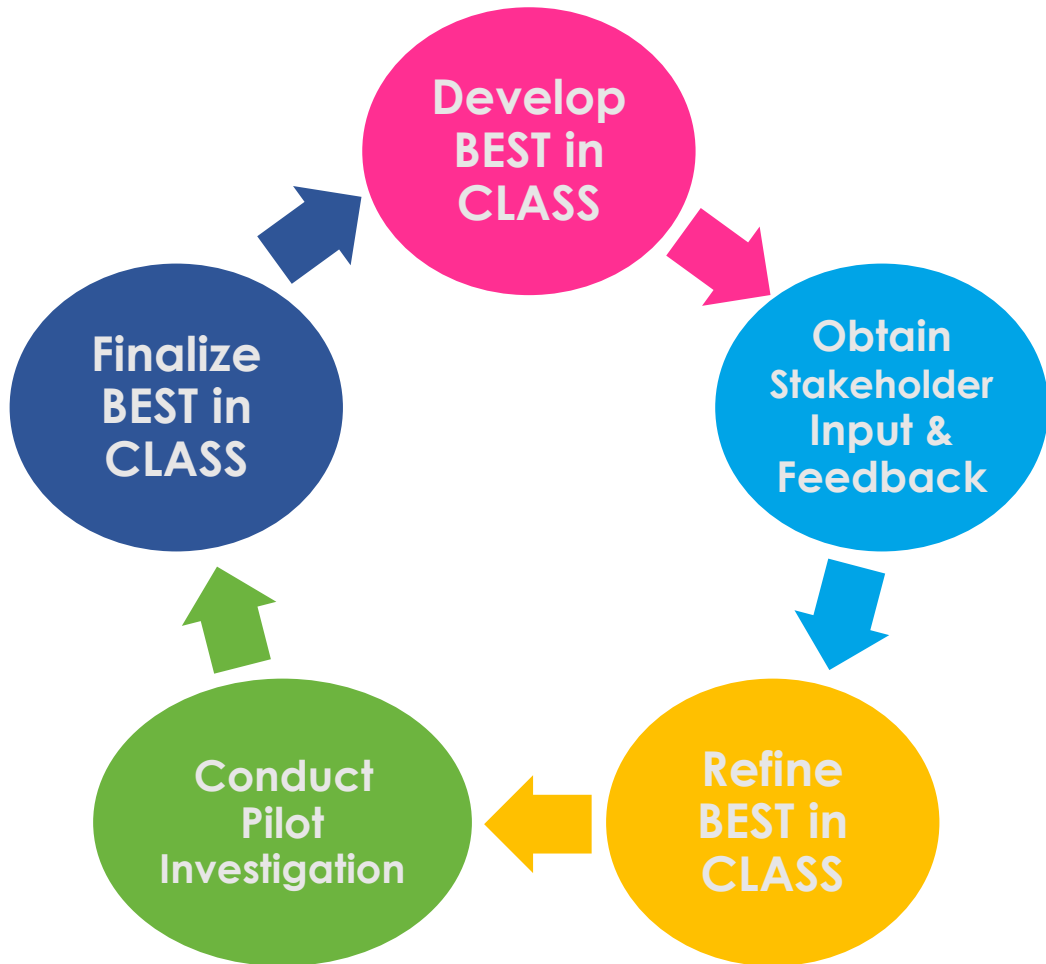
The **good news** is that evidence shows problem behavior is alterable with effective early intervention.

Positive teacher-child interactions can serve as a “protective” factor for social/emotional and academic success

(Bulotsky-Shearer et al., 2012; McCabe & Altamura, 2011; O'Conner & McCartney, 2007)



Development



Development

Develop
BEST in

Behavioral, Emotional, and Social Training: Competent Learners Achieving School Success

Conduct
Pilot
Investigation

Refine
BEST in
CLASS



Behavioral
(Skinner, 1953)



Building the Evidence

BEST in CLASS – Pre-K:
Goal 2
Development Study

TIMECS:
Goal 5
Measurement Study

BEST in CLASS – Web:
Goal 2
Development Study

BEST FRIENDS:
Goal 1
Early Career Study

BEST in CLASS – Pre-K
Replication Study

2011-2015

2015-2018

2018-2022

2020-2024

2008-2011

2014-2018

2016-2019

2019-2023

2021-2026

BEST in CLASS – Pre-K:
Goal 3
Efficacy Study

BEST in CLASS – Elementary:
Goal 2
Development Study

BEST in CLASS – Elementary:
Goal 3
Efficacy Study

BEST in CLASS – Elementary:
NIMH
Sustainability Study



Professional Development Components

Rules

Precorrection

Opportunity to Respond

Behavior Specific Praise

Corrective Feedback

Instructive Feedback

Linking & Mastery

BEST in CLASS Practices



BEST in CLASS
Teacher Workshop
and Manual



BEST in CLASS
Practice-based
Coaching

Teacher-Child Relationships & Classroom Atmosphere

Standardized Measures: Posttest Means & Treatment Effects

Measure	Scale	BEST in CLASS M	Comparison M	Cohen's d
Student-Teacher Relationship Scale; STRS	Closeness	<u>4.33</u>	4.17	0.26*
	Conflict	2.35	<u>2.64</u>	-0.29*
Classroom Assessment Scoring System; CLASS	Classroom Organization	<u>5.35</u>	4.82	0.52*
	Emotional Support	<u>5.59</u>	5.22	0.41*
	Instructional Support	<u>2.93</u>	2.33	0.55*



Child Behavior

Standardized Measures: Posttest Means & Treatment Effects

Measure	Scale	BEST in CLASS M	Comparison M	Cohen's d
Caregiver-Teacher Report Form; C-TRF	Externalizing Problems	57.99	<u>61.81</u>	-0.42*
Social Skills Improvement System; SSIS	Problem Behavior	111.07	<u>117.75</u>	-0.42*
Individualized Classroom Assessment Scoring System; inCLASS	Conflict	1.70	<u>1.94</u>	-0.43*



Implementation Fidelity

Behavior	BEST in CLASS		Comparison	
	Baseline M (SD)	Posttest M (SD)	Baseline M (SD)	Posttest M (SD)
Rules	.02 (.04)	↑ .11 (.09)	.02 (.04)	↓ .01 (.02)
Precorrection	.01 (.02)	↑ .07 (.07)	.01 (.02)	= .01 (.02)
Opportunity to Respond	.41 (.18)	↑ .54 (.19)	.39 (.20)	↓ .33 (.14)
Behavior Specific Praise	.01 (.03)	↑ .07 (.05)	.01 (.02)	↓ .00 (.01)
Instructive Feedback	.01 (.02)	↑ .11 (.10)	.01 (.02)	= .01 (.03)
Corrective Feedback	.01 (.02)	↑ .05 (.04)	.01 (.01)	= .01 (.01)
Engagement	.87 (.12)	↑ .98 (.03)	.86 (.15)	↑ .91 (.09)
Disruption, Aggression, Defiance	.10 (.12)	↓ ⁺ .01 (.03)	.08 (.15)	↓ ⁺ .07 (.11)
Positive Interactions	.87 (.14)	↑ .98 (.03)	.86 (.17)	↑ .92 (.09)
Negative Interactions	.10 (.10)	↓ ⁺ .01 (.04)	.12 (.16)	↓ ⁺ .08 (.11)

Conclusions

- In comparison to Business as Usual, there is evidence that

BEST in CLASS leads to:

Improved
classroom
atmosphere

Improved
teacher-child
interactions

Improvements in
child **appropriate**
behavior,
engagement, and
social skills

Reductions in
child **challenging**
behavior

- **BEST in CLASS** is an intervention that mitigates obstacles shown to negatively impact short- and long-term child outcomes

- These findings have maintained

Over **time**
&
Across **trials**



Conclusions

So, now.....

- **BEST in CLASS** is an intervention that mitigates obstacles shown to negatively impact short- and long-term child outcomes

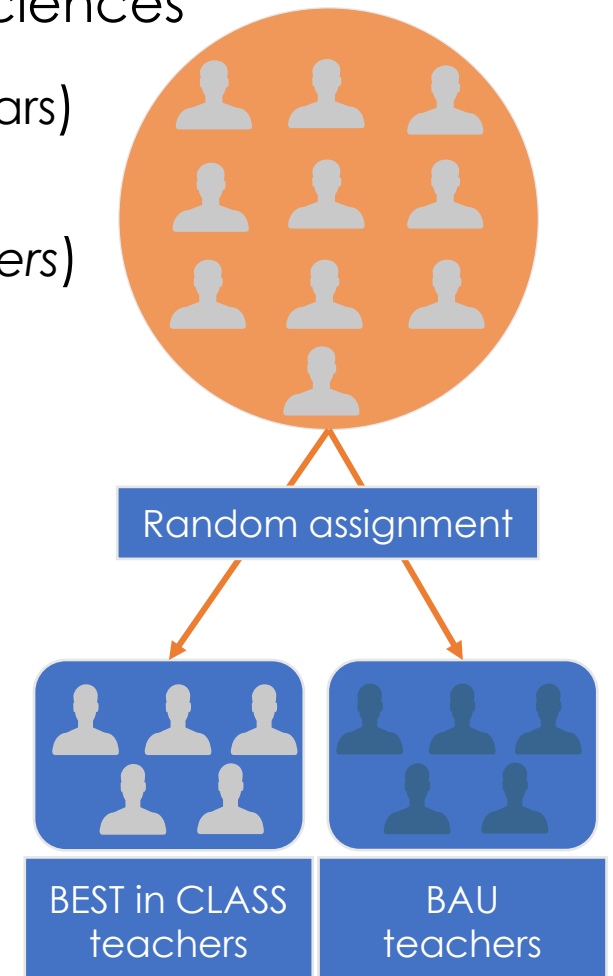
- These findings have maintained **Over time** & **Across trials**



Systematic Replication Study of BEST in CLASS

- Funded by **U.S. Department of Education**, Institute of Education Sciences (IES), *National Center for Special Education Research* (\$4.5M, 5 years)
- Partnership between **SRI** (*lead researchers*) and **UF & VCU** (*developers*)

Large-scale, experimental study of BEST in CLASS
under **routine conditions**
in **authentic early childhood settings**
across the country



Systematic Replication Study of BEST in CLASS

IES systematic replication eligibility criteria

- Peer-reviewed paper from causal-impact study meeting What Works Clearinghouse (WWC) standards
- Results must provide practically important impacts on meaningful education outcomes that would be of interest to education stakeholders

Previous **efficacy trials** of BEST in CLASS conducted under **ideal conditions**

- Coaching conducted by highly trained and experienced research staff, closely supervised
- Teaching practices observed, deviations corrected
- Regular monitoring by program developers

Replication study implemented in **naturally occurring** conditions with **typical end users**

- Independent evaluation



Systematic Replication Study of BEST in CLASS

Cluster randomized controlled trial

- 3 school years
- 180 classrooms
 - 1-3 focal children per classroom

Classroom **screening** to **identify** children with **behavior concerns**

- Systematic Screening for Behavior Disorders; SSBD

Data collection

Baseline and Posttest

- Direct observation
 - CLASS
 - Teacher-child interactions
 - BEST in CLASS implementation
- Direct child assessment
- Teacher survey
 - Teacher-child relationship
 - Self-efficacy
 - Child behavior

Midyear

- Teacher survey
 - Teacher-child relationship
 - Self-efficacy

- Randomization
- Coach training
- Teacher training
- Implementation
- Monitor fidelity of implementation and coaching

Cost effectiveness analysis study





- Purpose: To help stakeholders learn about **evidence-based** approaches to support all students' **positive behavior, mental health, and well-being**.
- Includes tips and findings from our research, evaluation, and TA work.
 - Perspectives from our partners on the ground, too!
- Send comments and inquiries about partnering or working with us to: studentbehaviorblog@sri.com

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