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

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Vanderbilt University

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Multi-site Grant

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Alyssa Van Camp
Leslie Williams

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

Help Cards

- Addresses Escape/Avoidance for students who need additional help with work
- Taught in small group booster session
- Peer or teacher help
RCT Efficacy Publications

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

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


Tier 2 Results

- Students non-responsive to class-wide components, improved behavior when adding self-management or help cards to CW-FIT.


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.\(^c\)


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</td>
<td>SG</td>
<td>IA</td>
<td>T</td>
</tr>
</tbody>
</table>

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

**Observation Type:**

**Reliability**

**Reliability Score**

**Praise Individual**
- Verbal

**Praise Group**
- Verbal
- Points

**Reprimand Individual**
- Verbal

**Reprimand Group**
- Verbal

| Group | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | Total |
|-------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|------|
|       |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |       |

**Code:**
- (+) for On-Task
- (−) for Off Task
- (-) for unable to observe

**Class Arrangement:**

**Comments:**

- Class Mean

**Updated 6/28/2013**

**Primary Observer:**

**Reliability Observer:**

**# of students present:**
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>Group On-task</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>Teacher Praise</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>Teacher Reprimands</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-Observer 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>Total</td>
<td>96.3%</td>
</tr>
</tbody>
</table>
Academic subjects across groups

- Treatment Classrooms
- Comparison Classrooms

Subjects:
- Reading
- Math
- Science
- Social Studies
- Writing
- Language Arts
- Other
Class-wide On-task Years 1-3

**Baseline**
- **Experimental**: Mean: 54.63%, SD: 16.65
- **Control**: Mean: 55.45%, SD: 14.38

**Intervention/Comparison**
- **Experimental**: Mean: 79.52%, SD: 11.73
- **Control**: Mean: 57.99%, SD: 15.69

Cohen’s $d$
- **Experimental**: 1.73
- **Control**: 0.17
Teacher Praise Years 1-3

**Individual Praise**

- **Experimental**
  - Mean: 4.62
  - SD: 5.18

- **Control**
  - Mean: 4.33
  - SD: 5.38

**Group Praise**

- **Baseline**
  - Mean: 1.52
  - SD: 2.23
  - Cohen’s $d$: 0.19

- **Intervention/Comparison**
  - Mean: 11.93
  - SD: 9.53
  - Cohen’s $d$: 1.50

- **Baseline**
  - Mean: 1.31
  - SD: 1.82
  - Cohen’s $d$: -0.26

- **Intervention/Comparison**
  - Mean: 0.87
  - SD: 1.53
  - Cohen’s $d$: -0.26
Teacher Reprimands Years 1-3

**Individual Reprimands**

<table>
<thead>
<tr>
<th></th>
<th>Per 20 minute observation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental</strong></td>
<td>6.12 (SD: 5.96)</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>2.83 (SD: 3.08)</td>
</tr>
</tbody>
</table>

Cohen’s *d* = -0.69

**Group Reprimands**

<table>
<thead>
<tr>
<th></th>
<th>Per 20 minute observation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental</strong></td>
<td>2.05 (SD: 2.25)</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>1.42 (SD: 1.78)</td>
</tr>
</tbody>
</table>

Cohen’s *d* = -0.31

<table>
<thead>
<tr>
<th></th>
<th>Per 20 minute observation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental</strong></td>
<td>2.01 (SD: 2.32)</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>1.50 (SD: 2.04)</td>
</tr>
</tbody>
</table>

Cohen’s *d* = -0.04

---

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

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Intervention/Comparison</th>
<th>Cohen's <em>d</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental</strong></td>
<td>Mean: 2.05 SD: 2.25</td>
<td>Mean: 1.42 SD: 1.78</td>
<td>-0.31</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>Mean: 2.01 SD: 2.32</td>
<td>Mean: 1.50 SD: 2.04</td>
<td>-0.04</td>
</tr>
</tbody>
</table>
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>
## 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
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
<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><strong>173</strong></td>
<td><strong>154</strong></td>
<td><strong>118</strong></td>
<td><strong>110</strong></td>
</tr>
</tbody>
</table>
MOOSESES 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-Observer 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>5290</td>
<td>1187</td>
<td>22.4%</td>
</tr>
</tbody>
</table>

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

Student Behavior

- **Frequency**
  - Disruptive behaviors
  - OTR responses
  - Hand raises

- **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

- Analyses support intervention decision-making
Student Engagement Years 1-3

Percentage of Time

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 with Baseline, Intervention/Comparison, and Peer Model categories.]
Teacher Praise Years 1-3

![Bar chart showing rates per hour for Experimental and Control groups with Baseline, Intervention/Comparison, and Peer Model categories]
Total Reprimands

![Bar chart showing total reprimands per hour for Experimental and Control groups. The chart compares Baseline, Intervention/Comparison, and Peer Model rates per hour.]
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>
</tr>
</thead>
<tbody>
<tr>
<td>1. Regarder et écouter la maîtresse.</td>
</tr>
<tr>
<td>2. Dire d'accord dans la tête.</td>
</tr>
<tr>
<td>3. Se mettre immédiatement au travail.</td>
</tr>
<tr>
<td>4. Vérifier avec la maîtresse si nécessaire.</td>
</tr>
</tbody>
</table>

1. ِاتباع التوجيهات من المعلّم (واستمع).
2. قل حسنًا ففي ذهنك.
3. نفّذها الآن.
4. تحتّقق مرة أخرى) إنّ لزم الأمر.

- 立刻遵守指示
- 眼睛看老師
- 耳朵聽指令
- 馬上做
- (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

3rd Grade
1st Grade

<table>
<thead>
<tr>
<th>KS classes</th>
<th>Fidelity</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd</td>
<td>99%</td>
<td>69%</td>
</tr>
<tr>
<td>1st</td>
<td>99%</td>
<td>81%</td>
</tr>
<tr>
<td>1st</td>
<td>99%</td>
<td>84%</td>
</tr>
</tbody>
</table>

Kansas Pilot Study Classes
BYU CLASSES

BYU Pilot Study Classes

4th Grade
2nd Grade
1st Grade

<table>
<thead>
<tr>
<th>BYU classes</th>
<th>Fidelity</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th</td>
<td>85%</td>
<td>97%</td>
</tr>
<tr>
<td>2nd</td>
<td>89%</td>
<td>81%</td>
</tr>
<tr>
<td>1st</td>
<td>89%</td>
<td>93%</td>
</tr>
</tbody>
</table>
Vanderbilt CLASSES

<table>
<thead>
<tr>
<th>TN classes</th>
<th>Fidelity</th>
<th>Quality</th>
</tr>
</thead>
<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>
</tr>
</tbody>
</table>

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>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of students</strong></td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
## 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>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>9.13</td>
<td>3.42</td>
<td>11.92</td>
<td>3.13</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>6.88</td>
<td>2.13</td>
<td>7.75</td>
<td>1.72</td>
</tr>
</tbody>
</table>
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
## CW-FIT Evaluation – Interview/Observations

<table>
<thead>
<tr>
<th>Location Observations</th>
<th>Staff questions</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many times a week do you use CW-FIT?</td>
<td>How many minutes a week do you use CW-FIT?</td>
<td>SCORING 4X + 120 = 2 &lt; 4X + 120 = 1 &lt; 4X + &lt; 120 = 0 Do you use the timer? What is a common reward? On a scale of 1-4, 4 being the highest, rate the improvement in student engagement during CW-FIT. Are the skill posters on display? Is the point sheet on display?</td>
</tr>
<tr>
<td>1</td>
<td>Y N</td>
<td>Y N Y N</td>
</tr>
<tr>
<td>...15</td>
<td>Y N</td>
<td>Y N Y N</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Student questions

<table>
<thead>
<tr>
<th>Teacher</th>
<th>What are the CW-FIT rules? Record # of rules known.</th>
<th>Do you like it when your teacher does CW FIT?</th>
<th>Did your team receive a CW FIT reward in the past week?</th>
<th>Are you on a CW FIT team?</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Y N Y N Y N</td>
<td>Y N Y N Y N Y N</td>
<td>Y N Y N Y N Y N</td>
<td>Y N Y N Y N Y N</td>
<td>Y N Y N Y N Y N</td>
</tr>
<tr>
<td>...15</td>
<td>Y N Y N Y N</td>
<td>Y N Y N Y N</td>
<td>Y N Y N Y N</td>
<td>Y N Y N Y N</td>
<td>Y N Y N Y N</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Linden West Follow-up Study

<table>
<thead>
<tr>
<th>Question</th>
<th>Data Source</th>
<th>Score (0-2*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does 90% of staff indicate using CW-FIT 4x a week and for 120 minutes.</td>
<td>Interviews, Fidelity Forms</td>
<td>Year 1= 2, Follow-up = 1</td>
</tr>
<tr>
<td>2. CW-FIT posters on display.</td>
<td>Observations</td>
<td>Year 1= 2, Follow-up = 2</td>
</tr>
<tr>
<td>3. CW-FIT point sheet is on display.</td>
<td>Observations</td>
<td>Year 1= 2, Follow-up = 2</td>
</tr>
<tr>
<td>4. The timer is being used in 90% of classrooms.</td>
<td>Interviews</td>
<td>Year 1= 2, Follow-up = 2</td>
</tr>
<tr>
<td>5. Can at least 3 of the 4 students per teacher state 2/3 CW-FIT rules?</td>
<td>Interviews</td>
<td>Year 1= 2, Follow-up = 2</td>
</tr>
<tr>
<td>6. Can at least 3 of the 4 students per teacher identify their CW-FIT team?</td>
<td>Interviews</td>
<td>Year 1= 2, Follow-up = 2</td>
</tr>
<tr>
<td>7. Do 3 of the 4 students per teacher indicated they have received a reward for CW-FIT behaviors during the past week?</td>
<td>Interviews, Fidelity Forms</td>
<td>Year 1= 2, Follow-up = 2</td>
</tr>
</tbody>
</table>

*0=0-50% of teachers, 1=51-89%, 2=90-100%
## Linden West Follow-up Study

<table>
<thead>
<tr>
<th>Question/data</th>
<th>Year 1</th>
<th>Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many times a week do you use CW-FIT?</td>
<td>4.1</td>
<td>3.8</td>
</tr>
<tr>
<td>How many minutes do the sessions average?</td>
<td>49</td>
<td>49.5</td>
</tr>
<tr>
<td>How many total minutes is CW-FIT in use?</td>
<td>203</td>
<td>182</td>
</tr>
<tr>
<td>On a scale of 1-4 (4 being highest), rate the improvement in student engagement during CW-FIT.</td>
<td>3.7</td>
<td>3.4</td>
</tr>
<tr>
<td>Mean # of skills students know (interviews).</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Mean # of students who remembered 2 or more CW-FIT rules (out of 4 interviewed).</td>
<td>3.4</td>
<td>3.1</td>
</tr>
<tr>
<td>Mean class-wide On-Task behavior.</td>
<td>84.9%</td>
<td>84.3%</td>
</tr>
<tr>
<td>Mean procedural fidelity.</td>
<td>95.9%</td>
<td>89.9%</td>
</tr>
</tbody>
</table>
Sustainability Factors

- Active SWPBS team met regularly.
- Principal was supportive, encouraged adoption and a 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!

Howard P. Wills and Debra Kamps
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