More Time to Teach, More Time to Learn: The Effects of CW-FIT on Classroom Behavior

Paul Caldarella, Leslie Williams, Richard Young
Brigham Young University
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MULTI-SITE GRANT
OUTLINE

• Overview of CW-FIT
• Review of results
  • Class-wide data
  • Individual data
  • Treatment fidelity data
  • Social validity
• Additional studies
• Summary and future directions
OVERVIEW OF CW-FIT

- Main Components (Tier 1, class-wide):
  - Lessons (Teaching social skills)
  - Teams (Group contingency)
  - Goals and Points
  - Rewards

- Components designed to address common functions maintaining problem behaviors:
  - Teacher attention
  - Peer attention
  - Escape
CW-FIT TEACHING SOCIAL 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
STANDARD SOCIAL SKILLS

How to Get the Teacher's Attention
1. Look at the teacher.
2. Raise your hand.
3. Wait for the teacher to call on you.
4. Ask your question or give your answer.

Follow Directions the First Time
1. Look at the teacher and listen.
2. Say OK in your head. "OK"
3. Do it now.
4. Check back, if needed.

Ignore Inappropriate Behavior
1. Keep a nice face.
2. Look away from the person.
3. Keep a quiet mouth.
4. Follow directions and do your work.
ADDITIONAL SOCIAL SKILLS

**Keep Hands, Feet, and Objects to Self**

1. Keep hands at side or across body.
2. Keep feet under desk and flat on the floor.
3. Use objects the right way (e.g., books are for reading, pencils are for writing).

**Talk in a Quiet Voice**

1. Put heads close together.
2. Talk in a whisper.
3. Only talk to people at your table.

**Stay in Your Seat**

1. Sit and stay seated in your chair.
2. Keep your feet under your desk, and your chair legs on the floor.
3. Sit straight, tall, and quietly.
CW-FIT PROGRAM

- Interdependent 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
  - Behavior specific praise
  - Praise to individuals and groups
• 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
REWARDS

• Strongly encourage quick activities or privileges
  • Five minute of freeze dance game
  • School supplies (pencils, erasers, small notebooks)
  • Five-minute class game
  • 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 VIDEO
THIRD GRADE TEACHER

CW-FIT

MORE TIME TO TEACH
TO LEARN
TIER 2—FOR STUDENTS NOT RESPONDING TO CLASS-WIDE COMPONENTS

**Help Cards**
- Addresses escape/avoidance for students who need additional academic help
- 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](image)
• Participants
  • 7 public schools across BYU-Public School Partnership
  • 27 experimental classes
  • 25 comparison classes
  • 59 CW-FIT students with behavior risks
  • 51 comparison students with behavior risks

AWARD: R324A120344
### Class-Wide Data Years 1-4

<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</td>
<td>SG</td>
<td>IA</td>
<td>T</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Experimental</td>
<td>Control</td>
<td>Baseline</td>
<td>Intervention</td>
</tr>
<tr>
<td></td>
<td>Y</td>
<td>N</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
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#### Praise Individual

<table>
<thead>
<tr>
<th>Group</th>
<th>Praise Individual</th>
<th>Praise Group</th>
<th>Reprimand Individual</th>
<th>Reprimand Group</th>
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<tr>
<td></td>
<td>Verbal</td>
<td>Points</td>
<td>Verbal</td>
<td>Verbal</td>
</tr>
<tr>
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<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

#### Code
- (+) for On Task
- (-) for Off Task
- () for unable to observe

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

#### Comments:

Primary Observer:

Reliability Observer:

# of students present:

Updated 6/28/2013
CLASS-WIDE ON-TASK YEARS 1-4

<table>
<thead>
<tr>
<th></th>
<th>Baseline Mean</th>
<th>Intervention/Comparison Mean</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>61.48%</td>
<td>74.34%</td>
<td>+12.86%</td>
</tr>
<tr>
<td>Control</td>
<td>57.88%</td>
<td>57.34%</td>
<td>-0.54%</td>
</tr>
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</table>
TEACHER PRAISE YEARS 1-4

<table>
<thead>
<tr>
<th></th>
<th>Baseline Mean</th>
<th>Intervention/Comparison Mean</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>6.87</td>
<td>16.7</td>
<td>+9.83</td>
</tr>
<tr>
<td>Control</td>
<td>6.88</td>
<td>4.01</td>
<td>-2.87</td>
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</table>
TEACHER REPRIMANDS YEARS 1-4

<table>
<thead>
<tr>
<th></th>
<th>Baseline Mean</th>
<th>Intervention/Comparison Mean</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>6.46</td>
<td>3.39</td>
<td>-3.07</td>
</tr>
<tr>
<td>Control</td>
<td>5.19</td>
<td>3.50</td>
<td>-1.69</td>
</tr>
</tbody>
</table>
DIRECT OBSERVATION
OF AT-RISK 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 behavior that is considered inappropriate by teachers and other school personnel. Non-example includes:

- displaying aggression toward objects or persons
- arguing
- limiting the submission of others
- defying the teacher
- being out of seat
- not complying with teacher instructions or directions
- having tantrums
- being hyperactive
- disturbing others
- restless
- not following teacher or school imposed rules

Examples include:

- displaying aggression toward objects or persons
- arguing
- limiting the submission of others
- defying the teacher
- being out of seat
- not complying with teacher instructions or directions
- having tantrums
- being hyperactive
- disturbing others
- restless
- not following teacher or school imposed rules

Instructions:

1. Review the definition of externalizing behavior and then review a list of all students.
2. Enter the names of the externalizing students (3-6) those whose behavior did not change.
3. Enter the name of the externalizing students (3-6) those whose behavior did not change.
4. Enter the name of the externalizing students (3-6) those whose behavior did not change.
5. Enter the name of the externalizing students (3-6) those whose behavior did not change.
6. Enter the name of the externalizing students (3-6) those whose behavior did not change.
### STUDENT ENGAGEMENT YEARS 1-4

#### Baseline vs. Intervention/Comparison vs. Peer Model

<table>
<thead>
<tr>
<th></th>
<th>Baseline Mean</th>
<th>Intervention/Comparison Mean</th>
<th>Change</th>
<th>Peer Model Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental</strong></td>
<td>77.09%</td>
<td>85.43%</td>
<td>+8.34%</td>
<td>93.14%</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>76.81%</td>
<td>78.37%</td>
<td>+1.56%</td>
<td>90.69%</td>
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</tbody>
</table>
## Disruptive Behavior Years 1-4

<table>
<thead>
<tr>
<th></th>
<th>Experimental</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline Mean</td>
<td>14.99</td>
<td>11.36</td>
</tr>
<tr>
<td>Intervention/Comparison Mean</td>
<td>6.95</td>
<td>9.69</td>
</tr>
<tr>
<td>Change</td>
<td>-8.04</td>
<td>-1.67</td>
</tr>
<tr>
<td>Peer Model Mean</td>
<td>3.27</td>
<td>5.46</td>
</tr>
</tbody>
</table>
TEACHER PRAISE YEARS 1-4

<table>
<thead>
<tr>
<th></th>
<th>Baseline Mean</th>
<th>Intervention/Comparison Mean</th>
<th>Change</th>
<th>Peer Model Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>1.21</td>
<td>4.28</td>
<td>+3.07</td>
<td>3.48</td>
</tr>
<tr>
<td>Control</td>
<td>1.17</td>
<td>0.82</td>
<td>-0.35</td>
<td>0.84</td>
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</table>
TOTAL REPRIMANDS YEARS 1-4

<table>
<thead>
<tr>
<th></th>
<th>Baseline Mean</th>
<th>Intervention/Comparison Mean</th>
<th>Change</th>
<th>Peer Model Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>1.94</td>
<td>0.82</td>
<td>-1.12</td>
<td>0.39</td>
</tr>
<tr>
<td>Control</td>
<td>1.49</td>
<td>0.82</td>
<td>-0.67</td>
<td>0.32</td>
</tr>
</tbody>
</table>
FIDELITY OBSERVATIONS

• Implementation fidelity was recorded on every observation.

• Teachers were able to implement CW-FIT procedures with 90% fidelity.
## IMPLEMENTATION FIDELITY

<table>
<thead>
<tr>
<th>CW-FIT Fidelity Procedures</th>
<th>CW-FIT</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills are prominently displayed on posters</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Team point chart displayed</td>
<td>100%</td>
<td>6%</td>
</tr>
<tr>
<td>Daily point goal posted</td>
<td>99%</td>
<td>0%</td>
</tr>
<tr>
<td>Timer used &amp; set at appropriate intervals</td>
<td>99%</td>
<td>0%</td>
</tr>
<tr>
<td>Points awarded to teams for use of skills</td>
<td>97%</td>
<td>0%</td>
</tr>
<tr>
<td>Frequent praise (points) given</td>
<td>96%</td>
<td>9%</td>
</tr>
<tr>
<td>Praise (points) to reprimand ratio is approximately 4:1</td>
<td>95%</td>
<td>14%</td>
</tr>
<tr>
<td>Points tallied for teams</td>
<td>93%</td>
<td>0%</td>
</tr>
<tr>
<td>Behavior-specific praise given</td>
<td>91%</td>
<td>29%</td>
</tr>
<tr>
<td>Corrections are instructive and refer to skills</td>
<td>87%</td>
<td>0%</td>
</tr>
<tr>
<td>Winners reward announced if delayed</td>
<td>86%</td>
<td>0%</td>
</tr>
<tr>
<td>Self-management charts given/individuals</td>
<td>83%</td>
<td>1%</td>
</tr>
<tr>
<td>Precorrects on skills at beginning of session</td>
<td>81%</td>
<td>0%</td>
</tr>
<tr>
<td>Winners immediately rewarded</td>
<td>61%</td>
<td>0%</td>
</tr>
</tbody>
</table>
SOCIAL VALIDITY SURVEYS

• Surveys were given to teachers and students at the end of the intervention.

• 89% of teachers would recommend CW-FIT to colleagues.

• 94% of students like using CW-FIT.
<table>
<thead>
<tr>
<th>Social Validity Questions</th>
<th>Very/Mostly True</th>
</tr>
</thead>
<tbody>
<tr>
<td>My students were more focused and engaged when we implemented CW-FIT.</td>
<td>100%</td>
</tr>
<tr>
<td>My students enjoyed using the CW-FIT program.</td>
<td>96%</td>
</tr>
<tr>
<td>The CW-FIT program was easy to learn and implement in my classroom.</td>
<td>94%</td>
</tr>
<tr>
<td>The use of teams and points for appropriate behaviors were helpful in improving students’ behavior.</td>
<td>91%</td>
</tr>
<tr>
<td>I will recommend the CW-FIT program to colleagues.</td>
<td>89%</td>
</tr>
<tr>
<td>I will use the CW-FIT skills I learned with future classes.</td>
<td>88%</td>
</tr>
<tr>
<td>I learned new skills to help manage students’ behavior.</td>
<td>85%</td>
</tr>
<tr>
<td>The self-management component was easy for students to learn.</td>
<td>76%</td>
</tr>
<tr>
<td>I enjoyed being a CW-FIT Intervention Teacher.</td>
<td>75%</td>
</tr>
<tr>
<td>The timer was manageable for use during instruction.</td>
<td>66%</td>
</tr>
<tr>
<td>The help card component was easy for students to learn.</td>
<td>63%</td>
</tr>
</tbody>
</table>
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
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.”
CW-FIT IN A SPECIAL ED. CLASSROOM

- Summer Program
- 3 students (ASD, ASD, ADHD; ages: 8, 11, 10)
- Alternating Treatment design
  - Baseline, CW-FIT with low OTR, CW-FIT with high OTR
- Adaptations
  - Individual Teams
Research Questions

1. What are the impacts of CW-FIT for students with academic and behavioral risks?

2. What are the impacts of increased OTR within CW-FIT for students with academic and behavioral risks?
Research Questions

1. What are the impacts of CW-FIT for students with academic and behavioral risks?

2. What are the impacts of increased OTR within CW-FIT for students with academic and behavioral risks?
Research Questions
1. What are the impacts of CW-FIT for students with academic and behavioral risks?
2. What are the impacts of increased OTR within CW-FIT for students with academic and behavioral risks?
Two male students (one 3rd grade & one 4th grade) were identified by teachers as needing extra support

- CW-FIT was used in the classrooms
- Students had used CW-FIT Tier 2 self-management
- Both were still highly disruptive in the classroom, and lacked appropriate social skills and boundaries

Title 1 school in suburban Utah County

- One 3rd grade general education classroom with 18 students
- One 4th grade general education classroom with 23 students
TIER 3
SELF MANAGEMENT INTERVENTION COMPONENTS

• Personalized training for target student, peer, teacher and parent
• Student self-recording
• Peer-matching
• Teacher reinforcement
• Teacher/Parent communication
• Parent reinforcement
TIER 3 CHART

Self-Management Card

Name: Shane  Date: 4-15-2015

How did I do?

<table>
<thead>
<tr>
<th></th>
<th>Y</th>
<th>N</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

POINTS

| YY = 2
| NN = 1
| YN = 0
| NY = 0

Total: 3

- Worked on my assignment
- Quiet, in seat, chair at desk
- Eyes on teacher as she talked
- Hands to self
TIER 3 TEACHER COMPONENT

- Receive completed card from student
- Praise/give constructive feedback on performance
- Give daily reinforcement if certain amount of points are earned
- Give peers reinforcement if they completed 75% of the procedures
TIER 3 PARENT COMPONENT

• Receive daily email or text from teacher
• Praise child at home for behavior in the classroom
• Provide a secondary reinforcer at home depending on the points earned
• Report back to teacher via email or text message
SHANE 3RD GRADE

Will Tier 3 self-management package have an effect on increasing engagement and decreasing disruptive behaviors of students with externalizing behavior problems?
<table>
<thead>
<tr>
<th>Date</th>
<th>Total Engagement</th>
<th>Number of Disruptives</th>
<th>% Peer Praise</th>
<th>Teacher Praise</th>
<th>Parent Reinf.</th>
<th>2-Way Comm</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-Apr</td>
<td>98</td>
<td>0</td>
<td>80%</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>4-May</td>
<td>98.7</td>
<td>5</td>
<td>80%</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>6-May</td>
<td>90.4</td>
<td>7</td>
<td>40%</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>7-May</td>
<td>97.3</td>
<td>1</td>
<td>100%</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>11-May</td>
<td>98.4</td>
<td>11</td>
<td>100%</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>14-May</td>
<td>100</td>
<td>1</td>
<td>100%</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>18-May</td>
<td>79.9</td>
<td>5</td>
<td>80%</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>21-May</td>
<td>96.9</td>
<td>3</td>
<td>88%</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
</tbody>
</table>
Ricardo 4th Grade

Will Tier 3 self-management package have an effect on increasing engagement and decreasing disruptive behaviors of students with externalizing behavior problems?
## Treatment Integrity for Ricardo - SM

<table>
<thead>
<tr>
<th>Date</th>
<th>Total Engagement</th>
<th>Number of Disruptives</th>
<th>% Peer Praise</th>
<th>Teacher Praise</th>
<th>Parent Reinf</th>
<th>2-Way Comm</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-Apr</td>
<td>92.5</td>
<td>5</td>
<td>100%</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>14-Apr</td>
<td>75.6</td>
<td>33</td>
<td>20%</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>16-Apr</td>
<td>65.4</td>
<td>37</td>
<td>0%</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>29-Apr</td>
<td>61</td>
<td>12</td>
<td>0%</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
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<tr>
<td>30-Apr</td>
<td>69.5</td>
<td>30</td>
<td>60%</td>
<td>Y</td>
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</table>

## Treatment Integrity for Ricardo - SM+

<table>
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<th>Total Engagement</th>
<th>Number of Disruptives</th>
<th>% Sch. Psych. Praise</th>
<th>Teacher Praise</th>
<th>Parent Reinf</th>
<th>2-Way Comm</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-May</td>
<td>87.4</td>
<td>2</td>
<td>100%</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>21-May</td>
<td>100</td>
<td>9</td>
<td>100%</td>
<td>N/A</td>
<td>N</td>
<td>Y</td>
</tr>
</tbody>
</table>
TIER 3 SOCIAL VALIDITY

- 3rd Grade Teacher:
  - “Before this intervention, Shane often had meltdowns... however, after starting the CW-FIT intervention, I noticed a big difference in Shane. He was much more happy at school and resolved his frustrations more calmly.”

- 4th Grade Teacher:
  - “I wish we had been able to implement this with Ricardo sooner.”
# TIER 3 SOCIAL VALIDITY

### Parent
- **3rd Grade Parent:**
  - “This was a good lesson to learn the importance of quality attention, and having a way to quantify that what I was doing was helpful.”

- **4th Grade Parent:**
  - “Loved this program. I want to use this at home with Ricardo when I am homeschooling him.”

### Student
- **Shane:**
  - “It helped me a lot because it helped me keep calm.”

- **Ricardo:**
  - “I liked matching with the peer because if I was right I would get points.”
SUMMARY

- CW-FIT has been found to be effective in a variety of elementary school settings
  - Increases teacher praise rates and student on-task behavior
  - Decreases student disruptions
  - Teachers are able to implement CW-FIT with fidelity
  - Teachers and students enjoy CW-FIT

- CW-FIT will be studied in middle school classrooms