

Managing Student Behavior with Class-Wide Function-Related Intervention Teams: An
Observational Study in Early Elementary Classrooms

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Abstract

Comprehensive evidence-based interventions are needed to help early childhood educators manage challenging student behaviors. One such intervention, class-wide function-related intervention teams (CW-FIT), is a multi-tiered behavioral intervention program based on positive behavior support principles, including four main elements: (a) teaching socially appropriate communication skills, (b) using differential reinforcement with an interdependent group contingency, (c) extinguishing or eliminating potential reinforcement for problem behavior, and (d) implementing individual interventions using self-management, help cards, and/or functional assessment. This study implemented CW-FIT with five kindergarten through second grade teachers. Results demonstrated efficacy of the program as early childhood teachers increased their praise rates and decreased their reprimand rates, and students responded with increased on-task behavior and fewer classroom disruptions. Study implications and limitations are addressed.

Managing Student Behavior in Early Elementary Classrooms with Class-wide Function-related Intervention Teams

Problem behaviors are often listed as the number one concern of early childhood educators (Conroy, Davis, Fox, & Brown, 2002). Emotional and behavioral problems occur frequently during early grades as young students are building skills with language and developing capacities to regulate their thoughts, emotions, and behaviors (Egger & Angold, 2006). Approximately 50% of teachers across all education levels report spending more time dealing with student misbehavior than they believe they should (Beaman, Wheldall, & Kemp, 2007). The prevalence of early elementary students exhibiting problem behaviors has been found to be between 7% and 10%, rising as high as 20% through later elementary and secondary school years (Beaman et al., 2007). Many early childhood and elementary school teachers report feeling that they are underprepared in effective classroom management practices (Reinke, Stormont, Herman, Puri, & Goel, 2011); lack of these skills causes a number to leave the profession (McIntosh, Brown, & Borgmeier, 2008).

Classroom management includes three core components: (a) allocation of maximum time for instruction, (b) arrangement of instructional activities to maximize student engagement and achievement, and (c) use of proactive behavior management strategies (Sugai & Horner, 2002). Proactive approaches to classroom management are considered best practice, but reactive approaches are sometimes used in dealing with students with challenging behaviors (Benedict, Horner, & Squires, 2007; Conroy & Brown, 2004). And some teachers who implement proactive interventions for students with challenging behaviors neglect the behavioral needs of other students (Benedict et al., 2007). Comprehensive evidence-based interventions are needed to deal

with early elementary students with challenging behaviors and to prevent their peers from developing similar conduct.

Early childhood educators can incorporate positive behavior support (PBS) into their classrooms to address challenging behaviors of some students without neglecting behavioral needs of the others (Benedict et al., 2007). PBS is acknowledged as an evidence-based approach to preventing or eliminating challenging behaviors by teaching and reinforcing appropriate social skills (Cohn, 2001). Fundamental components of PBS include (a) fostering students' positive relationships and interactions with peers and adults, (b) defining and teaching behavioral expectations clearly during instruction time, and (c) providing feedback on students' use of appropriate social skills throughout the day (Benedict et al., 2007).

The appropriate use of praise is integral to the successful implementation of PBS (Caldarella, Christensen, Young, & Densely, 2011). However the use of praise is not without controversy, particularly concerning its effects on student motivation and learning (Ames, 1990; Dweck, 1999). Some have argued that praise may weaken intrinsic motivation, if students perform for the praise alone (Ryan & Deci, 2000), potentially making students more dependent on teachers and passive about learning. Katz (1993), while supporting the notion of praise of young children, cautions that it may become so frequent that it begins to lose its value and adults may find it difficult to maintain a constant flow of meaningful praise. Kohn (2001) has noted that praise can lead to reduced creativity. Others have argued that praising students for behaviors they can control is less likely to inhibit intrinsic motivation and achievement than praising for uncontrollable factors, such as ability or intelligence (Zentall & Morris, 2010). According to Katz (n.d.):

It is better to...ask teachers to give what is called "informative" feedback rather than empty positive feedback like "Good job!" or "Awesome!"...make it informative—for example, "That came out well, the way you built the bridge right there."....The feedback should refer to something the child does or says in terms of its significance... (para. 2)

Research has shown that as teachers use frequent, contingent, and specific (or what Katz calls *informative*) praise student behavior can be improved (Kalis, Vannest, & Parker, 2007; Partin, Robertson, Maggin, Oliver, & Wehby, 2010). For example, Fullerton, Conroy, and Correa (2009) successfully trained early childhood teachers to increase their use of specific praise statements to preschool children who were at risk for behavioral disorders, resulting in significant increases in the children's appropriate behaviors and decreases in their behavior problems. A survey study of 92 early childhood educators found that they endorsed teacher praise as an important and feasible behavior support strategy (Stormont, Lewis, & Smith, 2005). Teacher praise has also been recommended as a way to encourage students and contribute to closer teacher-student relationships (Gable et al., 2009).

Another PBS strategy for managing student behavior is to use group contingencies, placing students in groups where they can work together to behave appropriately and earn points to exchange for a reward (Kerr & Nelson, 2006). Group contingencies provide peer influence to help students avoid their challenging behaviors as well as motivate positive behavior among all students (Ling, Hawkins, & Weber, 2011). Group contingencies have been found to reduce disruptive behaviors throughout the class (Donaldson, Vollmer, Krous, Downs, & Berard, 2011; Hulac & Benson, 2010; Ling & Barnett, 2013) and improve classroom environments (Öneren Şendil & Tantekin Erden, 2014; Wright & McCurdy, 2012).

Despite the established efficacy of PBS practices, many teachers still struggle with consistently implementing PBS in their classrooms. A study by Reinke, Herman, and Stormont (2013) investigated elementary teachers' use of classroom behavior management strategies aligned with PBS. Direct observations were conducted in 33 classrooms in schools that were implementing PBS with high fidelity. Findings indicated that while most teachers had posted positively stated classroom rules, their use of frequent praise and avoidance of reprimands were much less common.

Class-wide function-related intervention teams (CW-FIT; Wills et al., 2010), a program that incorporates PBS principles, is a variation of the Good Behavior Game (Barrish, Saunders, & Wolf, 1969), but focuses on tracking positive rather than negative student behavior. It is a function-related intervention in that the group contingency addresses attention, a common function of behavior (Kamps et al., 2011). CW-FIT is used as a primary level PBS intervention with all students in the classroom; teachers define and teach behavioral expectations as they monitor and reinforce appropriate behavior. CW-FIT can also be used as a secondary or tertiary level of support for students with more challenging behaviors, through the use of self-management, help cards, and functional assessment (Wills et al., 2010). CW-FIT is freely available to teachers who want to use it, and it is not a packaged program for sale. Wills and colleagues (2010) provide details for those wishing to implement it.

Currently three published journal articles document the effects of CW-FIT in elementary schools. Wills and colleagues (2010) provided evidence of positive effects of CW-FIT implementation in 16 elementary school classrooms. Their results showed increases in teacher attention to appropriate student behaviors, decreases in disruptive student behaviors, and increases in on-task student behaviors, even among students with serious behavior disorders.

Kamps and colleagues (2011) implemented CW-FIT in six elementary school classrooms, resulting in significant improvements in student on-task behavior. For students specifically identified as at risk for emotional and behavioral disorders (EBD), they reported decreased disruptive behaviors and increased on-task behavior. Wills, Iwaszuk, Kamps, and Shumate (2014) demonstrated similar positive effects of CW-FIT when implemented across academic instructional periods in one first grade classroom. However none of these studies specifically focused on the effects of CW-FIT in multiple early elementary school (K-2) classrooms and additional research was recommended.

The purpose of the current study was to investigate the effects of CW-FIT implemented in early elementary classrooms. Six research questions were addressed:

1. Are early elementary school teachers able to implement CW-FIT with fidelity?
2. Does the implementation of CW-FIT result in increased ratios of teacher praise to reprimand?
3. Does the implementation of CW-FIT result in increased levels of group on-task classroom behavior?
4. Is there a relationship between teacher praise to reprimand ratios and group on-task behavior?
5. Does the implementation of CW-FIT result in increased academic engagement and decreased disruptive behaviors for students identified as at risk for EBD?
6. Do teachers and students perceive CW-FIT as socially valid?

Method

Setting and Participants

The setting was a suburban Utah Title I elementary school with a total student population of 461: 82% Caucasian, 14% Hispanic, and 4% other ethnicities; 52% male and 48% female. Approximately 70% of the students were economically disadvantaged. Five teachers participated in the study; three taught classes designated for treatment (one kindergarten and two second-grade), and two taught classes designated as a control group (one kindergarten and one first grade). A total of 76 students were involved: 57% male and 43% female. The average class size was 19 ($SD = 2.87$) students. Of the 76 participating students, 17 (22%) were identified via screening as at risk for developing EBD: 10 (2 females, 8 males) were in treatment classrooms (6 in kindergarten, 4 in second grade) and 7 (4 females, 3 males) were in control classrooms (4 in kindergarten, 3 in first grade).

Participating teachers (four females, one male) had an average of 13 years of experience ($SD = 7.05$). All were Caucasian; the average age was 54 ($SD = 6.68$). Two teachers had bachelor's degrees and three had master's degrees. Four had early childhood endorsements, two had math endorsements, and one had an endorsement in Teaching English as a Second Language. The two second grade teachers participated in a "job-share," with one teaching in the morning and the other teaching in the afternoon.

CW-FIT was conducted in kindergarten in the afternoon during literacy (40 minutes), in second grade in the morning during guided reading/center time (45 minutes), and in second grade in the afternoon during math (45 minutes). The control group teachers were observed during the following subjects-- kindergarten in the afternoon during literacy (40 minutes) and first grade in the afternoon during writing (60 minutes).

Independent Variable

The independent variable was CW-FIT (Wills et al., 2010), a multi-tiered intervention program designed to contribute to (a) teaching appropriate classroom social skills, (b) using praise and group contingency to provide differential reinforcement, (c) eliminating potential reinforcement of problem behavior, and (d) using self-management, help cards, and functional assessment with students when needed. CW-FIT was implemented in conjunction with a typical academic lesson, a context in which the teachers experienced the most behavioral concerns.

The primary tier began with teaching three to five social skills during 10-minute lessons the first three to five days of implementation. Direct instruction and role plays were used. Social skills taught to all groups included how to “get the teacher’s attention,” “follow directions the first time,” and “ignore inappropriate behavior.” Skills were posted in the classrooms where they were visible to all students. At the beginning of each academic lesson teachers used pre-corrects to remind students to follow the posted social skills. They scanned their classrooms frequently throughout the lesson to identify and praise individuals and groups who were appropriately applying the social skills.

Students were assigned to groups or teams based on classroom seating arrangements (e.g., tables, rows, or clusters of desks). A timer sounded at intervals of approximately three minutes, cuing the teachers to deliver points and praise to teams that had all members on task and exhibiting targeted social skills. At the conclusion of the academic lesson, the teacher publically tallied the points earned for each team. Teams meeting or exceeding the predetermined goal received a tangible or nontangible reward (e.g., stickers, blowing bubbles, art activity, and classroom games such as four corners).

Potential reinforcement for problem behavior was eliminated in two ways. First, teachers were encouraged to minimize or withhold attention when students behaved inappropriately, focusing instead on praising appropriate behavior. Second, students were taught how to ignore peers' inappropriate or problem behavior and were reinforced when they did so.

For students who continued problem behavior and required extra support, teachers could add a secondary intervention such as self-management, enabling students to track their own behavior in relation to the social skills while still working toward the team goal. At the sound of the timer, teachers cued students to evaluate their own behavior and award themselves a point if they had earned it. Self-management addresses attention as a function of behavior. A functional assessment could also be completed if students did not respond to the secondary level intervention, though this was not required in the present study.

Student Screening

Three steps were used to identify students who were at risk for EBD. First, teachers completed Stage 1 of the *Systematic Screening for Behavior Disorders* (SSBD; Walker & Severson, 1992). Each teacher nominated up to five students who exhibited the most externalizing behaviors and up to five with the most internalizing behaviors. SSBD Stage 1 inter-rater agreement (Spearman ρ) is reported as .94 on the externalizing dimension and .82 on the internalizing dimension. Test-retest reliability for Stage 1 is reported as .79 for rankings of externalizing behavior and .72 for rankings of internalizing behavior (Walker & Severson).

Next teachers rated nominated students using the *Social Skills Improvement System* (SSIS; Gresham & Elliott, 2008), a standardized norm-referenced measure. The 83 items are rated using a 4- or 5-point Likert scale. Sample items include "Follows your directions," "Withdraws from others," and "Cheats in games or activities." The SSIS scales have internal

consistencies (alphas) of .94 to .97. Test-retest indices are reported as between .82 and .92 (Gresham & Elliott). Students scoring more than 1 standard deviation above the mean on the SSIS Problem Behaviors scale were considered at risk.

To further confirm students' at-risk status, direct observations were conducted using the Multi-Option Observation System for Experimental Studies (MOOSES; Tapp, Wehby, & Ellis, 1995), described below. Students whose disruptive behaviors were above 10 per 15-minute interval or whose engagement levels were below 75% were considered to be at risk.

Dependent Variables and Measures

Student and teacher behaviors were the dependent variables (see Table 1 for behavioral definitions). Student group on-task behaviors and teacher praise and reprimand rates were measured during 20-minute observation sessions via paper/pencil methods. Academic engagement and disruptive levels of at-risk behavior were recorded by trained observers during 15-minute observation sessions using the MOOSES computer software program (described below) on a tablet computer.

Student group on-task behavior was recorded using a time sampling procedure by which the observer scanned each student group every 30 seconds (three to six groups per class, as designated by rows, tables, or easily identified clusters of students). If the entire group was on task, the observer recorded a plus for that group; if any in the group were off task, the observer recorded a minus. At the conclusion, the number of pluses was totaled for each group and divided by the total number of observed increments. Group scores were combined and converted into a percentage of on-task behavior for the whole class.

During the observation sessions teacher praise and reprimands were recorded on the top portion of the group on-task observation sheet, using a frequency count. Teacher praise and reprimands to any individual student or to any group of students were recorded and summed.

During separate observation sessions, the frequency of disruptive behaviors and duration of academic engagement were recorded for at-risk students. Individual student behavior was measured directly via MOOSES (Tapp et al., 1995), an event-recording computer software system that has been successfully used in other studies involving observations of student and teacher behavior (see e.g., Reinke et al., 2013; Smith, Lewis, & Stormont, 2011). MOOSES enables the observer to collect data for later analysis, using a laptop or tablet computer. Each at-risk student was observed an average of three times at baseline ($M = 3.25$, $SD = .64$) and eleven times during intervention ($M = 11.3$, $SD = 1.42$).

To ensure consistency of observations, inter-observer agreement (IOA) was collected for 30% of observation sessions. IOA for group on-task behaviors was calculated using an interval by interval method, dividing the number of agreements by the total number of agreements plus disagreements: The mean was 93% ($SD = 3.34$). IOA was collected for 26% of the MOOSES observation sessions calculated on the frequency codes by dividing the number of agreements by the number of agreements plus disagreements: The mean was 85% ($SD = 15.36$).

A 17-item treatment fidelity form was used during each observation period. The items evaluated the fidelity of CW-FIT implementation (e.g., reviewing social skills at beginning of lesson, posting daily point goal, awarding points and praise for use of skills) and were scored dichotomously as “yes” or “no.”

Social validity was assessed with teachers, once two months into CW-FIT implementation using an open-ended format and again at the end of the study using a

questionnaire. The teacher forms included questions regarding the acceptability of the procedural components, ease of implementation, feasibility of self-management, and perceptions of effectiveness. Students also completed a social validity questionnaire in March, asking three open-ended questions and two yes/no questions, assessing what they liked or did not like about CW-FIT and whether they would recommend it to peers. Questionnaires were completed by all treatment teachers and by 90% of the students in their classrooms.

Design and Analysis

This study used a quasi-experimental non-equivalent control group design with classrooms randomly assigned as treatment or control. Students were not matched and thus were considered non-equivalent. Group data analysis included descriptive and inferential statistics (*t*-tests and *ANOVAs*) as well as Cohen's *d* effect size estimates to examine dependent (within group) and independent (between groups) means. Pearson's *r* was also calculated to examine the relationship between teacher praise to reprimand ratios and group on-task behaviors.

To examine individual at-risk students' responses to CW-FIT, descriptive data were summarized and *Tau-U* effect size differences between baseline and treatment phases were calculated. *Tau-U* is an effect size metric recently described for small N single-case data (Parker, Vannest, Davis, & Sauber, 2011). *Tau-U*, which compares baseline and intervention phases, can be used to combine effect sizes of multiple individuals using a weighted average. Data were entered into the *Tau-U* calculator (<http://www.singlecaseresearch.org>), which provides an effect size and significance test of the effect (Vannest, Parker, & Gonen, 2011).

Treatment fidelity ratings were analyzed using descriptive statistics, as were responses to Likert-rated items on the social validity questionnaires. Responses on open-ended social validity questions were examined qualitatively for common themes.

Procedures

School district approval and Institutional Review Board (IRB) approval (from the sponsoring university) was first obtained for the research protocol. Teachers completed consent forms following a school recruitment meeting. Parent consent/student assent forms were obtained for at-risk students identified via the first step of the student screening process (described above). Following the collection of baseline data, intervention teachers were trained on CW-FIT procedures (2-3 hour training) and began implementation in their classrooms (3-5 times a week), while control teachers taught as usual. Implementation and observations continued for approximately five months. All research staff were trained in the ethical and responsible conduct of research via the university's IRB office and were supervised by the first and second author.

Results

Fidelity on the CW-FIT procedures in the treatment classrooms averaged 95.74% ($SD = 4.46$). Intervention fidelity of levels of 80% or higher are considered acceptable (Kamps et al., 2000). Control classrooms averaged 4.56% ($SD = 8.42$), due to some teachers' customary use of praise and points.

Between-group analyses showed no statistically significant differences in teacher praise to reprimand ratios [$F(1,18) = 1.41, p = .25, d = .50$] in treatment classrooms compared to control classrooms at baseline. But following CW-FIT implementation, the praise to reprimand ratio was significantly higher [$F(1,60) = 10.41, p < .01, d = 1.06$] in the treatment classrooms (large effect size) compared to the control condition. Table 2 provides a summary of descriptive data and within-group differences, revealing statistically significant increases in teacher praise to reprimand ratios in CW-FIT classrooms but non-significant changes in control classes.

Between-group analyses revealed no statistically significant differences in group on-task behaviors [$F(1, 19) = 0.09, p = .76, d = .14$] between the treatment classrooms and the control classrooms at baseline. But following CW-FIT implementation, group on-task behaviors were significantly higher [$F(1,66) = 4.00, p = .05, d = .49$] in the treatment classrooms (moderate effect size) compared to the control classrooms. Results revealed statistically significant within-group increases in group on-task behaviors in CW-FIT classrooms but no statistically significant changes in control classes (see Table 2).

A moderate positive correlation [$r(80) = .31, p < .01$] indicated a significant linear relationship between the two variables: As teacher praise to reprimand ratios increased, student on-task behaviors tended to increase as well.

For at-risk students in CW-FIT classrooms, academic engagement increased over time from baseline ($M = 82.13\%, SD = 8.48$) to intervention ($M = 85.39\%, SD = 8.10$), which was statistically significant ($Tau u = .29, p < .001$). Classrooms disruptive behaviors also decreased for these students during intervention, from an average of 24.10 ($SD = 7.67$) during baseline to 9.97 ($SD = 3.94$) during intervention, which was statistically significant ($Tau u = -.69, p < .001$).

At-risk students in control classrooms showed no statistically significant increase in academic engagement over time ($Tau u = .03, p = .84$), though a modest increase was found from a mean of 90.38% ($SD = 11.90$) during the baseline phase to 92.39% ($SD = 5.35$) during the treatment phase. Additionally, no statistically significant decrease was found in disruptive behaviors for these students across time ($Tau u = -.11, p = .44$) by comparing the baseline ($M = 9.30, SD = 5.21$) to treatment phase ($M = 8.10, SD = 5.42$).

Regarding social validity, all intervention teachers reported that CW-FIT was easy to implement and that the procedures were helpful in improving their students' behavior. They

reported that students were more on-task, were listening better, and were trying to exhibit appropriate behavior during CW-FIT implementation. Teachers also reported that students developed a greater sense of teamwork. Teachers did note that the periodic sounding of the timer could be disruptive to teaching at times and that some students became upset when their team did not earn the group reward.

Students reported that CW-FIT was fun: They most liked receiving points and earning group rewards. Sample student comments included “it helps me behave and others too” and “it helps with being good, and it helps others with learning.” Many students reported that they enjoyed the “privilege” of being self-managers: They particularly liked to track their points and said they were sad when they weren’t chosen to be self-managers. Students reported that not getting points and not earning group rewards were their least favorite parts of CW-FIT. Overall, 97% of students would recommend CW-FIT to their peers.

Discussion

The purpose of the current study was to investigate the effects of CW-FIT implemented in early elementary school (K-2) classrooms. The results are discussed in terms of each of the research questions addressed.

First, results suggest that CW-FIT is feasible for early elementary teachers to implement in their classrooms. This was reflected in the high levels of treatment fidelity revealed in direct observations of CW-FIT in treatment classrooms. These fidelity results were similar to levels found by Kamps et al. (2011) and Wills et al. (2014). If teachers can consistently implement evidence-based interventions with fidelity, these interventions may be more likely to positively impact student behavior.

Second, results reveal that CW-FIT implementation was associated with significant improvements in teachers' praise to reprimand rates, also similar to the findings of others (Kamps et al., 2011; Wills et al., 2014). While praise is commonly regarded as an evidence-based intervention, many teachers do not use it frequently and consistently enough to have maximum positive impacts on student behavior (Reinke et al., 2013). With CW-FIT, praise rates increased dramatically, while in the control classrooms praise rates actually decreased slightly over time. The increased praise to reprimand ratios may be due to the timer sounding periodically to remind teachers that the time had come to reinforce and praise appropriate student behavior. Reinke and colleagues (2013) also noted that when praise rates increased, reprimand rates decreased, though teachers often needed reminders to praise students.

Third, results show that the implementation of CW-FIT resulted in significantly increased levels of class-wide group on-task behavior in treatment classrooms, similar to findings of others (Kamps et al., 2011; Wills et al., 2010, 2014), while control classrooms experienced only modest increases. Increased on-task behavior results in more time engaged in academic tasks, which is associated with improved academic performance as well as decreased student problem behaviors, particularly for students with learning difficulties (Rich & Ross, 1989).

Fourth, results revealed a moderate but statistically significant correlation between teacher praise to reprimand rates and student on-task behavior. These findings concur with studies documenting the positive effects of praise on student behavior (see e.g., Fullerton et al., 2009; Kalis et al., 2007; Partin et al., 2010; Stormont, Smith, & Lewis, 2007) and address the suggestion of Wright and McCurdy (2012) calling for further examination of the relationship between teacher praise and student on-task behavior.

Fifth, results suggest that the implementation of CW-FIT resulted in significant positive effects on academic engagement and reduction of disruptive behaviors for students identified as at risk for emotional and behavioral disorders (EBD), similar to results found by others (Kamps et al., 2011; Wills et al., 2010, 2014). Such findings are important when considering that students who develop EBD are at further risk of struggling with learning difficulties, dropping out of school, and experiencing employment problems (Wagner, Kutash, Duchnowski, Epstein, & Sumi, 2005). If early childhood educators can implement improved classroom management practices, such as CW-FIT, the negative trajectories of at-risk students may be altered.

Finally, results suggest that teachers and students believed CW-FIT to be socially valid. This finding is of consequence, since many teachers do not use interventions that research has shown to be effective, resulting in what has been called a research-to-practice gap (Walker et al., 1996). As noted by Marchant, Heath, and Miramontes (2012), “In the current climate of evidenced-based intervention, we often lose sight that it is not solely the proposed intervention that leads to desired change, it is the buy-in of stakeholders” (p. 1). The results of this study suggest that CW-FIT had buy-in from teachers and students, making it more likely to be implemented in the future.

There were several limitations to this study. First, relatively few classrooms participated. Replication studies with additional early childhood classrooms, including preschool classrooms, would further validate the results. Second, the fact that students could not be randomly assigned to treatment and control classrooms limited the internal validity of the study. Third, generalization and maintenance of behavioral improvements were not measured following termination of the CW-FIT intervention. Future studies including data from other class periods and/or follow-up data collected over several months would be helpful in evaluating the

sustainability of both the intervention and the changes in student behavior. Despite these limitations, this study adds support for CW-FIT implementation in early elementary school classrooms.

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Table 1

Definitions of Student and Teacher Behaviors

Behavior	Definition	Examples	How measured
Teacher praise	Verbal statements (to individuals, small groups, or whole class) indicating approval of behavior over and above an evaluation of adequacy or acknowledgement of a correct response to a question	“Great job getting my attention the right way!” “Jane, thank you for giving me your listening ears!” “I have stellar listeners in class today!”	20-minute on-task observations, recorded via frequency counts on group record sheet
Teacher reprimands	Verbal statements (to individuals, small groups, or whole class) used to comment negatively about student behavior or to scold students, often with the intent to stop a student from misbehaving	“I told you to sit down!” “Quit wasting time and get back to work.” “That’s five minutes off of recess.”	20-minute on-task observations, recorded via frequency counts on group record sheet
Group on task	Every student in a group must be working appropriately on an assigned or approved activity	Attending to the material and the task, making appropriate motor responses, asking for assistance (when appropriate) in an acceptable manner, waiting appropriately for the teacher to begin or continue with instruction	20-minute momentary time sampling on group record sheet
Student engagement	Active engagement: direct responses to an assignment or task Passive engagement: listening or attending to the material or task	Active: responding to a question, reading aloud, solving problems Passive: quietly listening to teacher, attending to the demonstration or material	15-minute observations, recorded via duration codes using MOOSES
Disruptive student behavior	Deliberate motor/physical or verbal displays of inappropriate behavior that interfered with the students’ participation and/or the productive classroom activity of peers	Gestures or statements intended to provoke others, inappropriate use of classroom materials, chatting during work time when not teacher permitted, making noise	15-minute observations, recorded via frequency codes using MOOSES

Table 2

*Differences in Mean Teacher Praise to Reprimand Ratios and Group On-Task Behavior**Percentages across Time and Classroom Condition*

Classroom Condition	<i>n</i>	<u>Baseline</u> <i>M (SD)</i>	<u>Intervention</u> <i>M (SD)</i>	<i>t</i>	<i>p</i>	<i>d</i>
CW-FIT						
Praise to reprimand ratio	61	1.04 (.99)	6.77 (6.36)	3.21	.002	1.26
Group on-task behavior %	61	59.79 (12.97)	74.58 (8.31)	4.03	.001	1.36
Control						
Praise to reprimand ratio	57	1.85 (2.08)	1.82 (1.88)	.03	.98	.02
Group on-task behavior %	57	61.63 (12.99)	69.61 (11.71)	1.44	.18	.64