

THE EFFECTS OF A GROUP CONTINGENCY ON GROUP AND INDIVIDUAL
BEHAVIOR IN AN URBAN FIRST-GRADE CLASSROOM

by

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Abstract

The current study examined the effects of a class-wide group contingency on the on-task behavior of a first-grade class and the on-task and disruptive behavior of three target students within that class who were nominated by their teacher through a behavioral screening. The classroom teacher used a systematic instruction model (i.e., direct instruction, model, and role-play) to teach three behavioral skills: (a) gaining the teacher's attention appropriately, (b) following directions, and (c) ignoring inappropriate peer behavior. These skills were reinforced through an interdependent group contingency in a class-wide game. The effects of the intervention on target student and class behavior were evaluated in a reversal design. Results showed the group contingency was effective in increasing the on-task behavior of the class and target students. A reduction in disruptive behavior was also seen for each target student during intervention. Students and teacher reported a high degree of satisfaction with the intervention.

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Discipline and behavior problems have been identified by teachers and the general public as among the biggest problems facing public schools today (Langdon & Vesper, 2000; Rose & Gallup, 2005). Schools have increasingly responded to challenging behaviors from students with reactionary and punitive procedures. Zero tolerance policies, which began as a response in the late 1980s to incidences of drug and weapon problems in schools, have been extended to less serious offenses such as disruptive behavior and absenteeism (Skiba & Peterson, 1999). These widespread policies (US Department of Education and Justice as cited in Scott, Nelson & Laupsin, 2001) result in suspension and expulsion of students and are often viewed as inequitable and excessive (Skiba & Peterson, 1999; 2000; Curwin & Mendler, 1999). Additionally, these policies remove students from the academic environment and fail to teach appropriate behaviors (Sugai & Horner, 2002).

Institutions concerned with educational research and policy are increasingly advising the use of preventative approaches to behavior and discipline issues in schools. The Individuals with Disabilities Education Act (IDEA) of 1990 and the reauthorization of IDEA (1997) recommend research to develop practices that focus on prevention rather than exclusion. Through IDEA, the U.S. Office of Special Education Programs has funded multiple grants addressing the prevention of problem behaviors (Algozzine & Kay, 2002). Numerous organizations, including the American Psychological Association, Center for the Study and Prevention of School Violence, and Center for Positive Behavioral Interventions and Supports, advocate positive and preventative strategies (Sugai & Horner, 2002). Professionals in the field

of special education research also advocate comprehensive strategies and preventative approaches to increase learning and improve behavior (Walker et al., 1998). Multiple studies (Forness, Serna, Nielsen, Lambros, Hale, & Kavale, 2000; Serna, Lambros, Nielsen & Forness, 2002; Serna, Nielsen, Lambros, & Forness, 2000; Serna, Nielsen, Mattern, & Forness, 2003) have focused on early screening of children for emotional and behavior disorders and the development of a variety of social skill programs designed to prevent these disorders in at-risk individuals.

Classwide Function Based Intervention Teams (CW-FIT) (Heitzman-Powell, Schmidt, & Kamps, 2006) is a program developed in response to these recommendations and the rising concerns surrounding problem behavior in schools. CW-FIT is intended as a preventative approach for classrooms in which behavior problems may be more likely to occur, as well as a tool to address problem behaviors that may be ongoing in classrooms. In a meta-analysis, Stage and Quiroz (1997) evaluated the effectiveness of interventions designed to reduce disruptive classroom behaviors. The authors found group contingencies and differential reinforcement were two of the three most effective interventions in public school settings. Thus, CW-FIT was designed based on evidence and research-based interventions to address disruptive student behavior. The program is comprised of two main components: (a) Teaching specific behavioral skills that may increase teacher attention for appropriate behavior, reduce peer attention for inappropriate behavior, and increase compliance in the classroom environment through the use of a systematic instructional model; and (b) differentially reinforcing behavioral skills through a group contingency

established within a game format. The following narrative briefly describes literature in support of the CW-FIT intervention components.

Social Skills: Teaching Appropriate Behaviors

Consistent with direct instruction models used in social skills instruction, CW-FIT implementation involves the progressive teaching of behavioral skills by a trainer or teacher. Initially, detailed explanations of desired behaviors are given. The teacher models the behaviors for the students and subsequently engages students in practice or role-play situations where behaviors can be displayed. The teacher facilitates student role-play and provides corrective feedback and praise to shape and reinforce behaviors (Michelson, Sugai, Wood, & Kazdin, 1983).

Numerous studies have explored the effects of this social skills instructional model. Langland, Lewis-Palmer, and Sugai (1998), for example, taught two seventh-grade classes the pro-social behaviors of showing respect to peers and adults by defining behavioral skills, using a common language for target behaviors, modeling examples and non-examples of the skills, and having students role-play situations in which skills could be used. To promote fluency, generalization, and maintenance, students displayed the skills in situ and received praise from the teacher. The results showed a reduction in disruptive behaviors for the classes following skill instruction.

Sasso, Melloy, and Kavale (1990) used similar procedures to teach social skills to three students diagnosed with behavioral and/or developmental disorders. Social skill deficits were identified, and skills that addressed those areas (e.g., asking permission, apologizing, expressing thanks) were defined and taught by teachers to

individual students using the model, role-play, and feedback format. The authors concluded this instructional approach was effective in teaching behaviors that maintained over time and generalized to other settings.

Direct and systematic instruction of social skills has also been effective with delinquent adolescents (Rutherford, Mathur, & Quinn, 1998), preschool and kindergarten children (Kamps, Ellis, Mancina, & Greene, 1995; Webster-Stratton, & Hammond, 1997) and individuals with learning disabilities (Prater, Serna, & Nakamura, 1999). Tankersley, Kamps, Macina, and Weidinger (1996) implemented a social skills intervention as part of a conduct disorder prevention program for at-risk preschool children. The results showed target student and comparison peer groups that received intervention had significantly lower rates of negative social behavior (e.g., aggression, negative verbal statements, out-of-seat behavior) than did the control group that did not receive intervention. Serna et al. (2000) provided systematic instruction of skills in direction following, sharing, and problem solving to 84 children identified as at-risk for emotional/behavioral disorders in five Head Start classrooms. Skills were defined and taught through stories, students role-played the skills until they met a mastery criterion, and teachers then required students to display the skills in the classroom during typical activities. Praise and corrective feedback were provided by the teachers. This social skills instruction for the children was combined with instruction for their parents in an intervention designed to affect scores on mental health outcome measures. Results indicated that students who received the social skills instruction along with their parents scored higher in post-

assessment measures of adaptive behavior and social interaction, while the control group showed no significant changes.

Group Contingency as a Reinforcement Strategy

The second major component of CW-FIT is reinforcement of desirable classroom behaviors through a group contingency. Group contingencies have been used in classrooms to decrease disruptive behavior (Harris & Sherman, 1973; Salend, Reynolds, & Coyle, 1989), increase compliance (Swiezy, Matson, & Box, 1992), and increase on-task behavior (Fishbein & Wasik, 1981; Packard, 1970). Group contingencies typically incorporate a token economy through which desired behaviors are reinforced. In a token economy, a medium of exchange (e.g., poker chip, tally mark) is selected that can be used to purchase a “backup” reinforcer (e.g., candy, free-time). The token becomes a conditioned reinforcer due to its pairing with the backup reinforcer and it bridges the time between the occurrence of a behavior and delivery of the backup reinforcer (Ayllon & Azrin, 1968). Group contingencies are generally one of three types: dependent, independent, or interdependent (Litow & Pumroy, 1975). Much research and practice in schools has focused on the interdependent contingency (Litow & Pumroy, 1975; Tingstrom, Sterling-Turner, & Wilczynski, 2006). This type of contingency involves putting the same response contingency in effect for all individuals within a group and applying it to some level of group performance. Reinforcement is dependent on the behavior of each member of the group (Litow & Pumroy, 1975).

In their seminal study, Barrish, Saunders, and Wolf (1969) showed a reduction in disruptive classroom behavior with the application of an interdependent group contingency called the Good Behavior Game (GBG). In this study, the class was divided into two teams that competed to earn privileges in the classroom, such as lining up first for lunch and free time. Teams would earn marks against their team if any student on the team displayed disruptive behavior. If teams received fewer than the predetermined number of marks, they earned a reward. The GBG has been used with success in numerous classrooms, and over 25 replications of the study have been published (Tankersley, 1995; Tingstrom et al., 2006). In a review of the literature on GBG, Embry (2002) described the generality of the game. The effects of the GBG have been shown with demographically dissimilar populations, in multiple settings, and using a variety of reward types. Embry suggests the GBG may have preventative effects and advocates the widespread dissemination of this program through a public health model.

The effects of an interdependent group contingency with token economy on the behavior of three classes of elementary school students were evaluated by Babyak, Luze, and Kamps (2000). Desirable student behaviors were taught by defining, modeling, and role-playing with students, and in-class rewards were delivered to student groups who displayed those behaviors. An increase in the percentage of time working quietly and remaining in seats was observed in each of the three classes when the contingency was in effect. In a similar study, Koch and Breyer (1974) implemented an interdependent group contingency with a token

economy in a fifth-grade classroom and evaluated its effect on class on-task behavior. Students were assigned to teams that could earn points by being on-task. The classroom teacher randomly observed each group and awarded points to groups in which all students were on-task at the time of the observation. Points could later be traded for access to free-time activities. The authors found the intervention to be functionally related to increases in class on-task behavior.

Reinforcement in a group contingency can be applied differentially to behaviors. Differential reinforcement is the reinforcement of some members of a response class and not others (Catania, 1998, p. 386). For example, in the classroom, reinforcement, in the form of teacher attention, may be given when a student raises their hand before speaking, but not when the student talks without permission. McLaughlin and Malaby (1972) differentially reinforced quiet behavior of fifth and sixth grade students. Students earned one point for each 5-min interval in which they displayed appropriate behavior (i.e., no talking). No points were awarded to students who displayed inappropriate verbalizations. The differential reinforcement of quiet behavior resulted in a reduction in inappropriate verbalizations.

Musser, Bray, Kehle, and Jenson (2001) used differential reinforcement as one component of an intervention to reduce disruptive behavior of three elementary school children diagnosed with multiple behavioral disorders. Compliance with classroom rules was differentially reinforced through a token economy in which every thirty minutes students earned stickers that could be exchanged for rewards at the end of the school day. The multiple baseline design across subjects showed a

reduction in disruptive behavior for each student when the intervention was introduced. In a similar study, Reitman, Murphy, Hupp, and O'Callaghan (2004) implemented a class-wide game that incorporated a dependent group contingency in which rule-following behavior was differentially reinforced. Once every 10-min, the teacher would deliver praise and game points if appropriate classroom behavior had occurred. Points were exchanged for backup reinforcers twice each day. A reduction in problem behavior was observed for three target students during intervention phases.

One benefit of the use of a group contingency to manage behaviors within a classroom is that it is possible to change the behavior of a large number of students using only one intervention. Group or class-wide interventions are often preferred over individual contingencies for multiple students because of the management difficulties for teachers associated with individual behavior plans (Skinner, Skinner, Skinner, & Cashwell, 1999). Thus, interventions that address the needs of the greatest number of students may be beneficial for teachers and students. One method to increase the number of individuals affected by a classwide intervention would be to target a common function of problem behavior. A review of literature on functional assessment in schools (Ervin, Radford, Bertsch, Piper, Ehrhardt, & Poling, 2001) reported that in studies in which functional analyses were conducted with students without disabilities, problem behavior was most frequently found to be sensitive to adult attention as a reinforcer. One hypothesis based on these findings is that interventions that reduce teacher attention for problem behavior and employ it as a

reinforcer for desirable behavior could affect the behavior of the greatest number of students.

In summary, social skills instruction to teach appropriate behavior and group contingencies with token systems to differentially reinforce behavior are two empirically validated intervention practices. Both of these components were incorporated in CW-FIT, as were skills that would allow students to access teacher attention as a reinforcer.

The purpose of the current study was to examine the effects of a multi-component intervention on the behavior of first-grade students in an urban elementary school. Specifically, the CW-FIT intervention was implemented to address the following research questions: (a) What are the effects of the intervention on disruptive and on-task behavior for students identified with ongoing problem behavior? (b) What are the effects of the intervention on class-wide on-task behavior? and (c) What are the effects of the intervention on teacher behavior?

Method

Setting and Participants

A class of 11 first grade students and their teacher in an urban core, charter elementary school participated in this study. The student body of 423 students was comprised of 36% Africans, 34% African-Americans, 21% Vietnamese students, 4% Caucasians, 4% Hispanics, and less than 1% Chinese students and Native Americans. A majority of these students (62%) were English language learners, with limited English proficiency. The school qualified for Title I status, as 94% of the student

body was eligible for free and/or reduced lunch (DLSC, 2005; Missouri Department of Elementary and Secondary Education, 2005).

The current study was conducted within the classroom, during the final hour of the day. The Core Knowledge Curriculum taught during this time encompassed all major content areas, but focused on science and social studies. The group of students who participated in this study was together only during this class period due to the Direct Instruction curriculum used in the school. This curriculum requires children be placed within their skill level for each content area, and therefore with different groups of peers for each class.

A school-wide system of Positive Behavior Supports (PBS) was in place in the school in which the study was conducted. Five school-wide behavioral expectations had been established, and behaviors that exemplified these expectations were reinforced through the school-wide reward system. Teachers would deliver hole-punches to students' reward cards that could be redeemed for tangible items (e.g., candy). Ms. D., the teacher who participated in the current study, used this system of reinforcement in her classroom prior to and throughout the study.

Three children were chosen as target students by the teacher and researcher. Lilly, a six-year-old girl, had been nominated by her teacher, Ms. D., during a routine behavior screening conducted by university researchers four months prior to the current study. Lilly was identified as an "externalizer" based on her scores on the *Systematic Screening for Behavior Disorders (SSBD)* (Walker & Severson, 1992). The criteria for identification as an externalizer were either less than 31 points on the

adaptive scale, more than 33 points on the maladaptive scale, or 2 or more critical events (e.g., damages others' property, sets fires). Lilly had an adaptive score of 36, a maladaptive score of 28, and 4 critical events. Ms. D. identified stealing, ignoring teacher warnings and reprimands, requiring punishment to terminate an inappropriate behavior, challenging classroom rules, and running around the classroom as behaviors frequently exhibited by Lilly. Albert, a six-year-old boy, was also identified as an externalizer through the *SSBD* with an adaptive score of 30, a maladaptive score of 28, and 2 critical events. On Albert's *SSBD*, Ms. D. noted that Albert had tantrums and exhibited a sad affect to the extent that it interfered with normal peer and classroom activities. Other behaviors identified in Albert's screening were frequent disturbances in the classroom and lack of compliance with teacher requests. Malachi, a six year old boy, was identified as an externalizer, but was expelled from school the week following the start of the study and was therefore unable to participate. Faith, a six year old girl, was then chosen as a third target student. Although Faith had not been nominated during the behavior screening, Ms. D. reported Faith's behavior was a concern, as she frequently disrupted class and often refused to follow directions. All of these children were reading at benchmark for their grade level, as determined by the *Dynamic Indicators of Basic Early Literacy Skills (DIBELS)* (Kaminski & Good, 1998).

The teacher involved in this study was recruited by university researchers, and was paid \$300.00 for her participation. Ms. D. was a first-year teacher who had previously requested help with this class from the school leadership team. Teaching

strategies employed by Ms. D. during the core curriculum period were primarily lecture and read-aloud. Students were typically required to actively listen, read academic material to themselves or with a partner, and complete worksheets related to lectures with partial independence.

Procedures

The CW-FIT intervention consisted of two components: (a) Teaching three appropriate classroom behaviors; and (b) differentially reinforcing those behaviors through a classwide game.

Teaching appropriate behaviors. Three primary skills were identified. The first, “How to Get the Teacher’s Attention”, was designed to be a functional replacement for undesirable behaviors that may have been maintained by teacher attention (e.g., calling-out, getting out of seat). This skill was defined by four behavioral components: (a) Look at the teacher, (b) Raise your hand, (c) Wait quietly for the teacher to call on you, and (d) Ask your question or give your answer.

The second skill, “Follow Directions the 1st Time”, was designed to address a broad group of compliance behaviors. This included discrete task instructions the teacher gave the students (e.g., “Put your worksheet in the basket”), and encompassed behaviors commonly expected from students in the classroom, such as working quietly at a desk and attending to the teacher during instruction. This skill consisted of: (a) Look at the person (teacher) and listen, (b) Say OK, (c) Do it, and (d) Check back if needed.

The final skill, “Ignore Inappropriate Behavior”, was designed to minimize peer attention for behaviors (e.g., acting silly, touching peers, using inappropriate language) that might be sensitive to attention from peers as a reinforcer. The behavioral components of this skill were: (a) Keep a pleasant face, (b) Look away from the person, (c) Keep a quiet mouth, (d) Pretend you are not listening, and (e) Follow directions - do your work.

Preceding intervention, Ms. D. was given training literature (see Appendix A) that explained the teaching components of CW-FIT and that offered scripts for teaching the three primary skills of the intervention. A 45-min meeting was then conducted with Ms. D. to review the literature and discuss the instructional methods to be used. Following baseline, the three identified skills were systematically taught to the class, beginning with: “How To Get the Teacher’s Attention.” This skill was taught to the class by the researcher in order to model the desired instructional methods for Ms. D. A poster describing the skill was placed on the board at the front of the classroom. It was read to the students, and examples and non-examples of each component of the skill were given verbally and then modeled by the researcher. Students were then recruited to role-play three to four examples and non-examples. These role-plays were supervised by the researcher and teacher, and lessons were always ended with an example of appropriate behavior. The skill lesson took 10 to 15 min and was repeated the following three days. Ms. D. taught the remaining two skills using the same methods. Three to four days were spent teaching each new skill, and previously taught skills were reviewed each day.

Differential reinforcement. The CW-FIT game was introduced to the students after the third and final skill had been taught. The researcher explained the game to the class as follows. Each day, students would have the opportunity to earn a reward. The class would be divided into groups (teams) of three or four students each. If each student within the group displayed the skills that had been taught, they would earn points toward a daily goal. Ms. D. would set a point goal at the beginning of the class period and intermittently a timer would beep. At that time, Ms. D. would look around the room and determine if each student was displaying one or more of the skills. If all students in a group were doing so, Ms. D. would mark a tally in their group's column on a game matrix and deliver behavior specific praise (e.g., "Super job, Group A. You are all remembering to raise your hand to get my attention"). However, if one or more members of a group were not displaying the skills, an X would be placed in the column and Ms. D. would provide corrective feedback and a verbal reminder of behaviors that would allow them to earn points (e.g., "Group B, when the timer beeped you were not following directions. Your group needs to follow directions the first time to earn a point toward today's goal"). Groups that met the point goal by the end of the class period would receive a reward.

Initially, a dense schedule of reinforcement was established in which the interval between the deliveries of points was one to two minutes in length. In order to increase the probability students would contact reinforcement, Ms. D. was advised to set a point goal that she thought the groups could reach. After a week, Ms. D. was given a rubric for choosing an appropriate point goal for the time available to play the

CW-FIT game (see Appendix B). There was a maximum of 40 min to play the game each day, however, this varied due to classroom routines and activities. Point goals ranged from 10-20, and were based on time available, Ms. D.'s assessment of classroom behaviors, and previous goals. Ms. D. set the timer for one to four minutes based on the goal and time available to play. While this interval was typically stable throughout a class period, it was at times varied by the teacher to lessen the chance that students would anticipate the end of an interval and change behavior immediately preceding it in order to receive a point.

Reinforcer assessment. A reinforcer assessment was conducted by the researcher and teacher prior to the introduction of the CW-FIT game. Students were told they would be playing a game in which they could earn rewards. The researcher and teacher gave parameters for the types of items that could be earned (e.g., items would not be big like a bicycle, but might include small toys). The students then suggested items (e.g., jewelry, stickers, temporary tattoos, gel pens, candy) and the teacher wrote them on the chalkboard. From this list, the researcher and teacher helped the students discriminate which items would be both appropriate and available. Additional rewards that were similar to items identified through the assessment were chosen by the researcher to decrease the probability of satiation.

During the first week, the researcher assisted Ms. D. by setting the timer and providing minimal verbal prompts (e.g., reminders to post point matrix, assess group behavior quickly, and deliver verbal praise) to assist in her implementation of the game. Ms. D. tallied points and gave behavior specific verbal praise when a group

earned points and corrective feedback when groups failed to earn points. Ms. D. gave frequent reminders, or “pre-corrects”, of behaviors she would be looking for from student groups. Pre-corrects were related to the behavioral skills taught in CW-FIT. Following the initial week of intervention, Ms. D. ran the CW-FIT game independently for the remainder of the study. At three times during the study, the researcher met with Ms. D. to give feedback on her implementation of CW-FIT and review behavior data for the class and target students. In addition, removal of intervention for the reversal phase was explained to Ms. D. Total training time over the course of the study was approximately three hours.

Materials

Tangible items were used as rewards for students who met the daily CW-FIT game goal. These items ranged in price from less than \$0.05 to \$0.35. Candy had been identified as a potential reinforcer, but, as it was used daily by the teacher as a reward within the school-wide PBS system, the researcher and teacher decided to eliminate it as a reward in the CW-FIT game to lessen the possibility of satiation.

Three 11”x17” laminated posters (see Appendix C) were displayed in the classroom throughout the intervention. Each poster was of a different color and listed one of the behavioral skills that had been taught to the students and examples of that skill. Icons were printed by each example in order to serve as a visual reference for students.

An 11”x17” white paper point matrix (see Appendix D) was posted on the blackboard each day the CW-FIT game was conducted. The matrix included spaces

for teacher name, daily point goal, and columns for team member names and point tallies. The three classroom skills were printed individually inside rows of the matrix to allow for an X to be marked by a skill if students had failed to display the skill at the time of assessment (i.e., at the end of each 1 to 5-min interval). Ms. D. marked points or Xs on the matrix using a magic marker in order to maximize visibility for all students in the class.

A digital kitchen timer was used to alert Ms. D. to the passing of intervals for point delivery opportunities.

Dependent Measures

Target Students. On-task behavior and disruptive behavior were measured for the three identified target students. On-task behavior was defined as a student being within the instructional area, complying with instructions for academic tasks or other activities, and attending to appropriate materials or the teacher. Disruptive behaviors were divided into three categories: verbal disruptive, physical disruptive and general disruptive. Verbal disruptive was any verbal statement towards others that was argumentative, taunting, name-calling, or provocative in nature, including verbal refusal to comply with directions. This category included talking, laughing, and making noises during times not allowed by the teacher. Physical disruptions included any throwing of objects, hitting, kicking, pushing, punching, scratching, biting, spitting, pulling or other physical contact with a peer or adult. General disruptive was defined as any instance of getting out of seat, tipping or rocking chair, putting feet on desk, playing with materials inappropriately, and any inappropriate behavior, as

determined by the teacher and researchers, that did not fall into the verbal or physical categories. Students could display disruptive behaviors while remaining on-task. For example, a student could be tipping back in their chair (a general disruptive behavior) while writing answers on a worksheet (on-task behavior).

Class-wide Behavior. On-task behavior of three groups that included all class members (grouped by row) was measured using the preceding definition.

Teacher Behavior. Teacher delivery of praise/points and reprimands to individuals and groups of students were measured. Praise/points was defined as any verbal statement, physical gesture, point tallied, or hole-punch given intended as reinforcement for desired behaviors to either individuals or groups of students. Reprimands included any verbal statement, physical gesture, or X tallied in the CW-FIT game intended to punish undesired behaviors of individual students or groups.

Observation Procedures

A minimum of observers were present daily; one collected class-wide data, the other collected target student data. Class-wide on-task data and frequency of praise and reprimands to individuals and groups were taken during 20-min observations using paper-and-pencil measures (see Appendix E for example data sheet). Observers tallied each occurrence of teacher praise or reprimand during the observation. The class was divided into groups of three to four students each, based on proximity. Each target student served as a group of their own. All groups remained constant throughout the study. On-task behavior was recorded for groups of students and target students every 30 s, using a momentary time sample technique. At the end

of each interval, a plus was recorded if all students within a group were on-task and a minus if one or more students were off task.

Additional data were taken on target students' behavior using *MiniMOOSES*, a version of the *Multiple Option Observation System for Experimental Studies (MOOSES)* (Tapp, Wehby, & Ellis, 1995) adapted for use on Pocket PCs. The sequence of target student observation was randomly selected each day, with the exception of irregular classroom scheduling (e.g., the student selected for the third observation was leaving early, so they would be moved up to the first observation). Occurrences of verbal, physical, and general disruptions were recorded during 10-min observations. Duration codes were used for on-task and off-task behavior. Frequency of teacher praise and reprimands to target students was also recorded.

Procedural Fidelity of Implementation

Procedural fidelity data were taken in 25% of observations during the two intervention phases of the study and are reported as percent of items implemented. A fidelity of implementation checklist (see Appendix F) covered 16 aspects of the CW-FIT procedures (e.g., review of behavior skills at beginning of session, display of point chart, behavior specific praise for use of skills). An additional 10 aspects of general classroom management and student behavior were evaluated (e.g., classroom materials ready, directions provided for assignments, percent of class on-task). Observers recorded the presence or absence of these items at the end of each observation.

Consumer Satisfaction Measures

Consumer satisfaction questionnaires were completed by the students and teacher following the completion of the study. Students were given a 12-point survey (see Appendix G) that included statements such as “It was easy to learn the rules of the game” and “I learned the right way to get the teacher’s attention.” Students were asked to circle a smiley face if they agreed with the statement, circle a face with a flat affect if they were indifferent, or circle a sad face if they disagreed with the statement. Due to the age and varied reading ability of the students, as well as their unfamiliarity with the measurement tool, appropriate completion of the survey was demonstrated and each statement was read to them. A 16-point questionnaire (see Appendix H) was completed by Ms. D. in the month following the study. This survey incorporated a 5-point Likert-type scale, as well as three open-ended questions to assess what the teacher did and did not like about CW-FIT. Statements related to the effectiveness of intervention, satisfaction with training and support, time required for CW-FIT implementation, and ease of implementation were included. Questions such as “To what extent did the students gain teacher attention appropriately during the game?” and “To what extent did the students follow directions during the game?” were included to assess the teacher’s opinion of the extent to which students’ behavior was affected by the game.

Interobserver Agreement

An additional observer recorded class on-task data simultaneously but independently in 29% of baseline observations and 24% of intervention observations, for a total of 10 observations. An additional observer collected *MiniMOOSES* data

during 9 intervention observations for each target student, for a total of 21% of observations. Observers were trained to a criterion of 90% for two observations for both data collection systems (i.e., class-wide on-task and *MiniMOOSES*).

During class on-task data collection, the primary and secondary observers were in close proximity to each other. The primary observer operated a digital timer and either gestured towards individual groups or called-out the letter assigned to the group for data collection purposes, in sequence, to the second observer at the end of each 30-s interval. Agreement percentages were calculated by comparing each observer's records on a trial-by-trial basis. An agreement was defined as both observers recording the same behavior (i.e., on-task or off task) for a group. Interobserver agreement was calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100. Interobserver agreement for class on-task data was 95% (range, 89% to 99%). Interobserver agreement for both praise/points and reprimands was calculated as total agreement. Reliability for praise/points frequency was 90% (range, 77% to 100%) and 88% (range, 63% to 100%) for reprimands.

Reliability for *MiniMOOSES* data was calculated using the software's interobserver agreement file analysis in which event codes, within a time window of 10 s, were analyzed between the primary and secondary observer's data files. Reliability for disruptive behavior was 86% (range, 63% to 100%) and on-task behavior was 99% (range, 87% to 100%) across participants.

Experimental Design

A reversal (ABAB) design (Baer, Wolf, & Risley, 1968) was used to assess the effects of CW-FIT on class on-task behavior, frequency of teacher praise/points, frequency of teacher reprimands, frequency of disruptive behaviors of target students, and on-task behavior of target students. Baseline data were collected for seven days. During three days of the initial baseline, two class-wide on-task and two *MiniMOOSES* observations per target student were conducted. During both baseline phases, Ms. D. reinforced appropriate student behavior with hole-punches (the universal PBS method in the school) that could be exchanged for candy at the end of each day. Data collection was stopped during behavioral skill instruction (approximately two weeks). Following completion of skill instruction, the CW-FIT game was introduced and remained in place for 18 days. A three day reversal, during which the game was not played, was followed by a reintroduction of the game for six days. Due to absences, the number of observations in baseline and intervention varied for target students.

Results

Overall, CW-FIT resulted in a reduction in disruptive behavior for each of the three target students and an increase in on-task behavior for both the target students and the class. In addition, increased levels of teacher praise/points to groups of students were observed when the intervention was in place.

Target Students

Disruption data are depicted in Figure 1. Verbal, physical, and general disruptions have been combined for total disruption frequency. Lilly's data are shown

in the top panel. During baseline, Lilly had a mean of 23 disruptions (range, 2 to 36) per 10-min observation period. The number of disruptions immediately dropped well below baseline levels and became stable when CW-FIT was implemented ($M = 7$; range, 2 to 14). Upon removal of intervention, Lilly's disruptions increased to a mean of 21 (range, 10 to 28). When intervention was re-implemented, Lilly's disruptions returned to levels below both the initial and second baseline, with a mean of 4 (range, 2 to 6).

Albert's data, shown in the center panel, reveal trends much like those in Lilly's data. Albert's disruptions, before CW-FIT, were a mean of 28 and were quite variable (range, 16 to 49). Mean disruptions dropped dramatically when intervention was introduced, to 4 (range, 0 to 10) per 10-min observation. In the return to baseline, Albert's mean number of disruptions increased to 16 (range, 5 to 22). With the reintroduction of CW-FIT in the classroom, Albert's disruptions fell to a mean of 6 (range, 0 to 18).

Faith's data are shown in the bottom panel. During baseline, mean disruptions were 18 (range, 3 to 27). This decreased to 2 (range, 0 to 8) with the implementation of CW-FIT. Faith's disruptions rose sharply when intervention was removed ($M = 16$; range, 3 to 31), but when CW-FIT was reintroduced, Faith's disruptions returned to levels seen during the first intervention phase ($M = 3$; range, 0 to 5).

Figure 2 represents on-task behavior for each target student. Lilly's data are shown in the top panel. Preceding CW-FIT, Lilly was on-task a mean of 77% (range, 62% to 100%) per 10-min observation period. After implementing intervention, on-

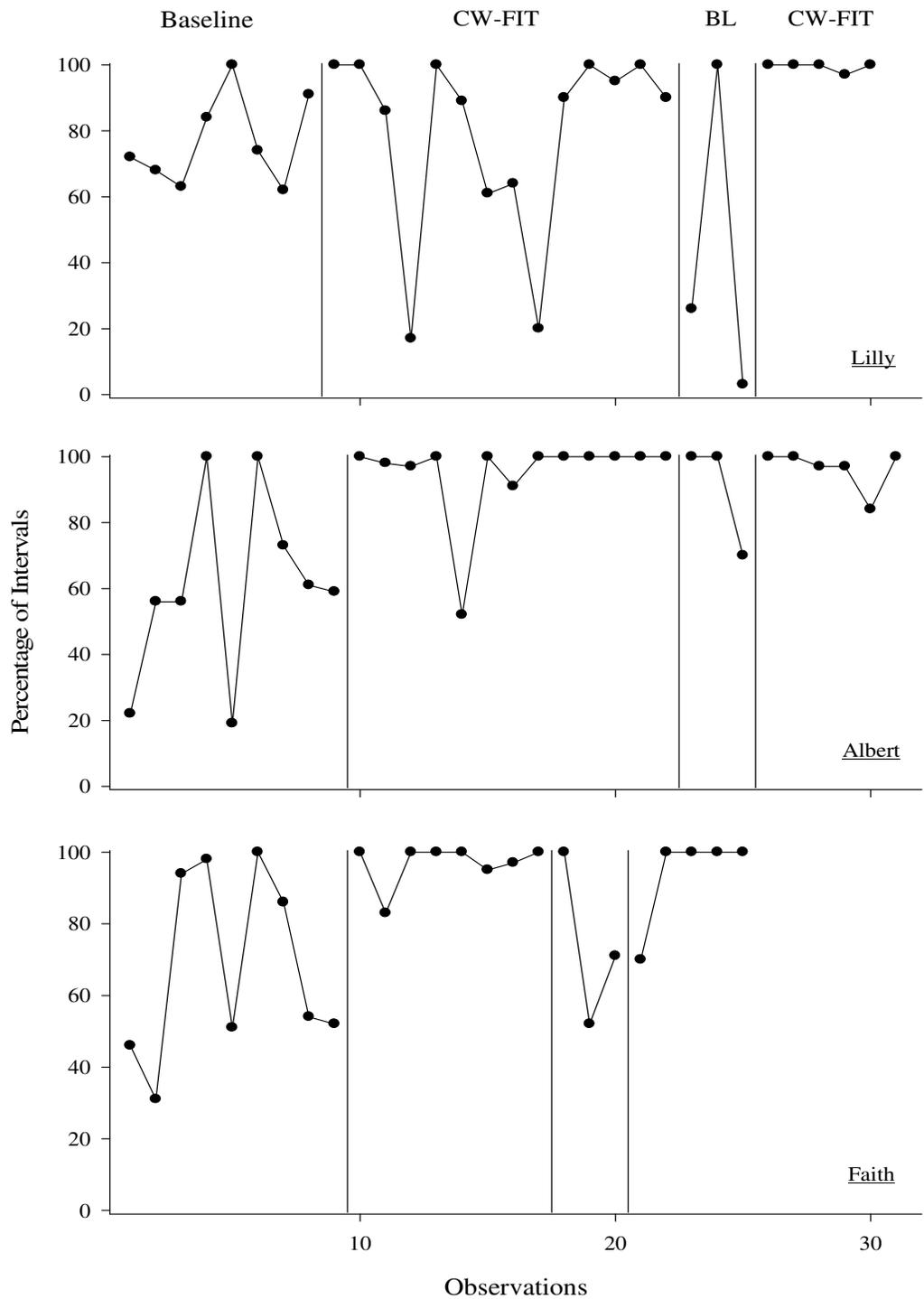


Figure 2. Percentage of intervals with on-task behavior for Lilly, Albert, and Faith per 10-min observation.

task behavior rose slightly to 79% and the data remained variable (range, 17% to 100%). In the return to baseline, Lilly was on-task a mean of 43% (range, 3% to 100%). Lilly's on-task behavior rose substantially during the final implementation of CW-FIT and stabilized at a mean of 99% (range, 97% to 100%).

Albert's on-task behavior, shown in the center panel, was variable during initial baseline. He was on-task a mean of 61% of intervals, with a range of 19% to 100%. Mean percentage on-task rose to 95% when intervention was in place in phase two and variability substantially decreased with 9 of 13 days at 100% of intervals on-task (range, 52% to 100%). Albert's on-task behavior fell only slightly to 90% (range, 70% to 100%) when intervention was removed. However, with the final implementation of CW-FIT, mean percent on-task rose to 96% (range, 84% to 100%).

Variability characterized Faith's on-task behavior during baseline, similarly to Albert. Her mean on-task behavior was 68% (range, 31% to 100%). On-task behavior stabilized to a mean of 97% when CW-FIT was introduced, with a range of 83% to 100%. When CW-FIT was removed, mean percentage on-task was reduced to 76% of intervals and the data again became more variable, with a range of 52% to 100%. Similar to both Lilly and Albert, Faith's on-task behavior returned to high levels when CW-FIT was reintroduced ($M = 94%$; range, 70% to 100%).

Class-wide Behavior

An effect was also seen in class-wide on-task behavior when CW-FIT was put in place (Figure 3). During baseline, on-task behavior for the class (including target students) was variable, with a mean of 57% and a range of 40% to 82%. Although

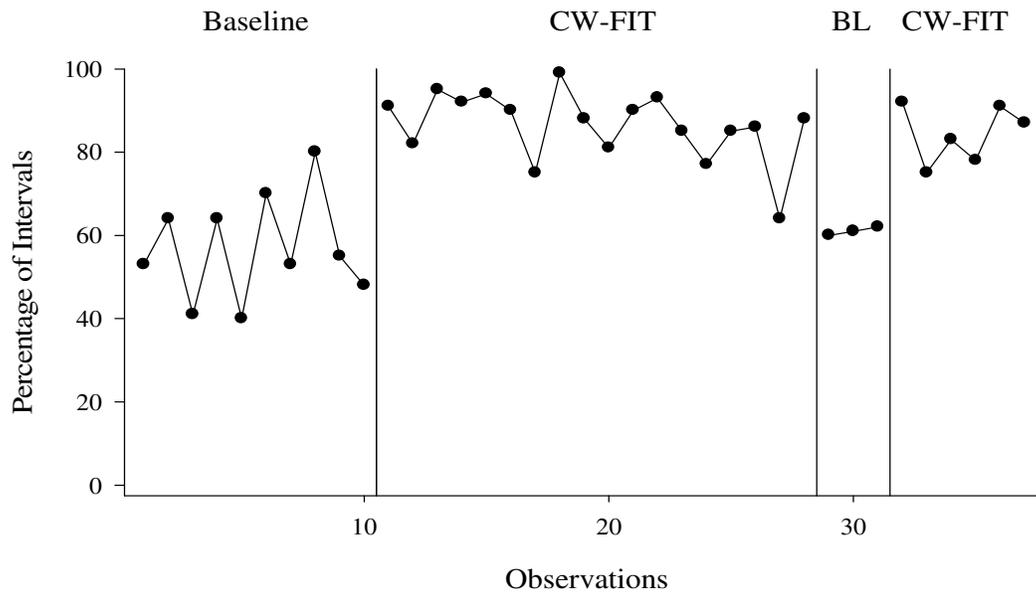


Figure 3. Percentage of intervals with on-task behavior for the class per 20-min observation.

variability continued following the implementation of CW-FIT, the level of on-task behavior rose ($M = 87\%$; range, 64% to 99%). The removal of intervention resulted in a drop in class-wide on-task behavior to a mean of 61% (range, 60% to 62%). The reintroduction of CW-FIT resulted in a mean of 84% (range, 75% to 91%).

Table 1 shows the percentage of on-task behavior for each group within the class. On-task behavior rose for all groups during both intervention phases. The target students had the lowest percentage of on-task behavior during Baseline 1, however, their on-task behavior rose above that of Groups A and B during CW-FIT 1. During Baseline 2 and CW-FIT 2, targets and Group A had similar percentages of on-task behavior. These percentages were lower than that of Groups B and C. Group C exhibited the highest percentage of intervals of on-task behavior across all experimental conditions.

Table 1. Mean Percentage of Intervals with On-task Behavior for Groups Across Experimental Conditions

Group	Baseline 1	CW-FIT 1	Baseline 2	CW-FIT 2
A	55	83	53	80
B	64	76	69	83
C	76	98	89	96
Targets	47	88	53	81

Teacher Behavior

Depicted in Figure 4 are number of praise/points and reprimands to the class. The level of praise/points was greatly increased when CW-FIT was in place; however, the level of reprimands remained stable during each phase of the study. During baseline, Ms. D.'s mean number of praise/points was 10 (range, 1 to 20) and reprimands was 8 (range, 3 to 17) per 20-min observation. When Ms. D. began using CW-FIT in the classroom, the level of praise/points rose dramatically to a mean of 48 (range, 20 to 87), while mean number of reprimands fell only slightly to 5 (range, 0 to 14). Upon removal of intervention, mean number of praise/points fell to 25 (range, 19 to 33) and reprimands rose to 9 (range 4 to 14). In the final phase, Ms. D.'s praise/points returned to a level similar to that in the first implementation of CW-FIT ($M = 45$; range, 25 to 60). Mean reprimands during this phase were 7 (range, 3 to 13).

Figure 5 shows the number of praise and reprimands delivered by Ms. D. to the target students during 10-min observations. Praise and reprimands to Lilly are depicted in the top panel. In baseline, Ms. D. delivered a mean of 1 (range, 0 to 2) praise and 1.6 (range, 0 to 8) reprimands per observation. When CW-FIT was implemented, praise levels rose slightly to a mean of 1.4 (range, 0 to 4) and reprimand level fell to a mean of .9 (range, 0 to 3). Mean praise was reduced to .7 (range 0 to 2) during the return to baseline, and reprimands rose to 2 (range, 1 to 3). The mean number of praise rose only slightly to .8 (range, 0 to 3) when CW-FIT was reintroduced. Ms. D.'s mean number of reprimands to Lilly during this phase was the same as in initial baseline, at 1.6 (range, 0 to 4).

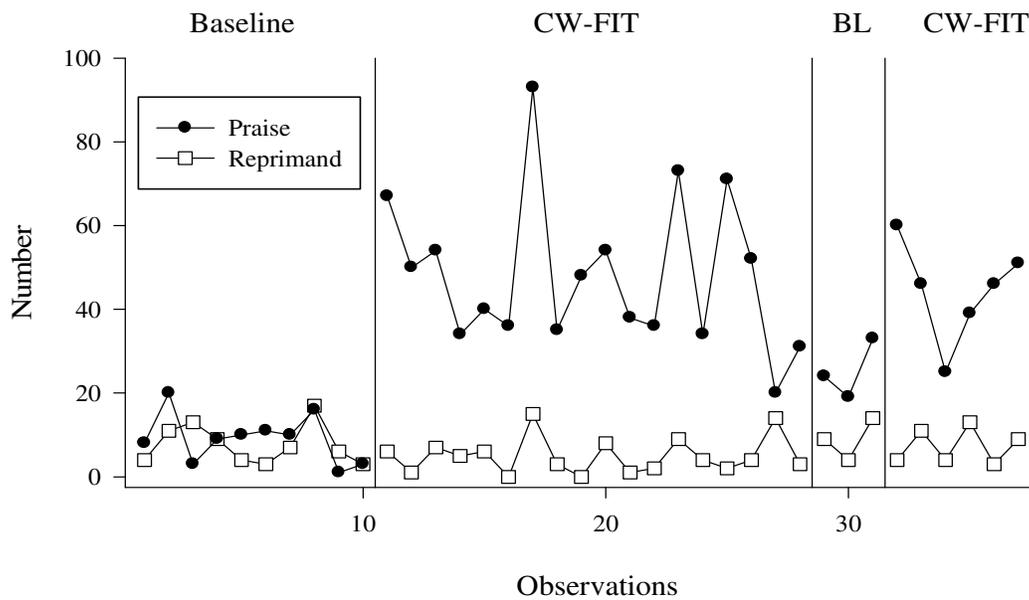


Figure 4. Number of teacher praise/points and reprimands delivered to the class per 20-min observation.

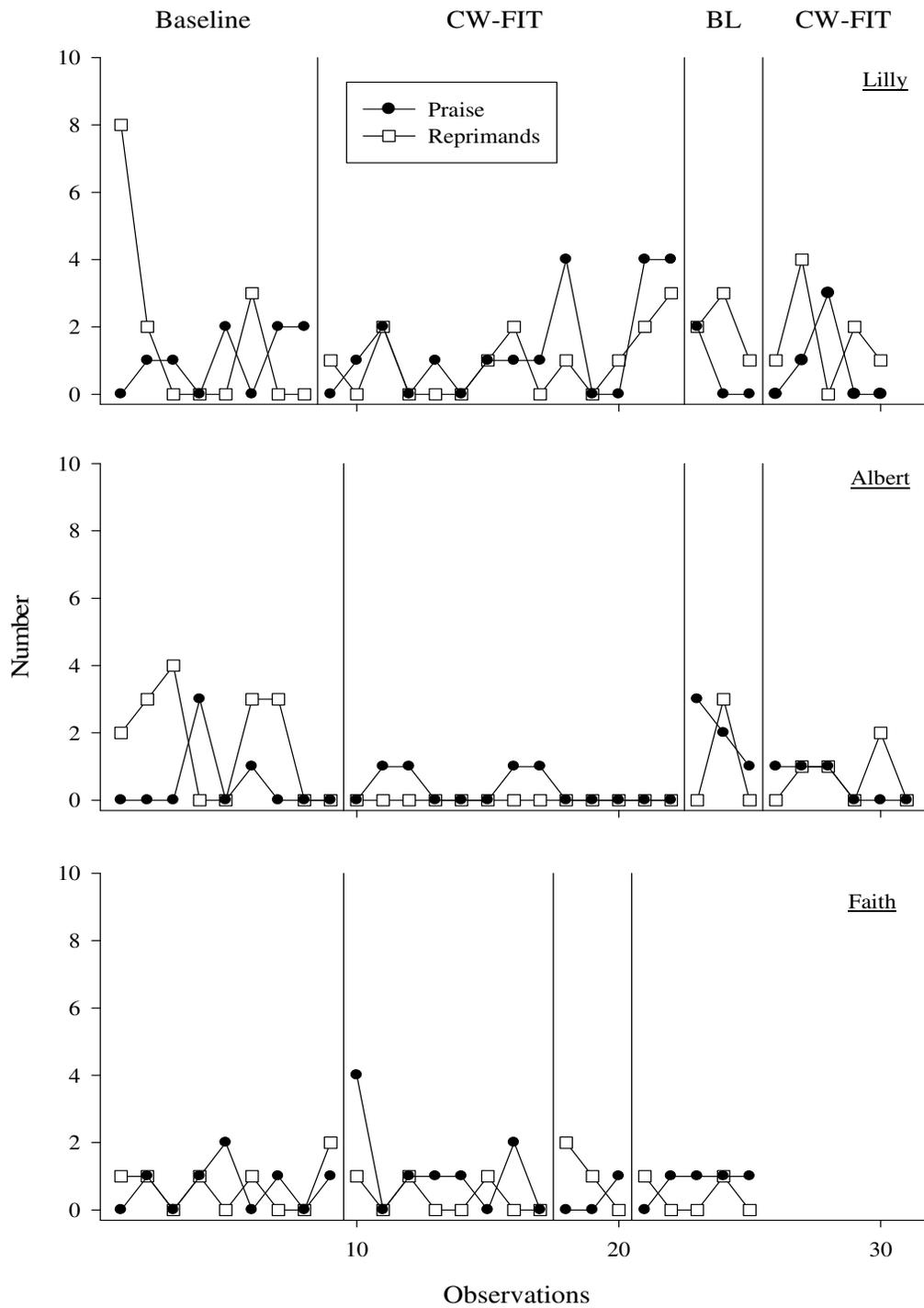


Figure 5. Number of praise and reprimands delivered to Lilly, Albert, and Faith per 10-min observation.

Ms. D.'s praise and reprimands to Albert are shown in the middle panel. Mean praise in baseline was .4 (range, 0 to 3) and reprimands were 1.7 (range, 0 to 4). Ms. D.'s mean praise fell to .3 (range, 0 to 1) with the introduction of CW-FIT. She delivered no reprimands to Albert in this phase. In the return to baseline, levels of praise and reprimands rose. Mean praise during this phase was 2 (range, 1 to 3) and mean reprimands were 1 (range, 0 to 3). Mean praise fell again during the final phase, to .5 (range 0 to 1). Mean number of reprimands dropped slightly to .7 (range, 0 to 2).

The bottom panel shows praise and reprimands to Faith. The mean number of praise in baseline was .7 (range, 0 to 2) and the mean number of reprimands were also .7 (range, 0 to 2) during this phase. Ms. D. delivered a mean of 1.1 (range, 0 to 4) praises and .4 (range, 0 to 1) reprimands when CW-FIT was implemented. The level of praise fell during the return to baseline and the level of reprimands rose. Mean number of praise was .3 (range, 0 to 1) and mean number of reprimands were 1 (range, 0 to 2). With the reintroduction of CW-FIT, Ms. D.'s mean number of praise and reprimands to Faith were similar to that in the previous intervention phase. Mean praise was .8 (range 0 to 1) and reprimands were .4 (range, 0 to 1).

Procedural Fidelity

The results of the procedural fidelity measures were high overall (see Appendix I for results summary) with a mean of 89% (range, 20% to 100%). Ms. D. consistently implemented components of the CW-FIT game ($M = 91%$; range, 20% to 100%). She displayed CW-FIT skill posters, awarded points for students displaying the skills, and delivered rewards to students who had met the daily goal with 100%

fidelity. However, she gave verbal reminders of the behaviors students should display during the game in only 20% of opportunities. Ms. D.'s implementation fidelity of classroom management techniques such as giving clear directions and having materials ready for lessons was a mean of 77% (range, 50% to 100%).

Consumer Satisfaction

Ten students completed a questionnaire regarding CW-FIT (see Appendix J for results summary). Overall, students responded very favorably to all questions. The majority of students liked playing the CW-FIT game and found it easy to learn and play. In addition, 90% of students reported they would tell friends that the CW-FIT game was fun to play. When questioned more specifically about reinforcement components of the game, all students responded that they liked earning points and prizes. Nearly 100% of students replied they had learned the three skills taught in CW-FIT (i.e., How to get the teacher's attention; Ignore inappropriate behavior; Follow directions the 1st time) and displayed those skills more when the game was played in the classroom.

Ms. D. gave favorable ratings regarding CW-FIT (see Appendix K for results summary) to the majority of questions in the teacher consumer satisfaction survey. She found the training and support she received for CW-FIT to be highly acceptable. Ms D. reported that the game was easy to implement and required very little time for preparation. In addition, she reported that implementing the game consumed very little instruction time. When questioned about the extent to which students displayed the skills taught in CW-FIT, Ms D. replied that while students very frequently gained

teacher attention appropriately and followed directions when the game was played, they ignored inappropriate behavior of peers only a little. Ms. D. reported that she liked CW-FIT very much and would be very likely to use it in the future, and would also recommend it to a colleague.

Discussion

The present study demonstrated the effects of the CW-FIT intervention on the on-task behavior of a first grade class, as well as the disruptive and on-task behavior of three individual students within that class. Mean class-wide on-task behavior during intervention phases increased 27% over baseline phases. These findings are similar to those obtained by Koch and Breyer (1974) in which implementation of a group contingency with token economy resulted in a mean increase of 32% in class on-task behavior, and those of Kelshaw-Levering, Sterling-Turner, Henry, and Skinner (2000) who showed that disruptive behaviors in a second-grade class were reduced when an interdependent group contingency was implemented.

On-task behavior for the three target students also increased when the CW-FIT game was played. Each student had highly variable on-task behavior during baseline, yet each responded immediately to the implementation of the game. Percent of intervals on-task rose to 100% for Lilly, Albert, and Faith on the first day the game was played. Albert and Faith both displayed very high levels of on-task behavior during this phase, with means of 95% and 97%, respectively. Although the level of Lilly's on-task behavior rose when CW-FIT was implemented, the mean was virtually unchanged (from 77% to 79%). Lilly's on-task behavior dropped well below baseline

on two days. These data do not reveal what variables may have affected her behavior; however, we observed anecdotally that on these days Lilly had frequent interactions with a classmate who displayed high rates of inappropriate behavior. Lilly's behavior seemed to be affected by this, reflected in low percentages of on-task behavior and a high number of disruptions. During the final implementation of CW-FIT, Lilly was on-task in 100% of intervals on 4 out of 5 days.

CW-FIT also resulted in a considerable decrease in each target student's disruptive behavior. The frequency of these students' disruptions preceding intervention was at a level unacceptable to the classroom teacher and had contributed to the identification of Lilly and Albert as at-risk for behavior disorders based on the *SSBD* measurement tool. Lilly showed the greatest overall decrease in disruptive behavior during CW-FIT. Albert's and Faith's mean number of disruptive behaviors was also reduced considerably during intervention phases. Kamps, Kravits, Stolze, and Swaggart (1999) showed similar effects on the behavior of students identified as having, or at-risk for, emotional and behavioral disorders (EBD). In that study, a group of 28 students, 11 of whom had EBD, received an intervention that included social skills training and behavior management strategies (e.g., token economy), while a control group of 24 students (6 EBD) received no intervention. Significant improvements were shown in the on-task behavior of the experimental group compared to that of the control group, as well as a significantly lower rate of inappropriate classroom behavior.

The similar effect of CW-FIT on both class-wide on-task behavior and target students' behavior shows the group contingency was effective with the large group of students and with high-risk individual students. Many group contingency studies targeting non-academic behaviors have shown the effect of an intervention on the group as a whole, but not on individuals within that group (e.g., Babyak et al., 2000; Gresham & Gresham, 1982; Harris & Sherman, 1974; Kelshaw-Levering et al., 2000; Koch & Breyer, 1974; Lorman & Talerico, 2004; Solomon & Tyne, 1979), while other studies have reported the effect of a group contingency on individuals only (e.g., Reitman et al., 2004). Carpenter and McKee-Higgins (1996) showed the effects of a group contingency on the disruptive behavior of a class of 20 students and on a small group of target students within that class. The authors reported the intervention was successful in reducing the number of student off-task behaviors. In that study, however, the individual results of the target students were reported as "small group" results, inhibiting the interpretation of the effects of the intervention on the individuals' behavior. In the current study, the effect of CW-FIT was shown for the large group (i.e., the class) and for individual target students. The collection of individual and group data, as in the current study, allows for the analysis of the effects of an intervention at different levels. Medland and Stachnik (1972) also did this in a replication of the Good Behavior Game (Barrish et al., 1969). The authors reported the effects of the intervention on the behavior of the class and that of four individuals with the highest rates of problem behavior in baseline. Through this additional analysis, the authors were able to assess the extent to which the behavior of

a sample of students came under control of the contingencies of the game. Packard (1970) separated individual and group results in a similar analysis. In that study, the effects of a group contingency on attending (i.e., on-task) behaviors were evaluated. Target students were chosen randomly from the group to show the effects of the intervention on the behavior of a sample of students and then correlate those results with the effects seen in the behavior of the class. The current study differs from Medland and Stachnik and Packard in that the target students in this study were selected by their teacher, based on their high levels of disruptive behavior and identification as at-risk for behavior disorders. A single intervention (i.e., CW-FIT) was able to concurrently affect the behavior of more highly disruptive and off-task students and the class as a whole, and in this respect, it adds to the literature on group contingencies.

The universal PBS incentive program (i.e., hole punches exchangeable for rewards) used by Ms. D. in her classroom before CW-FIT was introduced did not result in a behavior change to levels that were acceptable to the teacher. It is unclear why these supports were ineffective, however, several possibilities exist. The PBS literature estimates 80% of students will be supported by universal behavior supports in a school-wide PBS system (Sugai & Horner, 2002). The universal supports were not having a large enough effect on the behaviors occurring in the class involved in the current study, as evidenced by the high level of off-task behavior in baseline. It is possible that universal supports may have failed to reduce or maintain behavior at acceptable levels due to the number of high-risk students in the class. PBS literature

reports 15% of students will need a secondary level of support (Sugai & Horner, 2002). However, in areas where increased risk factors (e.g., poverty) affect a majority of students, this percentage may be larger. In the present study, there were significant risk factors for all students in Ms. D.'s class. These included low SES, minority, and ELL status. Although three students were chosen as targets because of their frequent disruptive behavior, anecdotally we observed high rates of problem behavior from several other students in the class. The higher level of reinforcement in CW-FIT compared to that of the universal school supports may have resulted in the increased on-task behavior of the class and target students.

Another possible explanation for the low levels of on-task behavior and high levels of disruptive behavior before intervention may be the frequency with which Ms. D. delivered praise. Flora (2000) recommended a ratio of teacher praise to reprimands of 5:1. Ms. D.'s ratio of praise to reprimands to the class during initial baseline was approximately 1:1. During intervention phases, Ms. D.'s praise to reprimand ratio rose to 7.5:1. The increased ratio of praise to reprimand during intervention phases could have affected student behavior. However, it is more probable that the contingent nature of the praise during the CW-FIT game contributed to the increase of on-task behavior and decrease of disruptive behavior. Hall, Lund, and Jackson (1968) found that contingent teacher praise led to substantial increases in study behavior and decreases in disruptive behavior. During CW-FIT, Ms. D. delivered praise/points contingent on students' display of specific skills. The

establishment of this contingency may have led to the subsequent increase in on-task behavior.

The levels of individual praise and reprimands delivered to Lilly, Albert, and Faith were low in each condition of this study, although praise/points to groups increased substantially during intervention phases of this study. As members of those groups, the target students did receive increased praise in these phases. This effect was likely due to the focus on the delivery of praise/points to groups of students in the CW-FIT game. In an interdependent group contingency such as CW-FIT, the reinforcement of the behavior of the group is dependent on the behavior of the individuals within that group. Consequently, both praise and reprimands may be directed at the group rather than at an individual. As such, it is possible that Ms. D's delivery of individual praise and reprimands to the target students remained relatively low because it was delivered to the groups to which these students belonged rather than the targets themselves.

Social Validity. Measures of social validity indicated high satisfaction with the CW-FIT intervention. Students enjoyed playing the game and felt that it improved their behavior in class. Skinner et al. (1999) reported that students may complain when peers are receiving rewards if they are not. The implementation of a group contingency like CW-FIT in which all students work for the same reward may reduce this problem associated with individualized protocols. Elliot, Witt, Galvin, and Peterson (1984) reported that teachers prefer interventions that are simple and that require few resources and time to implement. Teacher satisfaction ratings in this

study support those findings. Ms. D. reported that CW-FIT took very little time away from instruction and was easy to learn and implement. The managerial problems associated with individual contingencies and behavior plans make them less preferred by teachers than group contingencies (Skinner et al.). In this study, the behavior of target students who exhibited high rates of problem behavior was positively affected by the intervention, as was the overall on-task behavior of the class. These effects may have forestalled the need for individualized behavior plans for the target students, thereby reducing the teacher's burden and increasing the social validity of the intervention.

Limitations and Future Research

A limitation to the current study is that the occurrence of the behavioral skills taught in CW-FIT (i.e., gaining teacher attention appropriately, following directions the first time, and ignoring inappropriate behavior of peers) was not measured. As such, we were unable to analyze the extent to which the systematic instruction resulted in the occurrence of these behaviors. Future studies may choose to measure those responses in order to provide a more comprehensive analysis of the effects of the intervention on student behavior.

A further limitation of this study is that we were unable to evaluate maintenance of on-task and disruptive behavior under leaner schedules of reinforcement, due to the end of the school year. Future research might attempt to thin the schedule of reinforcement in the CW-FIT game and assess the maintenance of target behaviors. A leaner schedule of reinforcement would reduce both the costs

associated with rewards and the time teachers would have to devote to the delivery of points, thus lessening the requirements of the teacher and potentially increasing the social validity of the intervention.

An extension of this research that would contribute to the generality of the CW-FIT intervention is a large-scale group study that could evaluate the effect of CW-FIT over time, in multiple schools and classrooms. The potential preventative nature of the intervention could also be examined, as suggested for the GBG by Embry (2002). Evidence that the CW-FIT program could reduce and prevent problem behavior and increase desirable behavior of students across multiple environments would be beneficial to schools seeking to incorporate evidence-based practices in their discipline policies and procedures.

Conclusion

This study contributes to the literature on the use of group contingency interventions in classrooms by showing that a single intervention can affect the behavior of both a class of students and individuals within that class. While a small number of studies have reported effects for both (Medland & Stachnich, 1972; Packard, 1970), this has not been demonstrated in recent literature. CW-FIT resulted in decreased disruptions for high-risk students and increased on-task behavior for those students and their classmates. This factor may be significant for schools and teachers seeking to address the needs of a large number of students that include individuals thought to be in need of individualized behavior plans. As calls for preventative approaches to discipline in schools continue to rise (Algozzine & Kay,

2002; Sugai & Horner, 2002), future research may be directed towards programs that incorporate practices that address the needs of the greatest number of students. The findings of the current study may be beneficial to teachers and schools as they search for applications that are simple, effective, and evidence-based (Stage & Quiroz, 1997).

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APPENDIX A
TEACHER TRAINING LITERATURE

Class-wide Function-Based Intervention Teams (CW-FIT)

Teaching Component (11/29/04)

The first critical component of the CW-FIT intervention involves teaching functional replacement behaviors for the inappropriate behaviors that currently function to (a) obtain attention (adult or peer); (b) escape from tasks; and (c) gain access to materials, privileges, and activities.

In all cases, students will be taught the following 3 skills and 1 target skill that meet the class context:

1. How to gain the teacher's attention
2. Following directions
3. Ignoring inappropriate behaviors
4. Target skill

The teacher selects the 4th target behavior to help the class improve behavior and work completion (in seat, using respectful/kind words, improving quality/correctness of work).

Skills are prominently displayed on posters.

Group lessons on skills last approximately 10 minutes daily during the first week of CW-FIT intervention. After initial lessons, teachers "pre-correct" to review basic expectations as part of the Game. Points are awarded to teams for use of the skills. Teachers provide "active supervision" and specific praise frequently for use of the skills.

2-3 target students (those with challenging behaviors) are taught these same skills in small group sessions (3-4 sessions) with 2-3 peer models (peers are selected from the student surveys). Targeted students must show mastery of skills by exhibiting the appropriate behaviors across 3 classroom activities (majority of session with some prompting).

Teaching Lessons

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 answer

Now everyone read with me (students read chorally).

Which “Della Give Me 5” does this match? (Answer: Be Peaceful).
What other ways can you Be Peaceful? (Answer: Quiet, calm voice; Work quietly; Have quiet transitions).

Rationale

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

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)
2. Say OK
3. Do it
4. Check back if (if needed)

Now everyone read with me (students read chorally).

Which "Della Give Me 5" does following directions the 1st time match?
(Answer: Be Respectful)

What other ways can you Be Respectful? (Answer: Be a good listener; Take turns talking; Value others' ideas-no put downs).

Rationale

Why is it important to follow these steps for following directions? (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 pleasant face
2. Look away from the person
3. Keep a quiet mouth
4. Pretend you are not listening
5. Follow directions-do your work

Now everyone read with me (students read chorally).

Which "Della Give Me 5" does ignoring inappropriate behavior match?
(Answer: Be Responsible and Be Kind) 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).

Rationale

Why is it important to follow these steps for ignoring inappropriate behavior? (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)

Role Play

Let's practice following ignoring inappropriate 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 look away and NOT 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 "ignore inappropriate behavior" (choral read). Let's work hard to practice this behavior today.

APPENDIX B
CLASSROOM POINT GOAL RUBERIC

CW-FIT POINT GOAL RUBERIC

Goal	10	12	14	16
Opportunities	13	15	18	20
Minutes for Game	Minutes on Timer			
25	2m	1m30s	1m22s	1m12s
30	2m18s	2	1m42s	1m30s
		2m		
35	2m42s	2m18s	1m54s	1m42s
40	3m	2m42s	2m12s	2m
45	3m30s	3m	2m30s	2m15s

APPENDIX C
CW-FIT GAME POSTERS

**How to get the
Teacher's Attention**

1. Look at the teacher



2. Raise your hand



3. Wait for the teacher to call on you
4. Ask your question or give answer

**Follow Directions
the 1st Time**

1. Look at the person
(teacher) & listen



2. Say OK



3. Do it

4. Check back (if needed)

**Ignore
Inappropriate Behavior**

1. Keep a pleasant face

2. Look away from the
person



3. Keep a quiet mouth



4. Pretend you are not listening

5. Follow directions-do your work

APPENDIX D
CW-FIT POINT MATRIX

School: _____ Teacher: _____ Date: _____ Class: _____
 Goal: _____

	1	2	3	4	5	6
GROUPS						
POINTS						
Get Teacher's Attention: Be Peaceful						
Follow Directions: Be Respectful						
Ignore Peer Behavior: Be Responsible						
TOTALS:						

APPENDIX E
ON-TASK DATA SHEET

APPENDIX F
TEACHER FIDELITY CHECKLIST

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

School: _____ Observer: _____
Teacher: _____ Date: _____

CW – FIT procedures

- | | | | |
|---|-----|----|----|
| 1. Skills are prominently displayed on posters | yes | no | |
| 2. Precorrects on skills at beginning of session | yes | no | |
| 3. How to get attention (raise hand) | | | |
| 4. Following directions/completing work | | | |
| 5. Ignoring inappropriate behavior | | | |
| 6. Other targeted skill | | | |
| 7. Corrections for behavior match to language of skills/PBS | yes | no | |
| 8. Team point chart displayed | yes | no | |
| 9. Daily point goal made | yes | no | |
| 10. Self-management charts given to individuals | yes | no | na |
| 11. Timer set for 1-3 minute intervals (5 minutes if follow-up phase) | yes | no | |
| 12. Points are awarded to individuals/teams for use of the skills | yes | no | |
| 13. Teachers provide specific praise for use of the skills | yes | no | |
| 14. Praise ratio to reprimands approximates 4:1 level | yes | no | |
| 15. Points tallied for teams and winners announced | yes | no | |
| 16. Rewards delivered for winning teams | yes | no | |

Number “yes”
Total # scored
“# “yes” divided by total = % yes

Classroom management-student behavior

- | | | |
|--|-----|----|
| 1. Directions for class assignments are provided and clear | yes | no |
| 2. Materials for use are available and location noted for students | yes | no |
| 3. Transitions are smooth with only minor disruptions | yes | no |
| 4. Teacher ignores minor inappropriate behaviors | yes | no |
| 5. 80% of the class remains on task during group lessons | yes | no |
| 6. 80% of the class remains on task during independent work | yes | no |
| 7. Teacher monitors academic work and gives feedback | yes | no |
| 8. Target student # 1 is on task 80% of time | yes | no |
| 9. Target student # 2 is on task 80% of time | yes | no |
| 10. Target student #3 is on task 80% of time | yes | no |

Number “yes”
Total # scored
“# “yes” divided by total = % yes

APPENDIX G

STUDENT CONSUMER SATISFACTION QUESTIONNAIRE

CW-FIT Student Satisfaction

Name _____ Teacher _____ Date _____

1. I liked playing the game in my classroom.



Yes/ A lot



Okay/Alright



No/ Not at all

2. It was easy to learn the rules in the game.



Yes/ A lot



Okay/Alright



No/ Not at all

3. It was easy to play the game.



Yes/ A lot



Okay/Alright



No/ Not at all

4. I liked earning points on a team.



Yes/ A lot



Okay/Alright



No/ Not at all

5. I liked earning prizes.



Yes/ A lot



Okay/Alright



No/ Not at all

6. I learned the right way to get the teacher's attention



Yes/ A lot



Okay/Alright



No/ Not at all

7. I learned what to do when a classmate is acting inappropriately.



Yes/ A lot



Okay/Alright



No/ Not at all

8. I learned how to follow directions.



Yes/ A lot



Okay/Alright



No/ Not at all

9. I want to tell my friends it was fun to play the game in class.



Yes/ A lot



Okay/Alright



No/ Not at all

10. I followed directions more during the game.



Yes/ A lot



Okay/Alright



No/ Not at all

11. I raised my hand more during the game.



Yes/ A lot



Okay/Alright



No/ Not at all

12. I ignored my classmates when they were acting inappropriately more during the game.



Yes/ A lot



Okay/Alright



No/ Not at all

APPENDIX H

TEACHER CONSUMER SATISFACTION QUESTIONNAIRE

CW-FIT Consumer Satisfaction

School:

Teacher:

	<u>No Familiarity</u>				<u>High Familiarity</u>
How familiar were you with the components of this intervention before using it in your classroom?	1	2	3	4	5
How familiar are you now with the components of this intervention?	1	2	3	4	5
	<u>Unacceptable</u>				<u>Acceptable</u>
How satisfied are you with the training you received?	1	2	3	4	5
How satisfied are you with support you received from Juniper Gardens staff?	1	2	3	4	5
	<u>Very Hard</u>				<u>Very Easy</u>
To what extent was this intervention easy to implement?	1	2	3	4	5
To what extent were the procedures for running CW-FIT easy to learn?	1	2	3	4	5
	<u>A Lot of Time</u>				<u>Very Little Time</u>
Amount of time required to use CW-FIT:					
A.) Amount of preparation time:	1	2	3	4	5
B.) Amount of time during instruction:	1	2	3	4	5
C.) Amount of time delivering rewards	1	2	3	4	5
	<u>Not very effective</u>				<u>Very Effective</u>
How effective do you feel the intervention was?	1	2	3	4	5
	<u>Very Little</u>				<u>Very Frequently</u>
To what extent did the students gain teacher attention appropriately during the game?	1	2	3	4	5
To what extent did the students ignore inappropriate behavior during the game?	<u>Very Little</u>	1	2	3	4
	<u>Very Little</u>				<u>Very Frequently</u>
To what extent did the students follow directions during the game?	1	2	3	4	5
	<u>Strongly Disliked</u>				<u>Liked Very Much</u>
To what extent did you like the intervention?	1	2	3	4	5
	<u>Very Unlikely</u>				<u>Very Likely</u>
How likely are you use this intervention with future classes?	1	2	3	4	5
How likely are you to recommend this intervention to a colleague?	1	2	3	4	5

Feedback:

Please list what you liked about CW-FIT:

Please list what you did not like about CW-FIT:

Suggestions on how to improve CW-FIT or other comments:

APPENDIX I
TEACHER PROCEDURAL FIDELITY RESULTS

<u>Checklist Items</u>	<u>Mean Percent Implemented</u>
Skills are prominently displayed on posters	100%
Precorrects on skills at beginning of session	20%
Corrections for behavior match to language of skills/PBS	100%
Team point chart displayed	100%
Daily goal for points marked	100%
Self-management charts given to individuals	not applicable
Timer set for 1-3 minute intervals	100%
Points are awarded to individuals/teams for use of skills	100%
Teacher provide specific praise for use of the skills	83%
Praise ratio to reprimands approximates 4:1 level	100%
Points tallied for teams and winners announced	100%
Rewards delivered for winning teams	100%
Directions for class assignments are provided and clear	50%
Materials for use are available and location noted for students	100%
Transitions are smooth with only minor disruptions	75%
Teacher ignores minor inappropriate behaviors	83%
80% of class remains on-task during group lessons	100%
80% of class remains on-task during independent work	100%
Teacher monitors academic work and gives feedback	100%
Target student #1 is on-task 80% of time	67%
Target student #2 is on-task 80% of time	100%
Target student #3 is on-task 80% of time	80%

APPENDIX J

STUDENT CONSUMER SATISFACTION QUESTIONNAIRE RESULTS

-
1. I liked playing the game in my classroom.
Yes/A lot = 8 Okay/All right = 2 No/Not at all = 0
 2. It was easy to learn the rules in the game.
Yes/A lot = 7 Okay/All right = 2 No/Not at all = 1
 3. It was easy to play the game.
Yes/A lot = 8 Okay/All right = 2 No/Not at all = 0
 4. I liked earning points on a team.
Yes/A lot = 10 Okay/All right = 0 No/Not at all = 0
 5. I liked earning prizes.
Yes/A lot = 10 Okay/All right = 0 No/Not at all = 0
 6. I learned the right way to get the teacher's attention.
Yes/A lot = 10 Okay/All right = 0 No/Not at all = 0
 7. I learned what to do when a classmate is acting inappropriately.
Yes/A lot = 9 Okay/All right = 1 No/Not at all = 0
 8. I learned how to follow directions.
Yes/A lot = 9 Okay/All right = 1 No/Not at all = 0
 9. I want to tell my friends it was fun to play the game in class.
Yes/A lot = 9 Okay/All right = 1 No/Not at all = 0
 10. I followed directions more during the game.
Yes/A lot = 10 Okay/All right = 0 No/Not at all = 0
 11. I raised my hand more during the game.
Yes/A lot = 9 Okay/All right = 0 No/Not at all = 1
 12. I ignored my classmates more when they were acting inappropriately during the game.
Yes/A lot = 9 Okay/All right = 1 No/Not at all = 0
-

APPENDIX K

TEACHER CONSUMER SATISFACTION QUESTIONNAIRE RESULTS

Question	Rating
1. How familiar were you with the components of this intervention before using it in your classroom?	1 - No familiarity
2. How familiar are you now with the components of this intervention?	5- High familiarity
3. How satisfied are you with the training you received?	5- Highly acceptable
4. How satisfied are you with support you received from Juniper Gardens staff?	5- Highly acceptable
5. To what extent was this intervention easy to implement?	4- Easy
6. To what extent were the procedures for running CW-FIT easy to learn?	5- Very easy
6. Amount of time required to use CW-FIT:	
A.) Amount of preparation time	5- Very little time
B.) Amount of time during instruction	5- Very little time
C.) Amount of time delivering rewards	4- Little time
7. How effective do you feel the intervention was?	5- Very effective
8. To what extent did the students gain teacher attention appropriately during the game?	5- Very frequently
9. To what extent did the students ignore inappropriate behavior during the game?	2- A little
10. To what extent did the students follow directions during the game?	5- Very frequently
11. To what extent did you like the intervention?	5- Very much
12. How likely are you to use this intervention with future classes?	5- Very likely
13. How likely are you to recommend this intervention to a colleague?	5- Very likely
