APPLYING PBS IN ELEMENTARY SCHOOL CLASSROOMS WITH CLASS-WIDE FUNCTION-RELATED INTERVENTION TEAMS (CW-FIT)

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- Project Coordinators
  - Harriett Bannister
  - Terrell McGuire
  - Jackie Millin
  - Leslie Williams
AGENDA

- Teacher challenges and classroom behavior problems
- Overview of CW-FIT
- Previous research on CW-FIT
- Overview of the IES grant
- Review of results - Class-wide data
- Review of results - Individual data
- Summary and future directions
CHALLENGES IN ELEMENTARY SCHOOLS

- Classroom management and problem behaviors are significant concerns for teachers.
- 50% of teachers spend more time with student misbehavior than they think they should.
- Many teachers report being underprepared in effective classroom management.
- Teachers often report leaving the profession due to problems with behavior management.
EMOTIONAL BEHAVIORAL DISORDERS (EBD)

- Students at risk for or exhibiting:
  - Externalizing behaviors
  - Internalizing behaviors
  - Comorbid
EXTERNALIZING BEHAVIOR

- Behavior problems:
  - Outwardly directed
  - Behavioral excesses
  - Considered inappropriate

(Walker & Severson, 2014)
EXAMPLES OF EXTERNALIZING BEHAVIORS

- Arguing
- Bullying
- Defying the teacher
- Disturbing others
- Displaying aggression
- Not complying with teacher instructions and school rules

(Walker & Severson, 2014)
TYPICAL OUTCOMES FOR EXTERNALIZING BEHAVIORS

- Highly observable behavior
- Annoying, obnoxious behavior
- Rejection by peers and adults
- Results in office referrals
- Interventions in Tier 3 settings
- Interventions are punishment oriented
INTERNALIZING BEHAVIORS

- Behavior problems
  - Directed inwardly
  - Represents problems with self
  - Self-imposed
  - Involves behavioral deficits
  - Patterns of social avoidance

(Walker & Severson, 2014)
EXAMPLES OF INTERNALIZING BEHAVIORS

- Preferring to spend time alone
- Not talking with other children
- Being shy, timid, and/or unassertive
- Having low or restricted activity levels
- Avoiding or withdrawing from social situations
- Being unresponsive to social initiations by others

(Walker & Severson, 2014)
TYPICAL OUTCOMES FOR INTERNALIZING BEHAVIORS

- Less likely to be noticed
- Rejection by peers and adults
- Not referred for discipline or interventions
- Exhibits depression, anxiety, social withdrawal, and/or somatic problems

(Gage, 2013; Lane, et al., 2008)

- Internalizing symptoms, on account of their latent appearance, often receive less attention from school administration despite the growing gap between academic and post-high school success among students with internalizing symptoms and their peers.

(Lane et al., 2008)
LONG-TERM PROBLEMS CREATED BY EBD

- Sub-average academic performance
- Lower graduation rates
- Lower post-school success
- Lower post-secondary enrollment
- Increased risk of violent behavior
- Higher arrest rates
NEEDS IN SCHOOLS

~20% students in need of services
  • Only ~20% of these receive services

Demands on educators
  • Insufficient resources, overworked
  • Limited time, academic requirements

Ineffective Programs
  • Not evidence based (e.g., “fads”)
  • Reactive “get tough” approaches
  • Address problems too late, less responsive to treatment
OVERVIEW OF CW-FIT

- Common functions maintaining problem behaviors:
  - Teacher attention
  - Peer attention
  - Escape

- Students not responding to CW-FIT (universal) receive targeted strategies:
  - Help cards
  - Self-management
  - Increased OTR

- For students not responding to targeted strategies:
  - Intensify/modify targeted strategies
  - Functional assessment
CW-FIT Teaching Skills

- Direct instruction of skills to meet expectations
  - Define
  - Model
  - Role play
  - Feedback
  - Practice
- Teach and practice (3-5 days)
- Pre-correct at start of instruction
- Incidental teaching
**CW-FIT Program**

- **Group Contingency**
  - Teams
  - Daily point goal set
  - Points awarded every 2-5 minutes to groups in which all students are displaying behavioral skills at the beep
  - Reward given at end of class to all groups who met goal

- **Teacher Praise**
TEAMS

- Class is divided into 3-6 teams (2-5 students)
- Teams are usually “rows” or groups that the teacher may quickly and easily differentiate between.
- Some students may need to be on “their own team.”
TEACHERS SCORE & RECORD POINTS

- As the timer beeps, teachers scan the room and give points to each group actively engaged in appropriate behavior at that moment.
- Points are awarded contingent on entire group
REINFORCERS

STRONGLY ENCOURAGE QUICK ACTIVITIES OR PRIVILEGES

- Five minute of freeze dance game
- School supplies (pencils, erasers, small notebooks)
- Five-minute class game (for teams that met the goal)
- Use of gel pens during the next academic lesson
- Tickets as part of a class or school-wide reinforcement system
- Reading with feet on the desk
- Stickers (younger kids)
- Bonus choice time
CW-FIT Training

Pre-Corrects
Determining Goal and Reward
Praise and Points
Wrap Up
TIER TWO

- For students who are “nonresponsive”
  - Based on observational data
- Function based thinking
  - QABF – teacher ratings

```
- QUESTIONS ABOUT BEHAVIORAL FUNCTION (QABF)


Rate how often the student demonstrates the behaviors in situations where they might occur. Be sure to rate how often each behavior occurs, not what you think a good answer would be.

X = Doesn't apply 0 = Never 1 = Rarely 2 = Some 3 = Often
```

<table>
<thead>
<tr>
<th>Score</th>
<th>Number</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>Engages in the behavior to get attention.</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>Engages in the behavior to escape work or learning situations.</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>Engages in the behavior as a form of “self-stimulation”.</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td>Engages in the behavior because he/she is in pain</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Attention</th>
<th>Escape</th>
<th>Non-social</th>
<th>Physical</th>
<th>Tangible</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>Engages in the behavior to get attention.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Do something</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Not doing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Thinking alone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>When ill</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Physical problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Uncomfortable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Not testing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Blank</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>“Give me</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>You have</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Peer has</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Tier Two**

**Help Cards**
- Addresses Escape/Avoidance
  - For students who need additional help with work
- Taught in small group booster session
- Peer or teacher help

**Self-Management**
- Addresses students with attention seeking behaviors
- Presented as a “privilege”
- Taught in small group booster session

![Help Cards](image)

![Self-Management Chart](chart)
Participants:
- 17 public schools in 3 districts, 1 charter school, 1 parochial school
- 86 intervention classes and 73 comparison classes
- Approximately 1,600 students
- ABAB reversal design in 39 classrooms
- 181 students with behavior risks
- 132 comparison students with risks
METHODS

- Schools recruited at district level and then principal and staff agreement
- Teachers within schools volunteered and were randomly assigned following consent to experimental (CW-FIT) or comparison (Business as usual) conditions
- Students nominated by teachers and screened using Problem Behavior Subscale (SSRS)
- Baseline: Business as usual, colored cards pulled for misbehavior, minimal use of group contingencies
- CW-FIT: Class-wide lessons, group contingency using points and teams, goal settings, rewards
- Tier 2: Addition of self-management or help cards for students not responding to CW-FIT
MEASURES

- Class-wide
  - On-Task Behavior
    - momentary time sample 30 s across teams
  - Class-wide Teacher Praise and Reprimands
    - frequency count

- Target Student – At Risk for EBD
  - On-Task Behavior
    - duration using *Multi-Option Observation System for Experimental Studies* (MOOSES)
  - Target Student Disruptive Behaviors
    - frequency count using MOOSES
  - Teacher Praise and Reprimands to Target Students
    - frequency count using MOOSES
OUTCOMES FOR CW-FIT RCT # 1

- Class-wide On-task Behavior
  - Baseline average: 50%
  - CW-FIT average: 82%

- Teacher Praise
  - Baseline average: 2.2
  - CW-FIT average: 11.2

- At-Risk Student On-task
  - Baseline average: 67%
  - CW-FIT average: 87%

- At-Risk Student Disruptive Behavior
  - Baseline average: 17.9
  - CW-FIT average: 6.8
RCT Efficacy Publications


**Tier 2 Results**

- Students at risk for EBD improve on-task and reduce disruptive behaviors when adding self-management or help cards to CW-FIT.


### Tier 2 Results

**On Task %**

- **Self-management n=35**
- **Help Cards n=7**

**# of Disruptive Behaviors**

Bar graphs showing improvements across different tiers for on-task percentage and disruptive behaviors.
**OTHER FINDINGS**

- CW-FIT is a useful intervention when used multiple times during the class day.\(^a\)
- CW-FIT variations are effective in secondary settings.\(^b\)
- CW-FIT variations are effective in preschool settings.\(^c\)


TEACHER SATISFACTION

- Highly satisfied with results
- Spent less time attending to problem behavior
- Students were better behaved, improved climate
- Easy to implement

- “This worked really well with my language class...Both groups improved in what work they were able to complete.”
- “It was helpful to get some students to follow directions and it is good team building.”
- “We play CW-FIT during Math and they improved their scores more than ever in Math this time...I am going to start playing during reading too!”
STUDENT SATISFACTION

- Liked the game
- Requested to play it at other times of the day
- Students replicated the game during recess and at home

- “When we play the game my teacher is nice.”
- “I like getting rewards for being good.”
- “It makes me pay attention better.”
CW-FIT Multi-site 4-Year Study 2012-2016

Participants

- 21 public schools across 3 states
- 73 experimental classes
- 65 comparison classes
- 172 CW-FIT students with behavior risks
- 143 comparison students with behavior risks
METHODS

- Same methods and measures as initial CW-FIT RCT study
- Randomized Control Trial
- Schools recruited at all 3 sites
- Teachers within schools volunteer and are randomly assigned following consent
- Students nominated by teachers using SSBD and meeting Problem Behavior cut scores on SSIS ratings
- Class-wide on task, teacher praise and reprimands
- Target students’ on-task and disruptive behaviors
# Class-Wide Data Years 1-3

<table>
<thead>
<tr>
<th>School</th>
<th>Teacher</th>
<th>Subject</th>
<th>Class Activity Code</th>
<th>Observer</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>LG SO IA T</td>
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</tbody>
</table>

**Condition:**
- Experimental
- Control
- Baseline
- Intervention
- Comparison
- Reversal

**Reliability:**
- Y
- N

**Reliability Score:**%

## Praise Individual

<table>
<thead>
<tr>
<th>Group</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
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<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal</td>
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</tbody>
</table>

## Praise Group

<table>
<thead>
<tr>
<th>Points</th>
<th>Verbal</th>
</tr>
</thead>
</table>

## Reprimand Individual

<table>
<thead>
<tr>
<th>Group</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>5</th>
<th>6</th>
<th>7</th>
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<th>16</th>
<th>17</th>
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<th>20</th>
<th>Total</th>
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<tbody>
<tr>
<td>Verbal</td>
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</tbody>
</table>

## Reprimand Group

| Verbal | |

**Class Activity Codes:**
- LG = Large Group (teacher led)
- SG = Small Group ≤ 6 (teacher led)
- IA = Individual/Independent Work
- T = Transition

**Primary Observer:**

**Reliability Observer:**

**Comments:**

**Class Mean**

**Updated 6/28/2013**
DATA COLLECTION PROCEDURES

- Teachers identify most difficult time/subject of day
- 20 minute paper/pencil observation
- Trained research staff

Variables
- Group On-task
- Teacher Praise
- Teacher Reprimands
# Definitions of Variables

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Definition</th>
<th>Examples</th>
<th>How measured</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group On-task</strong></td>
<td>Every student in a group must be working appropriately on the assigned or approved activity</td>
<td>Attending to the material and the task, making appropriate motor responses, asking for assistance (where appropriate) in an acceptable manner, waiting appropriately for the teacher to begin or continue with instruction</td>
<td>20 minute momentary time sampling on group record sheet</td>
</tr>
<tr>
<td><strong>Teacher Praise</strong></td>
<td>All verbal statements (to individuals, small groups, or whole class) that indicated approval of behavior over and above an evaluation of adequacy or acknowledgement of a correct response to a question</td>
<td>“Great job getting my attention the right way!”, “Jane, thank you for giving me your listening ears!”, “I have stellar listeners in class today!”</td>
<td>20 minute on-task observations, recorded via frequency counts on group record sheet</td>
</tr>
<tr>
<td><strong>Teacher Reprimands</strong></td>
<td>Verbal statements (to individuals, small groups, or whole class) used by teacher to negatively comment about student behavior, or to scold students, often with the intent to stop the student from misbehaving</td>
<td>“I told you to sit down!”, “Quit wasting time and get back to work.”, “That’s five minutes off of recess.”</td>
<td>20 minute on-task observations, recorded via frequency counts on group record sheet</td>
</tr>
</tbody>
</table>
## Inter-Observable Agreement

<table>
<thead>
<tr>
<th>Total Sessions Across Sites</th>
<th>Total Reliability Sessions</th>
<th>Percentage of Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2370</td>
<td>553</td>
<td>23.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IOA Average</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>96.3%</td>
<td>82-100%</td>
</tr>
</tbody>
</table>
ACADEMIC SUBJECTS ACROSS CONDITIONS

Treatment Classrooms

Comparison Classrooms

- Reading
- Math
- Science
- Social Studies
- Writing
- Language Arts
- Other
CLASS-WIDE ON-TASK YEARS 1-3

![Bar chart showing on-task years 1-3 comparison between Experimental and Control groups.](image)

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Intervention/Comparison</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>Mean: 54.63%</td>
<td>Mean: 79.52%</td>
<td>1.73</td>
</tr>
<tr>
<td></td>
<td>SD: 16.65</td>
<td>SD: 11.73</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>Mean: 55.45%</td>
<td>Mean: 57.99%</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td>SD: 14.38</td>
<td>SD: 15.69</td>
<td></td>
</tr>
</tbody>
</table>
**Teacher Praise Years 1-3**

### Individual Praise

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Intervention/Comparison</th>
<th>Cohen’s $d$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>Mean: 4.62</td>
<td>Mean: 5.74</td>
<td>0.19</td>
</tr>
<tr>
<td></td>
<td>SD: 5.18</td>
<td>SD: 6.44</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>Mean: 4.33</td>
<td>Mean: 2.99</td>
<td>-0.27</td>
</tr>
<tr>
<td></td>
<td>SD: 5.38</td>
<td>SD: 4.71</td>
<td></td>
</tr>
</tbody>
</table>

### Group Praise

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Intervention/Comparison</th>
<th>Cohen’s $d$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>Mean: 1.52</td>
<td>Mean: 11.93</td>
<td>1.50</td>
</tr>
<tr>
<td></td>
<td>SD: 2.23</td>
<td>SD: 9.53</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>Mean: 1.31</td>
<td>Mean: 0.87</td>
<td>-0.26</td>
</tr>
<tr>
<td></td>
<td>SD: 1.82</td>
<td>SD: 1.53</td>
<td></td>
</tr>
</tbody>
</table>
**Teacher Reprimands Years 1-3**

### Individual Reprimands

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Intervention/Comparison</th>
<th>Cohen's $d$</th>
</tr>
</thead>
</table>
| Experimental | Mean: 6.12  
SD: 5.96 | Mean: 2.83  
SD: 3.08 | -0.69 |
| Control   | Mean: 5.25  
SD: 4.51 | Mean: 3.85  
SD: 3.84 | -0.33 |

### Group Reprimands

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Intervention/Comparison</th>
<th>Cohen's $d$</th>
</tr>
</thead>
</table>
| Experimental | Mean: 2.05  
SD: 2.25 | Mean: 1.42  
SD: 1.78 | -0.31 |
| Control   | Mean: 2.01  
SD: 2.32 | Mean: 1.50  
SD: 2.04 | -0.04 |
FIDELITY OBSERVATIONS

- Implementation fidelity was recorded on every observation.
- Teachers were able to implement CW-FIT procedures with 93% fidelity.
# Implementation Fidelity

<table>
<thead>
<tr>
<th>CW-FIT Fidelity Procedures</th>
<th>CW-FIT</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Skills are prominently displayed on posters</td>
<td>99%</td>
<td>0%</td>
</tr>
<tr>
<td>2. Precorrects on skills at beginning of session</td>
<td>90%</td>
<td>0%</td>
</tr>
<tr>
<td>3. Corrections are instructive and refer to skills</td>
<td>84%</td>
<td>0%</td>
</tr>
<tr>
<td>4. Team point chart displayed</td>
<td>99%</td>
<td>3%</td>
</tr>
<tr>
<td>5. Daily point goal posted</td>
<td>98%</td>
<td>0%</td>
</tr>
<tr>
<td>6. Self-management charts given/individuals</td>
<td>88%</td>
<td>0%</td>
</tr>
<tr>
<td>7. Timer used &amp; set at appropriate intervals</td>
<td>99%</td>
<td>0%</td>
</tr>
<tr>
<td>8. Points awarded to teams for use of skills</td>
<td>99%</td>
<td>1%</td>
</tr>
<tr>
<td>9. Points tallied for teams</td>
<td>97%</td>
<td>1%</td>
</tr>
<tr>
<td>10. Winners immediately rewarded</td>
<td>69%</td>
<td>0%</td>
</tr>
<tr>
<td>11. Winners reward announced if delayed</td>
<td>91%</td>
<td>0%</td>
</tr>
<tr>
<td>12. Frequent praise (points) given</td>
<td>98%</td>
<td>7%</td>
</tr>
<tr>
<td>13. Behavior-specific praise given</td>
<td>94%</td>
<td>13%</td>
</tr>
<tr>
<td>14. Praise (points) to reprimand ratio is approximately 4:1</td>
<td>92%</td>
<td>5%</td>
</tr>
</tbody>
</table>
SOCIAL VALIDITY SURVEYS

- Teachers
- Students
## Teacher Social Validity Surveys

<table>
<thead>
<tr>
<th>Statement</th>
<th>Very/Mostly True</th>
<th>Somewhat/Not True</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoyed being a CW-FIT Intervention Teacher.</td>
<td>87%</td>
<td>13%</td>
</tr>
<tr>
<td>The CW-FIT program was easy to learn and implement in my classroom.</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>The timer was manageable for use during instruction.</td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>The use of teams and points for appropriate behaviors were helpful in improving students’ behavior.</td>
<td>96%</td>
<td>4%</td>
</tr>
<tr>
<td>The self-management component was easy for students to learn.</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>The help card component was easy for students to learn.</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>I learned new skills to help manage students’ behavior.</td>
<td>93%</td>
<td>7%</td>
</tr>
<tr>
<td>I will use the CW-FIT skills I learned with future classes.</td>
<td>89%</td>
<td>11%</td>
</tr>
<tr>
<td>I will recommend the CW-FIT program to colleagues.</td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>My students enjoyed using the CW-FIT program.</td>
<td>96%</td>
<td>4%</td>
</tr>
<tr>
<td>My students were more focused and engaged when we implemented CW-FIT.</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Teacher Comments

What was most helpful in learning to implement CW-FIT?

- Modeling of intervention (videos or staff)
- Consulting with staff
- Practice

What could have been more helpful?

- Skills for generalization
- Larger selection of reward options
- More ideas for praise
STUDENT SOCIAL VALIDITY

- 94% of students like using CW-FIT
- 92% of students think others should use CW-FIT in their classrooms
**Positive Student Comments**

- **Enjoy CW-FIT**
  - “It’s fun and gives children a chance to learn good habits.”

- **Teamwork**
  - “It helped me get to work as a team with other people and make more friends.”

- **Academics**
  - “It helped me concentrate when I was writing.”

- **Rewards**
  - “Kids like prizes, and although they might mind if they have to follow rules, it’s a fun challenge and the reward is worth it.”
NEGATIVE STUDENT COMMENTS

 Dislike CW-FIT
  • “It can build up stress.”
 Teamwork
  • “If one person is disruptive, you don’t get a point.”
 Academics
  • “Sometimes the teacher doesn’t tell us to call out the answer and we yell out and she doesn’t give us the points.”
 Rewards
  • “It is hard to watch other kids receive rewards if you don’t.”
DIRECT OBSERVATION OF TARGET STUDENTS

Rank Ordering on Externalizing Dimension

Externalizing refers to all behavior problems that are directed outwardly, by the child, toward the external social environment. Externalizing behavior problems usually involve behavioral actions considered inappropriate by teachers and other school personnel. Non-examples include:

Examples include:
- displaying aggression toward objects or persons
- arguing
- limiting the submission of others
- defiant the teacher
- being out of seat
- not complying with teacher instructions or directives
- having tantrums
- being hyperactive
- disrupting others
- yelling
- not following teacher or school imposed rules

Instructions:
1. Review the definition of externalizing behavior and then review a list of all behaviors.
2. Enter the name of the externalizing students (3-6), those whose character the externalizing behavioral definition.
3. Rank order the students listed according to the degree or extent to which each greatest degree is ranked first and so on until all students are ranked ordered.
4. Enter the name of peer models. 3-4 students who show appropriate and can

File
Preferences
Timer

reg_r(0) OTR(0)
reg_r2(0)
Handrate(0)
pr_m(0)
pr_gr(0)
Resp(0)
Nonrep(0)
point(0)
teacher Act_eng Small
otherch Pass_eng AmazonOne
Diseng
Down_Time
bv(0) bd(0)
Screening Procedures

- Teacher completes a modified SSBD (Walker & Severson, 1991)
  - Rank order at-risk students and nominate peer models
  - Both Externalizers and Internalizers

- Teacher completes the problem behavior section of SSIS (Gresham & Elliott, 2008)

- Direct observation of disengagement and disruptive behavior
### Number of Students Observed Across Sites

<table>
<thead>
<tr>
<th></th>
<th>Intervention Target Students</th>
<th>Control Target Students</th>
<th>Intervention Peer</th>
<th>Control Peer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KU</strong></td>
<td>69</td>
<td>62</td>
<td>48</td>
<td>42</td>
</tr>
<tr>
<td><strong>BYU</strong></td>
<td>58</td>
<td>50</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td><strong>VU</strong></td>
<td>46</td>
<td>42</td>
<td>31</td>
<td>29</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>173</td>
<td>154</td>
<td>118</td>
<td>110</td>
</tr>
</tbody>
</table>
MOOSE\$ DATA COLLECTION PROGRAM

- Multi-Option Observation System for Experimental Studies (MOOSES)
- Continuous data collection of discrete events and duration measures
- Utilizes tablets to allow data collectors to maintain mobility

Benefits
- Seamless transition from data collection to data analysis
- Allows for inter-observer agreement estimates using various indices
- Analysis of frequency behaviors within durational states
## Inter-Observable Agreement

<table>
<thead>
<tr>
<th></th>
<th>Total Sessions Across Sites</th>
<th>Total Reliability Sessions</th>
<th>Percentage of Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>KU</td>
<td>5290</td>
<td>1187</td>
<td>22.4%</td>
</tr>
<tr>
<td>BYU</td>
<td>89.2%</td>
<td>37-100%</td>
<td></td>
</tr>
<tr>
<td>VU</td>
<td>93.3%</td>
<td>56-100%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5290</td>
<td>1187</td>
<td>22.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>IOA average of frequency codes</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>KU</td>
<td>88.3%</td>
<td>23-100%</td>
</tr>
<tr>
<td>BYU</td>
<td>89.2%</td>
<td>37-100%</td>
</tr>
<tr>
<td>VU</td>
<td>93.3%</td>
<td>56-100%</td>
</tr>
<tr>
<td>Total</td>
<td>90.3%</td>
<td>23-100%</td>
</tr>
</tbody>
</table>
## Analysis Procedures

### Student Behavior
- **Frequency**
  - Disruptives
  - OTR responses
  - Handraises
- **Duration**
  - Active engagement
  - Passive engagement
  - Disengagement

### Teacher Behavior
- **Frequency**
  - OTRs
  - Praise (group/individual)
  - Reprimands
  - Points
- **Duration**
  - Whole group instruction
  - Small group instruction
  - One-on-one instruction
  - Independent
  - Down-time
ANALYSIS PROCEDURES

- Ongoing visual and statistical analysis
  - Analysis at Student-Level & Teacher-Level
    - Rate per hour calculated for frequency codes
    - Percentage of time calculated for duration codes
    - Averages calculated across behaviors for every student and teacher
  - Analysis at Site-Level
    - Averages calculated across behaviors for every site
- Analyses support intervention decision-making
STUDENT ENGAGEMENT YEARS 1-3

- **Experimental Control**
  - Baseline
  - Intervention/Comparison
  - Peer Model
DISRUPTIVE BEHAVIOR YEARS 1-3

![Bar chart showing disruptive behavior rates per hour for Experimental and Control groups during Baseline, Intervention, and Peer Model phases.](chart.png)
TEACHER PRAISE YEARS 1-3

Experimental

Control

Baseline

Intervention/Comparison

Peer Model
**Total Reprimands**

The bar chart compares the rate of reprimands per hour in the Experimental and Control groups during different phases:

- **Baseline**
- **Intervention/Comparison**
- **Peer Model**

The chart shows a higher rate of reprimands in the Experimental group during the Baseline phase compared to the Control group. The intervention phase shows a reduction in reprimands, especially in the Experimental group, compared to the Control group. The peer model phase further reduces the reprimands in both groups, with a notable decrease in the Experimental group.
INDIVIDUAL TARGET STUDENT & PEER MODEL
CHAZ-KINDERGARTEN

**Engagement**

- Baseline
- CW-FIT
- Peer model

% of time on task per 15 min observation

**Disruptive Behavior**

- Baseline
- CW-FIT
- Peer

Frequency of disruptives per 15 min observation
NON RESPONDERS

**Engagement**

% on task per 15 min observation

**Disruptive Behavior**

Frequency of disruptives per 15 min observation

Peer model
INDIVIDUAL STUDENT EXAMPLE WITH HELP CARDS
JASON-1ST GRADE

**Total Engagement**

- **Baseline**
- **Intervention**
- **Help Cards**

**Disruptive Behavior**

- **Baseline**
- **Intervention**
- **Help Cards**

---

**Percentage of 15 min Interval**

**Rate per 15 min Interval**
FUTURE DIRECTIONS

- Complete requirements for What Works Clearinghouse
- Finish packaging the program
- Continue partnering with more schools and districts to adopt and implement CW-FIT
QUESTIONS AND COMMENTS
Thank you!

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