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The Effects of Class-Wide Function-Related Intervention Teams in Three Art Classrooms

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ABSTRACT

The Effects of Class-Wide Function-Related Intervention Teams in Three Art Classrooms

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Challenging and disruptive student behavior is a major concern for all teachers, including those who teach art. Unfortunately, there is a lack of research and resources available for art teachers to manage student behavior. School-wide positive behavior support (SWPBS) is a framework that has been shown to improve student behavior. Class-wide Function-Related Intervention Teams (CW-FIT) is an intervention that utilizes SWPBS principles including group contingency, social skills instruction, teacher praise, and positive reinforcement and has been shown to be effective in general education classrooms. This is the first study of CW-FIT in elementary art classrooms and examined the effects of the intervention on teacher praise-to-reprimand rates and student on-task behavior in three classrooms. The first classroom utilized an AB design while the other two used a reversal (ABAB) design to evaluate impact. The results indicated the teacher was able to implement CW-FIT with fidelity, increase praise-to-reprimand ratios, and increase group on-task behavior. Finally, both the teacher and students found it to be socially valid. Limitations and implications of this study for researchers and practitioners are discussed.

Keywords: art education, CW-FIT, positive behavior support, praise, social skills, group contingency

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CHAPTER ONE: INTRODUCTION

Disruptive student behavior is pervasive in schools and a significant concern for educators and parents (Everston & Weinstein, 2006) and has been cited as the reason behind why many teachers eventually leave the profession (McKinney, Campbell-Whatley, & Kea, 2005). It has been found that anywhere from 2% to 16% of students exhibit problem behavior that not only negatively impacts their education but that of their classmates (Hester, 2010). It is clear that the high prevalence rate and overall impact that problem behavior has on students and teachers is a major concern in public education.

Skiba and Peterson (2000) noted that the prevalence of behavior problems has led to many districts and schools to adopt "zero tolerance" or "get tough" policies. These policies suggest that students should be swiftly punished for challenging behavior through suspension, expulsions, and detention. While supporters of these policies believe that this would reduce problem behavior, research has suggested that it has the opposite effect (Horner, Sugai, & Horner, 2000). It is clear that these policies are outdated, ineffective, and more effective strategies should be adopted.

School wide positive behavior support (SWPBS) is the systematic implementation of interventions designed to manage student behavior in a more positive way (Chitiyo, May, & Chitiyo, 2012). The principles of SWPBS include, teaching important social skills, providing frequent praise and reinforcement for good behavior, and developing classroom environments that support appropriate behaviors (Sugai & Horner, 2006). Research has found SWPBS to be the most effective way to change and maintain changes in student behavior (Sugai & Horner, 2002). A study of approximately 38,000 students found that implementation of SWPBS led to a

decrease in office discipline referrals and overall reduction in problem behavior (Muscott, Mann, & LeBrun, 2008).

There are four core tenets of SWPBS that are emphasized to improve student behavior. First, teaching social skills has been found to be effective in the reduction of problem behavior (Stoiber, Gettinger, & Fitts, 2007). This suggests that students who are taught social skills are more aware of classroom expectations and thus are more likely to exhibit appropriate behavior. While teaching social skills is important, educators must support the use of appropriate behavior in order for students to effectively learn and utilize these skills. This leads to the second strategy, the use of praise to reinforce appropriate behavior. It has been found that the use of praise has a significant positive impact on student behavior (Young, Caldarella, Richardson, & Young, 2012). Thus, teachers who praise their students often can expect to see a reduction in disruptive or problematic behavior. Third, teachers often pair praise with a token economy system to further reinforce positive behavior and reduce disruptions (Wolfe, Dattilo, & Gast, 2003). The use of tokens (points, stickers, etc.) are offered to students for positive behavior and later exchanged for a reward (Young et al., 2012). Finally, group contingency, rewarding a group or team for good behavior, is also commonly utilized as a tool to reinforce students and improve behavior (Wills, Iwaszuk, Kamps, & Shumate, 2014).

Class-wide function-related intervention teams (CW-FIT) is a program that utilizes all of the core tenets of SWPBS and has been found to be effective in improving student behavior. Wills et al. (2010) found that student on-task behavior improved from 52-67% to 78-83% during implementation of CW-FIT. This intervention was effective for typical students and those identified as having significant behavior problems. Wills et al. (2014) studied the effect of CW-

FIT on three at risk students and found an improvement in student behavior during implementation of CW-FIT.

Social validity of CW-FIT is another important component to consider as it speaks to the likelihood that the intervention will be used. Social validity includes participant perceptions of the goals, procedures, and outcomes of the intervention (Marchant, Heath, & Miramontes, 2012). Caldarella, Williams, Hansen, and Wills (2015) found CW-FIT to be socially valid as both teachers and students rated the intervention favorably.

While CW-FIT has been studied in general education classrooms, less has been done in specialties classroom. One study by Caldarella, Williams, Jolstead, and Wills (2016) found CW-FIT to be effective in an elementary music classroom. The effective implementation of CW-FIT in a specialties class reveals the generalizability that could apply to other specialties classrooms.

The study of CW-FIT in various settings is of importance since students have been found to behave differently depending on the classroom settings (Jason & Kuchay, 2001). Art classrooms are one such setting where teachers have expressed concerns regarding classroom management and many art teachers feel overwhelmed and unprepared to manage problem behavior (Kowalchuk, 1999). Lorachelle (1999) noted the difficulties associated with managing behavior in an art classroom but unfortunately there has been little research into behavior management that could be useful to art teachers.

Study Purpose

While CW-FIT has proven effective in reducing problem behavior, increasing on-task behavior, and improving teacher classroom management, there is a lack of research in the effectiveness of CW-FIT in art classrooms. Given the varied nature of the art classroom compared to the general education classroom setting (Susi, 1996) it is important to investigate

the effectiveness of CW-FIT in this non-traditional setting. The purpose of the current study was to investigate the effects of implementation of CW-FIT in elementary art classrooms.

Research Questions

In order to investigate the effects of implementation of CW-FIT in elementary art classrooms, the following specific research questions were addressed:

1. Is an art teacher able to implement CW-FIT with fidelity?
2. Does the implementation of CW-FIT in three elementary art classrooms result in an increased teacher praise-to-reprimand ratio?
3. Does the implementation of CW-FIT in three elementary art classrooms result in increased group on-task behavior?
4. Does an art teacher and students in three classrooms find CW-FIT to be socially valid?

CHAPTER TWO: LITERATURE REVIEW

Behavior Problems at School

Classroom and behavior management is a pressing concern for all teachers and school administrators. Everston and Weinstein (2006) found that most individuals in the community identified behavior management as one of the biggest problems facing education. Furthermore, teachers ranked classroom management as the most important issue impeding their ability to teach. This is particularly of concern for first-year teachers as they try to navigate the difficulties of managing classroom behavior (Levy, 1987). Additionally, student behavior problems and difficulty managing the classroom is often cited as the reasons why many new teachers end up leaving the profession (McKinney et al., 2005). This suggests a need for further teacher training and resources to help assist the implementation of effective behavior management techniques.

While most students attending school in the United States will exhibit appropriate classroom and social behavior, between 2% to 16% of students exhibit problem behavior that inhibits learning and negatively affects the overall classroom environment (Hester, 2010). Moreover, a study of behavioral expectations found that teachers place the most importance on student self-control and cooperation in order to be successful in the classroom (Lane, Givner, & Pierson, 2004). Students are expected to possess these skills before they enter school. Unfortunately, students who enter school without these skills previously developed can struggle socially and academically, and can be quickly labeled as problem students.

Students exhibit two types of problematic behavior: internalizing and externalizing (Henricsson & Rydell, 2004). Externalizing problem behavior comprises the more noticeable behaviors such as aggression, defiance, and impulsivity. Internalizing behavior is harder to

identify as it is less overt and includes feelings of depression, anxiety, or sadness (Garber, Quiggle, Panak, & Dodge, 1991). It is no surprise that externalizing behavior is viewed as more problematic by teachers and school administrators as it is more likely to interrupt learning (Henricsson et al., 2004).

Problem behaviors in elementary school are a predictor for continued problem behavior into middle and high school. A 10-year longitudinal study of Canadian schools found that students with a history of problem behavior in elementary school were likely to exhibit the same problems in high school (Leblanc, Swisher, Vitaro, & Tremblay, 2007). This highlights the importance for intervention to occur sooner, in elementary school, in order to prevent the continuation of problem behavior into high school.

Behavior interventions have been found to be successful as early as kindergarten. A study including four elementary schools and 20 kindergarten classrooms was able to successfully implement a program to improve student behavior (Taylor, 2010). Students who were identified as having problem behavior were able to participate in a program that included weekly parenting classes, individual meetings with the teachers, and teacher implementation of a student behavior plan. The results of this study indicated an improvement in school and home behavior as reported by teachers and parents. Success in such interventions, with students as young as kindergarten, can be an effective tool in helping reduce the occurrence of future problem behavior in school.

It is clear that prevalence of behavior problems is an issue of great concern to educators, parents, and students. Evidence indicates that problem behavior can have a significant negative impact on learning and social development (Hester, 2010; Lane, et al., 2004). Fortunately, research has shown that these problems can be addressed through behavioral interventions. However, most studies have been conducted in the general education classroom and there is a

lack of research in specialties classrooms. Lorachelle (1999) noted the prevalence of behavior problems that exist in art classrooms. Kowalchuk (1999) found that many art teachers indicate a lack of training needed for effective classroom management. In order for effective interventions to be developed, there is a need for further research regarding behavior problems in art classrooms.

Behavior Problems in Art Classrooms

Jason and Kuchay (2001) found that students behave differently based on the educational setting. They found that students exhibit better behavior in language arts and social studies compared to math. Elementary school includes exposure to many different disciplines and subjects as part of an effort to create well-rounded learners. This allows students to explore and learn outside of their traditional classroom setting. Art class is one of these subjects that pulls students into a different learning environment, but it results in some associated challenges (Susi, 1996). Susi (1995) explains that the environment in an art classroom is inherently different from that of a general education classroom. This may pose challenges when applying traditional behavior management models. Art education does not follow a traditional instructional model: it is often unpredictable compared to typical classroom instruction. Art classrooms highly emphasize self-expression while also teaching students critically evaluate their own or the art of others. Art education also includes both physical skills to complete the art projects and critical thinking skills to study or critique. Furthermore, classrooms are often arranged with a formal instructional model and informal projects and activities that can be teacher or student driven. This can create a challenge for art educators who are striving to support a creative learning environment while still managing student behavior. For these reasons, there is a need for art teachers to adapt their expectations and behavior management to fit the needs of their students in

the art classroom.

While classroom and behavior management is a continued concern for all teachers, many art teachers relate additional difficulties in managing problematic behavior. One art teacher stated that, “When kids come to the art classroom they transform. Suddenly they have not heard of school rules, good classroom behavior, listening to directions, or focusing on their work” (Lorachelle, 1999, p. 28). Kuster, Bain, Newton, and Milbrandt (2010) conducted a qualitative study of 11 art teachers found that classroom management and student motivation was one of their main concerns. The report indicated that many teachers felt overwhelmed by all of the challenges of teaching art. This is especially a concern for new or student art teachers, as many state their need for more training and resources to better manage classroom behavior (Kowalchuk, 1999). Hiring guidelines offered by Saunders (1989) indicated several criteria for hiring an art teacher, the first being an ability to effectively manage a classroom. This indicates the importance placed on an art teacher’s ability in classroom management.

Some research has been conducted to investigate more effective ways to assist teachers with managing student behavior in the unique setting of an art classroom. Mitchell and Crowell (1973) conducted a study on three nine-year-old boys with learning disabilities. The purpose of the study was to evaluate the effectiveness of positive reinforcement on the behavior of the participants during art instruction. The results indicated a decrease in problem behavior during the reinforcement periods. While this study emphasized the importance of positive reinforcement and how it can be applied to the art classroom, it leaves room for concern regarding how this study could be generalizable to other art classrooms, since this study only included students with learning disabilities. While most art classrooms will include some students with disabilities, most will encompass a majority of typically developing students.

In an action study, Howard (2004), a practicing art teacher, established several classroom procedures to improve student behavior. She noted the importance of explaining the rules to students in order for them to understand expectations. Furthermore, she established punishments and rewards for the expected behaviors. She wanted to present this information creatively to her students and allowed them to use the art supplies to present drawings to the class regarding behavioral expectation. She noted that this design led to and overall successful art classroom environment.

Additionally, a study conducted by DeGreg (2015) found video modeling to be an effective tool to promote positive behavior in an art classroom. This research was conducted in two first grade classrooms and one second grade classroom at a private school in the Midwestern United States. The researcher collaborated with the teacher to create video models of appropriate classroom behavior and showed them to the class before art instruction took place. Video modeling was found to be an effective tool as, indicated by a reduction in disruptive behavior and increased engagement following implementation of this intervention. While this study revealed the effectiveness of video modeling on classroom behavior it leaves room for further development of behavioral interventions to assist in an art classroom. DeGreg also conducted this study at a predominantly Caucasian, private, religious school, resulting in concerns regarding the generalizability of this intervention. Due to the demographics of the participants in this study, it is difficult to know whether this intervention is applicable with different groups of students. Furthermore, the tools necessary for video modeling are not always available to teachers. Video modeling requires that the school own the necessary equipment (video camera, VCR/DVD player, television, and editing software) that may not be available in many schools. Video modeling also requires that teachers have the technical expertise to produce and edit these

videos in order to use them in their classroom.

While some inquiry has been made into behavior problems in art classrooms, there is a lack of sufficient research and resources that would be beneficial to art teachers hoping to improve their classroom and behavior management techniques. This reveals the importance for further research into proactive classroom management techniques that can be easily implemented by art teachers.

Positive Behavior Support

In order to address behavioral concerns, many school systems have adopted strict policies for punishing problem behavior. The attitude behind this supports the idea that when students misbehave at school a strict enforcement of negative consequences will teach the student that this behavior is unacceptable and, thus, will not reoccur. This unfortunately has not been the case as students with serious problems may be unintentionally reinforced by these punishments resulting in behavior that worsens (Skiba & Peterson, 2000). It cannot be expected that "get tough" school policies will promote long term changes in student behavior. These methods include suspension, expulsion, and punishments that have been found to be the least effective tools in addressing problem behavior. While such punishment may temporarily solve the problem of a student disrupting class, these policies will not prevent disruptions when the student returns to the classroom (Horner et al., 2000). These issues regarding school discipline practices emphasize the need for implementation of different behavior management policies. One such option, positive behavior support, has been found to effectively address behavior problems.

Positive behavior support (PBS) was developed from applied behavior analysis and is designed to improve problem behavior and support social learning. PBS emphasizes a more positive approach to addressing behavior through: "a) prevention-focused continuum of support,

b) proactive instructional approaches to teaching and improving social behavior, c) conceptually sound and empirically validated practices, d) systems change to support effective practices, and e) data-based decision making" (Sugai & Horner, 2002, p. 131). Furthermore, PBS emphasizes teaching applicable social skills, providing frequent positive reinforcement and praise for appropriate behavior, and organizing teaching environments that strengthen appropriate behaviors (Sugai & Horner, 2006).

Legislation of the Individuals with Disabilities Education Act (1997) emphasized the importance of using PBS to assist students exhibiting behavior problems at school. This is applicable to all students including those not currently eligible for special education services. While PBS has long been extended to students with disabilities, IDEA encourages extension of PBS to all students with disruptive behavior. Research has found that the development and implementation of PBS in general education classrooms is effective in reducing the number of students who would eventually require special education services (Kennedy et al., 2001). Essentially, if behavior can be improved in the general education classroom through the implementation of PBS then there may be a decrease in need for further special education services. For example, a study in a general education setting found a decrease in disruptive or problematic behavior after implementation of school-wide PBS (Taylor-Green, et al., 1997). Some have seen up to 50% of a reduction in disciplinary referrals following PBS implementation (Horner et al., 2000). Further examination of achievement testing scores, teacher perception surveys, and office discipline referrals yielded results in support of PBS (Pavlovich, 2008).

Chitivo et al. (2012) have noted that while PBS has been effective in improving student behavior it has not been well maintained or consistent across schools, thus the need for policies and systems to be put into place. School-wide positive behavior supports (SWPBS) includes the

systematic implementation of PBS across school settings and includes a three tiered approach to addressing student behavior. The second and third tiers are designed to assist students who require more support. Tobin and Sugai (2005) found that most students who have been identified with serious behavior problems, only require the primary level of intervention to improve behavior. However, when secondary or tertiary interventions were necessary the school was able to offer the higher level of support. Furthermore, SWPBS includes the emphasis on making evidenced based decisions, measuring outcomes, and defining support systems to help implement interventions effectively. This system strives to create a more positive school culture in dealing with disciplinary issues and improving student behavior.

SWPBS has proven to be successful in decreasing problem behavior at school and effective in the long-term. A study by Muscott, Mann, and LeBrun (2008) of approximately 38,000 students, across 124 private and public schools in the state of New Hampshire, showed the practicality and sustainability of a SWPBS system to reduce problem behavior. During implementation the participating schools saw a combined decrease in office discipline referrals from 6,010 to 1,032 suspensions. The decrease in school disciplinary actions was not the only indication of success. There was also an increase in the amount of time spent teaching and learning as a result. SWPBS was not only effective for one academic year, but it was found to be sustainable in the following year in participating schools These results indicate the practicality of implementing and maintaining SWPBS system for long-term use.

SWPBS is a useful tool designed to meet the needs of all students in a school. It is clear that SWPBS is effective in improving behavior of typical and at risk students. The systematic implementation of SWPBS includes various principles of PBS that are essential for improved behavior. The core principles include teaching social skills, using praise and token economy, and

group contingency. Educators can expect behavior improvements if these elements are included in their use of SWPBS.

Social skills. The importance of academic performance has a long-held importance to educators and parents and includes efficiency in reading, writing, math, spelling, etc. However, research has supported the equal significance of social competence on school performance (Cowan, 2011). Tobin and Sugai (2002) identified three divisions designated to help educators plan comprehensive interventions; identifying problem behaviors, promoting academic competence, and teaching social skills. Moreover, a student would be identified as successful within the social skills domain if they exhibit cooperation, assertion, and self-control. The inclusion of social skills in comprehensive interventions indicates that it is essential for success in the classroom.

Social skills are difficult to define and multiple definitions exist within the academic literature and professional domains. Among these definitions some common themes arise that will be used for the purposes of this paper. Merrell and Gimpel (1998) noted that "Social skills are learned, composed of specific behavior, include initiations and responses, maximize social reinforcement, are interactive and situation specific, and can be specified as targets for interventions" (p. 5). Furthermore, it is important to note the distinction between the terms social skills and social competence. Social skills include the specific behavior than a student exhibits in order to effectively complete a task. Social competence includes the judgments of others' (teacher, parent, peers) evaluation of how a student performs a social skill. It is not always the case that social competence is directly related to actual social skill ability, as educators make evaluations based on their perceptions of students.

Merrell and Gimpel (1998) also noted that students who exhibit developmentally appropriate social skills exhibit more positive overall growth and better mental health. Such students experience more social acceptance and more positive interpersonal relationships which play a significant role in academic achievement. On the other hand, students with inadequate social skills exhibit more negative outcomes such as psychiatric disorders as well as externalizing and internalizing behavior problems.

It has been found that SWPBS interventions that include the teaching of social skills improve student social competence, skills, and behavior (Stoiber, Gettinger, & Fitts, 2007). The social skills that are taught generally fall into five behavioral dimensions: peer relationships, self management, academic, compliance, and assertion (Caldarella & Merrell, 1997). Some social skills that fall within those domains include targeted skills such as: Following instructions, getting the teacher's attention, listening, and accepting consequences. A study by Caldarella, Shatzer, Gray, Young, and Young (2011) included some of these skills being taught monthly to students in 20 minute lessons as part of implementation of SWPBS. This included direct instruction, practicing the skills, viewing examples, and discussing the importance of the skills. The participating school showed improvements in teacher school climate ratings as compared to the control school which did not improve. Furthermore, Nelson, Young, Young, and Cox (2010) found that students who were taught social skills as a component of SWPBS had a decrease in office referrals for problem behavior.

A study by Arritola, Breen, and Paz (2009) was conducted to evaluate the effectiveness of teaching social skills to improve student on-task behavior in two elementary school classrooms. The teacher targeted several social skills that would be valuable for improved instruction and independent work time. The teacher first modeled the skill, had the students

model the skill, and then praised the students when they exhibited the behavior. The students and teacher both reported improvement in on task behavior and saw a significant increase in one of the target social skills.

It is clear that the use of social skills training is an important component of effective SWPBS. When educators identify and teach desired social skills students are more aware of the behavioral expectations. However, in order for students to effectively learn and use the social skills educators must use strategies to positively reinforce desired skills, and one such strategy includes the use of praise.

Praise. Praise as a reinforcement is understood to be the expression of approval for a behavior in order to increase the likelihood that the behavior will continue or reoccur (Howell, Caldarella, Korth, & Young, 2014). Young, Caldarella, Richardson, and Young (2012) made several important points related to praise in schools. First, praise is a critical component of SWPBS and is used to reinforce appropriate behavior with students. Praise is the most basic component of Tier 1 intervention and is the most easily accessible form of reinforcement educators can utilize. Second, teachers and other school employees are in an important position to provide positive feedback and praise to students for appropriate social, emotional, and academic behaviors. These adults can offer both encouragement and praise that can help students be more successful. Third, students with behavior problems do not receive much praise as their negative behaviors often become the focus of the teacher's attention. However, teachers can reduce the instances of problem behavior by offering frequent praise to students as it has been found to improve on-task behavior, student satisfaction, and help socially withdrawn students engage more with peers and the teacher. Finally, praise should be specific to the desired behavior. It has been found that praise that can "specifically state the behavior you are

complimenting, provide a detailed description of what occurred, give a reason why the behavior was praiseworthy, and provide a pleasant consequence" (Young, et al., 2012, p. 71) is the most effective.

Furthermore, Allday et al., (2012) found that the use of behavior specific praise was beneficial for students with emotional and behavioral disorders. Teachers in a general education classroom were trained to give behavior specific praise to the students in their classroom as well as use corrective statements related to inappropriate behavior. The classrooms included several students either with, or who were at risk of, emotional and behavioral disorder. As the teachers increased the use of behavior specific praise the targeted students exhibited improved behavior and were more on-task.

A study by Dufrene, Lestremau, and Zoder-Martell (2014) addressed the importance of educators implementing praise in early childhood school settings. Since behavior problems that appear in early childhood are pervasive into middle and late childhood it is important to address behavior problems early. These researchers studied the efficacy of praise on improving student behavior. Teachers were trained to give frequent praise to students for appropriate behavior. The use of praise was found to be highly effective in early childhood classrooms and reduced problem behavior.

While it is important to increase the amount of praise given it is also important to decrease the number of reprimands by the teacher. White (2010) conducted a study in order to improve teacher praise-to-reprimand ratios. Teachers were trained to offer more praise than reprimands and were able to see an improvement in student on task behavior.

Nelson et al., (2010) conducted a study where teachers used praise notes as a means of offering positive reinforcement to students for exhibiting appropriate social skills. The results

indicated that as students began receiving more praise notes the number of office discipline referrals decreased. Furthermore, Howell et al., (2014) noted the use of praise notes has been found to be socially valid by teachers. Praise notes were found to be easy to implement and sustain, and the teachers agreed that praise notes were beneficial to improve student behavior.

While praise is a core strategy of SWPBS there is some disagreement as to whether it is a useful tool in managing problem behavior. Howell et al., (2014) made note of this debate and the impact of praise on student motivation. First, the role that praise has on student motivation might lead to a lack of intrinsic motivation and a dependence on praise in order to perform. Second, some have argued that praising students has a negative effect on academic achievement. Finally, many educators praise their students for characteristics that are out of their control rather than behavior. For example, a teacher praising a student for being smart rather than being persistent in their work. Praising qualities, such as being smart, that are more inherent are not helpful or motivating to students. Rather the praise of qualities that are attainable to all students are far more motivating. While the arguments are compelling, Howell et al. (2014) noted that research actually supports the connection between praise and positive outcomes for students in terms of on-task behavior and teacher-student relationships.

It is clear the offering praise to students is highly effective in promoting positive behavior. Educators who increase the amount of praise they give and decrease the number of reprimands can expect to see a reduction in behavior problems in their classrooms. Praise can be offered verbally as well as through praise notes. However, Young et al. (2012) noted that praise is not the only strategy to reinforce positive behavior as the use of token economy is also an effective tool.

Token economy. Young et al. (2012) made several points about token economy systems. First, token economy is related to praise in that it offers a tangible reward in the form of a ticket, point, sticker, or other token after a desired behavior is exhibited. Students can then use these to exchange for a prize, privilege, or access to a desired activity. Second, effective implementation includes the identification of target behavior that need to be corrected, creating specific and desirable reinforcers, and a token distribution strategy that is clear to the teacher and students. Finally, if implemented correctly token economy systems can be a valuable tool to reduce problem behavior among students.

A study by Chevalier (2012) supported the use of token economy to improve student behavior. The goal of this study was to reduce off-task and disruptive behavior through reinforcement through a raffle drawing. Students received the tickets, which served as the token, occasionally when they exhibited the desired behaviors. Students entered the tickets in a drawing at the end of the week to earn a reward. The students who participated exhibited a significant reduction in problem behavior.

Furthermore, as reported by Wolfe et al. (2003) the use of classroom token economy is not only beneficial in reducing problematic behavior but there is also an increase in prosocial behavior. Prosocial behavior is defined by voluntary helping behavior and is an important component of social competence. Through the implementation of a token economy it was reported that there was an immediate increase in prosocial behaviors exhibited by the participating students.

While educators can use a variety of tokens and rewards it is important that these are desirable and reinforcing to the student. Carnett et al. (2014) noted that tokens and rewards that are of interest to the students are most effective in improving behavior. If the students are

working to earn something that is desirable then they are more likely to be positively reinforced by the token economy system, and thus, more likely to exhibit appropriate behavior.

Token economy is a beneficial component of SWPBS as it is applicable across all three tiers of intervention. The use of a token economy system is beneficial on the first tier as it is applicable to all students, not just those with behavior problems. While token economy works for typical students it has also been shown to be beneficial to students with serious behavior problems. O'Leary and Becker (1967) targeted eight students with severe behavior problems to participate in a token economy system to help them improve in the classroom setting. The target students were given tokens in exchange for exhibiting positive behavior and exhibited a reduction in problem behavior. They were also successfully able to fade the reinforcement and still see the students maintain appropriate behavior.

Furthermore, Wills et al. (2014) noted the use of token economy as an important component of a SWPBS intervention program designed to improve student behavior. Teachers assigned points to student teams for positive behavior and if enough points were obtained the students were able to earn a reward. The rewards were either be tangible (toy, candy, etc.) or access to a desired activity (game, extra recess, etc.) and was administered at the end of the intervention. These researchers found that this token economy system was helpful in improving student on-task behavior for typical and at-risk students.

Token economy provides a practical way for teachers to implement the principles of SWPBS. Students are reinforced to engage in appropriate and positive behavior by the administration of token that are later exchanged for rewards. This is an effective way for educators to address problem behavior in a more positive way and allows for teachers to reward positive behavior rather than simply punishing negative behavior. Furthermore, teachers can

administer tokens both individually and to groups of student. Rewarding students using group contingencies has also been found to be and effective classroom management strategy (Wills et al., 2014).

Group contingencies. Group contingencies are a popular behavior management tool in schools that are designed to reward students based on the behavior of all the members of the group and thus motivating them to exhibit appropriate behavior. This includes rewarding a group for collective appropriate behavior and has been shown to reduce the instances of problem behavior in the classroom (Wills et al., 2014).

Little, Akin-Little, and O'Neil (2015) explained that this strategy can be used as dependent, independent, and interdependent group contingencies. The dependent group contingency is when only the behavior of selected members of the group determine the reward for behavior. If a member of the selected group exhibits an undesirable behavior the group would not be rewarded, however any student that is not one of the selected group members cannot influence whether or not the group earns a reward. An independent group contingency is when all members of the group are given the same behavioral expectation but rewarded individually for meeting the expectation. Finally, interdependent group contingencies provide rewards to the entire group only if all members of the group meet the behavioral expectations.

Heering and Wilder (2006) used an interdependent group contingency to improve the on-task behavior in two elementary school classrooms. The access to a reward was dependent on all the members of the established groups exhibiting appropriate behavior during math instruction. The student on-task behavior was approximately 40% during baseline phase and improved to around 80% during the group contingency intervention. The teachers and students reported that the intervention was socially valid, easy to implement, and was well liked.

Ling and Barnett (2013) found the effectiveness of group contingencies interventions in preschool settings. An interdependent group contingency was implemented during circle time in two pre-school classrooms in order to improve student behavior and engagement. The results indicated an improvement in engagement and positive teacher attention as well as a decrease in disruptive behavior during intervention.

Furthermore, group contingencies are also beneficial for students who exhibit more serious behavior problems. Ling, Hawkins, and Weber (2011) conducted an interdependent group contingency study targeting a student who was often off task and disengaged in the classroom. The results indicated lower levels of on-task behavior and engagement during baseline and withdrawal phases. During intervention the target student, as well as the rest of the class, exhibited improved on-task behavior and higher academic engagement. This is further supported by Kamps et al., (2011) who found that the use of interdependent group contingency intervention improved behavior of the whole class as well as the students targeted for being at risk for emotional/behavioral disorder. These findings indicate that the use of group contingencies is beneficial for a variety of students regardless of severity of behavior problems.

It is evident that teaching social skills, using frequent praise, implementation of token economy, and utilizing group contingencies are all effective tools to improve student behavior. Many SWPBS systems use some of these strategies when designing interventions. Class-wide function-related interventions teams (CW-FIT; Wills et al., 2010) is an intervention that uses all of the listed strategies and has been found to be highly effective in improving student behavior.

Class-Wide-Function-Related Intervention Teams

Class-wide function-related intervention teams (CW-FIT) is a three tiered behavioral intervention program designed to implement PBS principles in the classroom. CW-FIT includes four main elements:

1. teaching socially appropriate communication skills
2. using differential reinforcement with an interdependent group contingency [points awarded in timed intervals]
3. extinguishing or eliminating potential reinforcement for problem behavior
4. implementing individual interventions using self-management, help cards, and/or functional assessment (Caldarella et al., 2015, p. 357).

A study of CW-FIT in three urban schools yielded promising results to help address behavioral concerns (Wills et al., 2010). The participating school was comprised of primarily minority (79-95%) and low SES students (80-95%). Before implementation of CW-FIT, during collection of baseline data, the 16 participating classrooms had group on task behavior of about 52-67%. Implementation of the program yielded improved on-task behavior to 78-83%. Furthermore, implementation of CW-FIT improved teacher praise-to-reprimand ratios, and decreased punitive discipline.

An additional study of a first grade elementary school in the Midwestern United States also yielded promising results as to the effectiveness of CW-FIT across a different population (Wills et al., 2014). The participating school was composed of a 71.8% Caucasian population and had already implemented SWPBS. This study identified three at risk students to evaluate the effectiveness of CW-FIT on more challenging students. Baseline data indicated that students were on task from a range of 49-76% of the time. After CW-FIT that increased to 84-96%. This

increase was seen in all students, including the identified at risk students. Furthermore, while CW-FIT was effective in improving student on-task behavior it also resulted in an increase in teacher praise and a decrease in teacher reprimands. This study of CW-FIT also proved effective in reducing punitive discipline in the participating classrooms.

CW-FIT has also been shown to be effective with students with emotional-behavioral disorders (EBD) or those who are at risk for such disorders. Wills, Kamps, Fleming, and Hansen (in press) conducted a randomized control study of 313 students across seventeen elementary schools. The results indicate that the teachers were able to implement CW-FIT with fidelity and teacher-raise-to reprimand ratios and group on task behavior improved. These results suggest that CW-FIT may be a useful intervention for students in special education.

While CW-FIT has been primarily implemented in general education classrooms, there has been some research into effectiveness in alternative classroom settings indicating the same procedure could be beneficial in improving student behavior in an art classroom. A multiple baseline study found CW-FIT to be effective in preschool settings indicating CW-FIT could be effective among a variety of age groups (Jolstead et al., in press). Hirsch, Healy, Judge, and Lloyd (2016) found similar results through a single-subject reversal design study in an elementary physical education classroom. Student behavior improved in this classroom setting while CW-FIT was being used Finally, Caldarella and colleagues (2016) conducted a single-subject reversal design study of CW-FIT was conducted in an elementary music classroom. During baseline the student on-task behavior average was 51.7% and the teacher praise-to-reprimand ratio was 1.65:1. After implementation of CW-FIT the class on-task average increased to 83.1% and the teacher praise-to-reprimand ratio increased to 4.5:1. Furthermore, during the reversal phase of the study the class on task average decreased to 64.5% and praise-to-reprimand

ratio decreased to 3.5:1. Upon reintroduction of CW-FIT the class average increased to 79.2% and interestingly the praise to reprimand ratio decreased to 2.15:1. Not only did the implementation yield improvements in student on-task behavior it was also reportedly viewed favorably (socially valid) by both the teacher and students. The teacher reported that the use of CW-FIT helped improve student behavior while still being easy to implement. Although some students were bothered by the beeping timer or missing points, 90% of the students indicated that they liked CW-FIT and would like it to be used in other classes.

The effective implementation of CW-FIT in a specialties class reveals the generalizability that could apply to an art classroom. The results of CW-FIT in this music classroom was similar to other studies conducted in general education classrooms (Wills et al., 2014). This indicates that CW-FIT could be a useful tool for behavior management in art classrooms, which has been reported as a major concern for art teachers (Susi, 1996). If art teachers were able to implement CW-FIT with fidelity they might expect a reduction in problem behaviors and improvements in student on-task behaviors.

While CW-FIT has demonstrated an effect in reducing problem behavior, increasing on-task behavior, and improving teacher classroom management, there is a lack of research in the effectiveness of CW-FIT in an art classroom. Given the varied nature of the art classroom compared to the general education classroom setting, it is important to investigate the effectiveness of CW-FIT in this non-traditional setting.

CHAPTER THREE: METHODS

Setting and Participants

This study was conducted in two third grade and one fifth grade art classroom at a Title I elementary school in suburban Utah. One specialty art teacher participated in the study and taught all three classes. The teacher was a 43-year-old female who had been teaching art for 10 years. The teacher did not have a formal degree in art education but rather was a self-taught artist.

The first third grade class participated in the 2014-2015 academic year (Classroom 1) and another third grade (Classroom 2) and a fifth grade (Classroom 3) participated in 2015-2016. The third grade classes were taught twice a week for 30 min and the fifth grade class was taught once a week for 60 min. There were 20 to 24 children in each classroom, for a total of 66 participating students (see Table 1). They ranged in age from 8 to 12 years old and were primarily Caucasian and Hispanic (see Table 1).

Table 1
Art Classroom Demographics

Variable	Classroom 1	Classroom 2	Classroom 3
Class size	20	24	22
Gender			
Male	8 (40%)	14 (58%)	13 (59%)
Female	14 (60%)	10 (43%)	9 (41%)
Ethnicity			
Hispanic	8 (40%)	13 (54%)	13 (59%)
Caucasian	9 (45%)	10 (43%)	6 (27%)
Asian	1 (5%)	0 (0%)	2 (9%)
Pacific Islander	2 (10%)	1 (4%)	1 (5%)
Average age	8.80	8.97	11.11

Context

The three participating classes attended art with their general education peers at a specified time during the week. The art classroom was specifically designed for visual art instruction and was only used in that capacity. The classes were working on various drawing projects throughout the study. The art teacher selected the classes that were the most behaviorally challenging to participate in the study.

Procedures

School district and institutional review board (IRB) approval was obtained before research began. The teacher was recruited in the 2014-2015 school year in a faculty meeting and again in the 2015-2016 school year when contacted individually by researchers. Modified consent forms were sent to all participating students (see Appendix A) and all researchers were trained in IRB ethical protocol.

Baseline. Prior to implementation of CW-FIT the teacher used a point and star system to motivate the students. The class would work as a whole to earn points for a class party to be held at a later date. Additionally, students could individually lose up to three points for inappropriate behavior, at which time they would be sent to the back of the room to complete an alternative assignment. The teacher would also award a piece of candy to the student who exhibited the best behavior during class. There were no classroom rules posted.

Baseline data were collected in all three of the art classroom during regular instruction and routines and the teacher did not deviate from her typical classroom management techniques during this period. Nine baseline data points were collected for Classroom 1, five data points Classroom 2, and four data points for Classroom 3. Fewer data points were collected in

Classroom 3 because it was only held once a week and occasionally unavailable due to school holidays.

Training. The participating teacher was trained by the researchers to implement CW-FIT with fidelity in a one-hour training session in the 2014-2015 school year. The teacher was refreshed on the training the following academic year in a 30-min booster session. The researchers trained the teacher on the intervention strategies while explaining the rationale behind the key elements. The teacher was further trained on providing social skill lessons in order to introduce new skills, the importance of praise, and various reward options. The training also included videos of teachers modeling CW-FIT and how that could be integrated into regular instruction.

After the initial training and booster session, researchers were available to the teacher to provide feedback on the intervention procedures to ensure they were being implemented correctly. The teacher was given approximately two weeks to become fluent on the intervention and train students on CW-FIT procedures after which intervention data was collected. Researchers were available to consult throughout the intervention phases if necessary.

Intervention. The independent variable in this study was CW-FIT, a SWPBS intervention programed aimed to improve student on task behavior through the use of social skills instruction, increasing teacher praise, group contingency, and token economy strategies (Wills et al., 2010). CW-FIT was administered to all of the students in the participating classes. Five intervention data points were collected for both 3rd grade classes, and four data points for the 5th grade classes.

Social skills lessons. The teacher started implementation by teaching three social skills to each class: Follow directions the first time, how to get the teacher's attention, and ignoring

inappropriate behavior. These particular socials skills were selected because they fall into two of the main social skills domains: peer relations skills and compliance skills. These skills are supported as not only important, but the most common skills used in social skills assessments (Caldarella & Merrell, 1997). It is important to note that the skill "follow directions the first time" was not related to how the art was completed but related to classroom procedures. The teacher taught one social skill lesson a week for three weeks. These lessons were approximately 10-15-min long and followed a teaching script (see Appendix B). They included the rationale for the desired behavior, explanation of the steps, role playing with the students, and reciting the steps as a class. These skills were displayed on posters (see Appendix C) and were visible to all students to reference when needed.

Teams. In each class the students were divided into six teams based on the tables in which they were already sitting. Students did not rotate during the class. There were approximately three to four students on each team. The teacher occasionally moved a student off their table to the back of the room if they exhibited excessive disruptive behavior. The teacher would then make the disruptive student into their own team for CW-FIT.

Timer. The teacher set the timer at an interval of 5-min for the fifth grade class and 3-min for the third grade class. The differing time intervals were based on the amount of time the teacher had for instruction. The teacher felt that since she had an hour for instruction with the 5th grade class five min intervals would be more appropriate. The timer was not audible to the class, but vibrated and reminded the teacher to award points. This was a modification made by the teacher due to difficulty of stopping the audible timer when she was drawing. The timer would vibrate and she could wait to finish what she was drawing before stopping it and awarding points.

Points, praise, and goals. When the timer vibrated, the teacher looked up and awarded points if every student on the team was following the taught social skills. The teacher was trained to praise the team for using the social skills when she awarded points. The teacher would also occasionally praise and offer "bonus points" when she noticed good behavior. The teacher gave points on a seating chart that she placed under her document camera so that it would be visible to the students (see Appendix D). This modification was used instead of the point chart because the teacher felt it was more conducive to art instruction. Additionally, a daily point goal was set to determine which teams would earn a reward. The point goal was set to allow for 75-85% of the total point opportunities. For example, if there were ten opportunities for teams to earn points the teacher would set the daily point goal at seven or eight. This goal was set at the beginning of the intervention.

Reward. At the end of instruction, the teacher tallied all the points to determine which teams reached the daily point goal and earned a reward that had been established by the teacher at the beginning of each session. These rewards were either tangible (candy, pencil, toy) or experiential (charades, heads-up 7-up). Rewards included pencils, candy, acting, or games. Due to the time constraints for the 3rd grade classes the teacher often used rewards, such as crab-walking into line, to prevent the reward activity from taking up instruction time. Any teams that did not earn the necessary number of points did not participate in the reward. Rewards were identified by direct observation of research assistants

Reversal. A reversal phase was conducted in Classrooms 2 and 3. During the reversal phase the teacher removed the social skills posters and stopped reviewing the skills at the start of every class. She no longer used the timer, point chart, and did not identify the class as teams. Furthermore, she did not award any points for positive behavior or have any daily reward. She

used the same classroom management procedures that she did during baseline (class points). If asked, she would tell the students that they were not doing the intervention that day. Three to five data points were collected in each class during the withdrawal phase.

Intervention. After the withdrawal phase the teacher began CW-FIT again but did not include the initial social skills lessons. The teacher did review the social skills and steps of the skills at the beginning of every class. The teacher used the intervention for the remainder of the study.

Dependent Variables and Measures

Teacher praise and reprimands. A tally of teacher praise and reprimands were collected during 20-minute observations simultaneously with the group on-task behavior. Trained graduate and undergraduate observers, who were all supervised by a research coordinator, recorded praise and reprimands offered by the teacher. The observers were trained to record, using paper and pencil method (see Appendix E), each praise and reprimand given to an individual or group of students.

Group on-task behavior. The group on-task behavior was also recorded using paper and pencil methods in 20-min observation periods (see Appendix E). The students were divided into small groups and marked on- or off-task based on the behavior of the students in the group. The observers were specifically trained to identify what was classified as on- and off-task behavior. A student was considered on-task when they were attending to the teacher, assignment, and following directions. Off-task behavior included not attending to the teacher, talking out, or not following directions. The observers recorded the groups as being either on- or off-task in 30 s intervals.

An interdependent group contingency was used so all of the members of the group were required to be on-task in order to earn points. If one or more students in the group were off task they would receive no points. Additionally, all points awarded by the teacher were recorded by the observers.

Treatment fidelity. In order to ensure that the intervention was being implemented correctly, the observers completed a treatment fidelity checklist that asked specific questions regarding implementation (see Appendix F). The observers marked whether or not the teacher utilized a specific skill or technique. If marked "yes" the observers gave a quality rating as to how the skill was used (1= implemented with partial fidelity, 2=implemented with good fidelity, 3=implemented with full fidelity). The observers were trained to identify and define the correct use of skills prior to entering the classroom (see Appendix F). Furthermore, a start-up fidelity form was completed to evaluate whether the teacher sufficiently explained the intervention and taught the social skills.

Social validity. After the study was completed the teacher answered an 18-item questionnaire as to the social validity of CW-FIT. The questionnaire included 15 Likert scale items rated from 1- very true to 4- not true, with three open ended questions. Questions addressed whether she found CW-FIT to be useful and practical to implement in her classroom and what modifications would she include. Questions also asked if CW-FIT was easy to implement and if she believed it helped improve student behavior. The participating students also completed a five question social validity questionnaire evaluating their perceptions of CW-FIT (see Appendix G). The student survey asked if and what they liked about CW-FIT in two yes/no questions and three open-ended questions to express their opinions about the intervention.

Inter-observer agreement. Four researchers observed and recorded data. Two were undergraduates, one graduate student, and a research coordinator. To ensure accuracy in data collection observers were trained to recognize on- and off-task behavior, praise and reprimands, and treatment fidelity and record it appropriately. The training was completed once observers reached 90% accuracy in training sessions. Two observers collected data during the same observation 54% of the time and the inter-observer agreement averaged 95.6%. Inter-observer agreement averaged 86.2% for praise-to-reprimand rates and 98.78% for the treatment fidelity checklist.

Design and Analysis

Classroom 1 collected nine baseline (September to March) and five intervention data points (April to March) and utilized an AB single-subject design. There was no reversal phase with Classroom 1 due to school-wide testing which occurred before the end of the school year and prevented time from being available to reverse.

This study used a single-subject reversal design (ABAB) for Classroom 2 and Classroom 3. This design is effective in demonstrating within-subject relationship between environmental changes in the classroom and subsequent changes in student behavior. Both Classrooms 2 and 3 began the intervention at the same time. Five baseline data points were gathered for Classroom 2 and four data points were gathered for Classroom 3 (between September and October). After allowing for training the teacher and the introduction of social skills to the class five intervention points were gathered for Classroom 2 and four for Classroom 3 (November to January). Descriptive statistics, which included means and standard deviations, were calculated across treatment phases to determine the impact of the intervention on student and teacher behavior. Visual analysis of level, trend, and variability of the data was also conducted. Finally, Tau U was

used to determine the effect size by analyzing non-overlapping data points between phases, which is appropriate for single-subject research (Parker, Vannest, Davis, & Sauber, 2010).

The fidelity checklists were analyzed to determine the effect to which the teacher was able to implement CW-FIT appropriately. Fidelity checklists were completed after every baseline, intervention, and reversal phase. An average fidelity score was analyzed to make a determination as to the degree of fidelity. Furthermore, analysis was provided to show the teacher praise-to-reprimand rates during each phase of the study as well as group on-task behavior rates. Finally, results from the social validity questionnaire were analyzed qualitatively.

CHAPTER FOUR: RESULTS

Results of the present study are described according to each research question. These results are detailed in the following sections. Treatment fidelity was addressed first in order to determine if the teacher could effectively implement CW-FIT. If she was unable to there would not be an expected improvement in praise-to-reprimand ratios or group on-task behavior. Praise-to- reprimand ratios were addressed next because previous research shows that improvement leads to better student on-task behavior. Group-on task behavior was addressed before social validity which spoke to the usefulness and practicality of CW-FIT.

Treatment Fidelity

The first research question in this study asked, "Is an art teacher able to implement CW-FIT with fidelity?" The art teacher was able to implement CW-FIT with an average of 79% (*SD*=0.64) fidelity across the three participating classrooms during treatment phases. During the baseline and reversal phases phases of the study, the teacher naturally implemented an average of 9.6% (*SD*=.022) of components of CW-FIT.

During treatment phases across classrooms, fidelity was 100% for "skills prominently displayed on posters" for all three classrooms. The following skills had high fidelity of 80% or more during implementation: "timer used and set at appropriate intervals", and "behavior specific praise given", "points awarded to teams for use of skills", "points tallied for teams", "frequent praise (points) given", and "praise-to-reprimand ratio approximately 4:1." The following components were implemented with lower fidelity: "point chart displayed" (15.6%), "daily point goal is posted" (25%), and "corrections that reference use of skills" (34%).

Praise-to-Reprimand Ratio

The second question in this study asked, "Does the implementation of CW-FIT in art classrooms result in an increased teacher praise-to-reprimand ratio?". During the baseline phase across all three classrooms the teacher praised the students an average of 11.35 times (*SD*=6.63) and the average reprimands given was 12.46 (*SD*=3.82) for a ratio of .91:1. While CW-FIT was being implemented across the three classrooms the average praise statements given by the teacher was 11.88 (*SD*=4.6) and the average reprimands given was 4.48 (*SD*=0.83) for a ratio of 2.65:1.

Withdrawal data was only collected in Classroom 2 and 3. These two classes averaged 5.3 (SD=6.08) praise statements and 7.9 (SD=1.03) reprimands for a ratio of .67:1 during this phase. When CW-FIT was re-implemented they averaged 8.6 praise statements and 1.975 reprimands and the praise-to-reprimand ratio increased to 4.35:1.

Tau-U analysis of increases in praise rates was significant for Classrooms 3 (*Tau u* = .571, *p*= 0.0577) between phases. The increases in praise rates were not significant for Classroom 1 (*Tau u* = -.155, *p*= 0.64) and Classroom 2 (*Tau u* = .245, *p*= 0.3354). There was a significant decrease in reprimand rates in Classroom 1 (*Tau u* = -.8222, *p*= 0.0136) and Classroom 3 (*Tau u* = -1 *p*= 0.0009). However, the reprimand decreases in Classroom 2 was not significant (*Tau u* = -.669, *p*= -1.037).

Group On-Task Behavior

The third research question in this study asked, "Does the implementation of CW-FIT in three art classrooms result in increased group-on task behavior?" as indicated by individual classroom data. Classroom 1 (see Figure 1) began with baseline of 58.97% (*SD*=15.91) on-task behavior and was highly variable with an overall downward trend. Group on-task behavior

increased to 84.4% (*SD*=4.95) during the implementation of CW-FIT and was less variable with a stable trend. This indicates an improvement in on-task behavior of 25.49% after CW-FIT implementation. Reversal phase for this class was not collected due to the end of the school year.

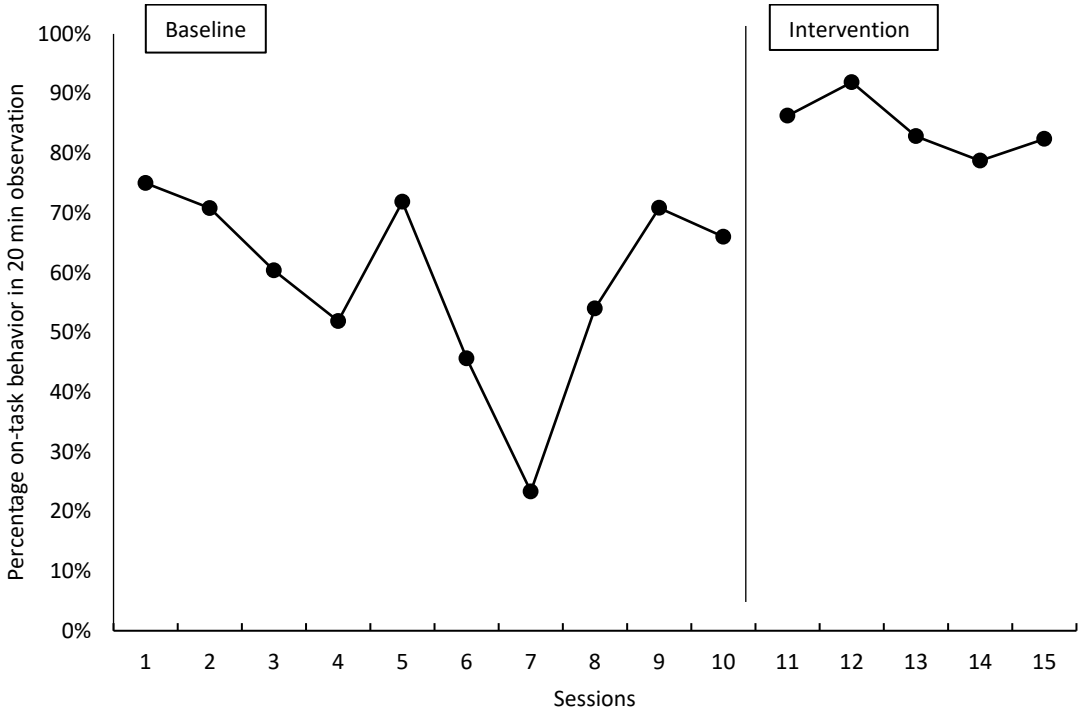

Figure 1. Group on-task percentages across phases for Classroom 1.

Group on-task behavior in Classroom 2 (see Figure 2) also improved during implementation of CW-FIT. The on-task behavior was 69.5% (*SD*=4.73) during the baseline phase. The data was rather stable with little variability and had a slight upward trend. On-task behavior improved to 85.8% (*SD*=6.15) during implementation of CW-FIT; There was slight variability in the data with a slight upward trend. During the reversal phase, on-task behavior decreased to 74.4% (*SD*=1.9), only 4.9% above baseline, and had a stable trend. Finally, during the reimplementation of CW-FIT on-task behavior increased again to 90.17% (*SD*=4.91) with a stable and slight downward trend. Overall, when CW-FIT was not being used in the class group on-task behavior averaged 71.95% (*SD*=4.27) and during the implementation of CW-FIT it

averaged 87.98% (*SD*=5.73). These results indicate that group on-task behavior improved by 16% during the implementation of CW-FIT in Classroom 2.

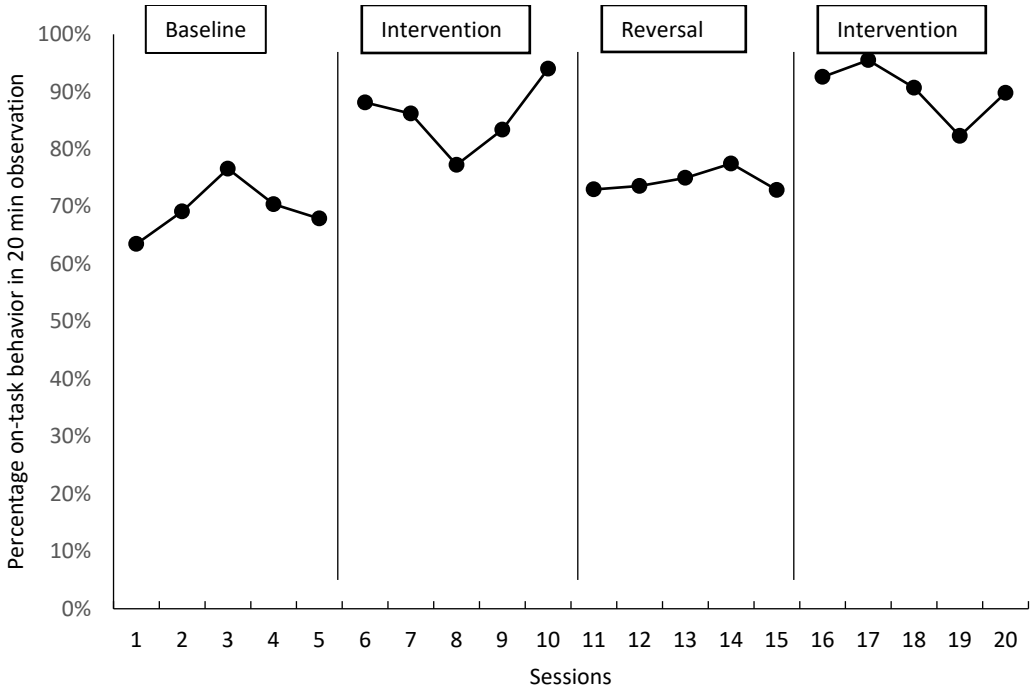

Figure 2. Group on-task percentages across phases for Classroom 2.

Classroom 3 (see Figure 3) began with baseline group on-task behavior of 68.5% (*SD*=7.52) and showed a clear downward trend. On-task behavior then improved to 86.5% (*SD*=6.35) during the implementation of CW-FIT with a slight downward trend. During the reversal phase on-task behavior decreased below baseline to 63.4% (*SD*=14.67) and was highly variable with a clear downward trend. On-task behavior improved to 90.3% (*SD*=3.12) during reimplementation with a slight upward trend. This classroom showed an overall improvement of group on-task behavior of 22.45% while CW-FIT was being used.

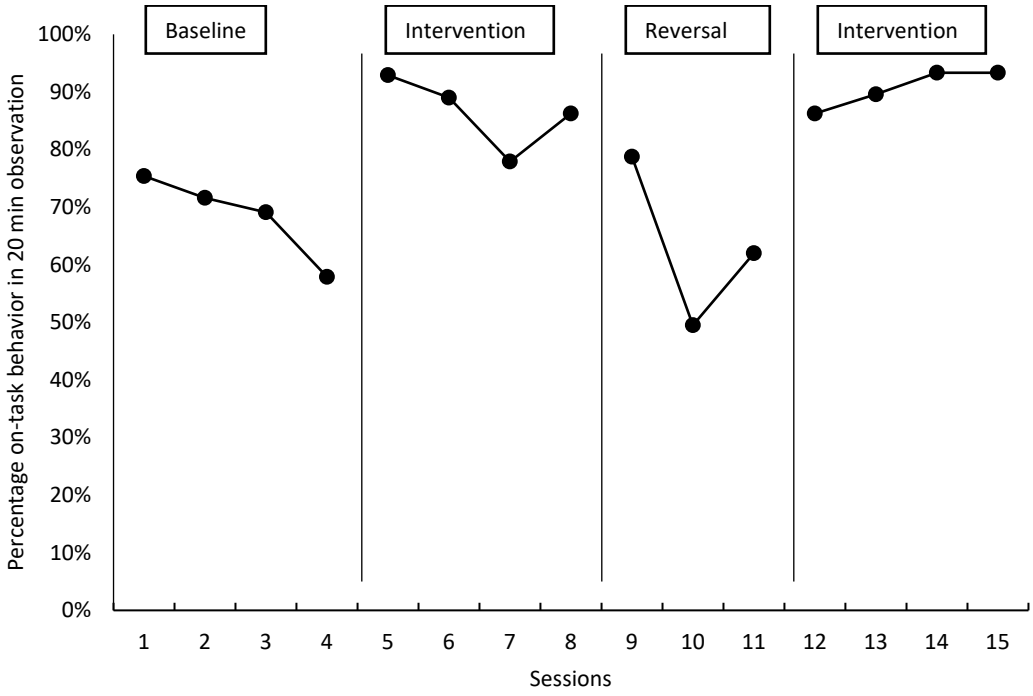

Figure 3. Group on-task percentages across phases for Classroom 3.

The baseline group on-task behavior across the three classrooms averaged 65.65% (*SD*=12.96). The group on-task behavior increased to an average of 85.56% (*SD*=5.41) after implementation of CW-FIT. During the reversal phases of Classrooms 2 and 3 on-task behavior decreased to 68.9% (*SD*=9.79), 3.25% above baseline levels. Finally, in Classrooms 2 and 3 group on-task behavior increased to 90.23% (*SD*=3.96) with the reimplementation of CW-FIT. These changes in group on-task behavior indicated an 18.3% average improvement in group on-task behavior during the implementation of CW-FIT in these elementary art classrooms.

The Tau-U analysis showed statistically significant differences in on-task behavior between baseline and intervention phases for all three classrooms combined (*Tau u* = 1, $p < 0.001$) and for each individual class as follows: Classroom 1 (*Tau u* = 1, $p < 0.0027$), Classroom 2 (*Tau u* = 1, $p < 0.002$), and Classroom 3 (*Tau u* = 1, $p < 0.0017$).

Social Validity

Teacher. The final research question of this study asked, “Do art teachers and students

find CW-FIT to be socially valid?". The teacher answered "very true" when asked if she enjoyed being a CW-FIT intervention teacher and "mostly true" that it was easy to implement in her classroom. She noted some instances where it was difficult to stop her drawing instruction in order to award point. She also expressed concerns regarding implementing CW-FIT for Classrooms 1 and 2 given the fact that they had only 30 min for art instruction. She answered "very true" that the use of teams and points was helpful in improving student behavior and in learning new skills to help her students' behavior. She answered that she would likely use CW-FIT in other classes and recommend it to her colleagues. She also answered that she felt her students enjoyed CW-FIT and they were more focused and engaged when it was being used. Finally, she gave two short answer responses saying, "I appreciate the training from [research assistant]. She was available to answer questions when they arose" and "I have been very happy with how we are currently doing it".

Students. A total of 51 students (77% of total student participants) were surveyed across the three participating classrooms. Of those students, 46 (90%) said that they liked using CW-FIT. The remaining 10% answered "no", or wrote in their own answers of "sometimes" or "maybe". The students were also asked an open ended question, "What do you like about it?". The most common answers were "the rewards/prize at the end" (*n*=19), "it is fun" (*n*=9), and "you get to play a game" (*n*=8). When asked "Is there anything you don't like about it?" 45% of students answered "no". Those who answered "yes" stated it "took away time from art" (*n*=4), "if one person makes noise your team doesn't get a point" (*n*=4) and "the point goal gets higher" (*n*=2). The survey then asked "Do you think other kids should get to play CW-FIT in their classrooms?"; 86.2% of students answered "yes". When asked "Why?" those that answered favorably often said "because it's fun" (*n*=16) or "it will help others get better" (*n*=8).

CHAPTER FIVE: DISCUSSION

The purpose of this study was to determine if CW-FIT, a group contingency program based on principles of SWPBS, would be effective in improving student behavior in three elementary art classrooms. Previous studies have shown CW-FIT to be effective in improving student behavior in general education classrooms (Caldarella et al.; 2015, Wills et al., 2010; Wills et al., 2014), a music classroom (Caldarella et al., 2016), and preschool classrooms (Jolstead et al., in press). In all of these past studies group on-task behavior and teacher praise-to-reprimand ratios improved significantly during implementation of CW-FIT. This is the first study of CW-FIT in art classrooms and the findings suggest it was effective.

First, the results of this study indicated that the participating art teacher was able to implement CW-FIT with fidelity. These results are consistent with the fidelity found in other CW-FIT studies (Caldarella et al.; 2015, Wills et al.; 2010, Wills et al., 2014). The areas in which the teacher had lower fidelity were "point chart displayed," "daily point goal is posted," and "corrections that reference use of skills." The teacher implemented most CW-FIT components with high fidelity including: "timer used and set at appropriate intervals", "behavior specific praise given," and "points awarded to teams for use of skills." These results indicate that while this art teacher had difficulty with a few components of CW-FIT, she was able to implement most with fidelity. This is an important finding since the research into behavior interventions in art classrooms is limited. These findings suggest CW-FIT may be feasible for art teachers to implement in their classrooms with fidelity.

Second, there was a significant improvement in teacher praise-to-reprimand ratios during the implementation of CW-FIT. During baseline phases the art teacher gave more reprimands

than praise statements. This reversed during the implementation of CW-FIT and improved to about a 3:1 praise-to-reprimand ratio which conforms more closely to best practice recommendations for increasing praise rates to improve positive behavior in classrooms (Nelson et al., 2010). During the reversal phases in Classrooms 2 and 3 the praise-to-reprimand ratio returned to baseline levels. The praise-to-reprimand rated improved to the 3:1 ratio again upon reimplementation of CW-FIT. These finding are consistent with other CW-FIT studies showing that praise-to-reprimand ratios improve significantly during the intervention (Caldarella et al., 2015; Wills et al., 2010; Wills et al., 2014). The teacher indicated that her praise rates may have been lower during baseline because she thought that art was already a reinforcing task and was concerned verbal praise could be excessive. It is likely that the praise rates improved through use of the timer that vibrated and reminded her to offer praise. The teacher also used "bonus points" which provided extra opportunities for her to praise the students. These finding are important since increased praise leads to improved student behavior (Howell et al., 2014).

Third, group on-task behavior improved significantly when CW-FIT was being implemented. The classrooms showed an average of 18.3% improvement in on-task behavior. An improvement in on-task behavior is consistent with previous CW-IT studies (Caldarella et al., 2015; Wills et al., 2010; Wills et al., 2014) but are likely lower due to initial on-task behavior rates. The on-task behavior in this study started higher than in past CW-FIT studies likely because art is more engaging. While on-task behavior did not improve to the same degree as in other settings there was still a high rate of on-task behavior. Research has shown that improved student on-task behavior allows for more instructional time and a better learning environment (Carter & Pool, 2012).

Finally, the teacher and students found CW-FIT to be socially valid which is also consistent with previous studies (Caldarella et al., 2015; Wills et al., 2010; Wills et al., 2014). The teacher rated CW-FIT positively and indicated that it was fairly easy to implement. She also believed that the use of this intervention helped improve student behavior. The teacher did indicate that she did not like some components of CW-FIT such as use of the timer. She also noted there were time constraints with two of the classes that were only taught in 30 min periods. It is important to have an intervention that teachers perceive as socially valid and can be practically applied in their classrooms (Marchant, Heath, & Miramontes, 2012). The vast majority of students also indicated that they liked CW-FIT and thought other children should be able to participate. Several noted that it was fun, they liked the group rewards, and it helped improve behavior.

This research has shown that CW-FIT could be a useful tool for elementary art teachers to manage student behavior. Previous research has shown that classroom management is a major concern for art teachers as many feel overwhelmed by difficult student behavior (Kuster, Bain, Newton, & Milbrandt, 2010). This could be especially useful for new art teachers who often report feeling unprepared to manage student behavior (Kowalchuck, 1999). It is likely that CW-FIT will be especially beneficial since it utilizes key principles of SWPBS: social skills instruction, praise, token economy, and group contingency. While this framework is widely supported, some critics argue that these strategies are restricting autonomy and creating students that are docile (Winett & Winkler, 1972). However, the purpose of this intervention is not to control students to conform to our desired behavior, but rather to allow the classroom to function in order to allow time for instruction and learning. These findings are important since the

research into behavior management in art classrooms is very limited and the results of this study indicate that CW-FIT could be a practical tool for art teachers.

Limitations and Areas for Future Research

While the results of this study were positive there were some limitations. First, there was only one participating art teacher in this study and three classrooms. Due to concerns of generalizability, replications of this study are recommended in other art classrooms. While there was a range of diversity among the students, the intervention should be further studied in other settings. Second, the participating teacher was not a certified art teacher. She was an artist who had been teaching for ten years, but did not have any formal training in art education. This leads to a concern as to the differences between a certified art teacher and one with no formal training. Research examining the use of CW-FIT with certified art teachers would help to further validate these study findings.

Third, there were some modifications to the intervention made by the art teacher in order to better accommodate the use of the intervention. As opposed to previous CW-FIT studies, the timer was not audible to the students. The timer vibrated and reminded the teacher to offer praise and award points but there was no audible reminder to the students. This change was made as the teacher felt it was too difficult to stop art instruction in order to stop the timer immediately. Furthermore, the point chart was not always visible to the students. Due to the nature of art instruction, the teacher was limited in her ability to get up and award points on a visible poster. She compromised by placing a point chart under the document camera when she awarded points. Unfortunately, this was still not always visible to the students. Despite these modifications CW-FIT was still shown to be effective. Further studies would be helpful to see whether such modifications would be needed by other art teachers.

Fourth, due to time constraints fewer baseline data points were able to be collected for Classroom 3. Since this class was held once a week and also fell on two national holidays only four data points were collected for each phase, except reversal where three were collected. In single-subject research three data points in each phase meets the standard for a reversal design with some reservations, while five or more data points are needed to meet the standard with no reservations (Kratochwill et al., 2010). For this reason, the results of Classroom 3 should be interpreted with some caution. Additionally, there was no reversal phase in Classroom 1 due to the end of the school year. Further studies with longer baseline and reversal phases would be helpful to validate these study findings.

Finally, several target students were identified by the teacher as having more difficult behaviors. The research team planned to collect and analyze individual data to determine if the intervention was effective for more challenging students. Due to the limited time for art instruction there was not sufficient opportunity to collect and analyze data for changes in individual student behavior.

Conclusion

While replications of this study are necessary to determine the effectiveness of CW-FIT in other classrooms, the results offer a promising intervention for art teachers. The research into behavior interventions in art classrooms is very limited and many art teachers list managing student behavior as a major concern (Kuster et al., 2010). The results of this study indicate that an art teacher was able to implement CW-FIT with fidelity in three classrooms and it led to increased praise-to-reprimand ratios and improved student on-task behavior. Additionally, the art teacher and students liked CW-FIT and indicated it was socially valid. Overall, these results

suggest that CW-FIT could be a practical tool for art teachers to positively manage student behavior in the classroom.

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APPENDIX A: CONSENT FORMS

Dear Parent / Guardian,

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

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

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

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

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

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

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

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

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

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

Estimado Padre de Familia,

Introducción
La Universidad de Brigham Young representada por los investigadores Paul Caldarella PhD. y K. Richard Young Ph.D. junto con la Universidad de Kansas son parte de una coparticipación de un estudio en la Escuela Primaria [redacted]. 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 incrementar en los estudiantes las habilidades sociales, su atención, y su aprendizaje. De igual manera los maestros aprenderan mejores maneras de cómo 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 clases el maestro(a) de su hijo(a) llevará acabo la aplicación del programa CW-FIT en el otoño o la primavera. El estudio 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.

Para fines de la investigación, el personal de BYU recolectará observaciones del comportamiento de la clase. Su hijo(a) no será identificado o individualizado durante la observación y ningún tipo de información personal será recolectada. El propósito de estas observaciones es determinar si CW- FIT mejora o desarrolla un comportamiento apropiado en la clase como conjunto. Se recogerá información demográfica de la clase. Además los maestros participantes identificarán a los estudiantes que tengan problemas de comportamiento en las aulas de clases y quienes se podrían beneficiar de intervenciones CW-FIT más intensivas CW-FIT. Se le notificará y se le pedirá su consentimiento antes de implementar una intervención del estudio de forma individualizada en caso de que su hijo(a) sea identificado por el maestro(a) de su hijo(a).

Riesgos/Desventajas
Son muy pocos los riesgos involucrados en tener a su hijo(a) observado(a) por el personal de BYU o identificado/a por su maestro. Tener los observadores de BYU en la clase podrían posiblemente 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), a menos que ud. proporciones consentimiento individual. Si el maestro(a) identifica que

su hijo(a) 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(a), aunque estudios anteriores de CW-FIT han demostrado mejoría en el aprendizaje de los estudiantes, un mejor comportamiento en las aulas de clase, y una mejor interacción social con sus compañeros y maestros. Los resultados de este estudio ayudarán a validar CW-FIT y ayudar a las escuelas a desarrollarse en todos sus esfuerzos.

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

Confidencialidad
Ninguna información de identificación asociada con usted o su hijo(a) 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 tendrán acceso a esos datos. La información obtenida a través de las observaciones a nivel de clase serán proporcionadas a los investigadores de la Universidad de Brigham Young y la Universidad de Kansas. Esta 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 reglas de confidencialidad establecida por la escuela. Cualquier información sobre estudiantes que no participen en la investigación permanecera en la escuela de su hijo(a) y los investigadores del estudio no tendrán acceso a esa información.

Participación
La participación de su hijo(a) en este estudio es de forma voluntaria. Ud. tiene el derecho a rehusar la participación de su hijo(a) o de retirar a su hijo(a) del estudio en cualquier momento, lo que significan que los investigadores no incluirían a su hijo(a) en las observaciones a nivel de clase y los maestros no identificarían a su hijo(a) para intervencion CW-FIT adicionales, aun cuando CW-FIT pudiese estar ocurriendo en el salón de clases de su hijo(a). Si no desea participar en el estudio o si una vez siendo participe del estudio desea retirarse, podrá hacerlo y esto no afectara de ninguna manera el estatus de su hijo(a) 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 o con el Dr. K Richard Young en richard_young@byu.edu o llamando al (801) 422-2277.

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 B: 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)*

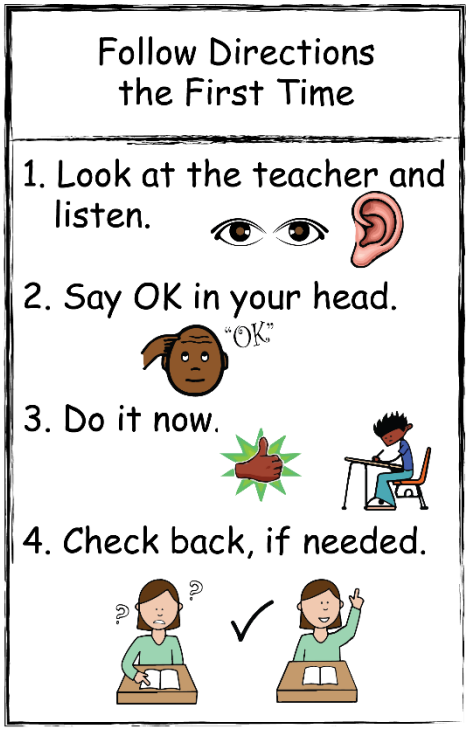
Role Play

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.

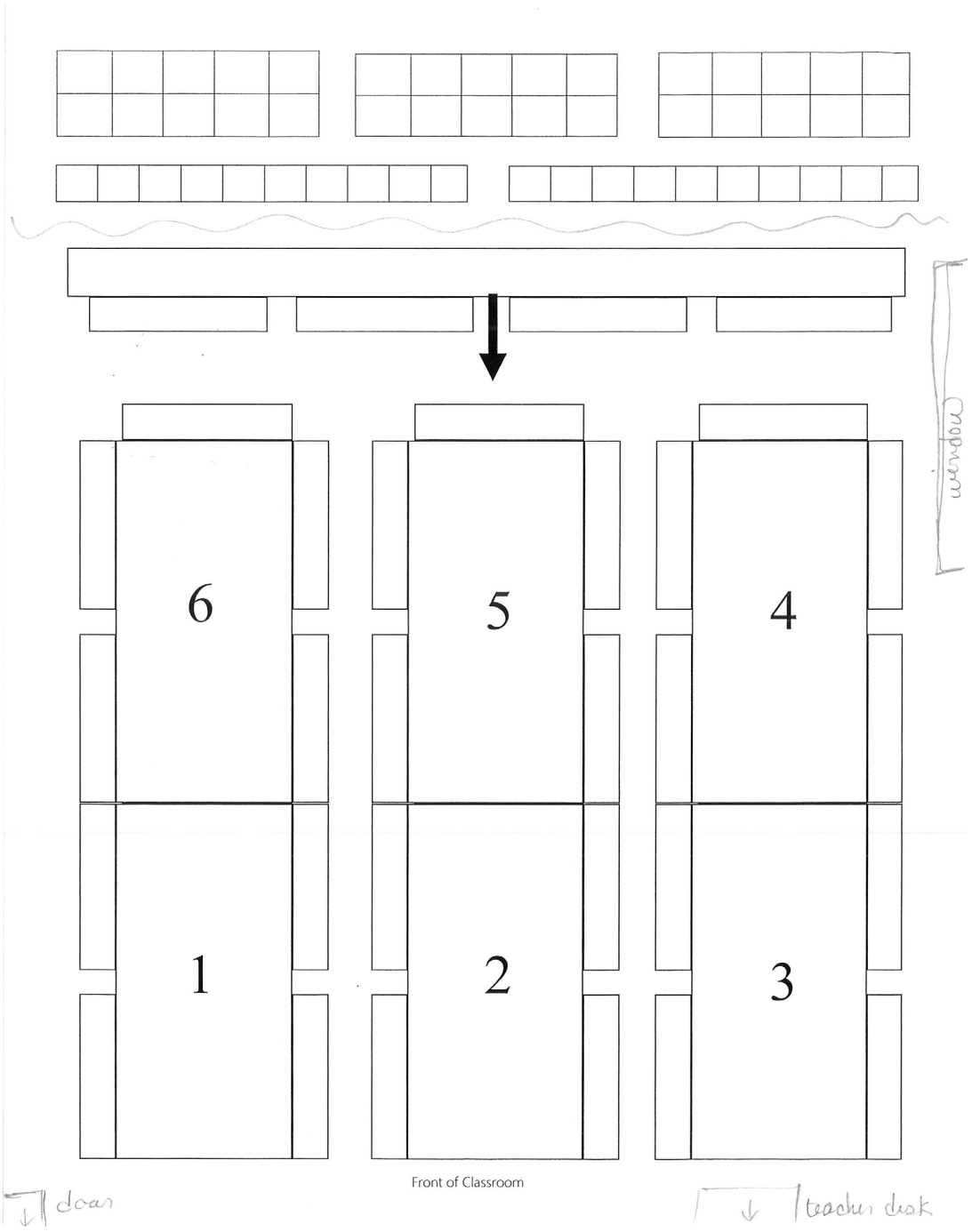
Review

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

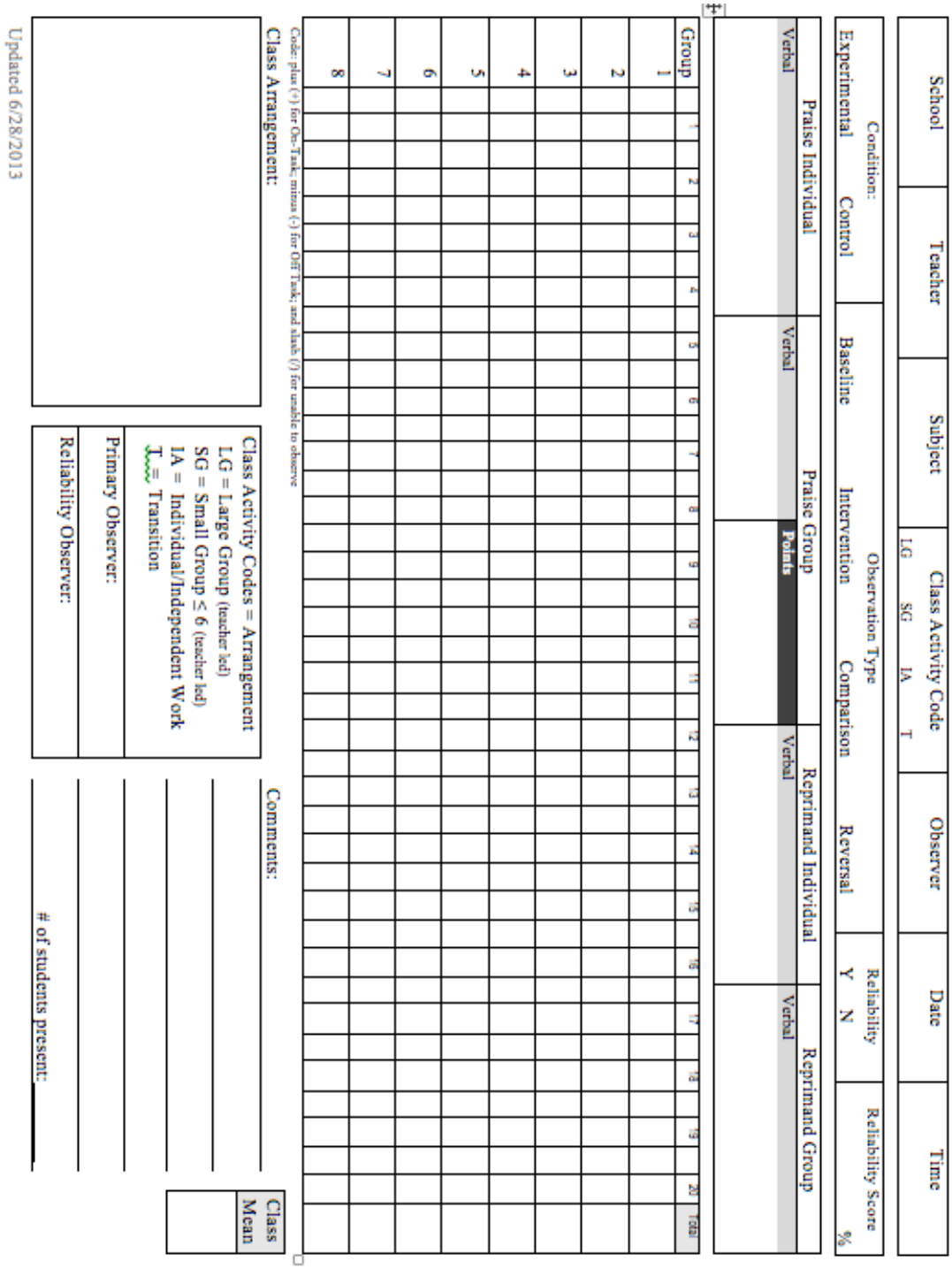
APPENDIX C: CW-FIT SOCIAL SKILLS POSTERS



APPENDIX D: SEATING AND POINT CHART



APPENDIX E: GROUP ON-TASK SHEET



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

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

Praise Individual: Verbal	Praise Group: Verbal / Points	Reprimand Individual: Verbal	Reprimand Group: Verbal

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

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			

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.

Time Spent:			

Check the primary lesson

☐ Reading ☐ Writing

☐ Math ☐ Science

☐Other

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. Points awarded to teams for use of skills

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

9. Points tallied for teams

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

10. Winners immediately rewarded.

    After adding up point totals and comparing the totals with the goal, the teacher should announce the teams who met their goal. The winning teams should receive their prize or activity right away, without delay.

    *Note: If reward is delayed but students are given a tangible representation of their reward, such as ticket or a token, code this item **"YES"**.

11. Winners reward announced if delayed.

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

12. Frequent praise (points) given.

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

13. Behavior-specific praise given.

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

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

Classroom Management –student behavior definitions

* Refer to percent scale on the fidelity checklist.

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

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

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

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

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

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

7. Frequent & specific praise given.
   Percentage of time that students are being praised for exhibiting good behavior. When praise is given, the teacher should explicitly say *what* the students were doing well. This can be done on an individual or group basis (i.e. “Sally, nice job raising your hand to get my attention!” or “Class, I am really proud of how you have been listening respectfully.”). In addition, points awarded count toward the frequency of praise. If the points are specific (“team 1 gets a point because they were sitting

in their seats") then that counts towards the specificity criteria. The teacher should give at least 3 specific verbal praises throughout the lesson and/or accompany points with specific verbal praise every 4th time the timer goes off.

8. 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. 3 to 5 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: SOCIAL VALIDITY QUESTIONNAIRES

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**

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! ☺