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The Effects of Class-Wide Function-Related Intervention Teams (CW-FIT)

Tier 1 in a Middle School Special Education Classroom

Robyn Katie Wright

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Educational Specialist

Paul Caldarella, Chair
Blake D. Hansen
Howard P. Wills

Department of Counseling Psychology and Special Education

Brigham Young University

ABSTRACT

The Effects of Class-Wide Function-Related Intervention Teams (CW-FIT)
Tier 1 in a Middle School Special Education Classroom

Robyn Katie Wright
Department of Counseling Psychology and Special Education, BYU
Educational Specialist

Middle school special education teachers are often concerned about challenging behavior. In recent years, school wide positive behavior support (SWPBS) has been shown to be effective in improving students' behavior. Class-wide Function-related Intervention Teams (CW-FIT) is a SWPBS-based program designed to for implementation at the classroom level. CW-FIT utilizes an interdependent group contingency by utilizing social skills training, teacher praise, and positive reinforcement to improve students' behavior. Students are taught how to achieve specific social skills and then work in teams, using these social skills, to earn a group reward. CW-FIT has been effective in elementary general education classrooms. It has also worked well for small classrooms of students in elementary schools who have emotional and behavioral disorders, autism spectrum disorder, or other health impairment. CW-FIT has not yet been evaluated in a middle school special education setting. The present study examined the effects of CW-FIT implementation on teacher praise rates and student on-task behavior in a middle school self-contained classroom, where 12 of the students had severe disabilities and 11 were typically-developing peer tutors. A single-subject, reversal design was used to evaluate impact. Results indicate that CW-FIT increased teacher praise rates and student on-task behavior. Both teachers and students reported CW-FIT to be socially valid. The present study suggests promising results for the implementation of CW-FIT in a middle school self-contained classroom.

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CHAPTER ONE

INTRODUCTION

Many middle school general education and special education teachers struggle to keep their students on-task in the classroom (Forrest, 2003). Likewise, many students with disabilities struggle to behave appropriately in the classroom (Barkley, 2000; Lavoie, 2005; Mitchell, 2014). Historically, schools have used coercive methods such as detention, suspension, and time out as a form of punishment when students misbehave (Jacob & Hartshorne, 2007). However, coercion in an ineffective way to help students learn how to behave long-term (Walker, Ramsey, & Gresham, 2004). Previous research indicates that students with disabilities do improve when there is a predictable environment, posted expectations, rationale for expectations, opportunity to practice skills (Mitchell, 2014). Likewise, students improve when they can practice self-management, build social skills, and receive meaningful positive reinforcement. Many of these principles are common in schools that utilize positive behavior interventions and support.

Positive behavior interventions and support (PBIS) "is an applied science that uses educational methods to expand an individual's behavior repertoire and systems change methods to redesign an individual's living environment to first enhance the individual's quality of life and, second, to minimize his or her problem behavior," (Carr et al., 2002, p. 4). PBIS was created from and is like Applied Behavior Analysis (ABA), which many students with disabilities have benefited from (Dillenburger, 2012; Sugai & Horner, 1999); students with disabilities should therefore respond well to PBIS. When PBIS is carried out in schools, it is referred to as School Wide Positive Behavior Support (SWPBS). Schools carry out SWPBS in different ways, but common elements include teaching behavioral expectations and their rationales, utilizing positive reinforcement, and extinguishing problem behavior (Young,

Caldarella, Richardson, & Young, 2012). While schools often have success using SWPBS, many middle school special education teachers do not know how to utilize SWPBS at the classroom level.

Class-wide Function-related Intervention Teams (Wills et al., 2010) is a SWPBS-based program designed to be implemented in the classroom. It has proved effective in improving teacher classroom management, increasing student on-task behavior, and reducing problem behavior in elementary general education classrooms (Caldarella, Williams, Hansen, & Wills, 2015; Wills et al., 2010). Likewise, it has effectively helped improve behavior for students in elementary school special education classrooms (Bolt, 2015; Weeden, Wills, Kottwitz, & Kamps, 2016). However, there is not yet research that examines the effectiveness of CW-FIT in middle school special education classrooms. Given the various behavior problems and unique challenges in such settings, it is important to explore the effectiveness of CW-FIT in such an environment.

The purpose of the current study was to investigate the results of implementing CW-FIT in a middle school special education classroom. The following specific research questions were addressed:

1. Can a middle school special education teacher implement CW-FIT with fidelity?
2. What impact does CW-FIT have on teacher praise and reprimand ratios?
3. What impact does CW-FIT have on students' on-task behavior?
4. Do teachers and students find CW-FIT to be socially valid?

CHAPTER TWO

LITERATURE REVIEW

Many students in middle school show problem behaviors in the classroom. According to Harrison, Vannest, Davis, and Reynolds (2012), an estimated 17% of adolescents are perceived by their teachers to often be excessively moving around the classroom. They reported that 16% of adolescents are almost always off task. These disruptive and hyperactive behaviors were considered by teachers to be quite common problem behaviors. Other concerns noted in this study were that 10% of these students often required directions to be repeated and experienced significant anxiety during class. Anxiety often leads to social withdrawal and aggression which may be related to changing social roles in middle school (Young et al., 2012). It is therefore crucial that teachers are equipped with preventative and responsive classroom management techniques.

Classroom Behavior Management in Middle School

Evertson and Weinstein (2013) described classroom management as "the actions teachers take to create environments that support both academic and social/emotional learning" (p. 4). When schoolwork is unreasonably too difficult or too easy, students often experience a decrease in interest and academic achievement; truancy and problem behaviors often tend to increase as well (Eccles, 2004). In addition, many students who show aggression and antisocial behavior in the classroom develop depression (Kiesner, 2002). If teachers can provide an environment that meets the educational and developmental needs of middle school students, the risks associated with misbehaving could be mitigated.

To effectively manage classroom behavior, middle school teachers must consider the various changes that occur during middle school, including significant increases in physical,

social, and cognitive changes. Susman and Rogel (2004) found that the perceived novelty of increased hormones and changes in the body often lead to middle school students experiencing an increase of stress. They also found that students who develop faster than their peers are more at-risk to become involved with older deviant peers and with substance abuse. Likewise, middle school students experience changes in societal expectations, limitations, and opportunities, such as dating, curfews, and substance use (Young et al., 2012). Eccles (2004) also found that the transition from elementary to middle school is associated with students' decline in motivation and behavior. Fortunately, according to Eccles, amidst these changes, middle school students benefit from strong, positive adult-adolescent relationships (2004). Educators can provide opportunities for such healthy social interactions. Finally, middle school students improve in deductive reasoning, working memory, and problem solving (Keating, 2004). Middle school teachers, therefore, need to both provide more opportunities for students to think creatively and critically, and be prepared for students who more frequently demand rationales for behavior expectations (Young et al., 2012).

According to Eccles (2004), the transition from elementary to middle school does not necessarily lead to inappropriate behavior. But when schools do not provide developmentally appropriate environments, students tend to lose motivation and feel indifferent towards the school's goals. Middle school teachers tend to place more emphasis on teacher control and limit opportunities for student decision making than do elementary school teachers (Eccles, 2004). If students are expected to behave appropriately, the classroom environment must be managed appropriately.

Unfortunately, many teachers utilize coercive methods of classroom management instead of methods that teach students alternative, appropriate behavior (Emmer, Evertson, & Worsham,

2003). Coercion is defined as using punishment and threats of punishment to stop misbehavior (Sidman, 1989). According to Jacob and Hartshorne (2007), expulsion, suspension, detention, time out, and even corporal punishment are commonly given to middle school students for a variety of misbehavior, often leading to negative results, defeating the purpose of punishment. Students tend to view punitive practices as harsh and often respond with anger. These coercive practices only temporarily decrease misbehavior, and students do not learn alternative, appropriate behaviors (Walker et al., 2004). Likewise, students tend to feel unsafe when punished and this negative school climate often simply yields more hostility (Young et al., 2012). Feeling emotionally supported in a positive school climate is one of the most essential aspects of developing positive behavior and attitudes (Eccles, 2004). If educators want to make long lasting, positive changes in students' behavior, they must first improve the classroom environment.

Middle school classrooms based on a punitive atmosphere cannot simply add on positive reinforcements to this same atmosphere and expect improved student behavior (Gottfredson, Gottfredson, & Hybl, 1993). Increasing praise while making minimal decreases in office referrals has little effect on encouraging teachers to provide even more positive reinforcement; slowly, the praise decreases toward original rates (Metzler, Biglan, & Rusby, 2001). According to Gottfredson et al. (1993), providing reinforcements, fair rules, and predictable and consistent consequences positively correlate to both students' and teachers' satisfaction and reports that there is less punishment and a healthier school climate. When teachers give clear rules, and are prepared with a contingency plan, as opposed to using reactive responses for different types of misbehavior, the teachers feel that there is more order. Schools and teachers should strive for

behavior management interventions that make long-lasting changes in promoting positive student behavior.

Middle School Special Education Classroom Needs

Behavior management can be especially difficult in special education contexts. Many general education teachers do not understand the nature of students' disabilities or know specific strategies that work with each disability (Forrest, 2003). Even middle school special education teachers struggle with this (Cox, 2015). It is therefore crucial that teachers learn effective behavior management strategies to help students in special education, just like they do with students in general education.

For example, in a study of 308 adolescent students with attention deficit-hyperactivity disorder (ADHD) and/or specific learning disability (SLD), students reported what was most important to them at school and what was most frustrating (Brook & Boaz, 2005). These students reported that besides their family, academic achievement was the most important aspect of their life. Yet despite this, 52% said their teachers had said that the students were not motivated and 34% felt stressed and impatient in class. Likewise, 39% said that getting help with learning would benefit them the most and 18% reported that if teachers treated them without criticism, anger, and pity, they would feel supported. Clearly, like their peers, students with special needs are sensitive to hostility and could benefit from positive behavioral support.

Each student with special needs has certain strengths and deficits associated with their disability. However, no matter the disability's manifestation, many such students struggle with displaying social skills and behaving appropriately in the classroom (Barkley, 2000; Lavoie, 2005; Mitchell, 2014). An understanding of common classroom problems and what behavior

management techniques mitigate these problems, can help teachers know the most appropriate strategies for helping their students.

Many students within special education struggle with processing auditory cues, which makes it difficult to listen to classroom directions (Lavoie, 2005). Posting classroom expectations makes it easier for these students to process directions. Creating a predictable environment, with rationales for expectations and opportunities to practice skills, as opposed to lecturing, threatening, and nitpicking, can help students improve their behavior. Such students can also benefit from self-management, and classroom management strategies that focus on building social skills and receiving meaningful positive reinforcement (Mitchell, 2014).

Likewise, many students with disabilities struggle with executive processing, "actions we perform to ourselves and direct at ourselves in order to accomplish self-control, goal oriented behavior, and the maximization of future outcomes" (Barkley, 2000, p. 8). This deficit is often apparent when students struggle to start and stay on-task. Many students with special needs are more prone to getting off task and not utilizing social cues (Lavoie, 2005). Teachers may interpret this behavior as lazy or disrespectful and classmates often reject students who display this behavior. It is important for teachers to ignore fidgeting behavior, if students are on-task and not disrupting others. Reinforcing on-task behavior through praise is an effective way to help such students stay motivated.

School-wide Positive Behavior Supports

Positive Behavior Interventions and Support (PBIS) "is an applied science that uses educational methods to expand an individual's behavior repertoire and systems change methods to redesign an individual's living environment to first enhance the individual's quality of life and, second, to minimize his or her problem behavior" (Carr et al., 2002, p. 4). PBIS was

developed from Applied Behavior Analysis (ABA) to improve individual interventions for students with severe problem behaviors and developmental disabilities. Since the release of regulations for the implementation of the 1997 amendments to the Individuals with Disabilities Education Act (IDEA), PBIS has been expanded to help students with and without disabilities in more system level implementation (Sugai & Horner, 1999). PBIS when implemented at the school-wide level is often referred to as School Wide Positive Behavior Supports (SWPBS); For the remainder of this manuscript the term SWPBS will be used. Although SWPBS looks different for every school, class, and individual, it utilizes the same strategies at every level (Carr et al., 2002). It is a framework that has been effective at decreasing challenging behavior in various educational settings, including middle school and special education classrooms (Carr et al., 1999).

According to Sugai, Horner, and Lewis (2009) a SWPBS model is not a specific program, but has specific core elements comprised of evidence-based practices. For example,

- Primary prevention: The goal is to decrease the number of news cases of problem behavior. This is done through utilizing the most effective school-wide and classroom-wide behavior management practices. The majority (approximately 80%) of students are adequately served at this level. Though SWPBS is not a package, many primary preventions include behavioral expectations defined, behavioral expectations taught, reward system for appropriate behavior, continuum of consequences for problem behavior, and continuous collection and use of data for decision making (Sugai & Horner, 2002).

- Secondary prevention: The goal is to reduce the number of existing problem behavior cases. This is done through providing additional behavioral and instructional supports. Approximately 15% of students are adequately served at this level.

- Tertiary prevention: The goal is to reduce the number of existing cases of long-standing problem behavior. A minority (roughly 5%) of students are served at this level; these are the students that are most at-risk for emotional, behavioral, and social failure.

The third (tertiary) tier is crucial in understanding how to manage the most disruptive behavior. Function-based behavior support plans and individualized education programs (IEPs) are commonly utilized in this tier for students in special education. Functional behavior assessments (FBA) are used to examine contextually relevant information surrounding misbehavior by identifying the antecedent and consequence associated with the problem behavior (Sugai & Horner, 2002). For example, in a study by Scott and Caron (2005), members of a school behavior team hypothesized that a student was engaging in conflict to get attention from peers, but when they observed that the student received peer attention when engaging in positive activities, they had to adjust their hypothesis. Upon further observation in a controlled 1their hypothesis and concluded that the student misbehaved in order to avoid aversive situations, which in this case was if peers made eye contact with the student. The team observed that when eye contact was made (antecedent), the student engaged in conflict (behavior), and the classmates moved away (consequence). A functional behavior assessment, such as this, leads to developing a hypothesis, which must include operational definitions of the problem behavior, descriptions of antecedents that predict the behavior's occurrence and nonoccurrence, and a description of the events that maintain the problem behavior (Sugai et al., 2000). Finally, an effective and efficient

behavior intervention is established. This intervention might include behavior support plans that focus on redesigning the environment and curriculum, and removing rewards that may have maintained the problem behavior. In the previously mentioned case, the team developed an intervention to bring the student and her classmates to discuss their issues and they developed some routines to engaged the student and her classmates in appropriate activity. For a student who misbehaves because she does not understand an assignment, an environment that teaches her how to request help and build skills may meet her need and therefore promote positive behavior (Young et al., 2012).

SWPBS is implemented with the assumption that behavior falls into one of the following categories: avoiding or escaping painful or uncomfortable circumstances, getting attention from someone, or obtaining something the individual wants (Sidman, 1989). The goal is to teach appropriate skills that help students develop self-discipline, civility, and maturity to meet their needs (Young et al., 2012), rather than simply attempting to stop misbehavior. Focusing on such skills helps students succeed long-term—in both life and school. Contrastingly, coercion, although sometimes an effective short-term solution, is linked to long-term avoidance, resentment, disrespect, and aggression, as well as various escape behaviors, including drug and alcohol abuse (Sidman, 1989). These side effects stand in stark contrast to the effects of SWPBS: thoughts of self-worth, value, confidence, and trust in others, desiring to reciprocate care and concern (Young et al., 2012).

Another key principle of SWPBS is that instructional approaches to teaching and improving social behavior need to be proactive. This means that teachers must carefully consider instructional practices, structures, and processes (Sugai & Horner, 2002), rather than simply reacting. Piwowar, Thiel, and Ophardt (2013) found that middle school teachers who are trained

to proactively reflect on their classroom management strategies feel more comfortable teaching and are better at making necessary changes. However, they found that this training does not significantly improve reactive behavior management, which tends to already be highly developed within teachers. According to Sugai and Horner (2002), reactive management is likely effective only when integrated into a thoughtful and instructional approach. They also noted that teachers who have clear behavior expectations, and who give behavior-specific praise and predetermined responses to inappropriate behavior, benefit from various positive outcomes in the classroom.

Middle school teachers feel less stress and perceive that less time is being used to handle misbehavior when SWPBS practices are used (Narhi, Kiiski, Peitso, & Savolainen, 2015). Learning proactive management skills is especially important for middle school teachers since, compared to elementary school teachers, such teachers often feel less competent in behavior management (Eccles, 2004). When middle school teachers feel competent, students tend to have a greater sense of self-worth and are more likely to connect to the teacher and avoid problem behaviors. Proactive classroom management takes time and preparation, but the results suggest that the associated improvements in student behavior are worth it.

Schools that implement SWPBS must utilize empirically validated practices. For example, SWPBS is effective when schools use a few positively stated expectations, students can practice meeting these expectations, educators provide support for encouraging the expectations, and educators appropriately discourage problem behaviors (Sugai & Horner, 2002). When teachers explicitly teach behavior expectations, they report feeling less distracted and there are higher ratios of praises to reprimands in the classroom (Colvin, Sugai, Good, & Lee, 1997). According to Sugai et al. (2000), teachers also feel they have more time to teach when they implement such SWPBS strategies. At a classroom level, research suggests that SWPBS helps

maximize time for teacher instruction, student engagement, and student achievement. SWPBS also encourages engaging in proactive behavior management tactics (active supervision, positive reinforcement, clearly taught consequences for rule violations, and precorrections). These approaches are also used in ABA.

SWPBS, disabilities, and ABA. In the classic article by Baer, Wolf, and Risley (1968), the components of ABA were defined systematically. *Applied* was defined as "not determined by the research procedures used but by the interest which society shows in the problems being studied" (p. 92). *Behavior* refers to the study of what people can be brought to do. *Analysis* refers to a "believable demonstration of the events that can be responsible for the occurrence or non-occurrence of that behavior" (p. 94). ABA was created as a response to a growing amount of research that focused on helping students with mild, high incidence disabilities. Students with various special needs have benefited from ABA throughout the years (Dillenburger, 2012). For example, focusing on providing reinforcement for appropriate behavior that serves the same purpose as the unwanted misbehavior, and putting those same problem behaviors on extinction, has had promising results for adolescents with autism (ASD; Wilczynski, McIntosh, Tullis, Cullen, & Querim, 2005). During the 1980s, a broad-based movement supporting non-aversive behavior management developed (Horner et al., 1990). Of special concern were those with developmental disabilities (Thomas, 2009); SWPBS was a response to some aversive ABA techniques used with this population. One of the most important aspects of SWPBS, functional behavior assessment, originated from 20 years of research in ABA (Sugai et al., 2000).

ABA and SWPBS are similar in important ways. Both rely heavily on FBA: determining what function the behavior is serving, what provokes the behavior, and what makes the behavior persist (Sugai et al., 2000). FBA is crucial to both ABA and SWPBS because to change a

behavior, school teams must identify what is reliably predicting and maintaining the unwanted behavior (Sugai, Lewis-Palmer, & Hagen, 1999). ABA and SWPBS both also rely on analysis of behavior. Extending principles of B.F. Skinner's idea of operant conditioning to issues of social importance, ABA and SWPBS both rely on principles of reinforcement, three term contingencies (antecedent, behavior, consequence), setting events, stimulus control, fading, prompting, generalization, and maintenance (Baer, et al., 1968; Dunlap, Carr, Horner, Zarcone, & Schwartz, 2008).

There are, however, some differences between ABA and SWPBS. According to Cooper, Heron, and Heward, (2007) SWPBS moves beyond operant conditioning and is used with not just the immediate environment, but with a broader system. SWPBS also is focused on replacing behavior, not just removing misbehavior (Dunlap et al., 2008). Finally, according to Carr (2007) the central dependent variable of SWPBS is quality of life, making "meaningful gains in the areas of material well-being, health and safety, social well-being, emotional well-being, leisure and recreation, and autonomy" (p. 4). ABA is not specifically aimed to promote quality of life.

Often, people believe that students with disabilities may not crave significance and belonging, and resort to using punitive responses, in the hopes of deterring them from acting out, instead of addressing the function of the behavior (Nelsen, Foster, & Raphael, 2011) Students' actions, including misbehavior, are often based on what they interpret will help them get what they want or need. Administrators should assess what function misbehavior serves before finding a suitable replacement behavior that will improve students' quality of life. Students need socially useful replacement behavior that allow them to learn in a classroom environment. Students with disabilities benefit from many of the same things that their typical peers benefit from: Break tasks down into small steps, stop all criticism, encourage any positive attempt, have faith in the

child's ability, focus on assets, don't engage in pity, don't give up, set up opportunities for success, teach skills, show how, and encourage (Nelsen et al., 2011).

Important elements of SWPBS. No matter how SWPBS is implemented, such programs have many of the same elements. First, teaching social skills is important as such skills are "those skills that are necessary for students to successfully interact with others" (Young et al., 2012, p. 63). In a school setting, this means directly teaching skills that will help students interact well with each other and adults. In creating a positive classroom environment, it is important to teach skills such as how to get the teacher's attention, speak politely, and follow adults' requests. While students often know what is expected of them, many benefit from being directly taught such skills (Emmer et al., 2003). Explaining the rationale for a specific skill is essential for students to realize that the request is logical and that consequences for behavior are predictable (Young et al., 2012). Adolescents are likely to be convinced when explanations are brief, believable, and personal. Being able to practice and receive feedback more likely leads to mastery and internalizing civil behavior.

Another important aspect of SWPBS is token economies. Young et al. (2012) explained how token economies typically work. When students meet behavior goals, teachers award tokens, usually in the form of tickets or points. When students receive enough tokens, they can exchange them for a reinforcement, either an experience, including free time, or an item. Young et al. recommended that there should be a variety of age-appropriate reinforcements. They also recommend that tokens are given when measureable behaviors are met, that students have access to knowing how many tokens they have, and that tokens not be taken away. Maggin, Chafouleas, Goddard, and Johnson (2011) evaluated the strength of evidence supporting the use of token economies. After establishing an inclusion criterion, the researchers narrowed down articles from

1960 to 2009 that studied token economies in the classroom. They found that despite an abundance of articles supporting token economies, there is currently a lack of support for token economies as an evidence based practice because few studies met the basic design standards needed to ensure methodological rigor. Few studies contained treatment fidelity and interobserver agreement. Many of the studies had too few data points and less than three opportunities to show an experimental effect (AB or ABA). Social validity was rarely measured and lack of details concerning the academic context limits possibilities replication. However, other studies, such as Kamps et al.'s (2015) evaluation of CW-FIT, met these standards using fidelity measures, social validity, and rigorous experimental controls showing positive effects on student classroom behavior.

Utilizing group contingencies in the classroom can be combined with token economies to help manage challenging behavior by "delivering a predetermined preferred item or activity in response to desired behaviors displayed by a group of students" (Wills, Iwaszuk, Kamps, & Shumate, 2014, p. 193). Litow and Pumroy (1975) first identified the three types of group contingencies: independent, dependent, and interdependent. Independent group contingencies are in effect for all members of a classroom, but are only given to students who meet the behavioral expectations. Dependent group contingencies are in effect for all members of a classroom, but only given when a specific individual or group of students meet the behavioral expectations. Interdependent group contingencies are only given when all members of a group meet the behavioral expectations. For example, making free-time activities for the entire class contingent upon each student successfully completing a spelling page. If one member of the class does not complete the assignment, nobody gets free time. Interdependent group contingencies can also apply to smaller groups within a classroom. Students can be divided into groups, and the whole

group gets rewarded if all are following the rules; if one member is not, nobody in the group gets the reward.

Gresham and Gresham (1982) compared dependent, independent, and interdependent group contingencies in a self-contained special education classroom where IQ's ranged from 45-68. For the dependent group contingency phase, all students' behavior was tracked, but students only received the prize if the captain of their team had the fewest disruptive behaviors. For the independent phase, students were not on teams and those with the lowest infractions received the prize. For the interdependent phase, students were marked with infractions if one person on their team was disruptive. The authors found that there were few decreases in disruptive behavior during the dependent phase. They found that there were a lot more decreases in disruptive behavior during both the interdependent and independent phases. However, they discussed that during the dependent phase, there were many students with fewer than five infractions, but because their captain had so many, these individuals were denied prizes. They concluded that it was fairer to make prizes dependent on all individuals in an entire group abstaining from disruptive behavior, than one student abstaining from disruptive behavior.

An application of group contingencies for students with disabilities is that when peers encourage positive behavior, students with ASD experience longer and more reciprocal interactions with typically developing peer (Kohler et al., 1995). Kohler and colleagues implemented a group contingency in a preschool with three students who had ASD, (the target students) and six typically developing peers where target students and peers reminded each other to behave. The comprehensive intervention improved the target students' social interactions amongst themselves and their peers. Peers exchanged supportive prompts to others only after

they had been trained. The authors suggested that peer support is an important antecedent for helping improve target students' interactions.

Likewise, group contingencies can be effective in reducing the number of times a teacher prompts a student while maintaining appropriate behavior for students with disabilities. Lefebvre and Strain (1989) implemented a group contingency in a preschool, where two of the students had disabilities. The students were taught how to initiate and respond to play through demonstration and opportunities to practice. The contingency and posters with directions for play allowed the teacher to redirect the students fewer times and focus more on the students' specific needs. Moreover, when the reinforcement contingency was implemented, typically-developing peers' appropriate behavior improved. Likewise, when the teacher prompted less, the students with disabilities continued to have the same rates of appropriate interaction than before. The authors concluded that using classroom-based social skills training packages can be effectively implemented to improve the behavior of typically developing students and students with disabilities, without disrupting normal classroom routines.

Group contingencies must be implemented frequently to keep students focused. Chafouleas, Hagermoser Sanetti, Jaffery, and Fallon (2012) conducted a study where typically-developing middle school students were given individual points when they were on-task and then those points were added with group members' points to find an average, interdependent score. At the end of the week, if the group's score met the goal, they were given a prize. If they met the goal again the next week, they were given two prizes, and if they met the goal all three weeks in a row, then they got three prizes. At the end of the study, students rated this interdependent group contingency plan as favorable. However, this method produced mixed results for on-task behavior; some groups made consistent progress while others slowly declined after a few weeks.

Having to wait a full week to get a prize might explain why on-task behavior did not consistently improve. Likewise, teachers having to average points every day may have become burdensome. Finally, the prizes were provided by the researchers and likely would be too expensive for a teacher to consistently give. Rewards need to take a few minutes of the teachers' time, should be used often, and should be something that can be given to the students all year long (e.g., inexpensive.)

Haydon, DeGreg, Maheady, and Hunter (2012) also successfully implemented group contingencies in an elementary school. They introduced a behavior management intervention package that included interdependent group contingencies, active supervision, precorrection, and almost immediate rewards to decrease students' transition time. A week after researchers actively intervened, students (transitioning from lunch to class) had decreased their transition time by 6 minutes and the teacher used 10 fewer prompts than at baseline. Although this study specifically studied transition times, the intervention package of active supervision, interdependent group contingency, precorrection, and receiving a promise of a reward, improved student behavior and teacher satisfaction with just making a few adjustments. This study suggests that such strategies would likely improve other disruptive situations in a middle school classroom.

Classroom applications of SWPBS. Successfully implementing SWPBS policies depends on many factors including the teachers' understanding and endorsement of the new practice, the way in which teachers receive training and support, and students' willingness to participate. Chityo and Wheeler (2009) found that despite SWPBS success as a school-wide behavior intervention, many middle school general education teachers do not utilize it in their classrooms. In their study, the school defined three guiding principles that should be applied in

each setting within the school. However, within the classroom, teachers struggled with knowing how to implement these principles. They struggled with conducting functional behavior assessments and using data to form hypotheses and were thus limited in their knowledge of why students misbehave. Likewise, they struggled to understand how to use antecedents to prevent challenging behavior and teach alternative replacement behavior. They felt time constraints regarding the use of SWPBS within the classroom and struggled with data collection. Cox (2015) found that regardless of their years of experience and formal education, many special education teachers also have substantial gaps in their knowledge of functional behavior assessments and behavior intervention plans. Like their general education colleagues, many special education teachers did not know how to identify antecedents for problem behavior, thus limiting their ability to create appropriate replacement behaviors.

Good Behavior Game. Tingstrom, Sterling-Turner, and Wilczynski (2006) found that interventions created to specifically implement SWPBS in the classroom can often improve the teacher's ability to manage student behavior. One such classroom intervention is the Good Behavior Game (GBG). The GBG provides teachers opportunities to acknowledge appropriate behavior, teach classroom expectations, discuss inappropriate behavior, and provide reinforcement (Flower, 2014). Teachers find that the GBG is easy to implement. While the GBG has been implemented with variation, there are some key principles that generally take place (Tingstrom et al., 2006). Teachers identify target behaviors, post rules, and identify the rewards for following the rules (Flower, 2014). They then divide the class into teams and tally infractions. Teams can earn daily and weekly prizes if they have the most points or the fewest infractions. These different elements have helped teachers manage classroom behavior for over 40 years.

However, the literature on implementing SWPBS strategies such as the GBG in special education is limited. Flower, McKenna, Muething, Pedrotty Bryant, and Bryant (2014) implemented the GBG in one ninth grade special education algebra classroom, where most of the students had SLD, intellectual disability (ID), or ADHD. They found that the students' off-task behavior decreased by 52.24%. Another study (Salend, Reynolds, & Coyle, 1989) found that the GBG was effective in decreasing inappropriate verbalizations by students with emotional disturbance (ED) in special education classrooms. When students received slashes on the whiteboard, indicating their team had vocalized inappropriately, they were reminded to behave appropriately. Being on a team may have encouraged students to behave due to their peers positively influencing them. It was easy for the teacher to implement; marking the board was a simple, yet powerful way to remind students not to misbehave. Classroom specific interventions, such as the GBG, have promising effects on special education middle school students' on-task behavior.

Despite the advantages of using the GBG, this intervention, as used in the above-mentioned articles, has some important drawbacks. First, the GBG typically uses two teams with the same number of students on each team. If a single student misbehaves, all students on the team, half the class, get a negative tally. Often the number and size of the groups are not allowed to change, even when a single student is consistently misbehaving and therefore students on the team must suffer the negative repercussions. Second, teachers give feedback, in the form of negative points, at random and not on a set schedule. This decreases the likelihood that they will remember to acknowledge positive behavior. Third, in keeping track of behavior, the GBG traditionally utilizes keeping track of negative behavior, instead of positive behavior. Fourth, the teacher usually does not tell the students how many infractions they are allowed. This means that

students have no way to track to see if they are doing well or not. Finally, the GBG does not actively seek to increase the teacher's rate of praise. Giving points and earning a prize can be effective, but not knowing what they are doing well at does not incentivize students to work towards a specific behavior. The GBG has helped increase on-task behavior, but the likelihood of having a disruptive classmate, exceeding the tolerable amount of infractions, and teachers forgetting to point out positive behavior is high, feels arbitrary, and can decrease students' desire to play the game long term.

CW-FIT. CW-FIT shares many of the same qualities as the GBG, while addressing the GBG's limitations. CW-FIT is a multilevel group-contingency intervention that addresses the most common reasons for severe problem behavior "that (a) account for the primary social factors known to contribute to the severe problem behaviors in schools, and (b) serve as a proactive approach in keeping with positive behavioral support intended to enable children's school success in school by addressing alterable contingencies at group and individual levels" (Wills et al., 2010, p. 165). Teachers explicitly teach three to five social skills that have been identified as particularly important to positive classroom behavior (Caldarella & Merrell, 1997). Teams for CW-FIT are composed of three to six students, and the classroom can have as many as six teams. Teams can be switched around and if a team is failing to receive points due to one child misbehaving, that child can be put on their own team temporarily, increasing the team's chances of receiving points, and encouraging the child to comply. Secondly, points are given every three to five minutes. The teacher sets a timer and when it goes off, he/she rewards a point to each team that is on-task. This helps the teacher remember to reward points and shows the students that their good behavior will consistently be noticed and rewarded. Teachers implementing CW-FIT keep track of positive behavior (Wills et al., 2010). Teachers are also

taught to increase behavior-specific praise and decrease reprimands, while every three to five minutes, at the sound of a timer, give points to any team where all members are on task. The teacher also chooses and shares with the class the number of points they must receive to earn the reinforcement. Because students know how many points they are working for, they can consciously monitor their behavior, instead of guessing and potentially giving up on reaching the goal.

Wills et al. (2010) described the four main components of CW-FIT. First, CW-FIT relies on teaching how to follow three main classroom behavior goals that cover a variety of behavior functions: getting the teacher's attention, following directions, and ignoring inappropriate behavior. Second, CW-FIT focuses on extinction, or the elimination of problem behavior through minimizing potential social reinforcement. By teachers recognizing appropriate behavior (taught through the lessons) and classmates ignoring inappropriate behavior, students' behavior improves. Third, CW-FIT also has an interdependent group contingency reward component; if all the students in a group are on-task, they receive points. These points add up to receive a reinforcement that the class agrees on. Finally, there is a Tier 2 component that consists of self-management charts that match class point charts where students can chart their own points and help cards that students use to get help from their peers or teachers. Students who do not respond to Tier 1 take part in Tier 2.

In one study, CW-FIT was tested on more than 35 classrooms and over 700 students (Wills et al., 2010). Table 1 shows the effect CW-FIT had on on-task behavior in three of the schools (16 classrooms). On-task behavior improved by an average of 21.67%. These increases in on-task behavior led to increased teaching time. At-risk students using the Tier 2 intervention showed nearly a 50% reduction of disruptive behaviors. Most teachers in the study found that

implementing CW-FIT helped them stay positive and that the intervention "protects teaching time by increasing engagement, decreasing disruptions, and avoiding reactive or punitive strategies that can result in students being referred to the office or otherwise losing instructional time" (p. 169). Eighty-five percent of students also reported that CW-FIT was fun, that their teacher was positive, and that they liked working as a team to earn rewards.

Table 1

CW-FIT Effect on On-Task Classroom Behavior in Three Urban Elementary Schools, Based on Wills et al., 2010

Classroom	Baseline	Intervention
1	67%	83%
2	52%	78%
3	57%	80%
Means	59%	80%

Wills et al. (2014) studied the effects of replicating CW-FIT across the day under various academic settings in a first-grade classroom. The school had adopted a SWPBS model three years prior and staff had demonstrated high fidelity (85%). The students played CW-FIT three times a day. On-task behavior at baseline was 65%, 58%, and 58% for each of the periods, and after CW-FIT was implemented their averages increased to 94%, 92%, and 97%, respectively. Likewise, the teacher's praise rates increased from averages of 6.1, 10.0, and 5.8 at baseline to 13.8, 19.3, and 11.0. Reprimands also decreased in each period between baseline and intervention. Likewise, three target students' on-task behavior increased.

CW-FIT has also successfully been implemented in elementary school special education classrooms. Bolt (2015) conducted a CW-FIT study in a class consisting of three students, two with ASD and one with other health impairment (OHI). All three students' behavior improved:

CW-FIT helped decrease the number of disruptions and increase levels of engagement, particularly when the program was paired with high rates of opportunities to respond. Weeden et al. (2016) implemented CW-FIT in a self-contained elementary school classroom for students with emotional and behavioral disorders (EBD). Because the participating teacher was hesitant to stop CW-FIT after initial implementation, the researchers included brief withdrawals between implementations. With total baseline measures averaging to 55% for on-task behavior, after intervention on-task behavior for all stages averaged 90%. Reprimand rates decreased by an average of 5.1 occurrences and praise rates increased by an average of 36.5 occurrences. The researchers recommended conducting additional studies of CW-FIT in other special education classrooms.

CW-FIT has been successful in elementary general education classes and special education classes. However, there is a lack of research on the effectiveness of CW-FIT in middle school special education classrooms. Considering the differences between elementary school and middle school students' development, and general education and special education contexts, it is important to understand the effectiveness of CW-FIT in a middle school special education classroom.

CHAPTER THREE

METHODS

Setting and Participants

This study was conducted in a self-contained special education classroom at a suburban Title I Utah middle school, where 56% of students qualified for free or reduced lunch. The teacher was a 28-year-old female who had been teaching special education for eight years. The class consisted of 12 students with disabilities: 58% were in seventh grade, 17% were in eighth grade, and 25% were in ninth grade. The students consisted of 50% females and 50% males. Students were Caucasian (58.33%), Hispanic (33.33%), and Native American (8.3%). Students in her class were classified under IDEA with ID (58.33%), ASD (8.33%), SLD (16.67%), Speech Language Impairments (8.33%), or OHI (8.33%). Sixty-seven percent of the students had IQ scores below 71, and 33% had IQ scores in the 71-84 range. Similarly, 58% of the students had adaptive behavior composite scores that were low and 42% students had adaptive behavior composite scores that were moderately low, based on the Vineland (Sparrow, Cicchetti, & Balla, 2005). The range for students' reading achievement based on the Brigance (2010) was pre-primer to 3rd grade. None of the students had behavior intervention plans and 42% had social skill goals.

Students were assigned to the self-contained classroom according to the IEPs they received in elementary school. Members of the IEP team gathered to discuss if the child's disability was so severe that their needs could not be met in a less restrictive environment, but in a self-contained class environment. The child's current teacher and the self-contained classroom teacher would together fill out a rubric (see Appendix A), grading the student across several areas, including social skills, student skills, and classroom independence. The multidisciplinary

team looked at general trends to help decide if they should recommend the child to the self-contained classroom. For example, if the assessment yielded mostly ones and twos they were more likely to join the self-contained classroom than somebody getting fours. Still, it was the responsibility of the IEP team to use this as just one way of deciding a child's placement. Ultimately, the IEP team, including parents, looked at the rubric and other pieces of information to determine the student's placement.

Every secondary school in the district (22 schools) had self-contained classrooms with typically-developing peer tutors, and this class was no different. There were 11 peer tutors in the classroom who signed up for the class as an elective. During the first week of school, the tutors received coaching by a member of the school staff on how to mentor a student with a disability; they were not trained in CW-FIT. Eight of the tutors were in 8th grade and three of the tutors were in 9th grade. Twenty-seven percent were Hispanic and 73% were Caucasian. Thirty-six percent of the peer tutors were males and 64% were females. One of the peer tutors was in a resource room and received special education services for a developmental disorder. These tutors sat amongst their peers in the special education classroom to assist in academic areas, model good behavior, and build relationships. The teacher reported that past peer tutors generally could model good behavior and build relationships that last through high school. Participating in the class also helped the peer tutors learn how to become advocates for people with disabilities.

Context

The students were taught in the special education room by the teacher during multiple periods a day, but CW-FIT was specifically implemented while the teacher taught a 60-minute lesson focused on improving functional, independent life skills. The purpose of this class was to help students with intellectual and developmental disabilities receive individualized attention to

improve social skills and behavior. For example, after students learned how to exchange money, they went on a field trip to Target and bought a gift. After they learned manners for going out to eat, they went to a pizza parlor to use these new skills. Other examples of topics taught in the class included how to read different parts of a recipe and how to have good hygiene. The teacher introduced a topic through a PowerPoint presentation or a short movie. She then had students work in teams to answer questions. Finally, she had students complete a learning activity. For example, when the teacher taught about sugar, she started with a clip from Bill Nye the Science Guy™. She then shared slides with various foods and asked teams to work together to guess how much sugar was in each item. She answered the question by filling up a cup with the correct amount of sugar and moved on to another food, repeating the process. Finally, students worked with peer tutors to check online how much sugar was in their favorite foods.

The teacher selected the specific period to implement CW-FIT as this class period that was the most behaviorally challenging. The students were in the self-contained classroom for the entirety of the day with the same teacher. The school used an AB schedule, where the students had adaptive skill lessons every other day, and thus CW-FIT was implemented every other day. Throughout the course of the study, there were 17-21 students present each day, with a mean of 20 students. Throughout baseline, training, and intervention phases, during 83% of the periods there were four groups and during 17% of the periods there were five groups. During the final baseline and intervention phases, there were only four groups each period. Each group consisted of four to six children, whose desks were side by side and across from each other to make a rectangular shape. When students were absent, the empty table stayed connected to the current group. Most groups consisted of peer tutors (50%), and students with disabilities (50%). A few of the students with disabilities were assigned specific peer tutors, but most of the peer tutors

helped and modeled whoever they were sitting next to. The teacher divided the groups based on who she believed would work best together. The two students with the most difficult behavior problems were in groups in the front of the classroom with their assigned peer tutor.

Procedures

The teacher was recruited after a school-wide recruitment meeting. School district and institutional review board (IRB) approval was obtained before research began. All the researchers were trained in IRB ethical protocol and approved informed consent forms were used, and available for parents in both English and Spanish (See Appendix B). The teacher was compensated by a $250 Amazon gift card. The study was conducted in several phases as described below.

Baseline. Baseline data were collected during class using the teacher's normal classroom routines. During the first week of school, the teacher had taught the steps of various classroom expectations she had created, but did not review the specific steps again after initially teaching them. During baseline, the rules were listed on the wall, and students used trackers that referenced the rules on the wall. The rules consisted of "Listen to directions the first time," "Keep body and objects to self," "Use kind words," "Work hard," and "Be prepared." These rules needed to be followed to receive five minutes of free time at the end of the period. Trackers were completed at the end of the day by the students with the help of their peer tutors. Each student could only receive one reminder to earn free time. Students who needed extra help had sticker charts that could be exchanged for prizes. Baseline data were collected in the classroom during these regular instructional times and routines. Five data points were collected.

Training. The teacher was instructed by the researchers on how to implement CW-FIT during a two-hour training in October 2016, after baseline data were collected. She was trained

in both CW-FIT Tier 1 and Tier 2 interventions at the same time. The researchers explained the rationale behind the key elements of CW-FIT and trained her on the specific intervention strategies. The teacher was given scripted lessons to introduce the skills (See Appendix C). She practiced role-playing teaching CW-FIT's three social skills lessons, including the accompanying posters, timers, and point charts, and received feedback from the researchers (See Appendix D). The training included videos of teachers modeling Tier 1 and Tier 2 of CW-FIT, showing how it is integrated in everyday instruction. The teacher was informed that CW-FIT should be used throughout her regular academic instruction to manage behavior. After the first training session, the teacher was given feedback on the intervention procedures as she introduced CW-FIT to her class, to ensure that she was implementing them correctly. She was given one week to become familiar with and train students on the procedures. Intervention data were then collected. Throughout the intervention phases, researchers were available to consult at her request. She received consultation four times, averaging two and a half minutes of discussion. The three classroom paraeducators did not attend the meeting, but were present when the intervention was explained to the students.

Intervention. The Tier 1 portion of CW-FIT (Wills et al., 2010) consists of teaching social skills and using an interdependent group contingency. These aspects of the intervention are described below.

Social skills lessons. The teacher started implementing CW-FIT by teaching three social skills to her class: Follow directions the first time, how to get the teacher's attention, and ignoring inappropriate behavior. These specific skills were chosen because they belong in two of the main social skills domains: compliance skills and peer relation shills. These skills are the most common skills used in social skills assessments (Caldarella & Merrell, 1997). These are

also the same skills in the research-based version of CW-FIT (Wills et al., 2010). The teacher

taught one social skill lesson a day for three days. These lessons were 10-15-minutes long and

followed a teaching script. The lessons included the rationale for each target behavior,

explanations of the steps, students role playing, and the class reciting the steps together. After the

three days, the teacher started CW-FIT by reviewing the three social skills. The skills were

displayed on posters that were visible to all students.

Teams. Students were divided into five teams, with four to five students on each team,

except for one student, along with her peer tutor, who was on her own team due to the teacher

thinking that would be best. Teams were divided up by ability level and there was approximately

a 1:1 ratio between students with special needs and peer tutors. Observers noted that both the

peer tutors and the students with disabilities were often off-task.

Timer. The teacher set the timer at an interval of five minutes. She chose this length

because she felt it would be easily manageable. The timer was audible for the students to hear.

Goals, points and praise. A daily point goal was set at the beginning of each session so

that teams could earn a reward. Point goals were based on 75%-85% of possible timer beeps.

When the timer beeped, the teacher praised and rewarded points to groups where all students

were displaying the social skills they had been taught. The teacher was taught to praise specific

behavior while awarding the points. She would also occasionally praise whenever she noticed

good behavior, regardless of the timer. The points were clearly visible to all students on a poster

on the wall (see Appendix E).

Reward. At the end of CW-FIT, the teacher tallied points to see which teams met the

daily point goal and thus earned the previously established reward. This reward was established

at the beginning of CW-FIT and was either tangible or a fun activity. Teams that did not earn the

necessary number of points did not receive the reward. Teams that received the number of required points could exchange the points for the reward at the end of class. It is important to note that the prizes awarded were often the same few activities: Bean Boozled, silent karaoke, rap battles, and watching video clips. These and similar activities were used in both intervention phases. Also, groups met their goals consistently, with only occasional instances where some teams did not achieve the class goal.

 Adaptations. The teacher implemented CW-FIT with some adaptations. First, as per school district policy, for each student in special education, there was a typically-developing peer tutor in the class to help them. Throughout parts of the intervention, the teacher put one of the students on their own team with just their peer tutor. Second, the teacher felt that some students were only on-task as soon as the timer went off, so for the second phase of the intervention she put the timer on silent and gave more praise between timed sessions, thus reducing the students' reliance on the timer. Next, she did not implement CW-FIT's Tier 2 component (i.e., self-management and help cards), because the teacher did not think that any of the students needed more support. Finally, the teacher reported that she did not explicitly ask the peer tutors to review the rules and did not include them in her decision to give points for a team during the first intervention. For example, if all students in a group, except for a peer tutor were on-task, the group would still get the point. During the second phase of the intervention, she addressed the peer tutors to make sure they were listening and following along with rules. She also included them in the interdependent group-contingency.

 Withdrawal. A withdrawal phase was conducted after the intervention. The teacher removed the social skill posters, stopped reviewing the skills, stopped using the timer and point chart, and did not identify the students by groups. Students also did not receive any points or a

daily reward. The teacher used the same procedures that she had during baseline. Five data points were collected during the withdrawal phase.

Intervention. After the withdrawal, the teacher once again implemented CW-FIT Tier 1. This time she put the timer on vibrate and gave more praise between the timed interval so that students would not only be on-task when they heard the timer, but also throughout the interval. Likewise, the teacher included the peer tutors in her decision to reward points during this phase, but did not during the first; during the second phase, they were included in the interdependent group contingency.

Post-intervention. Researchers met with the teacher after all data were collected. They showed the teacher graphs of on-task behavior, praise, and reprimand rates. They also recommended suggestions to improve implementations. The teacher and students also completed a social validity survey.

Dependent Variables and Measures

Dependent variables and measures were chosen carefully based on past CW-FIT studies (Jolstead et al., 2016; Kamps et al., 2015; Wills et al., 2010; Wills et al., 2014). A university-based researcher trained undergraduate and graduate observers to identify on-task behavior praise, and reprimands using practice video recordings. While watching the video of classrooms, observers marked groups of students as either on- or off-task, as well as kept a tally of praise and reprimands. Each observation was compared against a key. When they reached a minimum of 90% reliability, they observed live classrooms and had to reach 90% reliability three times before taking data for the study.

Treatment fidelity. To ensure that the teacher was implementing CW-FIT correctly, observers completed a 13-item treatment fidelity checklist at the end of each period (See

Appendix F). For example, they marked if teachers used the timer as expected, told groups what behavior expectation they did not meet when they did not earn a point, awarded points to groups and individuals, and gave the reward after CW-FIT. The observers were trained to define and identify the correct use of CW-FIT procedures before they entered the classroom, and referenced the definitions when they completed the sheets.

Observers marked if the teacher used the specific CW-FIT procedures. If they marked that the procedure was used, observers then rated the quality as to how it was used (3 = implemented with full fidelity, 2 = implemented with good fidelity, 1 = implemented with partial fidelity). For example, the item, "Precorrects on skills at beginning of session," suggested that the teacher reviews the expectations and steps prior to starting CW-FIT. If the component was marked "yes," a quality rating would be given (1 = Teacher minimally reviews skills, 2 = Teacher reviews some skills, but not all, 3 = Teacher reviews all skills). A startup fidelity form was also completed, evaluating whether the teacher sufficiently explained the intervention and taught the social skills. Quality ratings were determined by adding the quality ratings and dividing by the total possible. During the training phase, the observers used a Training fidelity checklist that had its own expectations and definitions (See Appendix G).

Teacher praise and reprimands. Praise was defined as any verbal statement that suggested approval besides the acknowledgement of a correct response. Examples include, "I like that everybody has eyes on me" and "Thank you Toby for raising your hand." Reprimands were defined as punitive statements or suggesting displeasure in behavior, such as, "C.J., this is your reminder to have eyes on me" and "Leo, please sit back down." The observers were trained to tally each praise and reprimand the teacher directed to a student or group of students. The data

were simultaneously collected, using paper and pencil methods, in 20 minute sessions with the group on-task behavior.

Group on-task behavior. The main dependent variable was student group on-task behavior. On-task behavior included following directions, responding appropriately, asking questions appropriately, attending to the teacher, and working on an assignment. Off-task behavior included not following directions, not attending to the teacher, and talking out. The behavior was recorded using paper and pencil methods in 20-minute observation increments at the beginning of class (See Appendix H). Students were divided into small groups and recorders marked on-task or off-task based on the behavior of the students in each group; on-task was only recorded when all students in the group were on-task. Observers were trained to identify specifically what was on-task and what was off-task behavior. Observers used a momentary time sampling method, where every 30 seconds, they looked at each group, one at time and marked them on-task if all students were on-task in that moment, before proceeding to briefly observe the second group, and so on.

Social validity. When the study was completed, the teacher answered a questionnaire (Appendix I) with 18 items about the social validity of CW-FIT. She was asked if she found CW-FIT to be useful and practical to use in the classroom. Participating students completed a five-question social validity questionnaire (Appendix J) that evaluated their opinions of CW-FIT. The class was divided in four groups, so two graduate students each sat with a group, a paraeducator sat with a group, and the teacher sat with the group. The adults each read the questions out loud and gave ample time for students to fill it out before moving on. The adults wrote the answers down for the students with limited writing abilities. Some of the students' verbal skills were limited, so the teachers and researchers would offer options. For example, after

the researcher asked if other students should play the game and the student shook their head "yes," the researcher asked "why" by giving two options: of "fun" and "easy." Each option was accompanied by making a fist that the child could touch, to indicate their preference. Peer tutors helped before filling out their own questionnaire.

Interobserver agreement. During 57% of the sessions, interobserver agreement was calculated. IOA for on-task behavior was calculated by dividing the number of intervals they agreed on by the total number of intervals observed. IOA averaged 94.07%. IOA was also calculated for treatment fidelity observations, for both occurrence and quality, by dividing the number of agreed intervals by the total number of intervals. IOA fidelity averaged to 99.18%, with a range of 91-100%. Praise and reprimand fidelity was also calculated in this respect.

Design and Analysis

A single subject reversal design (ABAB) was used. Five data points were collected in both baseline phases and in the second intervention. Three data points were collected during training and six data points were collected during the first intervention. Visual methods were used to analyze the graphical data for teacher praise rates and group on-task behavior examining in level, trend, and variability. Researchers analyzed information from the fidelity checklist to determine how well CW-FIT was implemented by calculating an average fidelity score and a quality score. Tau-U was used to compute differences between baseline and intervention averages. Tau-U is a non-parametric technique that measures effect size for single-subject data and for analyzing non-overlapping data points between two phases. An effect size calculator computed effect size and statistical significance (www.singlecaseresearch.org/calculators/tau-u). Using the Tau-U calculator, the baseline data were compared with the first intervention phase data, and withdrawal data were contrasted with the second intervention phase data. Results of

these were combined to compute an effect size. Descriptive statistics and qualitative coding were

used to summarize teacher and student social validity questionnaires of participants.

CHAPTER FOUR

RESULTS

Results of this study are described for each research question in the following section.

Treatment fidelity results are summarized first to examine whether the teacher implemented CW-

FIT effectively. Next, teacher praise-to-reprimand ratios are examined, because increasing this

ratio is expected to improve student on-task behavior. Finally, student group on-task behavior is

summarized, followed by teacher and student social validity results.

Treatment Fidelity

The first research question in this study asked, "Can a middle school special education

teacher implement CW-FIT with fidelity?" During the baseline phase, the teacher implemented

CW-FIT with 3.64% fidelity ($SD = 4.98$). During the training phase of the study, the teacher

implemented CW-FIT with 84.5% fidelity ($SD = 3.85$). She implemented each component during

training with 100% fidelity, except for "Which school/classroom rules does this match?" and

"What other ways can you…?" On each of the three days, she failed to do both of these

components. She also failed to provide rationale ("Why is it important to…") on the final day of

training. Because fidelity was acceptable during all three days, and because the components she

failed to implement were not components of the intervention phases' checklist, the researchers

decided that she had exhibited enough fidelity to move on to the next stage. During the first

treatment phase, the teacher implemented CW-FIT with 98.61% ($SD = 3.40$) fidelity. The teacher

implemented CW-FIT with 100% fidelity each day, except for the fourth, where all but two skills

had 100% fidelity. The two that did not, "corrections are instructive and refer to skills" and

"points tallied for teams," had 91% fidelity. When CW-FIT was withdrawn, fidelity average was

7.25% ($SD = 7.6$). When it was reintroduced, the teacher averaged 96.79% fidelity ($SD = 4.4$).

Points. Because the teacher was expected to give points when she praised, it is appropriate to report how many points the teacher gave in each phase. During baseline, the teacher gave an average of 0 points (*SD* = 0). During the training phase, she gave an average of 28 points (*SD* = 10.58) (See Figure 1). For the first implementation of CW-FIT, the teacher awarded an average of 21 points (*SD* = 2.34). When the intervention was withdrawn, she awarded an average of 0 points (*SD* = 0). During the final phase, when the intervention was reintroduced, she gave an average of 40.8 points (*SD* = 4.32). Tau-u analyses of changes in points was statistically significant (*Tau u* = .89, *p* < .001) between baseline and intervention phases.
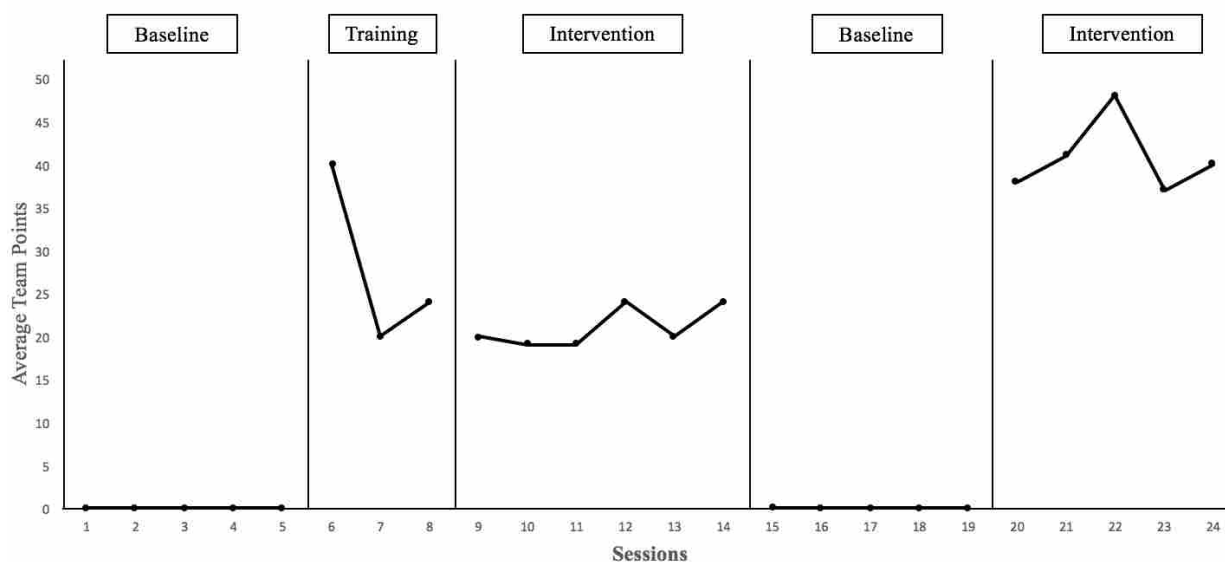
Figure 1. Average number of team points awarded by the teacher across phases.

Praise-to-Reprimand Ratio

The second research question in this study asked, "What impact does CW-FIT have on teacher praise and reprimand ratios?" During the baseline phase the teacher praised the students an average of 6.6 (*SD* = 6.6) with a slight upward trend and high variability. Reprimands at baseline was an average of 6.2 (*SD* = 2.38), with a moderate upward trend and moderate

variability. The praise to reprimand ratio at baseline was 1.06:1 (See Figure 2). During the

training phase, the teacher praised students an average of 18.33 (SD = 10.01) with a steady trend

and high variability. She reprimanded the students at an average of 9.67 (SD = 6.8) with a steady

trend and high variability. The ratio of praise to reprimands during training was 1.89:1. During

the first implementation of CW-FIT, the teacher praised students an average of 14.3 (SD = 8.5),

with a slightly upward trend and high variability. She reprimanded students at an average of 4.67

(SD = 1.63), with a slightly upward trend and low variability. The praise to reprimand ratio

during this first intervention was 3.06:1. While CW-FIT was withdrawn from the classroom, the

teacher averaged 10.8 praises (SD = 9.78), with a slight downward trend and moderate

variability. She averaged 7.1 reprimands (SD = 4.09), with a slight upward trend and low

variability. The ratio of praise to reprimands was 1.5:1. When CW-FIT was implemented again,

the praise rates averaged to 26.88 (SD = 13.98), with a slight downward trend and high

variability. Reprimands averaged to 4.4 (SD = 3.2), with a slight downward trend and moderate

variability. The praise to reprimand ratio for the final intervention was 6.1:1.

     Between the first baseline and the training phase, changes in praise rates were significant

(*Tau u* = 1.13, *p* = .011). Between baseline and the first intervention phase, changes in praise

rates were significant (*Tau u* = .80, *p* = .029). Between training and the first intervention phases,

changes in praise were not significant (*Tau u* = -.111, *p* = .796). Comparing the first intervention

and the second baseline phase, changes in praise rates were not significant (*Tau u* = -.633, *p* =

.083). Between the second baseline and the second intervention phase, changes in praise rates

were significant (*Tau u* = .76, *p* = .047). Comparing all intervention phases with all the baseline

phases, the changes in praise were statistically significant (*Tau u* = .609, *p* = .018). These same

comparisons were made for reprimands and there were only two statistically significant

differences: Changes between the second baseline and second intervention (*Tau u* = -.76, *p* = .047) and between the overall baseline and overall intervention (*Tau u* = -.609, *p* = .018).
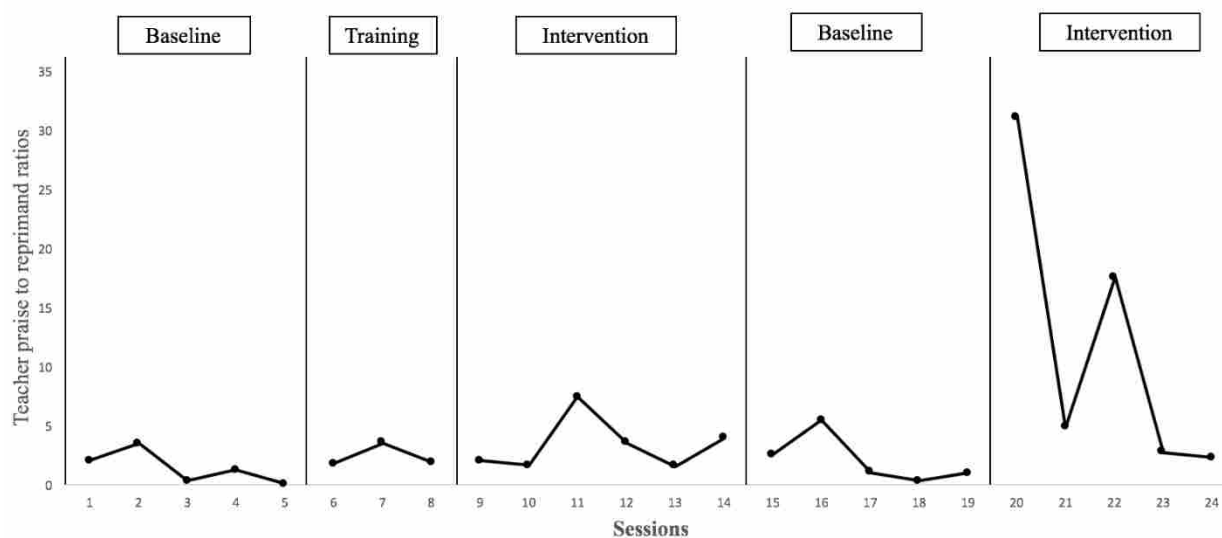
Figure 2. Ratio of praise and reprimand statements given across phases.

Group On-Task Behavior

The third question in this study asked, "What impact does CW-FIT have on students on-task behavior?" Visual analysis was conducted on level, trend, and variability within phases, and overlap and consistency between phases. Average group on-task data (Figure 3) began with a baseline of 67.85% (*SD* = 8.69) with an upward trend and high variability. Group on-task averages increased to 77.98% (*SD* = 2.64) during training with a slight downward trend and low variability. During the first intervention phase, group on-task behavior averaged 76.76% (*SD* = 6.79) with a slight upward trend and moderate variability. During the withdrawal phase, the group on-task average decreased to 68.38 (*SD* = 2.1) with a stable trend and low variability. When CW-FIT was implemented again, the group on-task average increased to 88.63% (*SD* = 5.2) with an increasing trend and moderate variability.
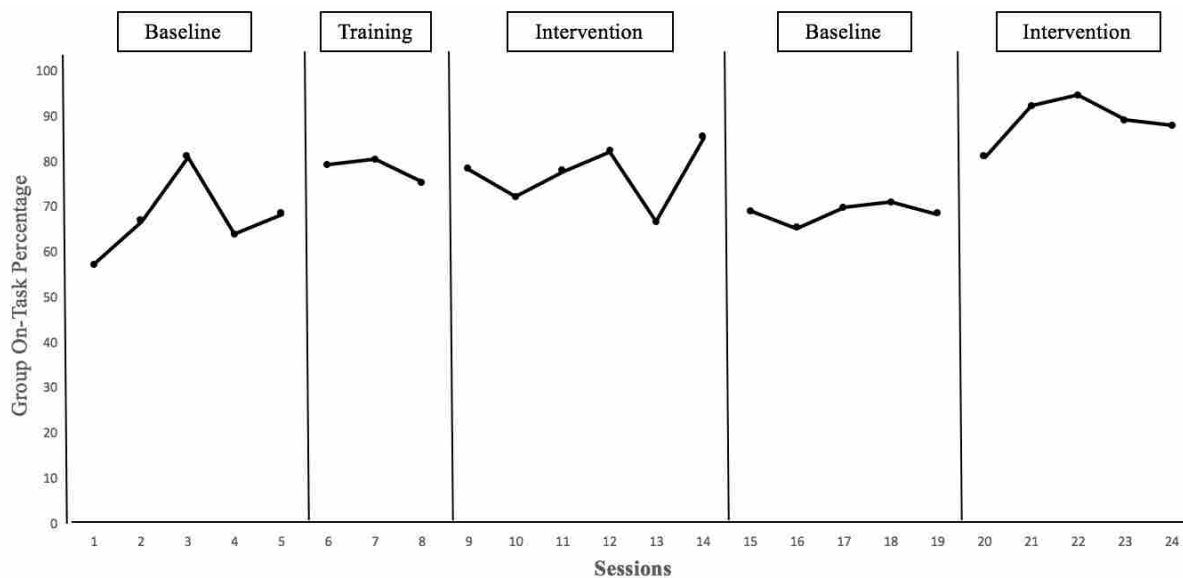
Figure 3. Student group on-task behavior percentages across phases.

Between the first baseline and the training phase, changes in on-task behavior were not significant (*Tau u* = .333, *p* = .456). Between baseline and the first intervention phase, changes in on-task behavior were not statistically significant (*Tau u* = .467, *p* = .201). Changes for on-task behavior between training and intervention phases were not significant (*Tau u* = -.056, *p* = .897). Between the first intervention and the second baseline phase, changes in on-task behavior were statistically significant (*Tau u* = -.833, *p* = .02). Between the second baseline and second intervention phase, changes in on-task behavior were statistically significant (*Tau u* = .92, *p* = .023). Finally, comparing the first intervention to the second intervention phase, the second intervention phase was more effective and statistically significant (*Tau u* = -.833, *p* = .023). Comparing the baseline phases to the intervention phases, the changes in on-task behavior were statistically significant (*Tau u* = .664, *p* = .010).

Social Validity

Teacher. The last research question in this study asked, "Do teachers and students find CW-FIT to be socially valid?" The teacher answered, "mostly true" when asked if she enjoyed

being a CW-FIT intervention teacher, if the use of teams and points for appropriate behaviors were helpful in improving students' behavior, and if she learned new skills. She also answered, "mostly true" regarding whether she will use the CW-FIT skills she learned with future classes, if her students enjoyed it, and if her students were more focused and engaged when CW-FIT was implemented.

The teacher answered, "very true" when asked if CW-FIT was easy to implement in her classroom and if she would recommend CW-FIT to colleagues. She reported that being reminded to give praise was helpful, though she indicated that it was "somewhat true" that the timer was manageable for use during instruction. She noted that some students only got on-task when they heard the timer, but when she put it on vibrate she benefited from being reminded without the sound of the timer reminding students to get on-task. She also reported that explicitly going over classroom rules and expectations was helpful.

The teacher reported that it would have been helpful to modify the program for students with disabilities. She said that listening looks different for her students and that the rules that CW-FIT addressed are not the most important skills. She explained that for some of her students, simply giving a response is more important than them raising their hands; she suggested that teachers choosing their own rules would be better.

Students in special education. A total of 10 students in special education (83.33%) were surveyed. Nine (90%) of the students said that other students should get the chance to play CW-FIT. The most common reason they noted ($n = 7$) was that it is fun. The student who reported not liking anything about CW-FIT and not liking the prize, timer, and points said that "It is hard to understand." Six (60%) of the students said that they liked playing CW-FIT. The students also answered open-ended questions, including "What do you like about CW-FIT?" The most

common answers were rewards/prize/treats ($n = 6$) and getting points ($n = 2$). When asked "Is there anything you don't like about it?" the most common responses were "boring" ($n = 2$) and "losing points" ($n = 2$). The teacher never actually took points away, but students often failed to earn points she was offering and perceived this as the points being taken away.

Peer tutors. A total of seven peer tutors (63.64%) were surveyed. Five (71%) of the students said that other students should be able to play. Their explanations as to why students should be able to play ranged from "It is a great way to earn praise," "It gets them to behave," "They might be able to learn and listen easier," "Because it might make them focus on their work if they know they are going to get a reward at the end of class," and "It helps children pay attention." The two students who said that others should not play CW-FIT said, "There may be a better, more fun way to help students interact in their learning" and "Because it's something special so it's magical in here." Four (57%) of these students said that they liked playing CW-FIT. When asked "What do you like about CW-FIT?" the most common answer was rewards/prize/treats ($n = 4$). Other answers included "I like how it made me and others pay attention" and "The students are interactive." Students were also asked if there was anything that they did not like about it. Answers varied, and included "The points," "It takes a long time," "The timer part," "having to stop every few minutes," "having to earn a lot of points" and "I don't like how if one person is not following rules the table misses a point."

CHAPTER FIVE

DISCUSSION

The purpose of this study was to determine how CW-FIT, a classroom-based positive behavior support intervention, influenced a middle school special education self-contained classroom. Prior studies have shown that CW-FIT is effective in improving on-task behavior and increasing praise in general education classrooms (Caldarella et al., 2015; Wills et al., 2010; Wills et al., 2014) and elementary special education classrooms (Bolt, 2015; Weeden et al., 2016). This is the first study of CW-FIT in a middle school special education self-contained classroom and the results suggest that it was effective.

First, the study's results suggest that the teacher implemented CW-FIT with fidelity. These results are consistent with fidelity found in prior CW-FIT studies (Bolt, 2015; Weeden et al., 2016). The areas in which CW-FIT was implemented with lower fidelity were "corrections are instructive and refer to skills" and "points tallied for teams." However, fidelity for these lowest criteria was 92%. The teacher implemented the rest of the items with 100% accuracy. High quality ratings indicated that the teacher not only implemented CW-FIT procedures, but also implemented them well. This suggests that other teachers of self-contained classrooms may be able to implement CW-FIT well. This is important given past literature indicating special education teachers struggle to implement SWPBS interventions with fidelity (Cox, 2015). The results suggest that the special education teacher succeeded in implementing CW-FIT with fidelity.

Second, while praise statements increased significantly during interventions, the reprimands decreases were not always statistically significant. Comparing all of baseline reprimands to all of intervention reprimands, the average reprimand rates decreased. Reprimands

also decreased between the last baseline and intervention phases. During baseline phases the teacher gave approximately one praise for every one reprimand. During the first intervention phase, she gave approximately three praises for every one reprimand and during the second intervention phase, she gave approximately six praises for every one reprimand. This is consistent with other studies that also found that praise-to-reprimand ratios improve significantly during the intervention (Caldarella et al., 2015; Wills et al., 2010).

Third, group on-task behavior overall improved significantly during the intervention phases. When CW-FIT was implemented, on-task behavior improved 9% from the first baseline to the first intervention, and 20% from the second baseline to the second intervention. Improvement in on-task behavior is consistent with previous studies (Wills et al., 2010; Wills et al., 2014) but is likely lower partly because of the higher initial on-task behavior (Caldarella et al., 2015). The teacher had experience working with students with more severe disabilities and consequently appeared to have a decent understanding of how to promote positive behavior with the population. On-task behavior is also partly lower for the first intervention because during that phase the teacher did not include the peer tutors when they were off-task. For example, if group one had four children, two of whom were peer tutors, and the students in special education were on-task, but the peer tutors were off-task, the teacher ignored the peer tutors and still gave the group a point. The observers, however, marked the group off-task. Although on-task behavior did not improve as much as it did in other studies, there was still a high rate of on-task behavior.

Finally, the teacher and students found CW-FIT to be socially valid. This too is consistent with previous studies' findings (Nelson, 2016; Wills et al., 2010; Wills et al., 2014). The teacher rated CW-FIT positively and indicated that it was easy to implement and she enjoyed using it in her classroom. The teacher indicated that she did not like when the timer was audible. She also

indicated that the expectations may have been too high for her students. A large majority of both the students in special education and the peer tutors indicated that they like playing CW-FIT and think that other students should play it. Many explained that they liked the prizes and that it is fun.

This study has shown that CW-FIT can be useful for a middle school special education teacher to help manage classroom behavior. Previous research has indicated that middle school special education teachers struggle to manage their classroom (Forrest, 2003). Although the initial on-task behavior was higher for this class, other special education classes, particularly those classes for students with minor disabilities and teachers without behavior management backgrounds, could benefit from CW-FIT.

It is also important to note that many secondary schools, especially in the state of Utah, have peer tutors in self-contained classrooms. Although students with disabilities and peer tutors were measured together, these groups of students often interact with each other and it is therefore appropriate to measure the impact their behaviors have on each other.

Limitations and Areas for Future Research

While the results of this study were positive, there were some limitations. First, on-task behavior data were collected for groups that consisted of both students with disabilities and typically developing peer tutors. We recommend that future researchers collect separate data for both groups of students, to determine whether differential effects are found for students with and without disabilities who are in the same classrooms.

Second, this study only implemented Tier 1 of CW-FIT. Prior studies have implemented both Tier 1 and Tier 2 (Caldarella et al., 2015; Wills et al., 2010; Wills et al., 2014). Prior CW-FIT studies of students in special education have also only utilized Tier 1 (Bolt, 2015; Weeden et

al., 2016). Tier 2 is utilized when students are not responding to Tier 1. The teacher in this study did not think Tier 2 was necessary for her class. She explained that the students with disabilities would require help using the help cards and self-management charts, and that the peer tutors would benefit from Tier 2 and not have time to help their assigned student. She also said that there were no specific students that she thought needed the Tier 2 intervention. We suggest that future researchers implement CW-FIT in general education middle school classrooms, where students receive both Tier 1 and Tier 2 interventions, according to their needs. Likewise, we recommend that both Tiers be implemented in special education where students do not require as much assistance managing the materials or where there are individuals or groups of students who could use a more intensive intervention.

A third limitation is that the two intervention phases were implemented somewhat differently. During the first phase, the teacher awarded points to teams where all the students in special education were on-task, but not necessarily the peer tutors. During the second intervention phase, the teacher considered all students in a group when awarding points. Essentially, during the first phase, peer tutors who were off task could still be rewarded, while during the second phase, these students learned that their behavior could prevent others from receiving points. She also praised the peer tutors during the second intervention phase, but not the first. The teacher almost doubled the number of points given during the second intervention phase, which was associated with increased praise and increased group on-task behavior during this phase. While the exact cause of the students' on-task behavior improving between the two phases is unknown, these findings suggest that the teacher became more fluent, by increasing her use of praise and points. These differences may help explain why student behavior improved by 12% between the first and second interventions. Future researchers should ensure that the teacher

understands that all students are included in the decision to reward points. Teachers should make sure to explicitly explain to peer tutors that they are part of the game too. The other difference was that the timer was audible for the first intervention but not the second. The teacher observed that students were only on-task whenever they heard the timer. We recommend that teachers demonstrate that they understand that they can give points whenever they like, not just when the timer goes off. When students understand that points can be given any time, they may be more likely to stay on-task instead of just getting on-task when the timer goes off.

A final limitation to the study was that it was only conducted in one classroom with one teacher. The results were positive; however, caution should be taken when generalizing to other classrooms. Similarly, the population of students in the special education class mostly had ID and ASD, so generalizing the outcomes to other populations, such as students with SLD, should be done with caution. This study should be replicated for students with mild/moderate disabilities.

Implications

Middle school special education teachers struggle to keep students on-task. Tier 1 of CW-FIT has been shown to be feasible and effective in increasing on-task behavior in middle school students in a self-contained classroom and in improving teacher behavior. The teacher implemented CW-FIT correctly, including increasing her praise rates during intervention. Although replications are needed to confirm CW-FIT's effectiveness, including replications that also use Tier 2, this study indicates promising results for middle school students with severe disabilities. Effective middle school special education interventions include predictable environments with rationales for expectations, posted expectations, opportunities to practice expectations, building social skills, and receiving meaningful reinforcement (Mitchell, 2014);

CW-FIT utilizes these interventions. Because group contingencies help students understand how their behavior influences others, CW-FIT can be effective in teaching students about peer relationships and social skills development (Jolstead et al., 2016).

Results of the present study suggest that group contingencies can be effective with middle school students in special education, particularly those with more severe disabilities. While other SWPBS-based interventions utilize group contingencies, CW-FIT allows teachers to be flexible in their grouping and students to know how many points they must receive (Flower et al., 2014; Wills et al., 2010). CW-FIT being flexible is an important part of the study; the teacher chose to put the timer on silent. Her fidelity was still high in this area, indicating that CW-FIT can be fit to address individual teacher's needs.

One of the most important results of this study is that the teacher liked it, found it easy to use, and would recommend it to others. Most of the students would also recommend it to others and found it fun. If an intervention is not liked or being used, it serves no practical purpose. The results indicate that other middle school special education teachers and students would benefit from playing CW-FIT.

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APPENDIX A: SPECIAL EDUCATION RUBRIC

Student's name:				Grade:	DOB:	Date:
Teacher's name:				School:		
Special education classification and date of last eligiblity determination:						
Current Placement: resource, self-contained special class special school				Number in class: Students Full time adults		
For students with severe disabilities. Mark the boxes for documented student skill levels. 9/2015'						

Ratings	1	2	3	4	5
Cognitive Score	Under 40	41 to 50	51 to 60	61 to 70	above 70
Adaptive Score	Under 40	41 to 50	51 to 60	61 to 70	above 70
IEP Goal Progress	Student has not made progress on any IEP goal	Student has made progress on 25% of IEP goals	Student has made progress on 50% of IEP goals	Student has made progress on 75% of IEP goals	Student has made progress on all IEP goals
Sensory disabilities	Dual sensory impaired	Severe hearing or visual impairment	Moderate hearing or visual impairment	Mild hearing or visual impairment	No sensory impairments
Behavior Performance	Frequent self-stim behavior or self-injurious or a "runner"	Needs continuous adult prompting to follow class routine	Needs frequent redirection to follow class routine	Needs occasional verbal prompts to follow class routine,	Independent in complying with teacher direction
Behavior	Behavior, such as aggression and non-compliance requiring BIP, but behavior has not decreased.	Behavior which can be controlled with support. (BIPS, contracts, etc)	Behavior requiring frequent support	Occasional minor behavior problems needing verbal prompts.	Behavior is not a concern.
Attention	Attends to large and small group activities for 1 minute	Attends to large and small group activities for 3-5 minutes	Attends to large and small group activities for 10 minutes	Attends to large and small group activities for 15 minutes	Attends to large and small group activities for 20+ minutes
Sensory Issues	Multiple sensory concerns. Sensory impacts behavior.	Multiple sensory concerns. Adult supported sensory breaks.	Mild sensory concerns. Minimal adult support.	Minimal sensory support. Self-regulated.	No sensory issues. Independent with sensory needs.
Communication	Emerging communication or no communication	Communicates wants or needs through _____ or 2-3 intelligible words.	Multiple word phrases or full sentences/asks questions	Communicates with peers and adults. Assisted/unassisted	No communication issues.
Social Skills	Isolated, wanders, does not engage with others	Majority of interactions are with adults	Shows interest in participating with peers.	Joins activities with peers, needs some adult guidance.	Initiates and sustains activities with peers.

Ratings	1	2	3	4	5
Classroom Independence	Unable to follow classroom routines, instruction and directions w/o intensive support.	Needs 10 or more individual prompts per hour to follow classroom routine, instructions and directions.	Needs 6-9 individual prompts per class period to follow classroom routine, instruction and directions.	Needs 3-5 individual prompts per class period to follow classroom routines, instructions and directions.	Needs 1-2 individual prompts per class period to follow classroom routines, instructions and directions.
Student Skills	Unable to participate in class appropriately, or complete tasks and navigates school. Needs support at lunch.	With adult support: Participates appropriately in class, completes tasks with accommodations and navigates school Independent at lunch.	With continuous peer support: Participates appropriately in group work and whole class discussions, completes tasks with accommodations navigates school independently.	With minimal peer support: Participates appropriately in class, completes tasks with accommodation, navigates school independently but requires prompts to adjust to schedule changes (i.e. assembly and early out day schedules).	Participates appropriately in class, completes tasks and turns in assignments, able to adjust to schedule changes (i.e. assembly and early out day schedules).
Toileting Skills	Diapered or catherized, student shows no awareness of elimination needs	Starting to use the toilet, daily accidents	Toilet scheduled, does not initiate need to use toilet, less than once weekly accident	Communicates need to use the toilet, less than once weekly accident	Toilet trained.
Motor skills	Severely impaired mobility in entire body	In wheelchair but has some use of limbs, head movement	In wheelchair or walker but has adequate fine motor skills and head movement	Gross motor skills do not impact access to curriculum, fine motor skills deficits require related services	Motor skills do not affect access to curriculum
Feeding skills	G.I. tube fed	Student needs to be fed.	Student needs adult help to hold utensils and bring food to mouth	Student needs supervision to eat	Student eats independently
Personal care skills	Unable to participate in any step of tasks	Continual prompting	Frequent prompting	Occasional prompting	Independent

APPENDIX B: INFORMED CONSENT FORMS

<u>TEACHER CONSENT</u>
Title: Class-wide Function-Based Intervention Teams

Dear Teacher,

Introduction
Paul Caldarella, Ph.D. and Robyn Orr, B.S., 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 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. 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. You will be implementing CW-FIT over the course of 4 to 6 months during regular academic instruction. 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 $250 check for your time spent participating in this study. Should you choose to withdraw from this study early, the stipend may be prorated according to the amount of time you spent participating in the 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 Robyn Orr at robyn.k.orr@gmail.com or by calling 707-456-7629.

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
Paul Caldarella, Ph.D. at Brigham Young University (BYU) is partnering with researchers at the University of Kansas on a study at ████ Junior High 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 classroom. 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 collaborate with teachers to evaluate CW-FIT for middle school settings. 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 and the implementation of CW-FIT components in the classroom. 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 components are implemented well and improved appropriate student behaviors in the classroom as a whole. Classroom demographic data will be collected. In addition, students will complete anonymous brief component feedback forms regarding acceptability of CW-FIT components. 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 background checks. 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 studies of CW-FIT at the elementary level 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, your child would not complete feedback forms or interviews, 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.

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.

Estimado Padre de Familia,

Introducción
La Universidad de Brigham Young representada por los investigadores Paul Caldarella PhD. junto con la Universidad de Kansas son parte de una coparticipación de un estudio en la Escuela ▉ Junior High. Como parte del estudio se implementará un programa que pondrá en práctica habilidades sociales del manejo de clase. A este programa se le conoce como: Equipos de Intervención de Función Relacionada a Nivel de Aula (CW-FIT, por sus siglas en inglés) y será implementado a nivel de toda la clase durante instrucción académica regular. El propósito de CW-FIT es aumentar las estudiantes habilidades sociales, la atención, y el aprendizaje de los estudiantes. De igual manera los maestros aprenderan mejores formas de reconocer las habilidades sociales de sus estudiantes y cómo responder a comportamientos perjudiciales o negativos.

Procedimientos
Como parte de este estudio, en el aula de su hijo ayudara a evaluar CW-FIT en su aula. CW-FIT está basado en prácticas óptimas e incluye:
1) Lecciones individuales o en clase sobre reglas de comportamiento en el salón de clases o en la escuela.
2) Que los estudiantes reciban retroalimentación positiva (puntos) por exhibir comportamiento apropiado en clase.
3) Que los estudiantes aprendan a usar el auto-monitoreo/autoevaluación y a lograr las metas de la clase. Las intervenciones serán implementadas a para toda la clase a nivel de grupo. El personal de la Universidad Brigham Young entrenará y asistirá en la implementación del CW-FIT.

El programa de CW-FIT se llevara a cabp durante el horaario escolar y ningun tiempo adicional se le requerira a usted.

Para propositos de la investigación, el personal de BYU dirigira observaciones del comportamiento de la clase y la implementacion de los componentes de CW-FIT en el aula. Su hijo no será identificado o individualizado durante la observación y ningún tipo de información identificable será recolectada. El propósito de las observaciones es determinar si se implemntan bien los componentes de CW-FIT y si mejora o desarrolla un comportamiento aproprianado en la clase como conjunto. Se recogerá información demográfica de la clase. Además, los estudiantes llenaran un breve cuestionario anonimo de las aceptabilidad de los componentes de CW-FIT. Los maestros participantes identificaran a los estudiantes que tangan problemas de comportamiento en las aulas de clase y quienes se podrian beneficiar de intervenciones de CW-FIT mas intensivas. Se le notificará y se le pedirá a usted su consentimiento antes de implementar una intervención del estudio de forma individualizada en caso de que su hijo sea identificado por el maestro de su hijo.

Riesgos/Desventajas
Son muy pocos los riesgos involucrados en tener a su hijo observadopor el personal de BYU o identificado/a por su maestro. El tener los observadores de BYU en la clase posiblemente podrían distraer a los estudiantes durante las primeras o segundas observaciones, pero generalmente una vez

que los estudiantes se familiarizan con cualquier personal nuevo, rápidamente vuelven a su comportamiento regular. El personal de BYU ha sido seleccionado y ha pasado por una revisión de antecedentes. Ellos no tendrán ninguna interacción directa con su hijo, a menos que ud. proporciones consentimiento individual. Si el maestro identifica que su hijo experimenta desafios en su comportamiento, estaa información se mantendrá confidencial como se explica en la sección de abajo.

Beneficios
No hay beneficios directos para usted o su hijo. Estudios anteriores de CW-FIT de nivel de esceula primaria has demonstrado un mejooramiento en el apprendizaje de los estudiantes, mejor comportamiento en las aulas de clase, y una mejor interacción social con sus compañeros y maestros. Los resultados de este estudio ayudarán a evaluar CW-FIT y ayudaran a las escuelas a desarrollarse en todos sus esfuerzos de mejoramiento.

Compensación
No hay ningún tipo de compensación para usted o su hijo por haber aceptado participar en este estudio.

Confidencialidad
Ninguna información de identifiable asociada con usted o su hijo será recogida o compartida con otros investigadores ni tampoco serán incluidos en los informes publicados o presentados. Toda la información recopilada se almacenará de forma segura y solo el personal de investigación tendrá acceso a esos datos. La información obtenida a través de las observaciones a nivel de clase será proporcionadas a los investigadores de la Universidad de Brigham Young y la Universidad de Kansas. Toda información se mantendrá confidencial en los archivos asegurados y protegidos con contraseña, y en las computadoras que son estrictamente cifradas. Se pondrán en práctica las normas y las reglas de confidencialidad establecida por la escuela. Cualquier información sobre estudiantes que no participen en la investigación permanecera en la escuela de su hijo y los investigadores del estudio no tendrán acceso a esa información.

Participación
La participación de su hijo en este estudio es de forma voluntaria. Usted tiene el derecho a rehusar la participación de su hijo o de retirar a su hijo del estudio en cualquier momento, lo que significa que los investigadores no incluirían a su hijo en las observaciones a nivel de clase y los maestros no identificarían a su hijo para intervenciones CW-FIT adicionales, aun cuando CW-FIT pudiese estar ocurriendo en el aula de su hijo. Si no desea participar en el estudio o si una vez siendo participe del estudio desea retirarse, podrá hacerlo y no afectara de ninguna manera el estatus de su hijo en la escuela.

Preguntas
Si usted tiene alguna pregunta relacionada con este estudio, puede comunicarse con el Dr. Paul Caldarella en paul_caldarella@byu.edu o llamando al (801) 422-5081.

Preguntas sobre sus derechos como sujetos de investigación
Si usted tiene alguna pregunta con respecto a sus derechos como participante, puede ponerse en contacto con el Administrador del IRB, en la Universidad de Brigham Young, A-285 ASB, Provo, UT 84602, (801) 422-1461 o irb@byu.edu.

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.

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.

APPENDIX E: EXAMPLE OF POINT CHARTS

CW-FIT GAME POINTS						
DATE: 6/18/14		REWARD: Sticker			GOAL: 5	
TEAMS:	1	2	3	4	5	6
POINTS:	卌 I	卌 II	卌 I	卌 I		

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. Skills are prominently displayed on posters.

    3-5 POSITIVELY STATED rules or skills are posted and visible to students and 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 1st 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 non-examples.

2. Precorrects on skills at beginning of session.

    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. Corrections are instructive and refer to skills

    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. Point chart displayed for appropriate behaviors

    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. Daily point goal posted

    The point goal should be announced and written on a chart that is visible to the students before instruction begins.

6. Self-management charts given to individuals

    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. Timer used & set at appropriate intervals

    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. <u>Points tallied for teams</u>

    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. <u>Winners immediately rewarded.</u>

    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. <u>Winners reward announced if delayed.</u>

    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. <u>Frequent praise (points) given.</u>

    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. <u>Behavior-specific praise given.</u>

    When praise is given, the teacher should be genuine and explicitly say *what* the students <u>were</u> doing well. This can be done on an individual or group basis (e.g., "Sally, nice job raisingyour 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. <u>Praise (points) to reprimand ratio is approx. 4:1.</u>

    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. Praise to reprimand ratio approx 4:1.

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. Three to five clearly and positively stated classroom rules/expectations are visibly posted.

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. System of rewards observed.

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: TRAINING FIDELITY CHECKLIST

Class-wide Function-related Intervention Teams (CW-FIT)
Procedural Fidelity Checklist for Start-up
Teaching the game and lessons

School: _____ Teacher: _____

Observer: _____ Date: _____ Time: _____

Skill taught by: _____ Skill: _____

General Procedures:	Observed		Quality		
1. Skill(s) are prominently displayed on poster(s).	Y	N	1	2	3
2. Group lesson on skill lasts approximately 10-15 minutes.	Y	N	1	2	3
3. Praise and points are awarded to teams for use of the skill(s).	Y	N	1	2	3
Teaching Lessons:	Observed		Quality		
4. Brief review of previous skill(s).	Y	N N/A	1	2	3
5. Introduction of skill.	Y	N	1	2	3
Definition:	Observed		Quality		
6. Review: "The steps are …"	Y	N			
7. "Now everyone read with me …"	Y	N	1	2	3
8. "Which School/Classroom Rule does this match?"	Y	N	1	2	3
9. "What other ways can you …" (school/classroom rule). (Answer: Quiet, calm voice; Work quietly; Have quiet transitions)	Y	N	1	2	3
Provide Rationale:	Observed		Quality		
10. "Why is it important to …" (skill being taught)? (Answer: So that we can have more time to learn each day, the classroom is quieter so people can work, so the teacher can help those who need a little more help).	Y	N	1	2	3
Role Play (Examples and Non-examples)	Observed		Quality		
11. "Let's practice …" (skill being taught). Use volunteers (2-3 students). After each example, ask students if the volunteers followed directions the first time or not and to state the steps they saw (or didn't see).	Y	N			
12. Example during role play. **Example:** Ask the students to get out their math workbooks and work on their subtraction/shapes. Praise the students for following directions the first time.	Y	N	1	2	3

13. Non-example during role play. **Non-Example:** Pretend to be starting a story. Have other children put away their math workbooks to listen to the story while the volunteer ignores the instruction. Discuss the problem.	Y N		1 2 3
14. Example during role play. **Example:** Pretend to be asking a question from the story. Ask volunteers to write down their answers. Praise the students for following directions the first time.	Y N		1 2 3
Review:	**Observed**	**Quality**	
15. "You did great with the role plays for practice! Again, let's read together the steps in following directions for the first time." (choral read) "Let's work hard to practice this behavior today!"	Y N		1 2 3

Total Fidelity Score_____   Total Quality Score_____

Total Score Possible_____   Total Score Possible_____

Total Score divided by Total Possible = % yes_____   Average_____

Skills	Consulting	Modeling	Follow-Up	Additional Notes
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:				

Quality Rating Definitions for CW-FIT Start-Up 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. Group lesson on skill lasts approximately 10-15 minutes
   - 1= Lesson covers less than 50% of the material
   - 2= Lesson covers 50-80% of the material
   - 3= Lesson covers 80-100% of the material (i.e., review skill, define, provide rationale, role play, review)

3. Praise and points are awarded to teams for use of the skill(s)
   - 1= Teacher gives points without pairing verbal praise
   - 2= Teacher gives points paired with verbal praise some of the time
   - 3= Teacher gives points paired with behavior specific praise most of the time

4. Review of previous skill(s)
   - 1= Teacher references that a skill was reviewed previously (i.e., remember to "Ignore inappropriate behavior")
   - 2= Teacher reads aloud the steps of the previous skill(s) or students silently read skill steps to themselves
   - 3= Students chorally read previous skill(s)

5. Introduction of skill
   - 1= Teacher references poster and then goes straight into the skill steps
   - 2= Teacher explains the skill
   - 3= Teacher provides a brief overview of CW-FIT program and explains the skill and what it means (i.e., define "inappropriate")

6. Review steps of skill
   Quality rating not applicable to this item

7. Chorally read skill steps
   - 1= Less less than 50% of students participate in choral reading
   - 2= 50-90% of students participate in choral reading
   - 3= 90-100% of students participate in choral reading

8. State a matching school/classroom rule
   - 1= Teacher reviews school/classroom rules without making a connection to CW-FIT
   - 2= Teacher identifies school/classroom rule that is applicable to CW-FIT skill(s)
   - 3= Teacher asks students to identify school/classroom rules that are similar and match CW-FIT skill(s)

9. Connection to school/classroom rules
   - 1= Teacher states additional ways that students can follow school/classroom rule
   - 2= Students brainstorm additional ways that they can follow school/classroom rule
   - 3= Teacher and students discuss additional ways they can follow school/classroom rules and reference specific events that may happen in their school/class

APPENDIX H: GROUP ON-TASK SHEET

School	Teacher	Subject	Class Activity Code	Observer	Date	Time
			LG SG IA T			

Condition:			Observation Type				Reliability	Reliability Score
Experimental Control		Baseline	Intervention	Comparison	Reversal		Y N	%

Praise Individual	Praise Group		Reprimand Individual	Reprimand Group
Verbal	Verbal	Points	Verbal	Verbal

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

Code: plus (+) for On-Task; minus (-) for Off Task; and slash (/) for unable to observe

Class Arrangement:

Class Activity Codes = Arrangement
LG = Large Group (teacher led)
SG = Small Group ≤ 6 (teacher led)
IA = Individual/Independent Work
T = Transition

Primary Observer:

Reliability Observer:

Comments:

_____

_____

_____

_____

_____

# of students present: _____

Class Mean

Updated 6/28/2013

APPENDIX I: TEACHER SOCIAL VALIDITY QUESTIONNAIRE

CW-FIT Intervention Teacher Satisfaction Survey

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?

APPENDIX J: STUDENT SOCIAL VALIDITY QUESTIONNAIRES

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!