Improving Elementary Classroom and Individual Student Outcomes with the CW-FIT Program

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AWARD: R324A120344
Overview and Take-aways

- Overview of CW-FIT
- Overview of the IES grant
- Review of results - Class-wide data
- Review of results - Individual data
- Learning about implementation (cross-site single case study)
- Summary and future directions
Overview of CW-FIT

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

Components designed to address common functions maintaining problem behaviors:
- Teacher attention
- Peer attention
- Escape
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
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.

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.
3. Do it now.
4. Check back, if needed.
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
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 – First Grade teacher
Tier Two – designed for students not responding to class-wide components

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

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
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<td></td>
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<tr>
<td>Points:</td>
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**Help Cards**
- Addresses Escape/Avoidance for students who need additional help with work
- Taught in small group booster session
- Peer or teacher help

- CW-FIT Rules
  - Follow Directions
  - Get teacher attention (waits)
  - Ignore peer behaviors
  - Do your work

TOTAL Points:   _____  Date:   _____

![Help Card Images]
CW-FIT Research Findings

Two Randomized Trials completed

- 38 public schools across 4 states
- 163 experimental classes/141 comparison classes
- 359 CW-FIT students with behavior risks
- 291 comparison students with behavior risks

General findings: class-wide on-task behavior and teacher praise increased; reprimands decreased; teachers and students reported that CW-FIT was effective and they liked it.

Students at risk for EBD also improved on-task behavior and reduced disruptive behaviors.

Students non-responsive to class-wide components, improved behavior when adding self-management or help cards to CW-FIT.
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
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.”
Direct Observation of Target Students
Student Engagement Years 1-4

Total Engagement

Percentage of time

Experimental  Group  Control

0  10  20  30  40  50  60  70  80  90  100
Disruptive Behavior Years 1-4

Disruptive Behavior

Rate per hour

Baseline Target Student
Intervention/Comparison Target Student
Intervention/Comparison Peer Model

Experimental Group

Control Group
Total Reprimands Years 1-4

Total Reprimands

- Experimental Group
  - Baseline Target Student: 9
  - Intervention/Comparison Target Student: 4
  - Intervention/Comparison Peer Model: 2

- Control Group
  - Baseline Target Student: 9
  - Intervention/Comparison Target Student: 6
  - Intervention/Comparison Peer Model: 3
Tier 2 students
Self-Management=61 and Help Cards=6

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<tr>
<th></th>
<th>Baseline</th>
<th>Intervention</th>
<th>Tier 2</th>
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<tbody>
<tr>
<td>Total Engagement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SM</td>
<td>65.7</td>
<td>82.6</td>
<td>86.6</td>
</tr>
<tr>
<td>HC</td>
<td>61.7</td>
<td>82.2</td>
<td>89.3</td>
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</tbody>
</table>
Tier 2 Students
Self-Management=61 and Help Cards=6

Total Disruptives

Baseline: 77.7
Intervention: 35.0
Tier 2: 29.2

SM
HC
CW-FIT: Accommodations for Novel Settings & Groups
CW-FIT in Preschool Classrooms

- 4 preschool classrooms (3 teachers)
- 55 children (mean age 4 years, 6 months)
- Delayed Multiple Baseline with Reversals
- Adaptations:
  - Hand gestures with skills
  - Shaded boxes instead of tallies
  - Short timer intervals (1.5 to 3 min)
Preschool Fidelity

Research Question
Are preschool teachers able to implement CW-FIT Tier 1 with fidelity?

Preschool teachers implemented CW-FIT Tier 1 with 92.9% fidelity.

High fidelity (100%):
- Displaying posters and game chart
- Using timer at appropriate intervals
- Awarding teams for the use of skills
- Giving frequent praise and points

Lower Fidelity:
- Precorrects at beginning of sessions (89.4%)
- Giving an immediate reward (40.4%)
  - If reward not immediate, announced & given later same day (98%)
Research Question
Does CW-FIT Tier 1 in preschool result in increased teacher praise to reprimand ratios?

Praise and Reprimand Rates
Overall Ratios
Baseline: 2.64
CW-FIT Tier 1: 9.95
Withdrawal: 4.81
CW-FIT Tier 1: 11.05
Research Question
Does CW-FIT Tier 1 in preschool result in increased levels of group on-task?

On-task %
Baseline: 63.14
CW-FIT Tier 1: 80.39
Withdrawal: 68.18
CW-FIT Tier 1: 81.34
Preschool Social Validity

**Teachers**

All items were rated *very true* or *mostly true*

**Likes**
- Less talking out
- Get more done
- More chances for teacher praise

**Dislikes**
- Difficulties with teamwork
- Keeping flow of instruction

**Students**

Most (94.34%) like CW-FIT

**Likes**
- Team points
- Fun
- Prizes

**Dislikes**
- When team doesn’t earn a point

98.11% think others should use CW-FIT
CW-FIT in French Classrooms

◎ 2nd, 3rd, 4th grade classrooms
◎ 74 students, 3 teachers
◎ French Immersion (½ day English, ½ Day French)
◎ Multiple Baseline
◎ Adaptations
  ○ French posters
  ○ Implementation in French
French Immersion Fidelity

Research Question
Are French immersion teachers able to implement CW-FIT with fidelity?

French Immersion teachers implemented CW-FIT with 88.8% fidelity.

High fidelity:
- Displaying posters and game chart
- Using timer at appropriate intervals
- Giving frequent praise and points

Most commonly missed component:
- Precorrects at beginning of sessions
Research Question
Will CW-FIT result in increased levels of student group on-task behavior?

2nd grade On-task %
Baseline: 48.7
CW-FIT Tier 1: 69.6
Withdrawal: 42.7
CW-FIT Tier 1: 69.9

3rd grade On-task %
Baseline: 40.1
CW-FIT Tier 1: 71.5
Withdrawal: 47.7
CW-FIT Tier 1: 62.6

4th grade On-task %
Baseline: 54.9
CW-FIT Tier 1: 76.4
Maintenance: 80.0
French Immersion Social Validity

**Teachers**

**Likes**
- Easy to use
- Learned new skills to manage behavior
- Students more focused and engaged

**Dislikes**
- Timer (prefer a vibrating one)

**Students**

**Most (92.3%) like CW-FIT**

**Likes**
- Reward
- Helps improve behavior

**Dislikes**
- When team doesn’t earn the reward

87.7% think others should use CW-FIT
CW-FIT in a Special Ed. Classroom

- 3 students (ASD, ASD, ADHD; ages: 8, 11, 10)
- Summer Program
- Alternating Treatment design
  - Baseline, CW-FIT with low OTR, CW-FIT with high OTR
  - What are the impacts of CW-FIT for students with academic and behavioral risks?
  - What are the impacts of increased OTR within CW-FIT for students with academic and behavioral risks?

- Adaptations
  - Individual Teams
Student Social Validity

All liked CW-FIT
○ Viewed as opportunity to earn prizes
○ It was fun
○ Kept them busy

All reported that others should use CW-FIT
Sustainability and Scaling Up

- Trainings offered to participating schools in subsequent years
- Web-site with materials and links to video examples
  - https://cwfit.ku.edu/research
- National and international dissemination
- Year 4 Pilot Study: Using School-based staff as coaches
- Linden West Follow-up Study
Dissemination to new cultures…… "Following Directions"

<table>
<thead>
<tr>
<th>Suivre les Consignes Rapidement</th>
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<tbody>
<tr>
<td>1. Regarder et écouter la maitresse.</td>
</tr>
<tr>
<td>2. Dire d'accord dans la tête. &quot;OK&quot;</td>
</tr>
<tr>
<td>3. Se mettre immédiatement au travail.</td>
</tr>
<tr>
<td>4. Vérifier avec la maitresse si nécessaire.</td>
</tr>
</tbody>
</table>

立刻遵守指示

1. 眼睛看老師
2. 耳朵聽指令
3. 馬上做
4. (如果不確定要發問)
Pilot Study: Can school staff manage start-up and monitoring for CW-FIT?

- Three classrooms at each site N=9
- Teachers selected by principals
- School-based designated team member managed intervention

KS = counselor/school psychologist; UT= vice-principal; TN = counselor

- University provided training and one follow-up meeting with staff; and intermittent contact to advise the building ‘coach’

- Measures: Class-wide on-task; MOOSES on-task and frequency of disruptive behaviors, collected by University staff

- Fidelity collected by University staff
  Overall: 47 to 100%, mean = 93%

Quality Rating: 50-100%; 84%
KANSAS CLASSES

Percentage On-Task Behavior

Sessions

Baseline | CW-FIT | Baseline 2 | CW-FIT

3rd Grade
1st Grade
1st Grade
Kansas Pilot Study Classes

KS classes | Fidelity | Quality
---|---|---
3rd | 99% | 69%
1st | 99% | 81%
1st | 99% | 84%
BYU CLASSES

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<thead>
<tr>
<th>Grade</th>
<th>Fidelity</th>
<th>Quality</th>
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<tbody>
<tr>
<td>4th</td>
<td>85%</td>
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<tr>
<td>2nd</td>
<td>89%</td>
<td>81%</td>
</tr>
<tr>
<td>1st</td>
<td>89%</td>
<td>93%</td>
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BYU Pilot Study Classes
Vanderbilt CLASSES

<table>
<thead>
<tr>
<th>Grade</th>
<th>Fidelity</th>
<th>Quality</th>
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<tbody>
<tr>
<td>3rd</td>
<td>98%</td>
<td>92%</td>
</tr>
<tr>
<td>2nd</td>
<td>89%</td>
<td>75%</td>
</tr>
<tr>
<td>4th</td>
<td>94%</td>
<td>81%</td>
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3rd Grade
2nd Grade
4th Grade

VU Pilot Study Classes
Target Student Engagement
Demonstration Classrooms-All sites

<table>
<thead>
<tr>
<th></th>
<th>KU</th>
<th>BYU</th>
<th>VU</th>
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</thead>
<tbody>
<tr>
<td>Number of students</td>
<td>5</td>
<td>2</td>
<td>3</td>
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Target Student Disruptive Behavior
Demonstration Classrooms-All sites

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>CW-FIT</th>
<th>Withdrawal</th>
<th>CW-FIT</th>
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<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>9.13</td>
<td>3.42</td>
<td>11.92</td>
<td>3.13</td>
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<tr>
<td><strong>SD</strong></td>
<td>6.88</td>
<td>2.13</td>
<td>7.75</td>
<td>1.72</td>
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Summary of Pilot Study – implementation

- 32 of 68 total teachers tried CW-FIT across the 3 schools (sites)

- 18 of those teachers “talked to team/coach, reported on CW-FIT”
  (9 in final month)

- 14 of those teachers were “observed” using CW-FIT
  (4 in final month)

- 14 of the 32 were still implementing 4 months later (# at Start up)
  
  KS  6/12
  BYU  5/8
  VU   3/12
Sustainability Factors

- Active SWPBS team met regularly
- Principal was supportive, encouraged adoption and large number of teachers implemented (n=14)
- SWPBS team reviewed Interventions e.g., Check in Check out, CW-FIT
- Active Grade level teams met regularly, provided a forum for discussing CW-FIT
- Instructional coach observed CW-FIT while observing content area classes
- Principal, team assigned teachers to train CW-FIT in follow-up year
Future Directions

◎ Complete requirements for What Works Clearinghouse
◎ Finalize Manual and Website
◎ Continue partnering with more schools and districts to adopt and implement CW-FIT
Questions and Comments
Thank you!

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