

Class-Wide Function-Related Intervention Teams (CW-FIT)

Intervention Report | Social, Emotional, and Behavioral Interventions

WHAT WORKS CLEARINGHOUSE™
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Educators can employ a variety of classroom management strategies in their efforts to foster a classroom environment in which all students can learn. *Class-Wide Function-Related Intervention Teams (CW-FIT)* is one such strategy. As part of *CW-FIT*, teachers establish classroom rules, provide instruction on target skills, place students into teams, and then reward teams for demonstrating target skills, all with the aim of improving student behavior and creating a positive learning environment. *CW-FIT* seeks to reinforce appropriate behaviors, minimize social attention to inappropriate behaviors, and provide self-management tools to individual students who need extra support.

Goal: *CW-FIT* aims to help teachers create a positive learning environment by decreasing disruptive behavior and improving social skills and prosocial behaviors among students.

Target population: *CW-FIT* can be used with students in prekindergarten through grade 12 and is often used with students or classrooms that are demonstrating high levels of disruptive behaviors.

The What Works Clearinghouse (WWC) reviews existing research on educational interventions to identify evidence-based programs and practices. This WWC intervention report summarizes the available evidence on the effects of *CW-FIT* on student and teacher outcomes.



Did CW-FIT improve student and teacher outcomes?

Eight studies of *CW-FIT* meet WWC standards and contribute to the effectiveness ratings in this report. Findings from the eight studies are summarized in Table 1. The table includes rows for each outcome domain—a group of related outcome measures—that was studied in the research. The effects of *CW-FIT* on other student and teacher outcomes are unknown.

Table 1 indicates whether the evidence satisfies the WWC’s requirements for strong, moderate, or promising tiers of evidence. Based on the eight studies, there is strong evidence that *CW-FIT* positively impacted student behavior and promising evidence that *CW-FIT* positively impacted teacher practice.

The WWC effectiveness rating also indicates whether *CW-FIT* resulted in improved outcomes by (1) comparing students and teachers who participated in the program to students and teachers who did not participate in the program and (2) comparing student and teacher outcomes during periods of program participation to periods when they were not participating in the program. More information about these ratings is provided on the next page. Findings and conclusions could change as new research becomes available.

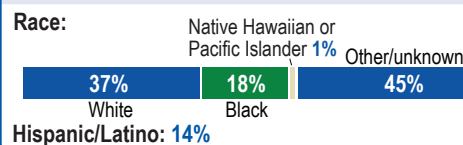
Table 1. Summary of findings on CW-FIT from eight studies that meet WWC standards

Outcome domain	Effectiveness rating	Improvement index	Evidence tier	Summary
Student behavior	Positive effects	669 students		The research provides strong evidence that <i>CW-FIT</i> improved student behavior. This assessment is based on six studies that meet WWC standards and include students in kindergarten through grade 10.
Teacher practice	Positive effects	321 teachers		The research provides promising evidence that <i>CW-FIT</i> improved teacher practice related to improving student behavior. This assessment is based on five studies that meet WWC standards and include teachers in prekindergarten through grade 7.

FINDINGS FROM 8 STUDIES

759 students in Missouri, Tennessee, Utah, and other unknown states

STUDENTS IN GRADES PreK–10



Free & Reduced-Price Lunch: 67%
Special Education: 22%
Female: 26%




HOW THE WWC REVIEWS AND DESCRIBES EVIDENCE

The WWC conducted a systematic review of interventions designed to improve teacher practice and selected and prioritized studies for review using the version 4.1 [Systematic Review Protocol for Social, Emotional, and Behavioral Interventions](#). The WWC evaluated the quality and results of the selected studies using the criteria outlined in the version 4.1 [Procedures and Standards Handbooks](#) and the accompanying [Study Review Protocol](#).

The WWC considers each study's research design, whether findings were statistically significant and positive, and the number of studies contributing to this report. The WWC synthesizes evidence across studies—using a weighted average—to determine the effectiveness rating for each outcome domain. The WWC defines outcome domains in the [Study Review Protocol](#) to group related outcome measures.

Effectiveness rating	Description of the evidence
Positive (or negative) effects	The evidence base primarily includes the strongest research designs, and the average effect across all high-quality research is statistically significant and positive (or negative).
Potentially positive (or negative) effects	The evidence base primarily includes research with some limitations, and the average effect across all high-quality research is statistically significant and positive (or negative).
Uncertain effects	The average effect across all high-quality research is not statistically significant, so the WWC does not classify it as a positive or a negative effect.

The WWC considers the effectiveness rating, the sample size, and the number of educational sites (states, districts, local education agencies, schools, postsecondary campuses) across studies to determine the evidence tier for each outcome domain. When the effectiveness rating is *uncertain*, *potentially negative*, or *negative effects*, there is no evidence tier.

Evidence tier	Criteria based on evidence synthesis
Strong evidence of effectiveness	 <ul style="list-style-type: none"> • Receives an effectiveness rating of positive effects, and • Includes at least 350 students in at least two educational sites
Moderate evidence of effectiveness	 <ul style="list-style-type: none"> • Receives an effectiveness rating of potentially positive effects, and • Includes at least 350 students in at least two educational sites
Promising evidence of effectiveness	 <ul style="list-style-type: none"> • Receives an effectiveness rating of potentially positive effects or positive effects • Includes fewer than 350 students or two educational sites

How was *CW-FIT* implemented?

This section provides details of how school districts and schools implemented *CW-FIT* in the eight studies that contribute to this intervention report. This information can help educators identify the requirements for implementing *CW-FIT* and determine whether implementing this program would be feasible in their districts or schools.

CW-FIT was implemented in general education and self-contained classrooms to encourage students to demonstrate appropriate behavioral skills and create a positive learning environment. Teachers identified target skills to focus on during *CW-FIT* sessions, including following directions, ignoring inappropriate peer behavior, showing respect, and getting the teacher's attention appropriately. Using short, scripted lessons, teachers defined each skill, explained why the skills are important, and allowed students to practice the skills. Teachers then divided their students into teams and reviewed the skills. Teachers monitored student behavior and scored the teams based on how well they displayed the target skills. At the end of the session, winning teams received a reward.

Comparison condition: In the two group design studies that contribute to this intervention report, students in the comparison group did not participate in *CW-FIT* and received business-as-usual instruction.

There is no comparison group in single-case design studies. In the six single-case design studies that contribute to this report, teachers instructed class as they normally would and enforced existing classroom rules during the baseline and reversal-withdrawal phases.

Teachers can implement *CW-FIT* during whole-class instruction or while students are working independently or in small groups. In all eight studies, *CW-FIT* was implemented with the whole class. The developer recommends that teachers implement 30-to 60-minute *CW-FIT* sessions three to four times per week during periods when students typically demonstrate disruptive behaviors. This frequency of sessions should be maintained over time, although teachers can decrease their monitoring of target behaviors and provide fewer opportunities for rewards as student behavior improves. In six studies, teachers implemented *CW-FIT* during varied class periods, and in two studies, teachers implemented *CW-FIT* during the period where students tended to be most disruptive. Teachers implemented the intervention once per day in six studies and three to five times a week in the other two studies. Table 2 summarizes the components and implementation of *CW-FIT* in more detail, and the [appendix](#) provides additional information about study-specific implementation in the single-case design studies.

WWC standards assess the quality of the research, not the quality of the implementation. Studies that meet WWC standards vary in quality of implementation. However, a study must describe the relevant components of the program and how each was implemented with adequate detail to be included in an intervention report.

Table 2. Implementation of components of *CW-FIT*

Component	Description of the component	How it was implemented
Teaching behavioral skills	<p>Teachers decide which behavioral skills to teach, typically selecting skills from a list suggested by the <i>CW-FIT</i> developer, including getting the teacher’s attention appropriately, following directions, ignoring inappropriate peer behavior, and showing respect. Teachers may choose to solicit student input on the selection of skills and decide whether the target skills will remain consistent or vary based on student behavior concerns.</p> <p>During the first 3 to 5 days of <i>CW-FIT</i> implementation, teachers introduce students to the behavioral skills that will be monitored during the implementation period using a 10- to 15-minute semi-scripted lesson for each skill. When introducing students to the target skills, teachers define the skill, discuss the rationale for learning the skill, and ask students to practice the skill. The skills for <i>CW-FIT</i> are also displayed on posters that include pictures as visual reminders for the students. Teachers review each target skill before beginning each <i>CW-FIT</i> session.</p>	<p>In seven studies, teachers taught two to four of the behavioral skills suggested by the developer. In one study, teachers taught skills from a list they developed using student input.</p> <p>In five studies, the target skills were consistent across all <i>CW-FIT</i> sessions. In three studies, teachers added skills based on student behavior challenges during sessions.</p>
<i>CW-FIT</i> game sessions	<p>Teachers divide their class into teams, usually based on seating arrangements. Teachers then explain that teams work together to earn points and rewards for demonstrating the <i>CW-FIT</i> target skills.</p> <p>Before each session, teachers decide how frequently to monitor behavior and award points, based on factors such as grade level, level of familiarity with the rules, and current levels of engagement. Teachers also decide how many points are needed for teams to earn rewards and announce the point goal before starting the session.</p> <p>During each session, teachers monitor student behavior at regular time intervals and award points if all members of a team are displaying the target skills. Teachers may also award bonus points at their discretion. Teachers record team point totals on a chart that is visible to all students. At the end of the session, teachers announce which team or teams won and provide rewards. Teachers use student input to create a list of rewards available to winning teams, often including a combination of small prizes, such as snacks, school supplies, free time, extra recess time, and activities such as short in-class games. Students choose their reward from the list.</p>	<p>In seven studies, teachers formed teams of two to six students. In one study, teachers did not divide classes into teams and instead assessed individual students’ demonstration of target skills.</p> <p>In five studies, teachers set a point goal that was constant throughout <i>CW-FIT</i> sessions. In two studies, the point goal was determined as a proportion of time intervals during the game session. In one study, teachers did not award points or establish point goals.</p> <p>In seven studies, all teams that met the established point goal received a reward of their choosing, and in one study, teachers did not provide rewards. In four studies, students provided input on the list of rewards.</p>
Teacher praise	<p>In addition to awarding points, teachers praise students for displaying the target skills. When giving praise, teachers describe how the students demonstrated the skill to reinforce appropriate behaviors. Teachers may also give behavior-specific, constructive feedback to students and teams who are not displaying the target skills.</p>	<p>In three studies, teachers were instructed to use skill-specific praise statements when teams displayed the target skills. The other five studies do not describe whether teachers were instructed to use skill-specific praise statements.</p>

Component	Description of the component	How it was implemented
Additional targeted supports for students	Teachers can provide additional supports for students who are having significant challenges demonstrating the target skills. Teachers select students who need additional support based on their behavior in initial <i>CW-FIT</i> game sessions and choose from two types of supports based on student behavior. For students who demonstrate attention-seeking behaviors, teachers show students how to monitor and track their own behavior using an individual version of the class point chart on their desks. For students who demonstrate avoidant behaviors (for example, putting their head down, leaving the room, or creating confrontations to avoid tasks), teachers show students how to ask for extra assistance from the teacher by holding up a help card. When introducing these supports, teachers select a peer to join a small-group lesson with the focal student or students to review appropriate behaviors, describe the supports, and practice using them. While implementing sessions, teachers praise students for appropriate use of the supports.	In two studies, after implementing initial <i>CW-FIT</i> sessions, teachers provided additional, targeted supports for students who continued to demonstrate significant disruptive behaviors. In six studies, teachers did not provide additional, targeted supports.
Training and support for teachers	Teachers can receive training from another staff member or from a <i>CW-FIT</i> researcher or developer. Training content covers how to teach behavioral skills using lesson scripts from the <i>CW-FIT</i> developer, monitor student behavior and award points, provide skill-specific praise, and provide rewards. Training may also include reviewing resources from the <i>CW-FIT</i> developer website, which include instructional videos of teachers implementing <i>CW-FIT</i> and written guides that describe the components of the intervention and how to implement them. Teachers can access additional materials from the developer website, including posters depicting the target skills, lesson scripts, class point charts, and individual point charts and help cards for providing targeted supports. Teachers often receive ongoing coaching support from staff members in their school or district when they start implementing <i>CW-FIT</i> , including coaching and modeling during the introductory sessions and classroom observations. Teachers might also need additional training when introducing additional, targeted supports to individual students.	In all eight studies, teachers received training from the study authors. In four studies, the study authors were also <i>CW-FIT</i> developers. In five studies, teachers received 90 minutes to 2 hours of training, and in two studies teachers received 45 to 60 minutes of training. In one study, teachers received 10 minutes of training, which involved reviewing lesson scripts for teaching the target skills. In five studies, teachers received ongoing coaching support, sometimes in more than one way. In two of these studies, teachers received additional coaching and modeling from the study authors during the sessions in which the teachers taught the target skills. In four of these studies, the study authors or <i>CW-FIT</i> coaches conducted classroom observations and provided feedback to teachers while teachers led <i>CW-FIT</i> sessions. Three studies do not describe coaching support for teachers. In the two studies in which teachers provided additional, targeted supports to students, teachers received additional training from the study authors or a <i>CW-FIT</i> coach on implementing these supports.

Notes: The descriptive information for this intervention comes from the developer website, <https://cwfit.ku.edu/>; the eight studies that meet WWC standards and have an effect size or design-comparable effect size; and from correspondence with the developers. Information about implementation in the additional six single-case design studies for which the WWC was unable to calculate a design-comparable effect size is provided in [Appendix Table 2](#).

How much does *CW-FIT* cost?

This section provides educators with an overview of the resources needed to implement *CW-FIT*. Table 3 describes the major resources needed for implementation and approximate costs, based on information available as of December 2022.

Table 3. Resources needed to implement *CW-FIT*

Resource	Description	Funding source
Teacher training	<i>CW-FIT</i> training materials for teachers are available for free on the developer's website.	In all eight studies, teachers were trained using materials available for free on the <i>CW-FIT</i> developer's website or provided by the study authors.
Coach training	Districts can purchase training packages for coaches from the developer, starting at \$6,000 to train two district coaches who, together, can support up to 20 teachers.	In four studies, the study authors provided additional coaching to teachers. Two studies do not describe how training for coaches was funded. In two studies, no additional coaching for teachers was provided.
Facilities and technology	<i>CW-FIT</i> is implemented in a classroom setting. <i>CW-FIT</i> training may be delivered in school facilities or online. Internet access and computers are required for online trainings.	School districts or schools provided the necessary facilities and technology.
Other materials	Implementation materials, such as posters depicting the target skills, class point charts, and individual point charts and help cards, are available for free on the developer's website. Teachers need a timer to facilitate <i>CW-FIT</i> sessions. Teachers or schools also provide rewards to winning teams, which often include a combination of small prizes such as snacks, school supplies, free time, extra recess time, and activities such as short in-class games.	The studies do not describe how timers for teachers or rewards for students were funded.

For more information about *CW-FIT*

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To request access to free training and implementation materials: <https://cwfit.ku.edu/request-access/>

What research did the WWC review about *CW-FIT*?

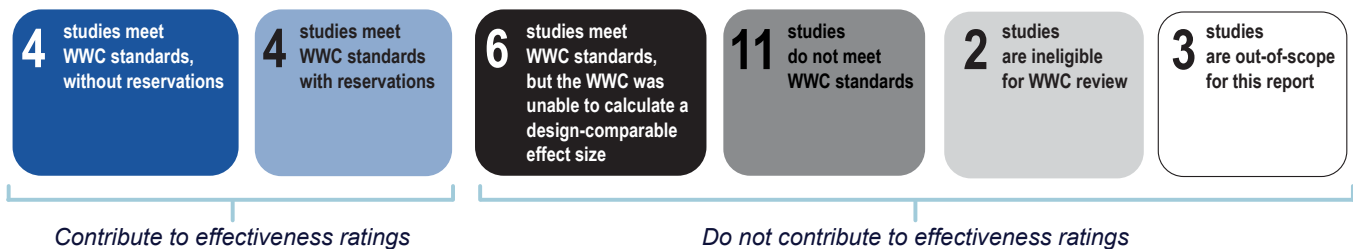
This section provides details about the studies of *CW-FIT* that the WWC identified in its systematic review. This section summarizes all of the studies reviewed by the WWC for this intervention report and the findings and characteristics of the eight studies that meet WWC standards and contribute to the findings in this report.

The quality of the available research about *CW-FIT*

The WWC identified 30 studies that investigated the effectiveness of *CW-FIT* from a literature search in the Education Resources Information Center (ERIC) and other databases in September 2021. Of these 30 studies, eight meet WWC standards and contribute to the summary of evidence in this intervention report. Of these eight studies, two studies included intervention and comparison groups (group design) and six studies were single-case designs, which follow the same students or classrooms over time. An additional six studies meet WWC single-case design standards but do not contribute to the findings in this intervention report because the WWC was unable to calculate a design-comparable effect size. These six studies are described further in [Appendix Table 2](#). Studies that do not meet WWC standards, are ineligible for review, or are out of scope also do not contribute to the findings in this intervention report (Figure 1).

What is a design-comparable effect size? The WWC synthesizes evidence across studies—using a weighted average of effect sizes—to determine the effectiveness rating for each outcome domain. For studies that meet standards, the WWC calculates effect sizes that are comparable for single-case design and group design studies. Findings from single-case design studies cannot contribute to the effectiveness rating if the WWC cannot calculate a design-comparable effect size for a study. A design-comparable effect size can be computed for a single-case design study that has three or more cases; this includes, for example, multiple baseline designs across three or more classrooms, students, or teachers; and single-case design studies with reversal-withdrawal designs for three or more classrooms, students, or teachers.

Figure 1. Eight of 30 studies identified in the literature search are eligible, meet WWC standards, and contribute to effectiveness ratings



- **Four studies meet WWC standards without reservations.** One group design study is a low-attrition cluster randomized controlled trial, one group design study is a low-attrition randomized controlled trial, and two single-case design studies have a sufficient number of phases and assessments per phase. All four studies receive the highest WWC rating. The WWC does not have any reservations about attributing results of the study to the intervention.
- **Four studies meet WWC standards with reservations.** Four single-case design studies have insufficient phases or assessments per phase to completely satisfy the WWC single-case design standards. The WWC has some reservations about attributing results of the study to the intervention due to limitations of the quality of the research.

- **Six studies meet WWC standards with or without reservations, but the WWC was not able to calculate a design-comparable effect size.** Five studies use reversal-withdrawal designs with fewer than three cases, and one study uses a multiple baseline design with a cluster-level outcome based on small groups of students clustered within classrooms. The WWC cannot calculate design-comparable effect sizes for these study designs. These studies and their ratings are described further in [Appendix Table 2](#).
- **Eleven studies do not meet WWC standards.** Two single-case design studies have insufficient data to demonstrate an intervention effect because the studies provide fewer than three assessments in at least one phase. In eight single-case design studies, the eligible outcomes do not meet WWC requirements because the studies either do not meet inter-assessor agreement criteria or do not report required inter-assessor agreement information. One group design study includes a confounding factor: because the intervention group included only one teacher, it is not possible to isolate the effectiveness of *CW-FIT* from the effectiveness of the teacher.
- **Two studies are ineligible for review.** These studies are ineligible for review because they do not use a study design eligible for review as described in the [WWC Standards Handbook \(Version 4.1\)](#). Both studies are meta-analyses.
- **Three studies are out of scope of this systematic review.** These studies bundle *CW-FIT* with another intervention so are outside the scope of the [Systematic Review Protocol for Social, Emotional, and Behavioral Interventions \(Version 4.1\)](#).

The citations for these six groups of studies are included in the references. For information on how the WWC determines study ratings, see the [Procedures and Standards Handbooks \(Version 4.1\)](#), [WWC Standards Briefs](#), and the [Study Review Protocol](#), available on the WWC website.

More details about the 8 studies of *CW-FIT* that meet WWC standards and contribute to effectiveness ratings

The eight studies that meet WWC standards and contribute to this report examined the effects of *CW-FIT* on nine measures of student behavior, including disruptive and on-task behavior, and 10 measures of teacher practice, including praise and reprimands. *CW-FIT* had positive effects on both student behavior and teacher practice.

Table 4 on the following page lists, for each finding, the name of the outcome, when it was assessed, the sample and setting, the means and standard deviations in the *CW-FIT* and comparison groups, the effect size, the improvement index, and whether the WWC determined the finding to be statistically significant. Table 5 summarizes contextual information about the eight studies of *CW-FIT* that meet WWC standards and contribute to the effectiveness ratings in this report, including the study setting and participants. The [appendix](#) provides additional contextual information for each single-case design study.

Links to each WWC study page are provided in the References. Other study findings that are not reported on the WWC website were either ineligible for review or did not meet WWC standards.

What is an effect size? The effect size is a standardized measure of the impact of an intervention that can be synthesized across outcome measures and studies. A positive effect size favors the intervention group and a negative effect size favors the comparison group. Effect sizes further away from 0 means there was a larger difference between the groups.

What is an improvement index? The improvement index is another measure of the intervention's impact on an outcome. The improvement index can be interpreted as the expected change in percentile rank for an average comparison group student if that student had received the intervention. For example, an improvement index of +5 means that a comparison group student at the 50th percentile would have scored at the 55th percentile if they had received the intervention. The effect size and improvement index measure the same concept in different units, similar to meters and feet for distance.

What is statistical significance? A finding is statistically significant if the difference between the intervention and comparison group means was large enough that it is unlikely to have been obtained for an intervention without a true impact. The WWC considers *p*-values less than 0.05 to be statistically significant.

Table 4. Findings by outcome domain from eight studies of CW-FIT that meet WWC standards

Outcome	Timing of measurement and study	Study sample	Number of sites	Mean (standard deviation)		Findings		
				Intervention group	Comparison group	Effect size	Improvement index	Statistically significant (p-value)
Student behavior outcome domain								
Number of disruptive behaviors, based on researcher observation of focal students	During SCD intervention sessions (Caldarella et al., 2019)	20 students in grades 6 to 9	5 schools in midwestern and western U.S.	--	--	1.12	+37	Yes (p<0.01)
Percentage of time on-task, based on researcher observation of focal students	During SCD intervention sessions (Caldarella et al., 2019)	20 students in grades 6 to 9	5 schools in midwestern and western U.S.	--	--	1.96	+48	Yes (p<0.01)
Percentage of time on-task, based on researcher observation of focal students	During SCD intervention sessions (Kitson, 2020)	6 students in grades K, 1, and 3	1 school in midwestern U.S.	--	--	1.62	+45	Yes (p<0.01)
Percentage of time on-task, based on researcher observation of focal students	During SCD intervention sessions (Moore et al., 2019)	3 students in grades 9 and 10	1 school in southeastern U.S.	--	--	1.54	+44	Yes (p<0.01)
Percentage of time on-task, based on researcher observation of focal students	During SCD intervention sessions (Speight et al., 2022)	3 students in grade 9	1 school in southern U.S.	--	--	1.90	+47	Yes (p<0.01)
Percentage of time displaying disruptive behaviors, based on researcher observation of classes	Multiple time periods during 6-month intervention (Wills et al., 2016)	313 students in grades K to 5	17 schools in midwestern U.S.	7.01 (5.23)	15.72 (11.93)	1.00	+34	Yes (p<0.01)
Percentage of time on-task, based on researcher observation of classes	Multiple time periods during 6-month intervention (Wills et al., 2016)	313 students in grades K to 5	17 schools in midwestern U.S.	85.20 (10.33)	65.85 (17.14)	1.42	+42	Yes (p<0.01)
Percentage of time students were engaged, based on researcher observation of classes	Multiple time periods during 6-month intervention (Wills et al., 2018)	324 students in K to 6	21 schools in Missouri, Tennessee, and Utah	90.80	76.60	0.67	+25	Yes (p<0.01)
Percentage of time on-task, based on researcher observation of classes	Multiple time periods during 6-month intervention (Wills et al., 2018)	324 students in K to 6	21 schools in Missouri, Tennessee, and Utah	80.00 (17.50)	58.80 (15.61)	1.38	+42	Yes (p<0.01)
Summary for student behavior: positive effects						1.38	+42	Yes (p<0.01)

Outcome	Timing of measurement and study	Study sample	Number of sites	Mean (standard deviation)		Findings		
				Intervention group	Comparison group	Effect size	Improvement index	Statistically significant (p-value)
Teacher practice outcome domain								
Number of teacher praise statements, based on researcher observation of teachers	During SCD intervention sessions (Jolstead et al., 2017)	3 teachers in PK	2 schools in Utah	--	--	0.85	+30	Yes (p<0.01)
Number of teacher praise statements, based on researcher observation of teachers	During SCD intervention sessions (Kitson, 2020)	3 teachers in grades K, 1, and 3	1 school in midwestern U.S.	--	--	1.80	+46	Yes (p<0.01)
Number of teacher reprimand statements, based on researcher observation of teachers	During SCD intervention sessions (Kitson, 2020)	3 teachers in grades K, 1, and 3	1 school in midwestern U.S.	--	--	1.67	+45	Yes (p<0.01)
Number of behavior-specific praise statements, based on researcher observation of teachers	During SCD intervention sessions (Speight et al., 2020)	5 teachers in grades 6 and 7	1 school in southern U.S.	--	--	2.38	+49	Yes (p<0.01)
Number of teacher praise statements to a focal student, based on researcher observation of teachers	Multiple time periods during 6-month intervention (Wills et al., 2016)	153 teachers in grades K to 5	17 schools in midwestern U.S.	0.78 (1.40)	0.30 (0.64)	0.42	+16	Yes (p<0.01)
Number of teacher praise statements to a group of students, based on researcher observation of teachers	Multiple time periods during 6-month intervention (Wills et al., 2016)	153 teachers in grades K to 5	17 schools in midwestern U.S.	12.21 (9.85)	0.55 (1.27)	1.57	+44	Yes (p<0.01)
Number of teacher reprimands to a focal student, based on researcher observation of teachers	Multiple time periods during 6-month intervention (Wills et al., 2016)	153 teachers in grades K to 5	17 schools in midwestern U.S.	0.72 (0.80)	1.31 (0.14)	0.97	+33	Yes (p<0.01)
Number of teacher reprimands to a group of students, based on researcher observation of teachers	Multiple time periods during 6-month intervention (Wills et al., 2016)	153 teachers in grades K to 5	17 schools in midwestern U.S.	1.26 (1.79)	1.63 (1.58)	0.06	+3	No (p=0.69)
Number of teacher praise statements, based on researcher observation of teachers	Multiple time periods during 6-month intervention (Wills et al., 2018)	157 teachers in K to 6	21 schools in Missouri, Tennessee, and Utah	15.20	3.10	2.36	+49	Yes (p<0.01)
Number of teacher reprimand statements, based on researcher observation of teachers	Multiple time periods during 6-month intervention (Wills et al., 2018)	157 teachers in K to 6	21 schools in Missouri, Tennessee, and Utah	3.60	4.60	0.11	+4	No (p=0.49)
Summary for teacher practice: positive effects						1.15	+37	Yes (p<0.01)

Notes: Means and standard deviations for the intervention and comparison groups are not displayed for findings from single-case design studies because single-case designs do not have a comparison group. In all studies, *CW-FIT* was implemented with the whole class. The first column contains information about whether the outcome measures were assessed for the whole class or for focal students who were identified because of high levels of disruptive or off-task behavior. Effect sizes are coded such that a positive effect size indicates a favorable outcome, and a negative effect size indicates an unfavorable outcome. Wills et al. (2016) measured outcomes at multiple time points, which spanned 6 months of the school year in both intervention and comparison classes. Wills et al. (2018) measured outcomes at multiple time points in late fall to early spring in both intervention and comparison classes. SCD = single-case design study.

Table 5. Characteristics of the eight studies of CW-FIT that meet WWC standards and contribute to the effectiveness ratings

	Group design studies	Single-case design studies
What was the study design?	<ul style="list-style-type: none"> • One study used a cluster randomized controlled trial design. • One study used a randomized controlled trial design. 	<ul style="list-style-type: none"> • One study used a multiple baseline design across classrooms. • One study used a series of multiple baseline designs across students and classrooms. • Four studies used reversal-withdrawal designs. <p>All six studies are described further in Appendix Table 1.</p>
What was the WWC study rating?	<p>Wills et al. (2016) is rated Meets WWC Group Design Standards Without Reservations because it is a cluster randomized controlled trial with low cluster level attrition and individual nonresponse.</p> <p>Wills et al. (2018) is rated Meets WWC Group Design Standards Without Reservations because it is a randomized controlled trial with low attrition.</p>	<p>Two studies—Caldarella et al. (2019) and Speight et al. (2020)—are rated Meets WWC Single-Case Design Standards Without Reservations because they have sufficient number of phases and assessments per phase to completely satisfy WWC single-case design standards.</p> <p>Four studies—Jolstead et al. (2017), Kitson (2020), Moore et al. (2019), and Speight et al. (2022)—are rated Meets WWC Single-Case Design Standards With Reservations because they have a sufficient number of phases or assessments per phase to partially satisfy WWC single-case design standards.</p>
Where did the study occur?	The students were in kindergarten through grade 6 in 38 elementary schools in Missouri, Tennessee, Utah, and other unknown states.	The students were in prekindergarten through grade 1, grade 3, and grades 6–10 in three elementary schools, six middle schools, and two high schools in Utah and other unknown states.
Who participated in the study?	The study samples ranged from 313 to 324 students. Overall, the composition of these samples was approximately 37% White, 20% Black, and 8% Hispanic or Latino. In addition, 74% were male, 24% received special education services, and 68% were eligible for free or reduced-price lunch.	The study samples ranged from three to 55 students. Overall, the composition of these samples was approximately 33% White, 7% Black, 5% Native Hawaiian or Pacific Islander, and 52% Hispanic or Latino. In addition, 67% were male, 51% were English learners, 12% received special education services, and 59% were eligible for free or reduced-price lunch.

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Additional sources

The WWC examined additional sources (such as preliminary reports, working papers, or other associated publications) related to the citations in the references to complete its review of these studies. The additional sources are listed on the WWC pages for each study review.