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# The Effects of Classwide Function-Related Intervention Teams on Preschool Behavior

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ABSTRACT

The Effects of Class-Wide Function-Related Intervention Teams on Preschool Behavior

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Challenging behavior in preschool is a serious concern for teachers. In recent years, positive behavior support (PBS) has been shown to be effective in reducing such behaviors. Class-Wide Function-related Intervention Teams (CW-FIT) is a specific program for implementing PBS principles in classroom settings. CW-FIT is a group contingency that utilizes social skills training, teacher praise, and positive reinforcement to improve student behavior. Students are taught specific social skills and then work in teams to earn a group reward based on the use of these skills. CW-FIT has been shown to be effective in elementary classrooms but has not yet been evaluated with other age groups. The present study examined the effects of CW-FIT implementation on teacher praise rates and student engagement in four preschool classrooms with 55 total students. A single-subject, multiple-baseline design with embedded reversals was used to evaluate impact. Results indicate that CW-FIT increased teacher praise rates and student engagement while reducing student disruptive behavior. Both teachers and students found CW-FIT to be socially valid. The present study indicates promising results for the implementation of CW-FIT in a preschool setting.

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CHAPTER ONE

INTRODUCTION

Without early intervention, challenging behavior in preschool students can evolve into more substantial concerns later in life (Dunlap et al., 2006). Preschool teachers need resources to prevent and to extinguish such behaviors (Gilliam, 2005). Effective interventions teach children social skills and benefit whole classes as well as individual students (Dunlap et al., 2006). Relatively few studies have investigated appropriate interventions for challenging behavior in preschools (Rescorla et al., 2011).

One type of intervention that has been effective across all grade levels is positive behavior support (PBS). PBS provides a framework that fosters the use of praise and reinforcement to support the needs of all students (Renshaw, Young, Caldarella, & Christensen, 2008; Sugai et al., 2000). Studies have shown that PBS is effective in improving individual student behavior as well as the behavior of whole classes (Blair, Fox, & Lentini, 2010; Duda, Dunlap, Fox, Lentini, & Clarke, 2004; Stormont, Smith, & Lewis, 2007). Although some debate surrounds the use of rewards in preschool, many studies show positive reinforcement can lead to improved performance and motivation (Cameron & Pierce, 1994; Lemos & Verissimo, 2014). Specifically, the use of verbal reinforcement, or teacher praise, has proven effective (Fullerton, Conroy, & Correa, 2009; Hemmeter, Ostrosky, & Fox, 2006; Stormont et al., 2007).

Social skills training is an important part of PBS and is essential for preschool students to know what behavior is expected. Preschool students can learn these skills from the direct instruction of teachers and from the examples of their peers (Carter & Pool, 2012; Hemmeter et al., 2006; Hughett, Kohler, & Raschke, 2013).

Group contingencies, programs in which a student's reward is dependent on the behavior of members of a group, often accompany PBS as well (Wright, 2008). The Good Behavior Game is a specific type of group contingency that can decrease disruptive behavior (Barrish, Saunders, & Wolf, 1969; Wright & McCurdy, 2012). Class-Wide Function-related Intervention Teams (CW-FIT) is a group contingency similar to the Good Behavior Game that utilizes teacher praise, social skills training, and PBS principles to improve student behavior (Conklin, 2010; Kamps et al., 2011). CW-FIT has been effective in elementary classrooms but has not yet been evaluated with other age groups.

The present study sought to examine the effects of CW-FIT in preschool classrooms. The questions addressed in this study were as follows:

1. Does the implementation of CW-FIT in preschool classrooms result in increased levels of group on-task behavior within the classroom?

2. Does the implementation of CW-FIT in preschool classrooms result in increased teacher praise to reprimand ratios?

3. Are preschool teachers able to implement CW-FIT with fidelity?

4. Do preschool teachers believe CW-FIT is socially valid?

5. Do preschool students believe CW-FIT is socially valid?

CHAPTER TWO

LITERATURE REVIEW

An estimated 33% of preschool-age children in the United States exhibit challenging behaviors such as the inability to wait, the need for immediate attention, and the tendency for quick changes from one task to another (Rescorla et al., 2011). Smith and Fox (2003) defined challenging behavior as "any repeated pattern of behavior, or perception of behavior, that interferes with or is at risk of interfering with optimal learning or engagement in pro-social interactions with peers and adults" (p. 6). Challenging behavior can be described in terms of its frequency and its effects on learning and socialization. Campbell (2002) suggested that many troublesome behaviors are common among young children, but it is the intensity, frequency, and co-occurrence with other behaviors that distinguish challenging behavior from the norm.

Dunlap et al. (2006) made several statements about the origins of challenging behavior. Innumerable factors can contribute to the development and maintenance of challenging behaviors. Environmental influences such as low socioeconomic status, community violence, and adverse family circumstances can play a role. Educational factors such as lack of praise, punitive behavior strategies, and limited access to effective instruction can also foster challenging behavior. Males are twice as likely as females to be disruptive, and children of single parents are at greater risk (Wakschlag et al., 2007).

Challenging behavior is a concern for most teachers because it can have a strong negative effect on the safety and productivity of the learning environment (Carter & Pool, 2012). Over 10% of preschool teachers reported expelling at least one student from their classrooms during 2005, and preschool expulsion occurs over three times as much as expulsion in grades K-12

nationwide (Gilliam, 2005). To counteract these negative trends, preschool teachers need access to effective behavior management strategies.

Not only is it vital to create intervention plans for preschoolers who exhibit challenging behavior, but implementing preventive strategies for all preschool children is critical as well. Some of the desired outcomes for such interventions are appropriate peer and adult relationships, self-control, and diligence in challenging tasks (Dunlap et al., 2006). To successfully transition into kindergarten, preschoolers need to learn social skills, problem-solving techniques, persistence during difficult tasks, and ways to appropriately communicate emotions (Hemmeter et al., 2006).

Related to these preventive strategies is the concept of executive function, or the mental processes that affect behavior control and organization. The Society for Research in Child Development (2014) asserted that executive function undergoes important developmental changes between the ages of three and five. Main processes of executive function include inhibition, working memory, and task switching. Research shows that the development of executive function in early childhood is an indicator of school readiness. Its development can also largely impact areas in adulthood such as relationship and career satisfaction, and mental and physical health. When selecting appropriate interventions for preschool, educators should consider how the ongoing development of executive function can be nurtured and what behavior can feasibly be expected at such a young age.

Effective interventions teach preschool children appropriate alternate behaviors and social skills. Multicomponent interventions that include preventive and consequence-based strategies have proven to be effective as well. Dunlap et al. (2006) analyzed a series of studies regarding behavior trends in preschool and came to several conclusions. Early intervention is

essential as challenging behaviors in early childhood are likely to increase with age. If problems are not identified early, they often require more intensive and lengthy services later in life. When intervention is delayed, the risks of academic struggles, poor social interactions, mental health concerns in adulthood, stress on families, and negative impact on the community largely increase. Although many educators are aware of this trend, few understand how to resolve it. Disruptive behaviors like temper tantrums are "developmentally typical" for preschoolers, so it can be hard to identify what is normal and what is abnormal. Educators need to know what constitutes challenging behavior and how to prevent and resolve it.

Unfortunately, relatively few studies have investigated ways to improve preschool behavior (Rescorla et al., 2011). Much of the research that has been conducted previously has focused on individual children and not on larger groups or whole classrooms. In addition, more studies in real-world contexts are needed. A majority of the research surrounding challenging behaviors in preschools is based on teacher or parent surveys, or occurs in contrived settings, rather than direct observation in real school settings (Dunlap et al., 2006). Much of the existing research in this area has focused on positive behavior support.

**Positive Behavior Support**

One type of intervention that has been effective in reducing challenging behavior in both preschool and older grades is positive behavior support (PBS). PBS combines applied behavior analysis, normalization principles, and person-centered values (Carr et al., 2002). Principles of applied behavior analysis, such as antecedents and consequences, provide the basis for PBS assessment and intervention strategies. Normalization promotes the idea of those with disabilities being as involved in "normal" social experiences as is possible. PBS makes that possible, partially through prevention and interventions for at-risk students. With its person-centered

focus, PBS looks at not only effectiveness, but the individual's worth and independence when planning interventions. PBS stresses teaching as the main tool to create comprehensive, durable, and relevant behavior change. Instead of using coercion to modify behavior, PBS seeks to restructure the learning environment, including teacher behavior (Sugai, et al., 2000).

Critical features of PBS include a focus on student outcomes, using research-based practices to support students with varying needs and backgrounds, implementing multiple tiers of supports, and using data-based decision making to support both students and teachers (Fox, Lentini & Binder, 2013). Effective PBS programs define and teach desired behaviors, give prompts and feedback to support appropriate behavior, and use data to guide future decisions (Stormont et al., 2007). In PBS, a three-tier model is used to meet the needs of students. At the *primary* level, all students are taught behavioral expectations and reinforced for meeting these expectations. The *secondary* level involves screenings, intervention, and monitoring the progress of students deemed at-risk for behavioral concerns. At the *tertiary* level, individualized plans are created for students who need extra support (Renshaw et al., 2008).

A combination of whole class and individual PBS intervention plans has proven effective in early childhood classrooms (Stormont et al., 2007). In a study by Blair et al. (2010), a lead teacher and an assistant teacher taught expected social skills to all students during circle time in a community preschool classroom. Preventive and response plans were also individualized for three target students. Prevention included providing students with opportunities to choose desired activities and assigning the students classroom jobs. Responses included withholding attention for undesired behaviors and praising desired behaviors. The intervention led to a significant increase in engagement and a decrease in challenging behavior of the target students. These positive changes also generalized to other class times. Data collected a month after the target

students transferred to other classrooms showed that high rates of engagement and low rates of challenging behavior continued in these new environments, providing evidence of generalization (Blair et al., 2010).

Another study (Duda et al., 2004) examined the effects of PBS on two preschool students with challenging behaviors. After researchers completed functional assessment interviews, they formed intervention teams comprised of the students' parents, the preschool teacher, paraeducators, the preschool director, and PBS consultants. Based on the assessments, changes were made in whole-class group activities, and individual supports were created for two target students. The supports included more opportunities to answer questions and greater choice. These interventions took place during two daily activities: opening circle and planning. PBS consultants coached and modeled behavioral management strategies throughout the intervention phases on an as-needed basis. During the intervention periods, the number of disruptions with each target student decreased significantly while engagement increased. PBS consultants also attempted to improve the preschool teacher's rate of praise, but this was not implemented as successfully. This failure to praise may have occurred because positive interactions between teacher and student required more effort than implementing the structural pieces of the intervention (Duda et al., 2004).

A specific type of PBS implemented in preschools is Prevent-Teach-Reinforce for Young Children (PTR-YC; Dunlap, Lee, & Strain, 2013). Prevent strategies recognize sources of potential challenging behavior and create alternatives. Teach strategies instruct students in appropriate social skills. Reinforce strategies do away with reinforcement for undesirable behavior and add reinforcement for desired behavior. In order to be effective, this reinforcement must be something truly desirable to the student.  PTR-YC incorporates five components: (1) a

5:1 positive to negative or neutral teacher attention ratio; (2) the display and teaching of clear, predictable schedules; (3) the use of multiple specific routines within daily routines; (4) direct instruction of expected behavior within all contexts; and (5) direct instruction of peer-related social skills. To improve PTR-YC fidelity, teachers should have cues or reminders such as a timer or bell. Fidelity also increases substantially if the process is scripted and kept identical for all participants. This provides just one example of an effective PBS intervention (Dunlap et al., 2013).

Hemmeter, Fox, Jack, and Broyles (2007) identified several outcomes of implementing a PBS school-wide system in preschools and elementary schools. Less consultation with outside mental health professionals was needed. Students were given fewer time-outs. Transitions to different classrooms were easier because of consistent school-wide expectations. Teachers had a more positive teaching approach. Staff turnover was reduced. This study is another example of the favorable results shown when PBS is applied.

**Debate Surrounding Reinforcement**

Despite encouraging results, debate surrounds the issue of whether PBS's behavioral emphasis on rewards to reinforce desired behavior is appropriate for preschool-aged students. Intrinsic and extrinsic motivation can exist simultaneously, particularly in the younger grades (Lemos & Verissimo, 2014). Shiller, O'Flynn, Reineke, Sonsteng, and Gartrell (2008) presented a discussion incorporating both sides of the rewards debate. Some believed rewards lead to decreased motivation for activities children already show interest in. Rewards can be seen as a method to control behavior. Some suggested using an engaging curriculum to motivate students instead of a positive reinforcement system. Others believed that rewards can be used effectively, particularly with difficult tasks: Positive reinforcement can allow students to experience success,

which can lead to developing basic skills and greater success in the future. Some advocated for a humanistic approach to delivering rewards, similar to that used in PBS. Such an approach would focus on individual needs and would use reward systems to guide students toward a goal, not merely to control their behavior.

Cameron and Pierce (1994) conducted a meta-analysis of studies involving rewards and motivation. One of their findings was that while tangible rewards do not always lead to an increase in future performance, verbal reinforcement or praise consistently produces an increase in intrinsic motivation. They also noted that opponents of such a system usually use the term "rewards," while supporters prefer "reinforcement." Distinguishing between the two terms is essential. Reinforcement is directed toward future behavior, while rewards only deal with the present situation.

Despite the debate surrounding this issue, research by Lemos and Verissimo (2014) indicates children perform successfully when they are reinforced for their behavior. Students can be both intrinsically and extrinsically motivated to perform tasks. Particularly in the younger grades, intrinsic and extrinsic motivation can co-exist without one necessarily undermining the other. As students enter fourth grade, there are data to suggest extrinsic motivation can negatively affect intrinsic motivation. However, extrinsic motivation can, at times, provide necessary support when students are asked to perform an undesirable or difficult task. The use of praise can be particularly beneficial.

**Benefits of Praise vs. Reprimands**

As the most stable element in a classroom, teachers are the ones most able to create change in the learning environment (Wright, 2008). Building positive relationships between teachers and students is an important component of managing challenging behavior. Such

relationships can be fostered through teacher praise of appropriate student behavior. Teacher praise also results in improved student behavior (Hemmeter et al., 2006).

Two studies conducted by Corpus and Lepper (2007), investigated the effects of types of praise on preschool and elementary students. The first study examined the effects of different types of praise on upper elementary students. Children were first asked to do easy tangram puzzles, and researchers gave feedback according to the child's randomly assigned condition: person praise, product praise, process praise, or neutral feedback. The children were then asked to do difficult tangram puzzles and were not praised during this time. While waiting to be debriefed on the study, students were given the choice of activities to do, including tangram puzzles. Students were then told they would receive a gift when the researcher returned several weeks later. Students were asked to rank choices of gifts, including a tangram set. When the researcher returned after several weeks, she had "misplaced" the ranking list and asked students to rank their preferences again. Results indicated that praise was more effective when it was directed at the product or the process, rather than at the children themselves. Results also suggested that intrinsic motivation increased for females who were given product or process praise, but decreased for those given person praise. No real differences existed with males. The second study was similar to the first, but included jigsaw puzzles instead of tangrams to fit the abilities and interests of preschool students. In the results of this study, preschool children of both genders who were in any of the three praise conditions were more likely to prefer jigsaw puzzles several weeks later than those who received neutral feedback. Preschool children appeared to be more intrinsically motivated in the future if they were given praise of any type.

Stormont et al., (2007) investigated the impact of teacher praise and pre-correction on student disruptive behavior in three Head Start classrooms. Teachers attended training on PBS

principles, and consultants helped them implement these principles in their own classrooms. After the training, observers recorded the number of teacher reprimands and praise statements, the number of student disruptive behaviors, and whether the teacher used precorrections at the beginning of the lesson. Results showed that after the training, teacher praise rates increased although reprimands rates did not decrease. Overall student disruptive behavior decreased significantly as well. Because of the small number of participants, researchers acknowledged the need for future studies to investigate the use of praise and precorrections in other early childhood classrooms.

Early childhood teachers can be trained to use higher praise rates for appropriate student behavior as part of a PBS school-wide system (Fullerton et al., 2009). Modeling, practice, and feedback are effective methods to encourage teachers to praise. Four early childhood education teachers were trained to increase praise with specific disruptive students in their classrooms. The rates of specific praise for each teacher significantly increased after training. Additionally, as teachers' rates of specific praise increased, preschool children's compliance and engagement increased as well (Fullerton et al., 2009).

While PBS is intended to improve the behavior and engagement of all students, a study by Fields (2012) showed that some teachers struggle to successfully implement the intervention with students who have behavior problems, specifically students with oppositional defiant behavior. Teachers tend to be able to use PBS more effectively with students who are on task than those who exhibit problem behaviors. Although those with behavioral disorders are not always off task, Field's research suggests that teachers often spot the negative behaviors exhibited by these students more frequently than their positive behaviors. Results also showed

that PBS was implemented more effectively with children under the age of eight than with older children, suggesting that this is an important strategy for early intervention.

**Social Skills Training**

Another component typically included in PBS is social skills training. Many behavioral difficulties, such as an inability to wait or to control one's emotion-based actions, are related to problems with self-regulation (Campbell, 2002). Self-regulation usually appears around the time a child turns three, which suggests a deficit exists for preschool students who exhibit challenging behavior. Children develop self-regulation through social experiences with adults and with peers. Additionally, Bjorkland's "theory of mind" asserts that young children develop an awareness of the thoughts and feelings of others based on their own thoughts and feelings and on previous experiences with those who are regularly present in their lives (Campbell, 2002). If preschoolers are lacking in these or other areas, skills need to be explicitly taught. Children learn social skills best when they are practiced on a daily basis and taught in context (Merrell & Gimpel, 1998).

Hemmeter et al. (2006) make several points regarding social skills instruction. First, they discovered a negative correlation between students' social skills and their challenging behavior: As social skills increase, problem behaviors decrease. Second, when creating behavior management plans, they note, it is important to remember that many of the challenging behaviors exhibited by preschoolers arise because of their lack of experience with social skills and their current stage of language, emotional, and cognitive development. Third, problem behavior significantly decreases when children know classroom rules and the specific steps needed to follow these rules, particularly when combined with social skills instruction.

Carter and Pool (2012) made recommendations regarding social skills training in teaching young children. Defining overall expectations and giving specific examples of what

desirable behavior looks like are important. Preschool classrooms should focus on two to four behavioral expectations at a time. These expectations should be developmentally appropriate and positively stated. When teaching social skills to young children, it is essential to provide an explanation for why such a behavior is important, to show examples and non-examples of the skills, to provide opportunities for students to practice, and to provide feedback.

Preschool children are able to learn social skills both from their peers and from adults. In a study by Hughett et al. (2013), children who exhibited poor communication and social skills were placed in groups with more adept children. Children were explicitly taught social skills and were periodically prompted by adults. The verbal communication skills of the target children improved through the modeling from their more adept peers. Appropriate verbalizations occurred between 4% and 22% of the time during baseline. During the intervention period, however, appropriate verbalizations increased to between 50% and 63% of the time. The amount of time spent in cooperative play showed a similar increase during the intervention. Percentage of time spent using appropriate verbalizations and engaging in cooperative play also continued to increase during a maintenance phase.

Pre-teaching of skills, or explicitly defining specific steps for expected behaviors before contrary behaviors occur, is also important for behavioral management, particularly in early education. LeGray, Dufrene, Mercer, Olmi, and Sterling (2013) contrasted the use of differential reinforcement of alternative behavior (DRA) on its own and DRA combined with pre-teaching to decrease inappropriate vocalizations and increase appropriate vocalizations in four preschool students. Results of this study showed that the addition of pre-teaching was more effective at creating the desired behavior than the DRA intervention only. With one of the students, inappropriate vocalizations were only reduced from 18% at baseline to 15.5% when the DRA

intervention was introduced.  However, when pre-teaching and DRA were implemented together with this student, the number of sessions in which inappropriate vocalizations occurred dropped below 10%. Appropriate vocalizations showed a dramatic increase as well (LeGray et al., 2013). The teaching of social skills can also be effectively combined with group contingencies.

**Group Contingencies**

Group contingencies, programs in which a student's reward is dependent on the behavior of members of a group, often accompany PBS. Group contingencies are a way of removing reinforcing peer behaviors, such as attention and laughter, when students engage in inappropriate behavior. Three types of group contingencies can be used: dependent, independent, and interdependent. With dependent contingencies, the reward of the entire group is based on the success of one individual or small group. Independent contingencies reward each individual based on their performance alone. Interdependent contingencies, which reward each group if every individual within the group reaches the desired goal, are efficient and promote teamwork, allowing teachers to focus on improving the behavior of disruptive students without isolating them from other members of the class (Wright, 2008). Group contingency interventions help students become more aware of their own behavior and how it relates to others (Poduska et al., 2007). Research shows that the ability to take another's perspective often develops between the ages of three and four (Campbell, 2002). Utilizing group contingencies with preschool-age children may help this skill develop and improve at a pivotal age.

**The Good Behavior Game.** One such intervention that incorporates interdependent group contingencies is the Good Behavior Game (GBG**;** Barrish et al., 1969). With this intervention, classes are divided into teams and definitions of disruptive behavior are explained. Teachers make a tally each time a disruptive behavior occurs during the time the game is played.

Disruptive behavior is defined as talking out of turn or being out of one's seat. When the game ends, teams that earned less than a specified number of behavior tallies are rewarded with a tangible prize or a desired activity. All teams have the opportunity to "win" the game.

Research has supported the use of the GBG. For example, implementation of the GBG in kindergarten and fourth grade classrooms was associated with significant decreases in disruptive behaviors (Barrish et al., 1969; Wright & McCurdy, 2012). In the original study by Barrish et al. (1969), students' talking out decreased from 96% at baseline to 19% during the intervention. Out-of-seat behavior also showed a decrease from 82% to 9%. The Surgeon General of the United States listed the GBG as a "Promising" behavior management program that has been shown to be effective in decreasing shy and aggressive behavior in elementary students (U.S. Surgeon General, 2001).

A study by Poduska, et al. (2007) showed fewer emotional or behavioral problems and less drug or alcohol use in young adult males who participated in the GBG while in elementary school than those from that age group who were not included in the intervention. Students entering first grade in 1985 and 1986 participated in the GBG for two years under teachers trained in the intervention. Before the intervention was implemented, teachers rated students on aggressive, disruptive, and shy behavior. Results of the study showed that males who were originally rated high in aggressive, disruptive behavior benefited most from participating in the GBG. They were also less likely than those not involved in the GBG to use mental health or drug treatment services, or to be involved in the justice system or social services (Poduska, et al., 2007).

Many variations of the GBG have been utilized in classrooms as well. One study by Wright (2008), examined the combination of the GBG and behavior specific praise statements

(BSPS) on student behavior. For a praise statement to be behavior specific, the teacher had to gain the student's attention and recognize appropriate behavior. The same GBG rules applied to this variation, with the teacher awarding a point to a team each time a disruptive behavior was exhibited. However, after each timer beep, the teacher gave a behavior specific praise statement to a student. Although on-task behavior significantly increased and disruptive behavior decreased, results showed no obvious difference between the use of GBG + BSPS and GBG alone. This may have been due to ceiling effects or to the contradictory nature of tallying teacher points for negative behaviors while also praising students for appropriate behavior.

Although the GBG has proven effective, it is often criticized for its focus on misbehaviors. To explore this concern, Tanol, Johnson, McComas, and Cote (2010) compared the use of the traditional GBG approach (called GBG-response cost) with a more positive variation (GBG-reinforcement) in two kindergarten classrooms. During the GBG-response cost phase, each team started with four stars. One was taken away each time a student displayed a disruptive behavior. Teachers would praise an appropriately behaving team or individual after each timer beep as well. During the GBG-reinforcement phase, teams were awarded stars for good behavior and stars were never removed. Praise also occurred during intervals. Both forms of GBG were effective at reducing disruptive behavior in six target students, showing that group contingency programs can work in grades as low as kindergarten. Implementation of GBG-reinforcement led to disruptive behaviors that were less than or equal to the levels that occurred during the GBG-response cost intervention. Praise and positive reinforcement were more effective than punishment at reducing disruptive behaviors when implemented as part of the GBG. Since this study only measured the effects of the intervention on individual students,

further research is needed to explore the effects of positive group contingency programs on a class as a whole.

The GBG has also been effective at increasing compliance in preschool children (Swiezy, Matson, & Box, 1992). Therapists used a puppet to give instructions to pairs of preschool children. The students were told that if both members of the team followed the instructions they would earn tokens and be rewarded. Compliant behaviors increased substantially during these sessions. Additionally, the children made encouraging comments to each other, showing that they were working cooperatively to earn the reward. Because this study only examined pairs of students, further research should be done to explore the use of group contingencies with a whole class. Also, the increase in compliant behavior did not generalize from the initial setting to outdoor free play.

**The Caught Being Good Game.** The Caught Being Good Game (CBGG) is a variation of the timer game (Wolf, Hanley, King, Lachowicz, & Giles, 1970) and is similar to the GBG. In the original timer game intervention, students were rewarded with tokens for being in their seats each time a bell rang. The tokens could later be exchanged for prizes such as candy, clothing, or field trips (Wolf et al., 1970). To create the CBGG, researchers made the reward contingent on all team members being on task at the bell ring (Wright & McCurdy, 2012).

A study comparing the GBG and the CBGG showed that both group contingency programs were successful in increasing engagement and decreasing off-task behavior (Wright & McCurdy, 2012). Both interventions were employed by two participating classrooms, a kindergarten class and a fourth grade class, at separate times. The CBGG was introduced first with the fourth grade classroom and was withdrawn after a period of time. The GBG was then introduced and withdrawn. The opposite presentation of interventions was used in the

kindergarten classroom, with the GBG presented before the CBGG. No significant differences existed between the results of the two interventions. With both interventions, the first intervention introduced produced a higher level of on-task behavior than the intervention introduced after the withdrawal. Novelty might have been the cause for these initial improvement rates. Both interventions were equally as effective at reducing disruptive behavior; however, neither intervention increased teacher praise rates. Surprisingly, teacher acceptability rates were higher for the intervention that worked less effectively. Students rated both interventions as acceptable (Wright & McCurdy, 2012).

**Other group contingency interventions.** Ling and Barnett (2013) examined the use of group contingencies and praise with preschool students. Teachers counted disruptive behaviors during a specified class time and rewarded students if the class as a whole had fewer disruptions than a predetermined goal. Class engagement, number of disruptions, teacher positive attention, teacher negative attention, and the amount of instruction time were observed and measured. Results showed a significant increase in engagement and teacher positive attention, as well as a significant decrease in disruptive behaviors and teacher negative attention. However, teacher-directed instruction time showed very little improvement, mainly due to a high percentage during baseline.

**Class-Wide Function-Related Intervention Teams**

One intervention that involves PBS principles, praise, social skills training, and group contingencies is Class-Wide Function-Related Intervention Teams, or CW-FIT (Wills et al., 2010). One component of CW-FIT is the teaching of social skills (e.g., getting the teacher's attention, following directions the first time) to students. CW-FIT also seeks to minimize reinforcement of disruptive behaviors and increase reinforcement of appropriate behaviors

through the use of group contingencies. Students are placed in groups and rewarded with points and praise for desirable behaviors. A second level of CW-FIT allows individual students to self-manage and track their points (Wills et al., 2010).

Implementation of CW-FIT has been shown to lead to greater student engagement, higher teacher praise rates, and fewer disruptions. In a study by Conklin (2010), one kindergarten, one second grade, and two seventh grade classrooms participated in CW-FIT. Disruptive behavior decreased while teacher praise and appropriate student behavior increased across all classrooms. On-task behavior increased at least 30% from baseline to intervention in all four classrooms. Although researchers discovered CW-FIT did not affect assignment completion or semester grades in the seventh grade classrooms, teachers were highly satisfied with the intervention.

Another study (Kamps et al., 2011) investigated the use of CW-FIT in six elementary classrooms in three different schools. On-task behavior increased from 43.6% at baseline to 79.7% during the intervention, while disruptive behavior significantly decreased. Teacher praise increased, while reprimands decreased. Although teachers reported that the intervention took time to implement, they also reported spending less time dealing with disruptive behavior.

In an additional CW-FIT study (Wills, Iwaszuk, Kamps, & Shumate, 2014), the intervention was implemented across different periods of the day by the same first grade teacher. After CW-FIT was used in one period for a short time, another period was added, and then another. Results indicated that on-task rates similarly increased across all class periods.

Caldarella, Williams, Hansen, and Wills (2014) implemented CW-FIT in five early elementary (kindergarten through second grade) classrooms. The results were similar to those of previous studies. Praise to reprimand ratios increased significantly. On-task rates increased for whole classes and for individuals at-risk for behavioral problems. Disruptive behaviors also

decreased both for whole classes and for individuals. Control classrooms did not show any significant increases for praise to reprimand ratios or for on-task behavior.

Not only has CW-FIT been shown to be effective in improving student behavior, but teachers and students have believed in its social validity as well (Caldarella et al., 2014; Conklin, 2010; Kamps et al., 2011). A "research-to-practice" gap often exists when teachers and other practitioners do not understand the importance of research or are unsure how to apply it (Carnine, 1997). Measuring the participants' views of the intervention plays a key part in determining whether the research is beneficial and whether others are likely to use it in the future. According to Wolf (1978), socially validity is based on the perceived importance of the intervention goals, the procedures, and the effects. Finn and Sladeczek (2001) suggest that using more than one measure of social validity adds strength to a study. PBS advocates for the investment of all stakeholders, including students. Therefore, attaining buy-in from students as well as teachers is important (Marchant, Heath, & Miramontes, 2012). In previous CW-FIT studies, both teachers and students have enjoyed participating and believed in its usefulness (Conklin, 2010; Kamps et al., 2011).

To date, no published CW-FIT studies have involved preschools. Favorable results in elementary schools suggest that CW-FIT may be helpful in other grades as well. The purpose of the present study was to implement CW-FIT in a preschool setting and examine its effects on teacher and student behavior.

CHAPTER THREE

METHODS

The methodology of this study is similar to that used in previous CW-FIT studies

conducted with older age groups (Caldarella et al., 2014; Conklin, 2010; Kamps et al., 2011;

Wills et al., 2014). The following sections detail how the present study was conducted.

**Setting and Participants**

The present study was conducted in four preschool classrooms in two Title I elementary

schools in suburban Utah. Participating teachers signed consent forms, and researchers sent

home detailed information about the study to the parents/guardians of all students in the

participating classes (See Appendix A). The university's institutional review board approved this

study for research on human subjects. Three preschool teachers participated in the study. One

teacher taught a morning class (Classroom 1) and an afternoon class (Classroom 2). At the other

elementary school, one morning preschool teacher (Classroom 3) and one afternoon preschool

teacher (Classroom 4) were participants. All teachers were Caucasian females with an age range

of 26 to 55 ($M = 45$, $SD = 13.44$). All had bachelor's degrees with endorsements in early

childhood education and had between 5 and 16 years of teaching experience ($M = 6$, $SD = 4.97$).

The teacher for Classrooms 1 and 2 was 55 years old and had 16 years of teaching experience.

The teacher for Classroom 3 was 54 years old and was in her first year teaching at that particular

preschool. She had taught 6 years previously. Classroom 4's teacher was 26 years old. She had

five years of experience and was working on an English Language Learner endorsement. Each

classroom also had a fulltime aide who worked with the students but who was not actively

involved in the study.

There were between 13 and 14 students in each classroom, yielding 55 preschoolers in total (See Table 1). Students were either 4 or 5 years old. All students were low SES and had to demonstrate low school readiness skills in order to be admitted to the preschools. Children seeking admission to the preschools were assessed using a test designed by the district. The test measured oral language abilities, motor skills, and basic knowledge of numbers and letters (See Appendix B). The 28 children (14 for the morning class, 14 for the afternoon class) with the lowest scores (per school boundaries) on this district test were admitted. The district provides separate special education classrooms for preschoolers, so none of the students in the participating classrooms were identified as having a disability. Additionally, specific ELL services were not provided to any of the students.

Table 1

*Preschool Student Demographics*

|  | Classroom 1 | | Classroom 2 | | Classroom 3 | | Classroom 4 | |
|---|---|---|---|---|---|---|---|---|
|  | *n* | *%* | *n* | *%* | *n* | *%* | *n* | *%* |
| Males | 9 | 69 | 8 | 57 | 7 | 50 | 10 | 71 |
| Females | 4 | 31 | 6 | 43 | 7 | 50 | 4 | 29 |
| ELL | 7 | 54 | 10 | 71 | 6 | 43 | 5 | 36 |
| Caucasian | 4 | 31 | 2 | 14 | 6 | 43 | 7 | 50 |
| Hispanic | 8 | 62 | 12 | 86 | 8 | 57 | 6 | 43 |
| African American | 1 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pacific Islander | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 |
| Total | 13 | 100 | 14 | 100 | 14 | 100 | 14 | 100 |

**Independent Variable and Procedures**

The independent variable was CW-FIT (Wills et al., 2010), a behavioral intervention program designed to increase on-task behavior through the teaching of social skills, teacher praise, group contingency, and self-management strategies. Teachers attended a training session under the direction of the researchers. During this training session, researchers explained the rationale and logistics of the intervention and teachers practiced implementing CW-FIT. Training also included example videos of teachers modeling CW-FIT in their classrooms. Teachers were also coached on CW-FIT implementation by research staff for one to two weeks, until teachers felt comfortable implementing independently. Training length varied between teachers based on how comfortable they felt with their abilities to implement CW-FIT. When the intervention was first implemented, the teachers taught three to four social skills to the students through 10-minute scripted lessons (See Appendix C). Skills were introduced one day at a time. Three lessons were suggested by the researchers: "how to get the teacher's attention," "ignoring inappropriate behavior," and "following directions the first time." The choice of these lessons was based on the importance of these academic-related social skills (Caldarella & Merrell, 1997). If they so desired, teachers could choose a fourth skill to teach to the class and to display. The teacher for Classroom 1 and 2 chose to add "keeping hands and feet to yourself," and the teacher for Classroom 3 chose "talking in a quiet voice." The Classroom 4 teacher did not choose to implement a fourth skill. These skills were posted in the classroom with accompanying visuals (See Appendix D). In order to make the typically used CW-FIT skills scripts age-appropriate, each preschool teacher combined hand gestures for students to use when repeating the specific steps. For example, if one of the steps was "Look at the teacher and listen," the teacher and

student would point to eyes and then ears as they repeated the step. Teachers were instructed to pre-correct, or briefly review, on these skills at the beginning of each session.

CW-FIT was implemented during the time of day that the teacher identified as the most problematic. For Classrooms 1 and 2, this period was circle time, when students sat together on the floor as a whole class and were instructed by the teacher on topics such as letters, numbers, and weather. During this time, students helped out with jobs, sang songs, danced, and answered simple questions. This time lasted approximately twenty minutes. For Classrooms 3 and 4, both teachers designated center time as the period with the most disruptive behaviors. Centers involved students moving as groups between four different stations, with students spending equal time at each station. One of these stations, usually focusing on the alphabet or numbers, was teacher-directed. Another station, also focusing on letters and numbers, was led by a paraeducator. The other stations involved artwork or writing. These other stations were sometimes led by parent volunteers; other times students monitored themselves. This time lasted approximately one hour.

Students were grouped into teams based on seating arrangement. Teams in Classrooms 1 and 2 were based on rows on the carpet. Students in Classrooms 3 and 4 were grouped according to the tables where students were sitting. These students rotated to other tables throughout the session, but teams remained intact. The teacher set a timer at intervals typically between one and a half and three minutes. When the timer went off, the teacher looked at each team and awarded points if every student in that team was following the rules (i.e., the social skills taught previously). The teacher of Classrooms 1 and 2 modified the team point chart to help students more easily visualize points earned and goals, coloring in squares each time a point was earned. The other teachers used tallies as has traditionally been done in previous CW-FIT studies (See

Appendix E for examples of both charts). Students in Classrooms 3 and 4 had learned previously about tally marks, while those in Classroom 1 and 2 had not. Along with awarding points, teachers were instructed to praise the teams for using the skills. Teachers were also to praise throughout the session whenever they saw a student following the rules and to ignore minor problem behaviors.

A second tier of CW-FIT, self-management charts and help cards, can be implemented with individual target students. A third tier, utilizing a functional assessment for students who still do not respond favorably to the intervention, can also be implemented. For the present study, because of student transiency, neither Tier 2 nor 3 interventions were used. Including Tier 2 interventions was initially intended in the present study, and participating teachers identified two or three target students per classroom. However, most of these students moved or were frequently absent during data collection, so this portion of the study was discontinued.

After all data were collected, researchers met with teachers individually to debrief them on their classroom results. They were shown the on-task behavior and praise rate graphs and given suggestions for improved future implementation. The social validity survey was also given at this time.

**Dependent Variables and Measures**

Several variables were measured as part of this study. Details regarding these variables are as follows.

**Teacher praise and reprimands.** Teacher praise to reprimand ratios were recorded by trained observers (e.g., undergraduate and graduate students) under the supervision of a master's level research coordinator. Each praise statement directed toward an individual or toward a group

was tallied. Likewise, each reprimand to an individual or to a whole group was recorded. These data were collected in 20-minute sessions in connection with group on-task behavior.

**Group on-task behavior.** The frequency of students' on-task behavior was measured using a paper/pencil method. Each observation lasted 20 minutes, and groups were recorded as either on task or off task in 30-second intervals. Specific definitions of on-task and off-task behavior were given to observers during training. On-task behavior included reading, writing, looking at the teacher, and following along in assigned materials. Off-task behavior included talking, looking away from the teacher, and failing to comply with given directions. In order for a group to be marked as on task, all students within that group had to be adhering to the behaviors mentioned above. The number of points earned was also recorded each session.

**Treatment fidelity.** After each observation, researchers completed a procedural fidelity checklist to record whether CW-FIT had been implemented by the teacher as intended. Items relating to the use of praise and reference to the skills were marked as being seen or not seen and then given a quality rating of 1, 2, or 3 (3 representing the highest quality). Additionally, researchers completed a start-up fidelity checklist when the skills were initially taught (See Appendix F).

**Social validity.** At the completion of the intervention, teachers completed a social validity questionnaire to indicate whether or not they found CW-FIT useful and whether or not it was easy to implement. With the help of researchers, preschool students also completed a social validity questionnaire regarding their perceptions of CW-FIT (See Appendix G).

**Interobserver Agreement**

To ensure accuracy, observers were trained on group on-task definitions prior to classroom observations. Observers watched videos of classrooms and marked groups of students

as either on task or off task. Each observation sheet was matched against a key. Classroom observations could not be completed until researchers consistently achieved 90% accuracy in training. To further ensure accuracy, two observers collected data simultaneously on 28.13% of the CW-FIT implementation sessions and interobserver agreement was calculated. Interobserver agreement averaged 98.29% and ranged between 92.80 and 100.00%.

**Design and Analysis**

This study used a single-subject multiple baseline design with embedded reversals. Each classroom began the intervention at different times and withdrew the intervention after consistent data points were obtained during intervention. Reversals lasted one to two weeks, after which the intervention was reintroduced. Information from the fidelity checklist was analyzed to determine how well teachers implemented CW-FIT with fidelity. An average fidelity score was calculated and information regarding pieces often omitted was analyzed. Visual analysis was the primary method used to analyze the graphical data for teacher praise rates and student on-task behavior. Differences between baseline and intervention phases was also computed using Tau-U, an effect size measure used for single subject data. Tau-U is a nonparametric technique that analyzes non-overlapping data points between two phases. It is particularly appropriate for small datasets (Parker, Vannest, Davis, & Sauber, 2010).

An effect size calculator (www.singlecaseresearch.org/calculators/tau-u) was used to compute effect size and statistical significance. With the Tau-U calculator, each classroom's baseline data was contrasted with the first CW-FIT phase data, and reversal data was contrasted with the second CW-FIT phase data. The results of these two contrasts were combined to find an effect size for each classroom. Results of the teacher and student social validity questionnaires

were also averaged and summarized using descriptive statistics and qualitative coding of

participants' open-ended responses.

CHAPTER FOUR

RESULTS

Results of the present study are described according to each research question. These

results are detailed in the following sections.

**Research Question One**

The first question addressed in the study was, "Does the implementation of CW-FIT in

preschool classrooms result in increased levels of group on-task behavior within the classroom?"

Overall baseline group on-task behavior levels averaged 63.14% ($SD = 10.34$). During the

intervention phase, on-task behavior levels increased to a mean of 80.39% ($SD = 6.81$), a 17.25%

increase over initial baseline levels. On-task behavior decreased almost to baseline levels during

the reversal period (68.18%, $SD = 7.17$). When the intervention was reintroduced, levels

increased once again to reach a mean of 81.34% ($SD = 5.04$), a 13.16% increase from the

reversal phase. By examining the standard deviations across phases, it is evident that variability

of student behavior decreased when CW-FIT was being implemented in classrooms.

Individual classroom data were as follows (see Figure 1): Classroom 1 baseline group on-

task averaged 48.39% ($SD = 13.47$) with a rapidly increasing fairly stable trend. Group on-task

increased to 77.22% ($SD = 6.85$) during the intervention phase with a gradually increasing

variable trend. On-task behavior during the reversal phase dropped to 61.04% ($SD = 9.57$) with a

rapidly decreasing stable trend. During the reintroduction of the intervention, group on-task rates

increased to 78.66% ($SD = 5.49$) with zero trend and moderate variability.

Classroom 2 averaged 68.67% ($SD = 6.67$) on-task behavior during baseline with zero

trend and moderate variability. Group on-task behavior increased to 81.74% ($SD = 5.12$) during

the first intervention phase with a slightly increasing trend and some variability. During the
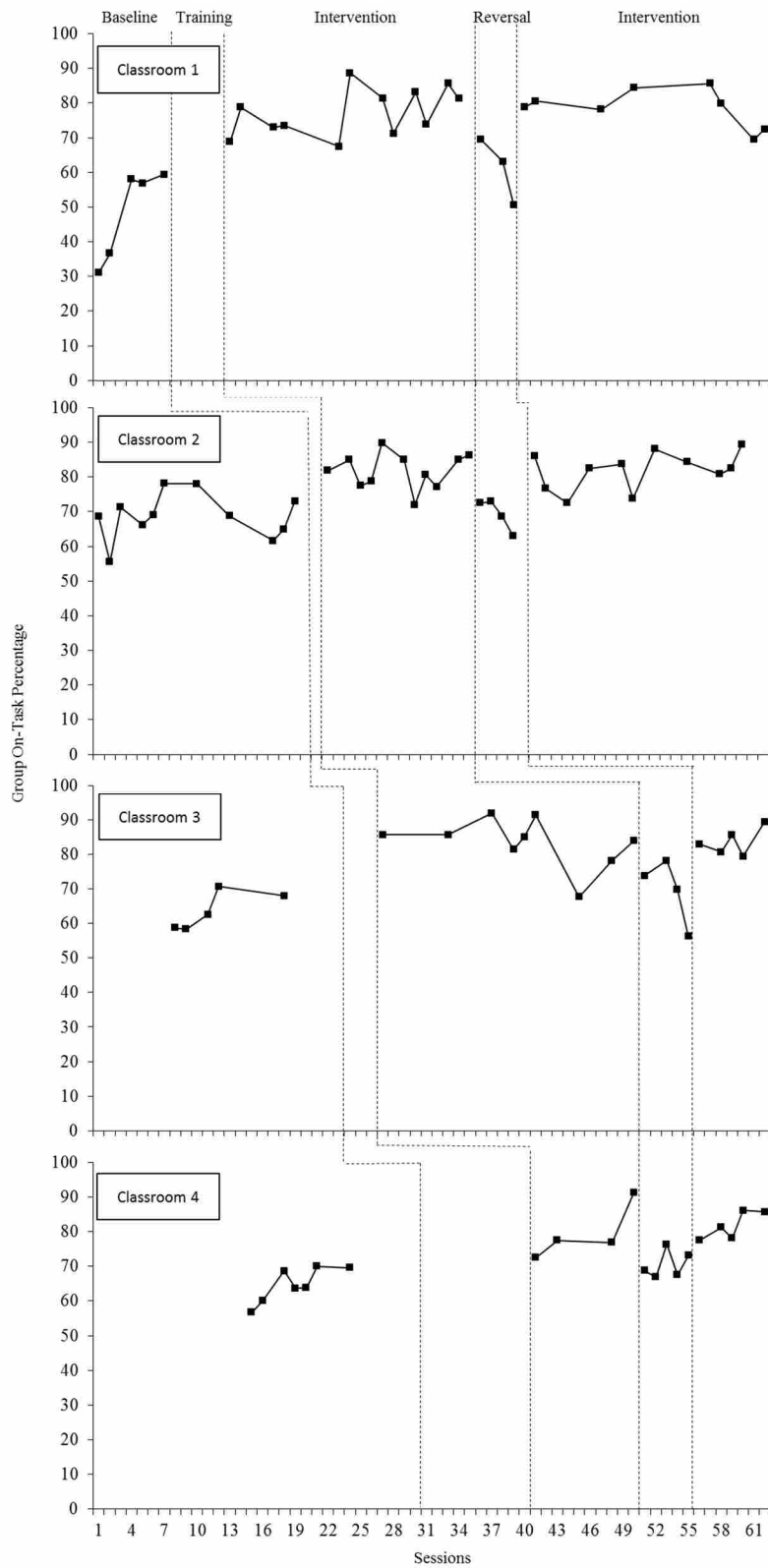
*Figure 1.* Group on-task across classrooms and phases.

reversal phase, on-task behavior dropped to 69.32% ($SD = 4.56$) with a rapidly decreasing stable trend. After CW-FIT was reinstated, group on-task percentages increased to 82.03% ($SD = 5.30$) with zero trend and moderate variability.

Baseline group on-task behavior for Classroom 3 averaged 63.62% ($SD = 5.49$) with a gradually increasing fairly stable trend. Once CW-FIT was introduced group on-task behavior increased to 83.36% ($SD = 7.30$) with a slightly decreasing variable trend. Reversal group on-task levels dropped to 69.47% ($SD = 9.45$), with a rapidly decreasing fairly stable trend. When CW-FIT was reintroduced, on-task behavior increased to 83.56% ($SD = 3.99$) with a slightly variable increasing trend.

Classroom 4 baseline levels averaged 64.63% ($SD = 5.10$) with a gradually increasing somewhat variable trend. Once CW-FIT was introduced group on-task behavior increased to 79.52% ($SD = 8.10$) with a gradual increasing moderately variable trend. Group on-task during the reversal phase decreased to 70.52% ($SD = 4.06$) with zero trend and minimal variability. When CW-FIT was reinstated, group on task levels increased to 81.72% ($SD = 4.04$) with a gradual increasing fairly stable trend.

The Tau-U analysis revealed statistically significant differences in on-task rates between baseline and intervention phases for each of the four classrooms and for all classes combined (*Tau u* $= 0.9507$, $p < 0.0000$). See Table 2 for individual classroom Tau-U results.

**Research Question Two**

The second research question addressed in the study was, "Does the implementation of CW-FIT in preschool classrooms result in increased teacher praise to reprimand ratios?" Praise rates did increase substantially. See Table 3 for individual class praise and reprimand rates across phases.

Table 2

*Tau-U Group On-Task Results*

| | On-Task | |
| | *Tau u* | *p* |
|---|---|---|
| Classroom 1 | 0.9844 | 0.0001 |
| Classroom 2 | 0.9029 | 0.0000 |
| Classroom 3 | 0.9467 | 0.0002 |
| Classroom 4 | 1.0000 | 0.0002 |

Overall rates for baseline were 2.64 praise statements for each reprimand. During the implementation of CW-FIT, overall rates increased to 9.95 praises for every reprimand, 3.81 times greater than initial baseline levels. Rates during the reversal phase were 4.81 praises for every reprimand. When CW-FIT was reintroduced praise to reprimand ratios increased to 11.05 to 1, a 2.29 times increase from levels during the reversal phase.

Table 3

*Teacher Praise and Reprimand Rates per 20 Minute Observation*

| | Baseline Praise *M (SD)* | Baseline Reprimands *M (SD)* | CW-FIT Praise *M (SD)* | CW-FIT Reprimands *M (SD)* |
|---|---|---|---|---|
| Classroom 1 | 15.25 (7.70) | 3.50 (2.78) | 28.15 (6.88) | 3.25 (2.00) |
| Classroom 2 | 12.00 (8.27) | 1.60 (1.86) | 27.48 (13.34) | 0.83 (1.34) |
| Classroom 3 | 6.33 (3.74) | 4.56 (3.24) | 11.86 (8.71) | 2.79 (2.69) |
| Classroom 4 | 4.25 (4.05) | 2.67 (3.08) | 8.89 (5.99) | 1.67 (1.12) |

Individual classroom data were as follows: For Classroom 1, praise to reprimand ratios averaged 3.81 to 1 during baseline. Praise rates showed zero trend with moderate variability,

while reprimand rates showed zero trend with low variability. During the intervention phase, praise to reprimand ratios increased to 8.89 to 1. Praise rates showed zero trend with high variability. Reprimand rates showed a gradually decreasing trend with low variability. Praise to reprimand rates dropped to 5.08 to 1 during the reversal phase. Praise showed a steadily increasing trend, while reprimand rates gradually increased with some variability. When CW-FIT was reintroduced, praise to reprimand ratios increased to 8.36 to 1. Praise rates showed zero trend with high variability, and reprimand rates showed a gradually decreasing trend with low variability when CW-FIT was reintroduced.

For Classroom 2, praise to reprimand ratios were 5.81 to 1 at baseline. Praise rates showed high variability with a gradually increasing trend. Reprimand rates showed zero trend and low variability. During the first intervention phase, praise to reprimand ratios increased to 19 to 1. Praise rates were highly variable, but did not show a clear trend direction. Reprimand rates gradually decreased with low variability. Praise to reprimand ratios averaged 19.33 to 1 during the reversal phase. Praise rates showed an increasing trend with moderate variability. Reprimand rates showed low variability and zero trend. After the reintroduction of CW-FIT, praise to reprimand ratios dramatically increased to 64.17 to 1. Praise rates gradually increased and showed high variability. Reprimand rates showed zero trend with low variability.

Praise to reprimand ratios for Classroom 3 were 1.12 to 1 during baseline. Both praise and reprimand rates showed zero trend with low variability. When CW-FIT was implemented, praise to reprimand ratios jumped to 7.17 to 1. Praise rates showed a highly variable, decreasing trend. Reprimand rates showed zero trend with low variability. During the reversal phase, praise to reprimand ratios dropped to 1.81 to 1. Praise rates showed zero trend with low variability, while reprimand rates showed an increasing trend with low variability. When CW-FIT was

reintroduced, praise to reprimand ratios averaged 1.76 to 1. Praise rates showed a gradually increasing trend with moderate variability. Reprimand rates showed zero trend with low variability.

Classroom 4 praise to reprimand ratios averaged 0.81 to 1 during baseline. Both praise and reprimand rates gradually decreased with low variability. When CW-FIT was implemented, praise to reprimand rates increased to 6.38 to 1. Praise showed zero trend with moderate variability. Reprimand rates showed a gradually decreasing, low variable trend. During the reversal phase, praise to reprimand ratios averaged 5.00 to 1. Praise rates showed a zero moderately variable trend. Reprimand rates showed zero trend with low variability. When CW-FIT was reintroduced, praise to reprimand ratios averaged 4.14 to 1. Praise rates showed a decreasing trend with moderate variability. Reprimands showed zero trend with low variability. Results revealed statistically significant differences in baseline and intervention praise rates for Classroom 1 (*Tau u* = 0.7552, *p* < 0.0025) and Classroom 2 (*Tau u* =0.5581, *p* < 0.006). Results did not show statistical significance for praise rate changes in Classrooms 3 and 4 or for reprimand rate changes in any of the classes. See Table 4 for complete Tau-U praise and reprimand results. See Figure 2 for praise and reprimand rates across classrooms and phases.

Table 4

*Tau-U Praise and Reprimand Results*

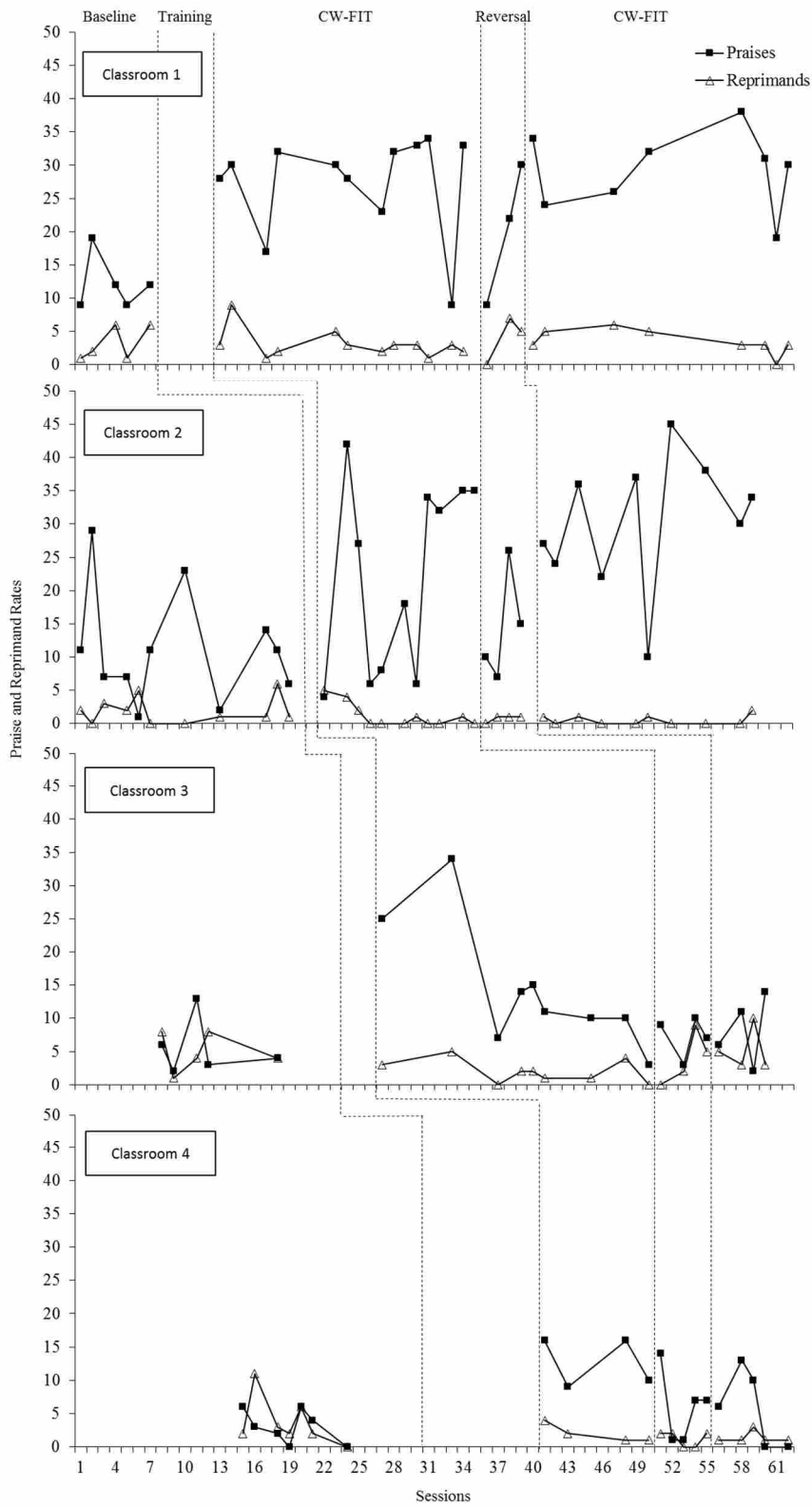|  | Praise | | Reprimand | |
| --- | --- | --- | --- | --- |
|  | *Tau u* | *P* | *Tau u* | *p* |
| Classroom 1 | 0.7552 | 0.0025 | -0.0260 | 0.9170 |
| Classroom 2 | 0.5581 | 0.0060 | -0.2774 | 0.1718 |
| Classroom 3 | 0.4000 | 0.1213 | -0.3200 | 0.2152 |
| Classroom 4 | 0.4079 | 0.1295 | -0.1431 | 0.5948 |

*Figure 2:* Praise and reprimand rates across classrooms and phases.

**Research Question Three**

      The third research question addressed in the study was, "Are preschool teachers able to implement CW-FIT with fidelity?" Overall, preschool teachers implemented CW-FIT with 92.94% ($SD$ = 5.96) fidelity. Classroom 1 averaged 93.60% ($SD$ = 3.62), Classroom 2 averaged 93.67% ($SD$ = 3.53), Classroom 3 averaged 96.10% ($SD$ = 5.91), and Classroom 4 averaged 85.38% ($SD$ = 9.46) fidelity. Teachers showed the highest fidelity (100%) with displaying the posters and the game chart, using the timer at appropriate intervals, awarding points to teams for the use of skills, and giving frequent praise and points. Giving an immediate reward was implemented with the lowest fidelity, 40.63% of the time. However, if a reward was not given immediately, the reward was announced and given later in the day 98.25% of the time. Precorrecting on skills, the second least implemented item, was still implemented at a high level, 86.46% of the time. Classroom 4, which had a lower fidelity average than the other classrooms, showed the lowest fidelity on precorrecting on the skills (28.57%), referring to the skills when correcting student behavior (54.55%), and rewarding winners immediately (57.14%). All other fidelity items appeared over 85% of the time.

      Preschool teachers not only consistently implemented most components, but they implemented them well. Overall quality ratings for the CW-FIT components implemented averaged 92.35% ($SD$ = 9.85). Individual quality ratings averaged 96.19% ($SD$ = 4.44) for Classroom 1, 96.66% ($SD$ = 5.82) for Classroom 2, 83.50% ($SD$ = 13.73) for Classroom 3, and 83.87% ($SD$ = 6.66) for Classroom 4. Quality ratings for Classrooms 3 and 4 were lower (approximately 13% less) than ratings for Classrooms 1 and 2. Both the teachers of Classroom 3 and Classsroom 4 received lower ratings for giving corrective instructions that referred to the skills and for referencing skills when teams were awarded points. Classroom 3 also had lower

quality when tallying points for teams (77.78%) and announcing when and where the reward would be given if not given immediately (77.78%). Classroom 4 received lower ratings for setting and using the timer at appropriate intervals (78.57%) and for giving behavior-specific praise (63.87%). See Appendix H for procedural fidelity across classes and phases and for complete fidelity and quality rates.

**Research Question Four**

The fourth question addressed in this study was, "Do preschool teachers believe CW-FIT is socially valid?" For a majority of the questions on the social validity questionnaire, teachers chose *Very True*, indicating that they believed CW-FIT was both useful and easy to implement (See Table 5). One teacher indicated that students "get more done" when playing CW-FIT and that the game provided "more chances for [the teacher] to praise and remind." Another teacher stated that there was "less talking out" when her students played the game. The teacher of Classroom 3 demonstrated the lowest ratings, which still were *Mostly True*. The item with the lowest ratings was, "The timer was manageable for use during instruction."

The last three questions were open-ended, asking teacher participants, "What was most helpful to you in learning how to implement the CW-FIT program?", "What could have been more helpful to you?", and "How would you modify the CW-FIT program or self-management/help cards for future use?" The teacher for Classrooms 1 and 2 indicated that "learning to praise more and ignore inappropriate behavior" was the most helpful. She had no suggestions for what might have been more helpful, but stated that along with modifications she had made along the way, she would use "more of a variety of rewards" in her future use of CW-FIT. These modifications, mentioned previously on pages 21 and 22, included changing the way points were presented on the game chart and using hand motions to teach and pre-correct on

Table 5

*Teacher Social Validity Responses*

| Items | Classroom 1 and 2 | Classroom 3 | Classroom 4 |
|---|---|---|---|
| I enjoyed being a CW-FIT Intervention Teacher. | 1 | 1 | 2 |
| The CW-FIT program was easy to learn and implement in my classroom. | 1 | 1 | 1 |
| The timer was manageable for use during instruction. | 1 | 2 | 2 |
| The use of teams and points for appropriate behaviors were helpful in improving students' behavior. | 1 | 1 | 2 |
| I learned new skills to help manage students' behavior. | 1 | 1 | 2 |
| I will use the CW-FIT skills I learned with future classes. | 1 | 1 | 2 |
| I will recommend the CW-FIT program to colleagues. | 1 | 1 | 2 |
| My students enjoyed using the CW-FIT program. | 2 | 1 | 1 |
| My students were more focused and engaged when we implemented CW-FIT. | 1 | 1 | 1 |

*Note.* 1=Very True, 2=Mostly True.

skills. The Classroom 3 teacher thought practice was most useful in learning to implement CW-FIT. She also was unsure about what would have been more helpful, and wished to be "more creative" with the rewards used. The teacher of Classroom 4 thought "seeing it in action" on training videos was the most helpful aspect of learning the intervention. "More ongoing updates and reminders" about what was expected would have been helpful in the implementation

process. For future modifications, she would "use it during different times of the day" and increase the time between the timer beeps.

**Research Question Five**

The fifth question addressed in the study was, "Do preschool students believe CW-FIT is socially valid?" Of the 53 students surveyed, 50 (94.34%) said that they liked playing CW-FIT. When asked what they liked about it, many students said the game was fun. Others enjoyed getting points and prizes. Only 23 students (43.40%) indicated there was anything they did not like about the game. Of these students, many said they did not like when their team did not earn a point. One student did not like when students were put on their own teams (because of inappropriate behavior). Two others mentioned other students were "mean" or would "get mad" when one student's behavior cost their team points. Nearly all of the students (98.11%) said they thought students in other classrooms should be able to play CW-FIT. Of the 53 student surveys, 16 provided coherent responses regarding why other students should play the game. The common theme was that other students would also like CW-FIT and would think that it was fun.

CHAPTER FIVE

DISCUSSION

The purpose of this study was to determine the effectiveness of CW-FIT, a group

contingency program based on positive behavior support principles, when implemented in

preschool classrooms. Previous studies have shown that CW-FIT is effective at increasing on-

task behavior and improving praise to reprimand ratios in older grades (Caldarella et al., 2014;

Conklin, 2010; Kamps et al., 2011; Wills et al., 2014). This is the first study to date to examine

CW-FIT implementation in preschool classrooms. This study sought to examine the effect of

CW-FIT on student on-task behavior and teacher praise to reprimand ratios. The present study

also addressed whether preschool teachers could implement CW-FIT with fidelity. Finally, this

study sought to examine teachers' and students' perceptions of the social validity of CW-FIT.

First, the results indicate that CW-FIT resulted in increased classroom on-task rates.

Average student on-task rates during CW-FIT were 80.82%, compared to 64.97% during

baseline and reversal phases. These results are consistent with findings in previous CW-FIT

studies (Caldarella et al., 2014; Conklin, 2010; Kamps et al., 2011; Wills et al., 2014). High

student on-task behavior is critical to educators since off-task and disruptive behaviors can lead

to loss of instruction time and an unsafe learning environment (Carter & Pool, 2012). Effective

interventions incorporate preventive measures, including the pre-teaching of expectations, as

well as consequences. These preventive measures are best utilized, not only with at-risk children,

but with all students in the classroom (Dunlap et al., 2006). CW-FIT, which uses such preventive

measures, has been shown to be effective in improving the behavior of whole preschool classes,

as illustrated in the present study.

Second, praise statements increased significantly, similar to results from other CW-FIT studies (Caldarella et al., 2014; Conklin, 2010; Kamps et al., 2011; Wills et al., 2014). The number of reprimands remained fairly constant across study phases, though all teachers gave very few reprimands even during baseline. As an explanation for the initial low reprimand rates, one teacher mentioned preschool teacher education programs tend to emphasize praising often and reprimanding seldom. The periodic timer beeps, which signaled teachers to award points, might have reminded teachers to praise and led to increased praise rates.

However, there were some differences in praise rates across classes. Classrooms 1 and 2 had significantly higher praise rates during CW-FIT phases. Although praise rates for both Classrooms 3 and 4 started at a higher level during CW-FIT implementation than what was exhibited during baseline, they decreased over time. Praise during the reversal phase in these two classrooms remained consistently low and did not increase when CW-FIT was reintroduced. When CW-FIT was implemented for the second time in Classroom 3, praise rates increased only slightly from levels during reversal. In Classroom 4, praise during the second intervention phase actually decreased slightly when compared to the reversal phase. In fact, praise to reprimand ratios decreased from the reversal phase to the reimplementation of CW-FIT for Classrooms 3 and 4. This decrease might be due to the nature of classroom instruction during the intervention. CW-FIT took place during large-group instruction for twenty minutes in Classrooms 1 and 2. For Classrooms 3 and 4, however, CW-FIT took place when students were working in small groups for close to an hour. Perhaps it was easier to remember to praise for a shorter amount of time or when all students were continuously present before the teacher. The teachers of Classrooms 3 and 4 might have found it more difficult to circulate around the room and praise students as they were attempting to run small instructional groups. Despite low levels of praise statements at

times, on-task rates increased in all classrooms whenever CW-FIT was implemented. These data suggest that on-task behavior was not related to teacher praise alone. Other aspects of CW-FIT, such as the social skills training, rewards, and points, seem to have helped student on-task behavior remain high despite sometimes lower praise rates.

Past CW-FIT studies have also shown an increase in praise to reprimand ratios, though these earlier studies showed greater consistency in increased praise rates than the present study (Caldarella et al., 2014; Conklin, 2010; Kamps et al., 2011). Increased teacher praise has been shown in other studies to improve teacher-student relationships, which in turn has led to improved student behavior (Hemmeter et al., 2006). The present study supports previous research in this regard. Stormont et al. (2007) found that teacher praise and precorrections increased student on-task behavior in preschool-age students. Their call for future research of these elements is in part addressed in the present study.

Third, results indicated that teachers were able to implement CW-FIT with a high level of fidelity. This is consistent with fidelity levels in previous CW-FIT studies (Caldarella, et al., 2014; Conklin, 2010; Kamps et al., 2011; Wills et al., 2014). The items where teachers showed the lowest fidelity were precorrecting on skills and immediately distributing rewards. In cases when students were not rewarded immediately, teachers showed high fidelity with announcing the specifics of the reward. Since the teachers often had recess or other activities immediately following the intervention time, they might have found giving the reward at that time inconvenient, thus explaining the low fidelity in that area. High quality ratings indicated that teachers not only implemented CW-FIT procedures, but they implemented them well. These results suggest preschool teachers can successfully utilize CW-FIT as intended.

Fourth, all teachers found CW-FIT to be socially valid. All teachers' ratings and comments regarding the intervention were positive. Teachers in previous studies have also viewed CW-FIT positively (Caldarella et al., 2014; Conklin, 2010; Kamps et al., 2011). Researchers refer to a "research-to-practice gap," when teachers do not understand, or are unsure how to apply, the results of studies (Carnine, 1997). Measuring teacher perceptions of classroom management practices is critical in closing this gap. Since teachers gave CW-FIT favorable ratings regarding ease of implementation and usefulness, their belief in its practicality and applicability are evident.

Fifth, most students indicated that they enjoyed participating in CW-FIT and believed other children should participate as well. Since best practices recommend using more than one method to determine perceived importance (Finn & Sladeczek, 2001), positive survey results from both teachers and students add strength to CW-FIT's social validity. Although some of the student responses were unintelligible, common themes among answers showed that the game was fun to the students. During the reversal phase, researchers observed students ask whether the CW-FIT game was going to be played that day. Students were aware of the game and looked forward to playing it.

**Limitations and Areas for Future Research**

Because one of the participating teachers taught both Classroom 1 and Classroom 2, some aspects of the intervention were used in Classroom 2 while it was still in baseline. As soon as she began to implement CW-FIT in her morning class, observers noticed that she began to praise more and use some of the social skills training language with her afternoon classroom. However, on-task behavior and praise rates increased even more after CW-FIT was fully implemented in Classroom 2.

Another limitation to be considered is the small number of classrooms and teachers included in the study. Replications of the current study are recommended in order to determine if the same effects occur in other preschool classrooms. The diversity of both teachers and students was also limited within the present study. Replications involving different demographics and locations would be beneficial. Future studies might also examine the extent to which the results of CW-FIT generalize to other classroom activities and whether the effects maintain after the intervention is taken away permanently.

Additionally, the method of survey delivery is a potential limitation to the social validity results. Researchers gave the questionnaires to teachers at the same meeting where teachers were debriefed on their classroom results. Since researchers had consulted with teacher participants on several occasions, this could have created a social desirability bias. Seeing the positive on-task and praise results of the study might have affected teachers' survey responses as well. The clarity of student responses also presents a limitation to the social validity data. Students were often unable to clearly articulate aspects of CW-FIT they enjoyed or did not enjoy. The question of why other classes should play the game was particularly problematic for them, perhaps because of developmental level.

**Implications**

CW-FIT has been shown to be effective in increasing on-task behavior and decreasing disruptive behavior of preschool students. Although replications are necessary to confirm CW-FIT's effectiveness, this study indicates promising results for preschool implementation. Effective preschool interventions teach appropriate alternative behaviors, social skills, and self-control, promoting appropriate teacher and peer relationships (Dunlap et al., 2006). CW-FIT

involves social skills training and, with its use of praise and an interdependent group contingency, may foster improved relationships between students and with teachers.

Results of the present study suggest that group contingencies can be effective with preschool-age children. Many of the existing studies on group contingencies in early childhood education focus only on individual students or small groups (Swiezy et al., 1992; Tanol et al., 2010). The present study involved whole classrooms, expanding the proven effectiveness of this type of intervention. Since group contingencies help students become more aware of how their behavior affects others (Poduska et al., 2007), interventions such as CW-FIT can help preschool students in their peer relationships and social skills development.

As shown by the modifications used by one of the teacher participants, CW-FIT can be used flexibly to fit preschool teachers' needs. The amount of time between timer beeps can be changed according to the abilities and needs of the classroom. Visuals can be added to point charts and hand motions can be combined with verbal cues if necessary for greater efficacy. Teacher and student behavior can be positively influenced with the implementation of CW-FIT: Teachers can be trained to teach social skills, use a group contingency, award points, and increase praise, which in turn leads to greater student on-task behavior. The present study indicates promising results for the implementation of CW-FIT in other preschool settings.

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## APPENDIX A: CONSENT FORMS

### TEACHER CONSENT
### Title: Class-wide Function-Based Intervention Teams

Dear Teacher,

**Introduction**
Paul Caldarella, Ph.D. and K. Richard Young, Ph.D., researchers at Brigham Young University (BYU), are partnering with researchers at the University of Kansas on an intervention study of Class-wide Function-Related Intervention Teams (CW-FIT). You are being given the opportunity to participate in a research study using CW-FIT to teach on task behavior to your class in the fall or spring of this school year. The following information is provided for you to decide whether you wish to participate in the present study.

The purpose of this project is to assist teachers in developing and implementing behavior interventions for classrooms and small groups or individual students who may be at risk for emotional or behavioral problems. You have responded to the recruitment presentation and indicated your classroom is eligible as a site for CW-FIT due to potential student behavioral risks. Risks include off-task behaviors or attention problems that interfere with learning. We are requesting permission to assist you in providing behavioral intervention in your classroom and assessing your students' progress.

**Procedures**
If you choose to participate, you agree to be randomly assigned to either one of two groups: Intervention, in which you will receive training in CW-FIT, participate in assessment for student classroom needs, self-monitoring and goal-setting, and individual class lessons on school rules in the fall; or Comparison, in which you agree to participate in meetings, assessments, and classroom observations, but not receive CW-FIT training until spring. The BYU personnel will (a) assist with teacher training in behavioral interventions and classroom management, (b) monitor academic performance, and (c) observe classroom behavior.

CW-FIT is based on best practices, and includes: 1) individual or class lessons on classroom/school rules, 2) schedules (check points) for teachers and students to receive feedback on behavior, and 3) student self-monitoring with goal setting and rewards for performance. Together, these procedures are described as CW-FIT. The options for student consequences for inappropriate behaviors during the study are the same as are currently used for all students at your school (e.g., loss of privileges, office referrals). Interventions are implemented for the individual child and for the whole class as a group, with BYU personnel training and assisting teachers in the implementation of CW-FIT.

Assessments include teacher rating scales and interviews, and observations of student on task performance and inappropriate behaviors. BYU personnel will conduct these direct observations. Teachers will complete rating scales and interviews, some in group meetings and others individually, with total paperwork time being no more than 10 hours for teachers participating in the treatment classrooms and no more than 10 hours for teachers participating in the comparison classrooms spread out over the entire school year.

**Time Commitment**
BYU personnel may be in your class conducting observations for approximately 8 months during one class period of your normal school day. Treatment classroom teachers will be implementing CW-FIT over the course of 4 to 6 months during regular academic instruction; comparison teachers will be engaging in just their regular academic instruction during this time. At the conclusion of the 4 to 6 months, the comparison teachers have the opportunity to be trained in CW-FIT. You will spend no more than 10 hours outside of the regular school day participating in trainings and assessments, for which you are being compensated.

**Compensation**
At the end of the school year you will be compensated with a $200 check for your time spent participating in this study. This payment is considered taxable income and we will need you to complete a W-9 tax form to receive your payment.

**Risks/Discomforts**
We do not foresee more than minimal educational or psychological risks associated with participating. You may possibly feel some discomfort when trying to implement CW-FIT in your classroom while being observed by BYU research personnel.

**Benefits**
While there are no direct benefits to you, based on prior studies, we expect to see improved student learning, classroom behavior, and social interactions with peers and teachers. The results of this study will also help to further validate CW-FIT.

**Confidentiality**
All data gathered will be coded with an ID number and no identifying information associated with you or your students will be shared with other researchers or included in any published or presented reports. No identifying information will be associated with the ratings you provide on each student.  Any information you provide will be securely stored and only BYU research personnel will have access to the data. Your permission allows a copy of all information obtained from assessment and interventions to be provided to researchers at BYU and at the University of Kansas. This information will be kept confidential in secured files and on password protected, encrypted computers. All school policies on confidentiality will be followed. BYU personnel will have relevant study information regarding you and your students available for you to review. Any information about non-research students will remain at your school and researchers will not have access to that information.

**Participation**
Your participation in this study is voluntary. You have the right to withdraw from this study at any time.  Refusal to participate or withdrawing from this study will not affect your employment or standing at your school in any way. BYU personnel may exclude your classroom from participation in the study if the initial information collected in the classroom shows minimal student behavioral risks. You will still have the opportunity to participate in the CW-FIT training.

**Questions about the Research**
If you have any questions regarding this study, you may contact Dr. Paul Caldarella at paul_caldarella@byu.edu or by calling 801-422-5081 or Dr. K. Richard Young at richard_young@byu.edu or by calling 801-422-2277.

**Questions about your Rights as Research Participants**
If you have any questions with regards to your rights as a participant, you may contact the IRB Administrator, Brigham Young University, A-285 ASB, Provo, UT 84602; 801-422-1461 or irb@byu.edu.

**Statement of Consent**
I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study. I further agree to be randomly assigned to Treatment or Comparison conditions. If in the treatment condition, I will not share study procedures with the Comparison condition teachers. If in the Comparison condition, I will not solicit information regarding study procedures.


_____          _____
Printed first and last name                                     School


_____          _____
Signature                                                              Date

Dear Parent / Guardian,

**Introduction**
Researchers at Brigham Young University (BYU), Paul Caldarella, Ph.D. and K. Richard Young, Ph.D., are partnering with researchers at the University of Kansas on a study at _____ Elementary School. As part of the study, a social skills classroom management program will be implemented in some classrooms. The program is called Class-Wide Function-Related Intervention Teams (CW-FIT) and is implemented in the whole class during regular academic instruction. The purpose of CW-FIT is to increase students' social skills, attention, and learning. Teachers may also learn better ways to acknowledge students' social skills and respond to disruptive behaviors.

**Procedures**
As part of this study, your child's teacher may be implementing CW-FIT in her/his class in the fall or the spring. CW-FIT is based on best practices, and includes: 1) individual or class lessons on classroom/school rules, 2) students receiving positive feedback (points) for appropriate classroom behavior, and 3) students learning to self-monitor and achieve classroom goals. Interventions are implemented for the whole class as a group. BYU personnel will train and assist teachers in the implementation of CW-FIT. The options for student consequences for inappropriate behaviors during the study are the same as are currently used for all students at your child's school (e.g., loss of privileges, office referrals). CW-FIT will be implemented during regular school hours and no additional time commitment will be required.

For research purposes, BYU personnel will conduct observations of classroom behavior. Your child will not be identified or singled out during this observation and no individual identifiable student information will be collected. The purpose of the observations is to determine whether CW-FIT improves appropriate student behaviors in the classroom as a whole. Classroom demographic data will be collected. In addition, participating teachers will identify students who are experiencing behavioral challenges in the classroom and who might benefit from more intensive CW-FIT interventions. You will be notified and allowed to consent to participate prior to implementation of these more individualized interventions should your child be identified by her/his teacher.

**Risks/Discomforts**
There are very few risks involved with having your child observed by BYU personnel or identified by their teachers. Having a BYU observer in their classroom may initially distract students the first one or two observations, but students typically return to their normal classroom behavior once becoming accustomed to this new person. BYU personnel have all been screened and have cleared a background check. They will not have any direct interaction with your child, unless you provide individual consent. If your child's teacher identifies your child as experiencing behavioral challenges, this information will be kept confidential as explained in the section below.

**Benefits**

There are no direct benefits to you or your child, though prior studies of CW-FIT have shown improved student learning, classroom behavior, and social interactions with peers and teachers. The results of this study will help to further validate CW-FIT and may assist the school in ongoing school improvement efforts.

**Compensation**
There is no compensation to you or your child for agreeing to participate in this study.

**Confidentiality**
No individually identifiable information associated with you or your child will be gathered or shared with other researchers or included in any published or presented reports. Any information gathered will be securely stored and only research personnel will have access to the information. Information obtained from class-wide observations will be provided to researchers at BYU and the University of Kansas. All information will be kept confidential in secured files and on password protected, encrypted computers. All school policies on confidentiality will be followed. Any information about non-research students will remain at your child's school and researchers will not have access to that information.

**Participation**
Your child's participation in this study is voluntary.  You have the right to refuse to have your child participate or withdraw your child from this study at any time, which means that researchers would not include your child in class-wide observations and teachers would not identify your child for additional CW-FIT interventions, though CW-FIT might still be occurring in your child's classroom. Refusal to participate or withdrawing from this study will not affect your child's status or standing at the school in any way.

**Questions about the Research**
If you have any questions regarding this study, you may contact Dr. Paul Caldarella at paul_caldarella@byu.edu or by calling 801-422-5081 or Dr. K. Richard Young at richard_young@byu.edu or by calling 801-422-2277.

**Questions about your Rights as Research Participants**
If you have any questions with regards to your rights as a participant, you may contact the IRB Administrator, Brigham Young University, A-285 ASB, Provo, UT 84602; 801-422-1461 or irb@byu.edu.

# APPENDIX B: DISTRICT PRESCHOOL ASSESSMENT

## Oral Language Component

Directions: Say: *"I am going to read some sentences to you. I want you to repeat each one. Listen carefully, then say exactly what I say."*

Practice: I like ice cream. I am running. Can she jump?

Read the sentences in each form and ask the child to repeat them. If the child is unable to repeat a sentence **verbatim**, go on to the next one. You may repeat the sentence one time. If they say words in a contraction when they shouldn't be (She's/She is), say, "Say it exactly as I said it". Repeat it again. If they get it right, give it to them, if not, it's wrong.

(Mark if they are right)

_____They are lost.

_____She is working today.

_____John was the best.

_____I saw a dinosaur at the movies.

_____He sang a song for me.

_____We are going to our house after school.

_____My brother was crying because he was sad.

_____Tonight is Halloween, so I dressed in my costume

_____He is not my brother.

_____Are you going to help me find it?

_____Put that back.

_____Thanks for a good breakfast!

Total Correct:_____ (12 possible)

Student Name:_____

Contact Name:_____

| | Proof of Address Phone # | Y N |
|---|---|---|
| | AM/PM request | AM PM |

## PreKindergarten Assessment

Section 1:
___ What is your name? (1)
___ How old are you (1) (has to *say* age)
___ Are you a boy or a girl? (1)
___ What is the name of one of your friends? (1)
(no matter how many they state)

| Assessment /59 | Oral Language /12 | TOTAL / 71 |
|---|---|---|

Section 2:
_____ Count to 10 (10) (Stop awarding points as soon as they miss a number: 1 2 5 would be worth 2 pts.)
_____ 1:1 Correspondence (5) (Give the student 5 objects and have them count.)
_____ Name the colors (10)__ red __yellow__blue__green __purple __orange
__pink__brown __white __black (whatever you use, make sure it is showing the true color...crayons are not the best choice.)
_____Name the shapes: (4) ___ circle ___ square ____ triangle ____ rectangle
(show the student shapes that have been cut out and ask the student to name them.

Section 3:
_____ Pencil Grip (1) (pincer grip) L or R
_____ Write your name (4 pts, entire name; 3, some letters in order; 2, some letters random; 1, 1 letter)
_____ Draw a person (5 pts--1 ea for head, eyes, nose, mouth, body)
_____ Color one of the shapes below (1) (we are watching for fine motor skills. It does not have to be absolutely perfect, but close!)
_____ Draw the shapes below (3) (Ask them to draw a circle, square and cross. As you ask them, do not trace around it, they need to figure out how to do it without clues.)
_____ Cut on the line (2: 1 for cutting on the line, one for holding scissors correctly) (Use the line below the shapes, stopping at the horizontal line. Again, it does not have to be perfect, but close.
_____Name the alphabet letters: (10)

# M F W C S T A O X Z
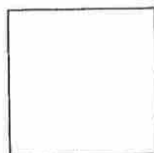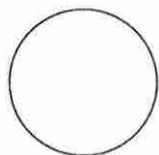
APPENDIX C: TEACHING SCRIPTS

We are going to review the skill: **"How to Get the Teacher's Attention"** (*refer to poster*)

## Definition

The steps are (*teacher reads aloud*):

1.  Look at the teacher
2.  Raise your hand
3.  Wait for the teacher to call on you
4.  Ask your question or give an answer

Now everyone read with me (*students read chorally*).

Which "School Rule" does this match?  (*Answer:  Ex: Be Peaceful or Be Respectful, etc*).
What other ways can you Be Peaceful or Respectful?  (*Answer:  Quiet, calm voice; Work quietly; Have quiet transitions, etc).*

## Rationale

Why is it important to use these steps for getting the teacher's attention?  (*Ex: so we can all hear the person, the classroom is quieter so people can work, so people are not talking all at once, so students aren't shouting out, etc).*

## Role Play

Let's practice getting the teacher's attention.
*Use volunteers (2-3 students).  After each example, ask students if the volunteers got the teacher's attention the right (or wrong) way & to state the steps they saw (or didn't see).*
**Example**:  Pretend to be explaining a math problem on board.  Have students raise hands. Call on one to ask/answer question.
**Non-example**: Pretend to be reading a story.  Have volunteer shout out a question about the passage (what happened, who said it?).
**Example:**  Pretend to be asking questions from the story.  Have volunteers raise hands to answer.
**Example**:  Have students writing in their journals. Have a volunteer raise hand and ask to get an eraser or dictionary.

## Review

You did great with the role plays for practice.
Again, let's read together the steps in how to get the teacher's attention (*choral read*).
Let's work hard to practice this behavior today.

We are going to review the skill: **Follow Directions the 1ˢᵗ Time** (*refer to poster*)

## Definition

The steps for following directions are (*teacher reads aloud*):

1. Look at the person (teacher) & listen
2. Say OK in your head
3. Do it now
4. Check back (if needed)

Now everyone read with me (*students read chorally*).

Which "School Rule" does following directions the 1ˢᵗ time match? (*Answer: Ex: Be Respectful, etc.*)
What other ways can you Be Respectful? (*Answer: Be a good listener; Take turns talking; Value others' ideas-no put downs, etc).*

## Rationale

Why is it important to follow these steps for following directions? (*Ex: we look at the teacher so she/he knows we are listening; say OK to show we understand; do it so everyone gets their work done, to help keep our class quiet…..)*

## Role Play

Let's practice following directions the 1ˢᵗ time.
*Use volunteers (2-3 students). After each example, ask students if the volunteers followed directions the 1ˢᵗ time the right way & to state the steps they saw (or the wrong way and to state the steps they didn't see).*
**Example**: Pretend to be explaining a math problem on board. Tell students to copy the problem. Have students say OK quietly and write the problem.
**Non-example**: Pretend to be reading a story. Ask students to write 3 sentences about the main idea of the story. Have volunteers talk to each other, draw a picture, play with things in desk.
**Non-Example:** Tell students to copy 5 vocabulary words from the story (write on board). Tell students, when they are done, to go to shelf and get a book to read. Have volunteers finish words and then talk, have several go to shelf and chit-chat.
**Example**: Tell students to write 2 sentences about the brain and what it does for our body in their journals. Have volunteer students write quickly and quietly.

## Review

You did great with the role plays for practice.
Again, let's read together the steps to "follow directions the 1ˢᵗ time" (*choral read*).
Let's work hard to practice this behavior today.

We are going to review the skill:  ***Ignoring Inappropriate Behavior*** (*refer to poster*)

**Definition**

The steps for ignoring inappropriate behavior are (*teacher reads aloud*):
1. Keep a nice face
2. Look away from the person
3. Keep a quiet mouth
4. Follow directions-do your work

Now everyone read with me *(students read chorally).*

Which "School Rule" does ignoring inappropriate behavior match?  (*Answer:  Be Responsible and Be Kind, etc*) When you are responsible, you "take care of yourself."
 When you are kind you are a friend (*that means helping your classmates do the right thing, not get in trouble*)
What other ways can you Be Responsible?  (*Answer:  Finish your work; accept outcomes of your behavior, etc).*

**Rationale**

Why is it important to follow these steps for ignoring other's poor choices and bad behavior?
(Ex: *we need to show good behavior, we don't want to give people attention for bad behaviors; we want our class to learn more things; we need to show responsibility; it is good to encourage each other to do the right thing; if we shout back or give attention to someone they will keep doing the wrong thing, etc*)

**Role Play**

Let's practice following ignoring other's poor choices and bad behaviors.
*Use volunteers (2-3 students).  After each example, ask students if the volunteers ignored inappropriate behavior the right way & to state the steps they saw (or the wrong way and to state the steps they didn't see).*
***Example***:  Pretend to be explaining a math problem on board.  Have one student start talking to another.  Have the second student "look away" and then start working.
***Non-example***: Pretend to be reading a story.  Ask students to write 3 sentences about the main idea of the story. Have one student call a peer and pass a note to them.  Have the second peer take the note, then start writing story sentences.
***Non-Example:***  Tell students to copy 5 vocabulary words from the story (write on board). Tell students when they are done, go to shelf and get a book to read. Have volunteers go to shelf, have one start saying making faces at a peer, have the second student say "you're not funny!" in a loud voice and have the 1st peer laugh loudly.
***Example***:  Tell students to write 2 sentences about the brain and what it does for our body in their journals. Have volunteer start waving a paper at a student. Have the second student look away, put hand above eyes to block, then start writing quietly.
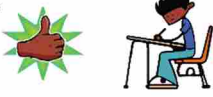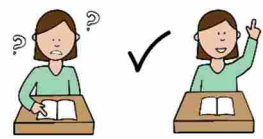
**Review**

You did great with the role plays for practice.
Again, let's read together the steps to "ignoring inappropriate behavior" (*choral read*).
Let's work hard to practice this behavior today

APPENDIX D: CW-FIT SOCIAL SKILLS POSTERS

## Follow Directions the First Time

1. Look at the teacher and listen.

2. Say OK in your head. "OK"

3. Do it now.

4. Check back, if needed.

## 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.

## 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.

## Keep Hands, Feet, and Objects to Self
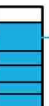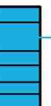
1. Keep hands at side or across body.

2. Keep feet under desk and flat on the floor.

3. Use objects the right way (e.g., books are for reading, pencils are for writing).

## Talk in a Quiet Voice

1. Put heads close together.

2. Talk in a whisper.

3. Only talk to people at your table.

APPENDIX E: EXAMPLES OF POINT CHARTS

Classrooms 1 and 2 (modified format):

## CW-FIT GAME POINTS

| DATE: | 6/18/14 | REWARD: | | Sticker | | GOAL: | | 5 |
|---|---|---|---|---|---|---|---|---|
| TEAMS: | 1 | 2 | 3 | 4 | 5 | 6 |

| POINTS: | | | | | | |

1. How to gain teacher attention
2. Following directions
3. Ignoring inappropriate behaviors

Classrooms 3 and 4 (traditional CW-FIT format):

## CW-FIT GAME POINTS

| DATE: | 6/18/14 | REWARD: | Sticker | GOAL: | 5 |
|---|---|---|---|---|---|
| TEAMS: | 1 | 2 | 3 | 4 | 5 | 6 |
| POINTS: | 𝍷𝍷𝍷𝍷 𝍷 | 𝍷𝍷𝍷𝍷 𝍷𝍷 | 𝍷𝍷𝍷𝍷 𝍷 | 𝍷𝍷𝍷𝍷 𝍷 | | |

1. How to gain teacher attention
2. Following directions
3. Ignoring inappropriate behaviors

APPENDIX F: PROCEDURAL FIDELITY CHECKLIST

☐ Primary Sheet                                                                    ☐ Reliability Sheet

**Class-wide Function-related Intervention Teams (CW-FIT)**
**Procedural Fidelity Checklist**

School: _____          Teacher: _____
Observer Name: _____          Observer 2/reliability: _____
Date: _____          Time: _____

Condition:                    ☐Control      ☐Experimental
Observation Condition:    ☐Baseline    ☐Intervention   ☐Training   ☐Comparison   ☐Reversal
Observation Type:          ☐On-Task     ☐MOOSES      ☐General    ☐Other

MOOSES File(s):_____
Self-Managers: _____
Help Card Use: _____

| CW-FIT Procedures | Observed | Quality |
|---|---|---|
| 1.   Skills are prominently displayed on posters. | Y   N | 1   2   3 |
| 2.   Precorrects on skills at beginning of session. | Y   N | 1   2   3 |
| 3.   Corrections are instructive and refer to skills. | Y   N   N/A | 1   2   3 |
| 4.   Team point chart displayed. | Y   N | 1   2   3 |
| 5.   Daily point goal posted. | Y   N | 1   2   3 |
| 6.   Self-management charts given to individuals. | Y   N   N/A |  |
| 6a. Teacher prompts SM students to give points/HC students to use HC. | Y   N   N/A | 1   2   3 |
| 6b. SM students give themselves points/Students use HC. | Y   N   N/A | 1   2   3 |
| 6c. Teacher praises SM/HC students (at least 2 times). | Y   N   N/A | 1   2   3 |
| 6d. Teacher supports SM/HC (proximity, checks for accuracy). | Y   N   N/A | 1   2   3 |
| 7.   Timer used & set at appropriate intervals. | Y   N | 1   2   3 |
| 8.   Points awarded to teams for use of skills. | Y   N | 1   2   3 |
| 9.   Points tallied for teams. | Y   N | 1   2   3 |
| 10.   Winners immediately rewarded. | Y   N |  |
| 11.   Winners reward announced if delayed. | Y   N   N/A | 1   2   3 |
| 12.   Frequent praise (points) given. | Y   N | 1   2   3 |
| 13.   Behavior-specific praise given. | Y   N | 1   2   3 |
| 14.   Praise (points) to reprimand ratio is approximately 4:1. | Y   N | 1   2   3 |

**Please subtract out any items marked N/A when computing your totals.**

Total Fidelity Score_____          Total Quality Score_____
Total Score Possible_____          Total Score Possible_____
Total Score divided by Total Possible = % yes_____                    Average_____

| 1 – Very Low | = 40% of students or time |
| 2 – Moderately low | = 60% of students or time |
| 3 – Average | = 80% of students or time |
| 4 – Moderately high | = 90% of students or time |

**Classroom management – student behavior:**

1. Level of compliance during academic instruction ☐1 ☐2 ☐3 ☐4

2. Students follow rules appropriate to setting ☐1 ☐2 ☐3 ☐4

3. Transitions are short with only minor disruptions ☐0 – unable to code ☐1 ☐2 ☐3 ☐4

4. Students are focused and on task ☐1 ☐2 ☐3 ☐4

5. Level of lesson structure
(organized clear directions, sufficient work to keep students busy) ☐1 ☐2 ☐3 ☐4

6. Teacher ignores minor inappropriate behaviors ☐0 – unable to code ☐1 ☐2 ☐3 ☐4

7. Frequent and specific praise given
(points count toward frequency) ☐1 ☐2 ☐3 ☐4

8. Praise (points) ratio to reprimands approximately 4:1 ☐1 ☐2 ☐3 ☐4

9. Three to five clearly and positively stated classroom
expectations/rules are visibly posted ☐1 ☐2 ☐3 ☐4

Total Score _____

Total Score Possible _____

Total Score divided by Total Possible = % yes _____

10. System of rewards observed: ☐Yes ☐No

Check any observed and approximate %
(Must total 100%)

☐Large Group* _____%

☐Small Group* _____%

☐Independent _____%

☐1 on 1 _____%

☐Transition _____%

*Note: Large or Small Group must be led by teacher.

Check the primary lesson
☐ Reading ☐ Writing
☐ Math ☐ Science
☐ Other

| Skills | Consult | Modeling | Follow-Up |
|---|---|---|---|
| Lessons/Precorrects | | | |
| Instructive Corrections | | | |
| Teams | | | |
| Goals/Points | | | |
| Rewards | | | |
| Praise | | | |
| Timer/Time Intervals | | | |
| Logistical Questions | | | |
| Transitions | | | |
| Lesson Structure | | | |
| General Behavior | | | |
| Self-Management | | | |
| Help Cards | | | |
| FBA | | | |
| OTHER | | | |
| **Time Spent:** | | | |

**CW-FIT Fidelity Definitions**

1. <u>Skills are prominently displayed on posters.</u>
   **3-5 POSITIVELY STATED rules or skills** are posted and visible to students <u>and</u> each rule has 3-5 actionable/observable steps that students can reference when demonstrating that skill and/or follow the rule. **Skills/rules address (**1) How to Get the Teacher's Attention, (2) Follow Directions the 1$^{st}$ Time, (3) Ignore Inappropriate Behavior, and other target skills. **\***Posted lists of character traits, expectations without steps to meet those rules, and posters with lists of more than 6 rules/expectations are all <u>non-</u>examples.

2. <u>Precorrects on skills at beginning of session.</u>
   Before instruction, the teacher briefly reminds students about the posted rules/skills (e.g., "Remember the way to get my attention is…" (Teacher reads the steps outlined on the poster).

3. <u>Corrections are instructive and refer to skills</u>
   When correcting inappropriate behavior, the teacher refers to the posted appropriate skill that the student should have used (i.e., "Next time, please raise your hand to get my attention the right way"). Corrections teach students specific ways to improve.

4. <u>Point chart displayed for appropriate behaviors</u>
   Points are used to reward appropriate student behavior. This definition excludes charts that track points for inappropriate behavior and excludes charts that remove points as a consequence for inappropriate behavior. In addition, the point chart is posted where the students can easily see it.

5. <u>Daily point goal posted</u>
   The point goal should be announced and written on a chart that is visible to the students before instruction begins.

6. <u>Self-management charts given to individuals</u>
   If target students have been chosen for self-management, the individual charts should be handed out before the instruction begins. In addition, the students should be reminded of their goal and the process for awarding points to themselves. **Score other self-management charts, individual sticker charts on desktops, SR+ as a "yes".**

   6a. Teachers should remind SM students to "check behavior & give themselves points for following the CW-FIT rules"/remind HC students to use their cards.
   6b. SM students give themselves points/HC students use cards.
   6c. Teacher praises SM/HC students.
   6d. Teacher supports SM/HC students by visually observing them giving themselves points/using cards, spot checking for accuracy, and assisting if necessary.

7. <u>Timer used & set at appropriate intervals</u>
   The teacher sets a timer when instruction begins and resets it each time it goes off. The appropriate time interval is determined by the percent of on-task behavior the class demonstrates (i.e. 1-3 min at first etc...).

8. <u>Points awarded to teams for use of skills</u>
   Points should be given to teams who are exhibiting the appropriate skills at the exact moment the timer goes off. The teacher should quickly glance around the room to

determine which teams are displaying the appropriate behavior. The teacher then marks a point for each team in which all team members were behaving appropriately. In addition, the teacher should specifically praise each team and explain to them why they earned a point at that interval (i.e. "Team one earns a point because they were doing a great job following directions!"). This specific praise should be done as often as possible, without significantly disrupting the lesson.

9. Points tallied for teams

   At the end of the interval, the teacher will add up each team's points. Each team's final score is written in their box. Each team's points total is then compared with the predetermined point goal to determine winners.

10. Winners immediately rewarded.

    After adding up point totals and comparing the totals with the goal, the teacher should announce the teams who met their goal. The winning teams should receive their prize or activity right away, without delay.
    *Note: If reward is delayed but students are given a tangible representation of their reward, such as ticket or a token, code this item **"YES"**.

11. Winners reward announced if delayed.

    If the reward is something that will take place later in the day (e.g., extra recess, lunch with the teacher) then the reward for the winning teams should be announced.

12. Frequent praise (points) given.

    Students should be praised frequently for exhibiting the skills/behaviors. It is not necessary that the teacher uses specific praise EVERY time she/he praises, just frequently. In addition, points awarded count toward the frequency of praise. If the points are specific ("team 1 gets a point because they were sitting in their seats") then that counts towards the specificity criteria as well. This is measured with respect to the entire class, not just individual students.

13. Behavior-specific praise given.

    When praise is given, the teacher should be genuine and explicitly say *what* the students were doing well. This can be done on an individual or group basis (e.g., "Sally, nice job raising your hand to get my attention!" or "Class, I am really proud of how you have been ignoring inappropriate behavior!"). If the points are specific ("team 1 gets a point because they were sitting in their seats") then that counts towards the specificity criteria as well as the frequency. This is measured with respect to the entire class, not just individual students.

14. Praise (points) to reprimand ratio is approx. 4:1.

    The teacher's overall student interactions within the session included approximately 4 positive interactions (praise, comments, physical rewards, and **points awarded**) to every 1 negative interaction reprimands, comments, or removal of rewards). This is measured with respect to the entire class, not just individual students.

**Classroom Management –student behavior definitions**
* Refer to percent scale on the fidelity checklist.

1. Level of compliance during academic time.
    Record the percentage of students that complied with teacher instructions throughout the session.

2. Students follow rules appropriate to settings.
    Percentage of students that followed classroom rules as defined by class rules poster or school expectations. Also includes demonstrating appropriate behavior for particular activities (i.e., small group/pair-work vs. teacher leading large group activities).

3. Transitions are short with only minor disruptions.
    Percentage of students that transitioned between activities, locations, subjects, or materials smoothly and without major disruptions.

4. Students are focused and on-task.
    Percentage of students that remained focused on and engaged in the activity or lesson.

5. Level of lesson structure
    Quality of lesson structure: organized clear directions, well organized lessons, smooth operation of lessons, clear schedule of activities, few disruptions, and sufficient work to keep students busy
    1= Very low—much down time, lessons unclear, chaotic
    2= Moderately low—multiple occasions of down time or poorly structured lessons and/or disruptions
    3= Average—generally structured with some minor down time on 2+ occasions and/or occasional minor disruptions
    4= Moderately high—well structured, few disruptions

6. Teacher ignores minor inappropriate behaviors.
    Percentage of time that the teacher ignored minor inappropriate behavior. Minor inappropriate behavior is defined as behavior that is not harmful to the student or anyone else and is not extremely disruptive or disrespectful. Hitting, kicking, or cursing at the teacher would not be considered minor inappropriate behavior and probably should not be ignored.

7. Frequent & specific praise given.
    Percentage of time that students are being praised for exhibiting good behavior. When praise is given, the teacher should explicitly say *what* the students were doing well. This can be done on an individual or group basis (i.e. "Sally, nice job raising your hand to get my attention!" or "Class, I am really proud of how you have been listening respectfully."). In addition, points awarded count toward the

frequency of praise. If the points are specific ("team 1 gets a point because they were sitting in their seats") then that counts towards the specificity criteria. The teacher should give at least 3 specific verbal praises throughout the lesson and/or accompany points with specific verbal praise every 4th time the timer goes off.

8.  <u>Praise to reprimand ratio approx 4:1.</u>
    Percentage of the teacher's overall student interactions within the session included approximately 4 positive interactions (praise, positive comments, physical rewards, and **points awarded**) to every 1 negative interaction (reprimands, negative comments, removal of rewards). This is measured with respect to the entire class, not just individual students.
    1= Very Low—More reprimands than praises.
    2= Moderately Low—Equal number of reprimands and praises.
    3= Average—Twice as many praises as reprimands
    4= Moderately High—Four times (or more) as many praises as reprimands.

9.  <u>Three to five clearly and positively stated classroom rules/expectations are visibly posted.</u>
    Each poster is accessible to students (i.e., written in clear language and has illustrations that all students can access). There are between three and five stated rules/expectations Each rule has 3-5 actionable/observable steps that students can reference when demonstrating that expectation/rule.
    *Posted lists of character traits, expectations without steps to meet those rules, and posters with lists of more than 6 rules/expectations are all non-examples.

10. <u>System of rewards observed.</u>
    At least once during the session, the teacher rewards some students with tickets, bracelets, points, tallies, etc… Color cards do not count unless they are moved to the positive side.

# Quality Rating Definitions for CW-FIT Procedural Fidelity Checklist

*In order to get a 1, 2 or 3 Quality Rating the Y must be circled*
*1=Implemented with partial fidelity, 2=Implemented with good fidelity, 3=Implemented with full fidelity*

1. Skills are prominently displayed on posters
   - 1= Posters are up but are visible to less than 50% of the students
   - 2= Posters are up but are visible to only 50-90% of the students
   - 3= Posters are up and appear visible to all of the students

2. Precorrects on skills at beginning of session
   - 1= Teacher minimally reviews skills
   - 2= Teacher reviews some skills, but not all
   - 3= Teacher reviews all skills (can be brief)

3. Corrections are instructive and refer to skills
   - 1= Teacher refers to skills less than 50% of the time while giving corrections
   - 2= Teacher refers to skills between 50-80% of the time while giving corrections
   - 3= Teacher refers to skills during at least 80% of the time and has teacher led discussion for all students

4. Team Point chart is displayed
   - 1= Point chart is posted but visible to less than 50% of the students
   - 2= Point chart is posted but visible to 50-90% of the students
   - 3= Point chart is posted and visible to 90-100% of the students, 90-100% of the time

5. Daily Point Goal is posted
   - 1= Point goal is posted but visible to less than 50% of the students
   - 2= Point goal is posted but visible to 50-90% of the class
   - 3= Point goal is posted and visible to 90-100% students, 90-100% of the time

6. Self-Management charts/Help cards given to individuals
   *Quality rating not applicable to this item*

   6a. Teacher prompts SM students to give themselves points/HC students to use cards.
   - 1= Teacher prompts SM students/HC only once
   - 2= Teacher prompts SM/HC students 1-2 times and students use SM/HC inconsistently
   - 3= Teacher prompts SM/HC students 3 or more times and/or observes that students use SM/HC consistently

   6b. SM students give themselves points/HC students use their help cards
   - 1= SM students give themselves points less than 50% of the time/HC students use their help cards less than 50% of the time
   - 2= SM students give themselves points between 50-90% of the time/HC students use their help cards between 50-90% of the time
   - 3= SM students give themselves points 90-100% of the time/HC students use their cards 90-100% of the time

   6c. Teacher praises SM/HC students
   - 1= Teacher praises the group of SM/HC students once during session OR praises some of the SM/HC students individually
   - 2= Teacher praises the group of SM/HC students two times during session OR praises each of the SM/HC students once during the session
   - 3= Teacher praises SM/HC students three or more times during session OR praises each of the SM/HC students two or more times during the session

6d. Teacher supports SM/HC students
      1=  Teacher uses proximity to check use of the system and accuracy once during session
      2=  Teacher uses proximity to check use of the system and accuracy twice during session OR checks all SM/HC students once during session
      3=  Teacher uses proximity to check use of the system and accuracy three or more times during session OR checks all SM/HC students two or more times during session

7. Timer Used and set at appropriate intervals
      1=  Teacher uses timer but has intervals too spread apart and timer is inaccessible
      2=  Teacher uses timer most of the time with good fidelity
      3=  Teacher has timer set at frequent, appropriate intervals and the timer is easily accessible

8. Points awarded to teams for use of skills
      1=  Points are awarded, but skills are not referenced
      2=  Points are awarded adequately across all groups and skills are referenced some of the time
      3=  Points are awarded to teams and skills are referenced and reinforced while awarding points

9. Points tallied for teams
      1=  Points are tallied but with no discussion
      2=  Points are tallied with minimal discussion
      3=  Points are tallied with enthusiasm and discussion

10. Winners Immediately Rewarded
      *Quality rating not applicable to this item*

11. Winners reward announced if delayed
      1=  Reward is announced but no detail
      2=  Reward is announced with some detail
      3=  Reward is announced with significant detail of time/place

12. Frequent praise (points) given
      1=  Teacher gives points without pairing praise
      2=  Teacher gives points paired with praise some of the time
      3=  Teacher gives points paired with praise most of the time

13. Behavior-specific praise given
      1=  Teacher praise is given to the class or individual students 2 times during the observation
      2=  Teacher praise is given to the class or individual students 3-4 times during the observation
      3=  Teacher praise is given to the class or individual students at least 5 times during the observation

14. Praise (points) to reprimand ratio is approximately 4:1
      1=  Teacher praise to reprimand appears to be a 4:1 ratio but not behavior specific
      2=  Teacher praise to reprimand ratio is 4:1 and behavior specific some of the time
      3=  Teacher praise to reprimand ratio was greater than 4:1 and behavior specific most of the time

APPENDIX G: SOCIAL VALIDITY QUESTIONNAIRES

## CW-FIT Intervention Teacher Satisfaction Survey – 2013-2014

**1. I enjoyed being a CW-FIT Intervention Teacher.**

| Very True | Mostly True | Somewhat True | Not True |
|-----------|-------------|---------------|----------|
| 1 | 2 | 3 | 4 |

2. **The CW-FIT program was easy to learn and implement in my classroom.**

| Very True | Mostly True | Somewhat True | Not True |
|-----------|-------------|---------------|----------|
| 1 | 2 | 3 | 4 |

**3. The timer was manageable for use during instruction.**

| Very True | Mostly True | Somewhat True | Not True |
|-----------|-------------|---------------|----------|
| 1 | 2 | 3 | 4 |

**4. The use of teams and points for appropriate behaviors were helpful in improving students' behavior.**

| Very True | Mostly True | Somewhat True | Not True |
|-----------|-------------|---------------|----------|
| 1 | 2 | 3 | 4 |

**5. The self-management component was easy for students to learn.**

| Very True | Mostly True | Somewhat True | Not True | N/A |
|-----------|-------------|---------------|----------|-----|
| 1 | 2 | 3 | 4 | |

**6. Students were reliable in evaluating their behavior and giving points on self-management charts.**

| Very True | Mostly True | Somewhat True | Not True | N/A |
|-----------|-------------|---------------|----------|-----|
| 1 | 2 | 3 | 4 | |

**7. The self-management component was helpful in improving students' behaviors.**

| Very True | Mostly True | Somewhat True | Not True | N/A |
|-----------|-------------|---------------|----------|-----|
| 1 | 2 | 3 | 4 | |

**8. The help card component was easy for students to learn.**

| Very True | Mostly True | Somewhat True | Not True | N/A |
|-----------|-------------|---------------|----------|-----|
| 1 | 2 | 3 | 4 | |

9.  **Students were reliable in determining when to use help cards and responded to help.**

| Very True | Mostly True | Somewhat True | Not True | N/A |
|:---:|:---:|:---:|:---:|:---:|
| 1 | 2 | 3 | 4 | |

10.  **The help cards were beneficial in improving students' behaviors.**

| Very True | Mostly True | Somewhat True | Not True | N/A |
|:---:|:---:|:---:|:---:|:---:|
| 1 | 2 | 3 | 4 | |

11. **I learned new skills to help manage students' behavior.**

| Very True | Mostly True | Somewhat True | Not True |
|:---:|:---:|:---:|:---:|
| 1 | 2 | 3 | 4 |

12. **I will use the CW-FIT skills I learned with future classes.**

| Very True | Mostly True | Somewhat True | Not True |
|:---:|:---:|:---:|:---:|
| 1 | 2 | 3 | 4 |

13. **I will recommend the CW-FIT program to colleagues.**

| Very True | Mostly True | Somewhat True | Not True |
|:---:|:---:|:---:|:---:|
| 1 | 2 | 3 | 4 |

14. **My students enjoyed using the CW-FIT program.**

| Very True | Mostly True | Somewhat True | Not True |
|:---:|:---:|:---:|:---:|
| 1 | 2 | 3 | 4 |

15. **My students were more focused and engaged when we implemented CW-FIT.**

| Very True | Mostly True | Somewhat True | Not True |
|:---:|:---:|:---:|:---:|
| 1 | 2 | 3 | 4 |

16. **What was most helpful to you in learning how to implement the CW-FIT program?**

17. **What could have been more helpful to you?**

18. **How would you modify the CW-FIT program or self-management/help cards for future use?**

# CW-FIT Student Satisfaction Survey

**Do you like playing the CW-FIT Game?**

Yes                              No

**What do you like about the CW-FIT Game?**

**Is there anything you don't like about the CW-FIT Game?**

**Do you think other kids should get to play the CW-FIT Game in their classrooms?**

Yes                              No

**WHY?**

**Thank you for doing this survey!** ☺
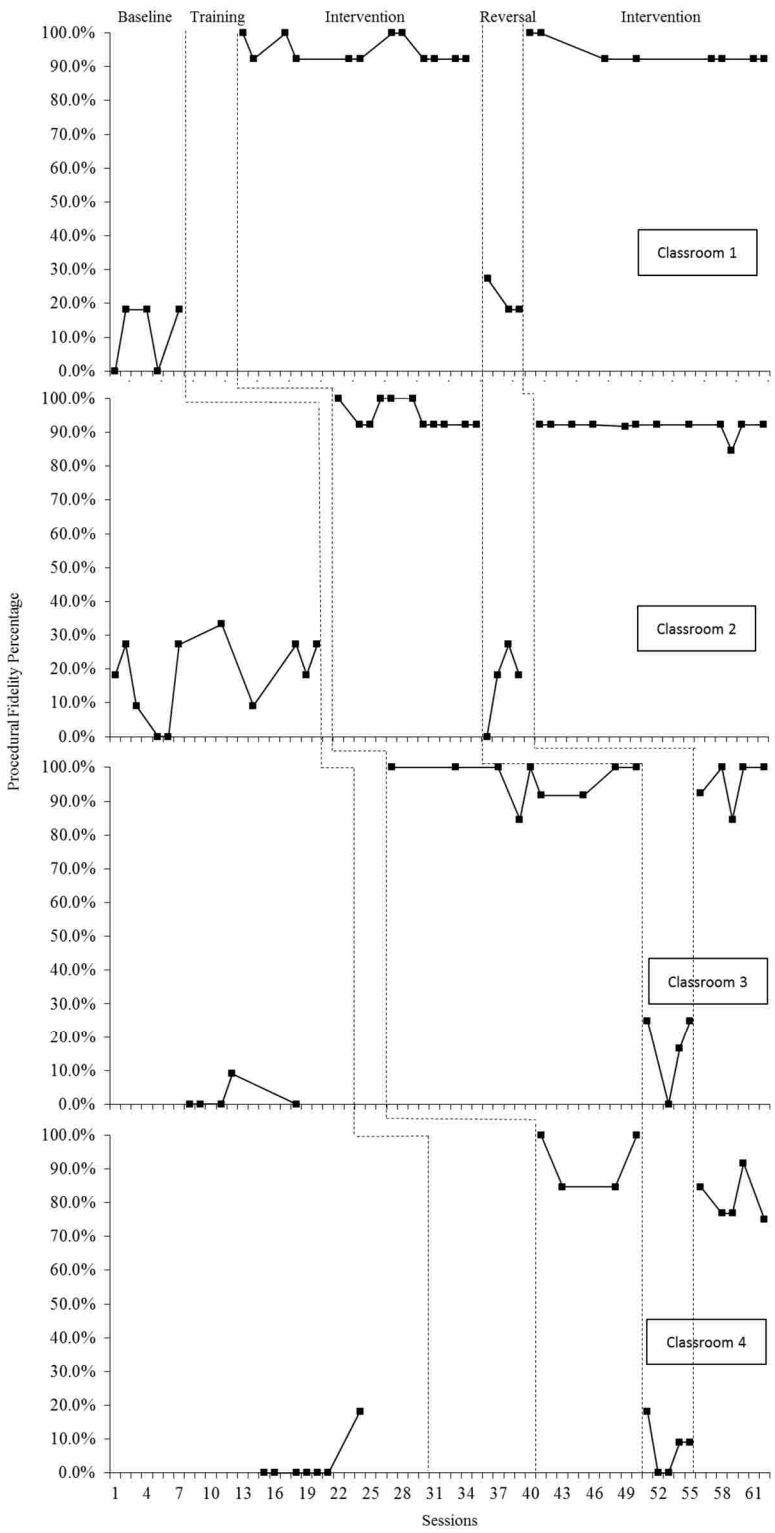
APPENDIX H: PROCEDURAL FIDELITY RESULTS



*Figure 3*. Procedural Fidelity across Classes and Phases.
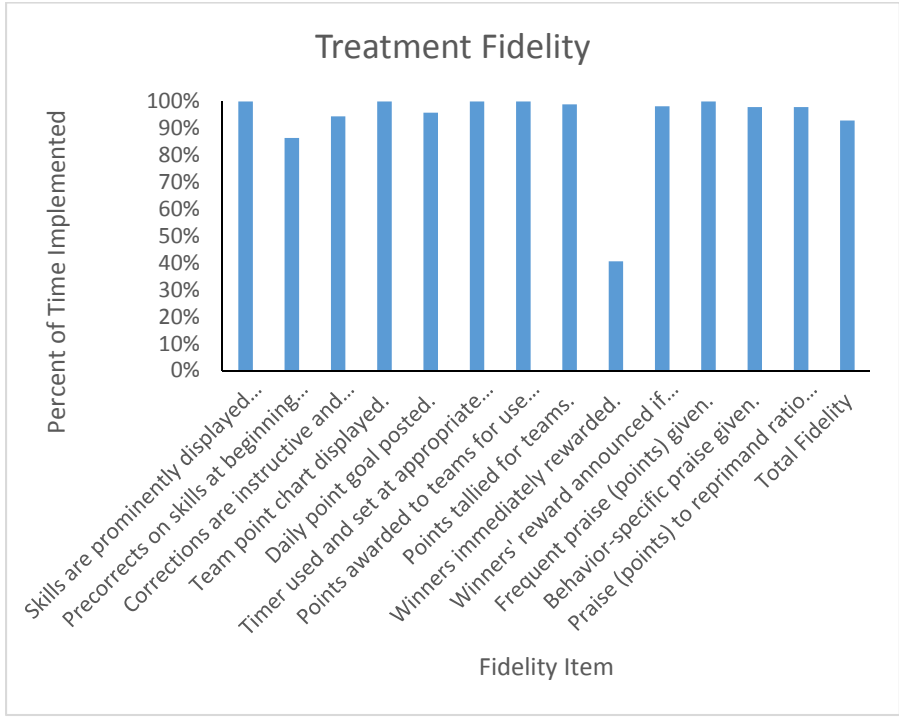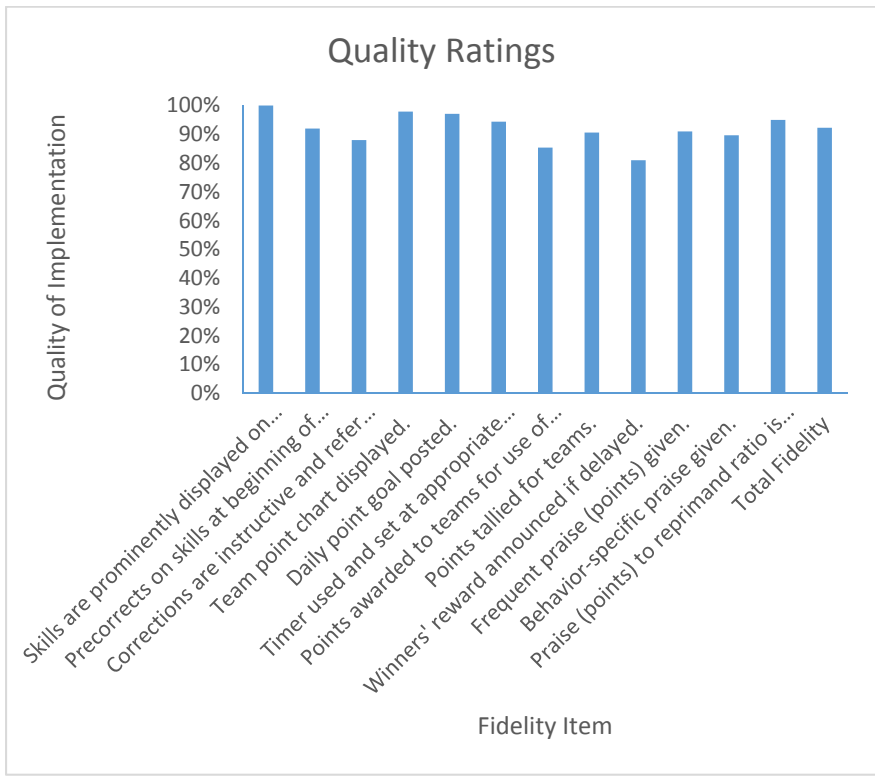
*Figure 4.* Procedural Fidelity per Item.



*Figure 5.* Procedural Fidelity Quality per Item.