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# An examination of the Good Behavior Game and behavior specific praise statements on student and teacher behavior

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AN EXAMINATION OF THE GOOD BEHAVIOR GAME AND BEHAVIOR  
SPECIFIC PRAISE STATEMENTS ON STUDENT AND TEACHER BEHAVIOR

A Dissertation

Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
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in

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## Abstract

This study directly compares two interdependent group oriented contingency strategies, the GBG and the GBG with a behavior specific praise statement (BSPS) component (i.e., GBG+BSPS) to examine the relative effectiveness of each as a tool for class-wide behavior management, to inspect the effect on teacher interactions with students, and to assess the relative teacher and student acceptability of both games. The Good Behavior Game has been identified as an evidence-based intervention to manage class-wide behavior difficulties, but recently has been criticized for not being proactive in teaching appropriate classroom behavior. The relative effectiveness and acceptability of each game as a class-wide behavior management tool will be examined. This experiment will extend the literature on the GBG by comparing the GBG to a similar, more positive variation of the game where teacher initiated behavior specific praise is included in the procedures (GBG+BSPS).



## Introduction and Review of Literature

Even though a classroom free of disruptive behavior does not ensure academic gains, order is generally a prerequisite for effective instruction (Carpenter & McKee-Higgins, 1996). Disruptive behavior is associated with lower scores on high stakes tests and poorer academic success overall (Wentzel, 1993). Brophy (1986) defines classroom management as a teacher's efforts to establish and maintain the classroom environment as an effective place for teaching and learning. Maintaining the classroom environment includes teacher's efforts to provide in and out of class activities for students, including academic instruction, management of student interactions, and supervision of student behavior (Burden, 2000; Good, Biddle, & Brophy, 1982; Iverson, 1996; Weinstein, 2007). For some teachers, addressing the behavioral concerns of multiple students in one classroom proves difficult. More than half of teachers polled during a study by Merrett and Wheldall (1978) reported displeasure and concern about the amount of disruptive behavior in their classroom, yet they lacked the knowledge of behavioral classroom management theories, techniques to address behavior and methods to implement specific behavior modification strategies.

Student disruptive behavior has been and continues to be addressed using a variety of interventions. Evidence of the effectiveness of behavior modification and behavior analytic approaches have been documented with various populations in many settings and addressed numerous target behaviors (Bellack & Hersen, 1990; Mayer, 1995; O'Leary & O'Leary, 1976). These target behaviors include verbal (e.g., speaking without permission, verbalizing information not related to course content), motor (e.g., throwing objects, getting out of seat), and a combination of motor and verbal behaviors. These

research proven techniques have also been used in classroom settings being implemented by teachers. Teachers are responsible for organizing, managing and maintaining the school environment in which the child interacts, including antecedent and consequence delivery. Although there are numerous variables influencing student behavior, the teacher is the relatively constant variable in the classroom. Other intervention agents (i.e., school administrators, support personnel, behavior managers, therapists and parents) can only allocate a limited amount of resources to a single student or classroom, thus limiting their effectiveness as a behavior change agent.

Today, with increasing pressures placed on schools, administrators, and teachers regarding student achievement, student behavior has received more attention (No Child Left Behind Act, 2001). Students are coming to school with less school readiness, pre-academic and behavioral skills (Sternberg & Williams, 2002). Teachers continue to be responsible for providing academic instruction to all students and are increasingly responsible for the instruction of school readiness skills including pre-academic skills and appropriate classroom and school setting behaviors. Although teachers today have increased classroom responsibilities, many professionals, both young and old, are not well prepared to address the continuing behavioral needs of students. Wesley and Vocke (1992, cited in Jones, 1996) reported less than half of teacher pre-professional education programs (37%) require students to complete a course designed to formally address classroom management approaches, strategies, and evaluation of the methods.

With these increasing demands being placed on teachers, administrators and school staff, increasing rates of disruptive behaviors, and limited teacher education on classroom management techniques (Wesley & Vocke, 1992), there is a growing need for

effective interventions that efficiently address the behavior of many students at once. Group oriented contingency management strategies have been used to address the disruptive behaviors of individuals, a small group or an entire group of individuals in various settings.

Cooper, Heron, and Heward (1987) describe a group oriented contingency as a procedure in which a group earns rewards contingent upon a specific behavior or set of behaviors occurring based upon the actions of an individual, small group, or the entire group. Group oriented contingencies have been used as simple, effective classroom management techniques for both academic and behavioral concerns (Theodore, Bray, & Kehle, 2001). Group contingency strategies utilize peer influence as a major component to achieve behavior change. Assigning consequences to an entire group based on the disruptive behavior of a student or group of students removes many of the peer responses (e.g., attention, laughing, peer acceptance) that often maintain disruptive behavior in the classroom. Graubard (1969) identifies the importance of peer interaction and social approval in the maintenance of disruptive behavior when comparing three management techniques. He found the groups manage themselves in order to achieve the group goal and individual rewards. Group contingencies build on the importance of student/peer approval to discourage disruptive behavior.

### Group Oriented Contingencies

There are three different categories of group oriented contingencies: dependent, independent and interdependent. In dependent group oriented contingencies, the reinforcer for the entire group is contingent upon on the performance of an individual or small subset of the group meeting the criterion; for example, the entire class earns 15

minutes of extra recess time if Bobby stays in his seat for the entire math class (Cooper et al., 1987).

Litow and Pumroy (1975) describe independent group oriented contingencies as all members of the group who achieve the criterion receive reinforcement based on their personal performance. For example, if a student makes a 100% on the quiz, he will be able to select a prize from the treasure chest. The student earns the reward based on his individual performance.

Interdependent group oriented contingencies require all of the individuals of a group meet the criterion (individually and as a group) before any member earns reinforcement; for example, if the entire class turns in their homework on Thursday, no homework will be assigned for the weekend. Thus all members of the group must meet the criterion for the entire group to earn the reward. Gresham and Gresham (1982) report that dependent, independent and interdependent group oriented contingencies, when implemented in classrooms to address disruptive student behavior, result in similar dramatic decreases in disruptive behaviors with neither of the three resulting in more significant changes than the others.

There are advantages that have been linked to the interdependent group oriented contingencies. One advantage includes being highly efficient; interdependent group oriented contingencies are a single intervention used to address the behavior of an entire classroom of students, and this efficiency is translated into savings of teacher time addressing the behavioral needs of students which could be applied to preparation and instruction of academic material. Another benefit is that it can be implemented in such a way to address the behavior of one or two students; however, during the Good Behavior

Game (GBG), a particular form of group contingency, the expectations and rewards for all students remain the same, which avoids the segregation of students with behavioral difficulties (Elliott, Turco, & Gresham, 1987). Interdependent group contingencies are also intended to be fun activities for students and teachers that capitalize on the competitive spirit of students and require team work for the group to achieve the common goal through positive peer pressure or influence (Darveaux, 1984; Theodore et al., 2001; Tingstrom, Sterling-Turner, & Wilczynski, 2006). The Good Behavior Game (GBG) is an example of an interdependent group oriented contingency procedure.

### Good Behavior Game

The Good Behavior Game was initially used by Barrish, Saunders, and Wolf (1969) to address class wide disruptive behavior problems for a class of fourth grade students. Barrish et al. implemented a program that utilized peer competition and group rewards in the form of privileges to achieve reductions in the occurrence of both out-of-seat and talking-out disruptive behaviors. During this competition, the classroom students were split into two equal groups and the teams selected team names to develop a sense of ownership and identity (Barbetta, 1990). The teams played a game daily during an assigned class period and the winning team(s) earned simple classroom privileges that were easily implemented by their teacher (e.g., wear victory tags, line up first for lunch, extra free time at end of school day). Teams with members who engaged in rule breaking behaviors (e.g., sitting on top of the desk, speaking without raising hand) received a point for their team, and teams with point totals below five at the end of the period earned the class privilege, so both teams could earn the reward. Losing teams did not earn the privileges and were required to continue working on class assignments. Weekly rewards

were also included for these games, teams with point totals equal to or less than 20 at the end of the week would receive four extra minutes of recess. The investigators, following the implementation of the GBG, reported significant and consistent decreases in the occurrence of out-of-seat and talking-out behaviors (Barrish et al., 1969). Since its formation, the GBG has been used with various populations in many settings and has addressed numerous target behaviors (Barrish et al., 1969; Tingstrom et al., 2006).

Like all group oriented contingencies, the GBG uses peer competition and influence, along with reinforcement, to consistently increase on-task behaviors and decrease disruptive behaviors. In addition to classroom behavior, the GBG has been used to increase appropriate behavior in a school library and to improve oral hygiene (Fishbein & Wasik, 1981; Swain, Allard & Holborn, 1982). It has also been implemented with diverse populations. For example, successful implementation of the GBG has been demonstrated with children in Germany (Huber, 1979), Sudan (Saigh & Umar, 1983), and with rural and urban populations in the United States (Darveaux, 1984; Lannie & McCurdy, 2007; Salend, Reynolds & Croyle, 1989).

**GBG Populations.** Initial implementation of the GBG was in classrooms of upper elementary aged students with positive results (Barrish et al., 1969; Maloney & Hopkins, 1973; Medland & Stachnik, 1972; Johnson, Turner, & Konarski, 1978; Warner, Miller, & Cohen, 1977). Further investigations were conducted to extend evidence for the GBG with younger populations. Lannie and McCurdy (2007) and Bostow and Geiger implemented the GBG with first and second grade classrooms, respectively. Lannie and McCurdy implemented the GBG in a large urban school setting where more than 90% of students enrolled in the school received free or reduced price lunch. The game was

implemented in a first grade classroom with 22 students and one classroom teacher.

Implementation of the GBG was used to decrease levels of verbal and motor behaviors.

Following initiation of the GBG, changes in student on-task and off-task behaviors were statistically significant (Lannie & McCurdy, 2007).

Bostow and Geiger (1976) replicated the GBG protocol by Barrish et al. (1968) with a large second grade class with multiple students engaging in high rates of disruptive behaviors. The classroom was identified for intervention because student behaviors were occupying much of teacher and school administrator's attention to address and manage the student's behavior. Bostow and Geiger implemented the GBG in this classroom to address the target behaviors of out-of-seat, talking-out, inattention to the lesson, and bothering others. Following implementation, the researchers reported not only significant reductions of each of the target behaviors but also reports of teacher and student acceptance of the procedures in the form of student discontent during reversal conditions, and continued implementation by the teacher following termination of the study. Results from both investigations confirmed hypotheses of the experimenters that the GBG would yield significant decreases in student off-task behaviors (i.e., passive, verbal, and physical disruptions) of younger populations than had previously been exposed to the GBG (Bostow & Geiger, 1976; Lannie & McCurdy, 2007).

Further extensions of the GBG with younger populations were conducted with a classroom of preschool aged (i.e., 4-5 year old) students. The investigators utilized the GBG procedures; however, a few modifications were necessary for adequate implementation in a preschool setting. The necessary modifications included providing tokens to students engaging in compliant behaviors and ignoring negative behaviors.

Instructions during implementation were provided by a puppet named “Buddy Bear.” The project was conducted in a small group setting with four students. The students, each with significant disruptive behavioral excesses and social skill deficits, required a smaller educational setting specialized for their specific needs. Teams were constructed of student pairs. The pairs were given instructions by the puppet and behavior specific praise along with point assignments made contingent on the pair’s compliance with the directions. Noncompliance was ignored by the therapists. As expected, student compliant behaviors increased noticeably following implementation of the GBG with residual decreases in noncompliance behaviors. The effects of the GBG generalized with teachers/therapists; however, treatment effects did not generalize from instructional settings (i.e., resource room, kitchen) to non-instructional settings (i.e., playground, school yard; Sweizy, Matson, & Box, 1992). Given the young age of the participants more specific efforts could be necessary to achieve generalization to other settings.

The GBG has also been utilized with adolescent students with emotional and behavior disorders (Salend et al., 1989) and intellectual disabilities (Phillips & Christie, 1986). Salend et al. implemented the GBG in three inclusive classrooms for students with a special education classification of emotionally disturbed. Due to the variety of disruptive behaviors present in the classrooms, the investigators individualized the GBG. Students in the class were assigned to teams based on pre-intervention levels of disruptive behavior (e.g., cursing, inappropriate touching, drumming, speaking without teacher permission). Using a reversal design the investigators reported the individualized GBG yielded consistent results with previous investigations of the GBG and extended the



literature by demonstrating the flexibility of the GBG in addressing the specific behavioral deficits or excesses of groups of students.

Another investigative team utilized the GBG to address behavioral concerns with individuals receiving special education services for delayed academic achievement and disruptive behavior (e.g., fighting over seats, throwing objects, deliberate interruption of lessons, arriving to class late and noisily), ages ranged from 12-13. The GBG was implemented specifically to decrease disruptive behaviors during instructional periods. Results of the study indicated by Phillips and Christie (1986) suggest a dramatic decrease in disruptive behavior. Following implementation of the GBG, student disruptive behavior decreased from high rates of disruptive behavior ( $M = 23$  per class period) to near zero levels of disruptive behavior. Qualitatively, Phillips and Christie also reported increases in pro-social and appropriate classroom (e.g., hand raising to speak, eagerness to interact with the teacher and the lesson) behaviors as well.

Generally, the GBG has been utilized with school aged students but have also been implemented to address the behavior of adults. Lutzker and White-Blackburn (1979) implemented the GBG with adults in a sheltered workshop for residents in a state hospital rehabilitation unit. Following implementation of the “Good Productivity Game” condition, employee productivity (i.e., number of lumber pieces sorted) increased over 100% as compared with negligible increases during performance feedback only sessions (i.e., announcements of the number of boards sorted).

Further extending the GBG literature, in 1983, the GBG was implemented with second grade school children, in rural Sudan, using a reversal design. Seat leaving, verbal disruptions and aggressive behaviors were identified by the teacher and researchers as

disruptive enough to warrant intervention to reduce the behaviors. Following implementation of the GBG, each of the target behaviors decreased significantly from baseline levels. During reversal conditions, younger children's disruptive behaviors reverted to near baseline levels more quickly than older students (Saigh & Umar, 1983). These results suggested individuals programming for younger students' disruptive behavior may need to address other options for generalization to settings or provide more extensive training with the GBG before withdrawing the intervention (Embry, 2002). The study by Saigh and Umar (1983) not only replicates the literature base of the GBG to a younger population, but also extends it to an even more diverse group of students and teachers in rural Sudan, an area where most educators and psychologists are not familiar with behavioral theories to achieve behavior change. Huber (1979) also implemented the GBG with similar results with elementary aged students in Germany.

The GBG has been implemented with similar dramatic results, including significant and rapid decreases in disruptive behaviors of individuals both children and adults and with individuals with behavioral and intellectual disabilities (Darch & Thorpe, 1977; Gresham & Gresham, 1982; Hegerle, Kesecker, & Couch, 1979; Salend et al., 1989). The GBG has also been implemented among various age groups with effective results, suggesting the GBG can be utilized with diverse populations both nationally and internationally (Huber 1979; Lannie & McCurdy, 2007; Saigh & Umar, 1983).

**GBG Settings.** The GBG has primarily been implemented to address the behavior of students in their assigned classroom (Barrish, et al., 1968; Lannie & McCurdy, 2007; Saigh & Umar, 1983; Salend et al., 1989; Schmidt & Ulrich, 1969). Given the occurrence of student misbehavior in settings other than the classroom and the powerful results of the

GBG, others have extended the procedure to other settings and intervention agents to address student misbehavior. Fishbein and Wasik implemented a variation of the GBG in the school library where the librarian was concerned about the levels of disruptive behavior of a particular fourth grade class. Swain et al. (1982) and Lutzker and White-Blackburn, (1979) utilized the GBG to increase work productivity in a rehabilitation hospital unit.

**GBG Target Behaviors.** Student disruptive behavior has consistently been the main target for behavior change during implementation of the GBG in various settings. Initial target behaviors addressed in the GBG by Barrish et al., (1969) included out-of-seat behavior (i.e., leaving seat without teacher permission) and talking-out behavior (i.e., talking without teacher permission). Student verbal-disruptive (Bostow & Geiger, 1976; Harris & Sherman, 1973; Huber, 1979; Medland & Stachnik, 1972; Salend et al., 1989), out-of-seat (Hegerle, et al., 1979; Saigh & Umar, 1983), and aggressive behaviors (Saigh & Umar, 1983) were common targets during GBG implementation. Student compliance with instruction and noncompliance with directions were also target behaviors in the study conducted by Sweizy et al. (1992). Academically oriented behaviors, on-task (Robertshaw & Hiebert, 1973; Darch & Thorpe, 1977) and task completion (Darveaux, 1984; Webster, 1989) have also been identified as target behaviors.

Johnson et al. (1978) conducted a replication of the GBG and collected data not only on student disruptive behavior, but also examined teacher attention as a dependent variable in the implementation of the GBG. Johnson et al. indicated from the results of their study that teacher attention (i.e., verbal responses to a student or student group following disruptive behaviors) to disruptive behavior decreased dramatically following

implementation of the GBG procedures, potentially due to fewer occurrences of problem behaviors, but also potentially due to the simple response of assigning a point to the team instead of addressing the problem behavior verbally.

Lannie and McCurdy (2007) extended the literature on the GBG by not only investigating effects of the game on student on-task and disruptive behavior, but they also explored the effects of the GBG on teacher behavior, specifically the influence of the GBG on teacher praise statements directed to students. The investigators hypothesized that more frequent teacher praise would occur during implementation of the GBG due to dramatic reductions of student disruptive behaviors. The hypothesis was not confirmed during the investigation; teacher praise statements did not increase following implementation of the GBG. However, teacher negative statements diminished following implementation of the GBG along with residual decreases in student disruptive behavior.

The GBG has been examined as a method to address disruptive behavior in the classroom setting, and along the way academic behaviors have also been investigated. Following extended implementation of the GBG, Dolan et al. (1993) reported the GBG was associated with declines in disruptive behavior and shy or withdrawn behaviors. On the other hand, they reported that the GBG was not associated with increases in student reading academic achievement based of results on standardized achievement tests. A critical consideration may be that the GBG may serve as an academic enabler enhancing the availability of time in which instruction can occur, but it does not provide structure or guidance for what would most profitably be instructed or how to teach.

Conversely, the GBG has been reported to have positive influences on academic behaviors necessary in the classroom. The GBG was associated with teachers completing

more course material than when the game was not being implemented (Medland & Stachnik, 1972). Harris and Sherman (1973) reported during the GBG students turned in more math assignments with a higher rate of accuracy than when the GBG was not being implemented. Darveaux (1984) found student assignment completion increased when the GBG was implemented with another component to reinforce desired classroom behaviors, specifically, assignment completion and accuracy. Those examples of the GBG that have demonstrated increases in academic behaviors have had a component of the procedure specifically addressing and rewarding student academically oriented behaviors. In sum, increases in academic achievement based on test scores have not been reported; however, increases in academic related behaviors (e.g., academic engaged time, completion rates) have been reported.

Variations of Reinforcement Strategies. Medland and Stachnik (1972) and Harris and Sherman (1973) conducted systematic replications and analyses of the many components of the GBG. Initial GBG procedures included 1) teacher review of game rules, 2) division of class into teams, 3) public point posting for rule violations, and 4) receipt of rewards for game winners. Medland and Stachnik conducted an analysis of the game components including reward, rules only, and public versus private point tallies. Results indicated that simple recitation of the rules prior to the class period resulted in slightly lower levels of disruptive behavior than in baseline conditions, yet student behavior was still variable. Recitation of rules and public notification of point assignment for disruptive behavior lead to more significant and less variable decreases of student disruptive behavior. Finally, implementation of the GBG procedures including tangible rewards or privileges for point totals below the criterion resulted in the most stable and

lowest levels of student disruptive behavior. These results suggest that each of the major components of the GBG are necessary to achieve the results of decreases in disruptive behavior; however, the reward/privilege component was associated with the most significant levels and stability of behavior change.

Harris and Sherman (1973) extended the literature base of the component analysis of the GBG. Harris and Sherman implemented the GBG procedures as suggested in Barrish et al. (1969) and varied several components of the game including the effects of consequences (i.e., reward and privileges), changes in the criterion used to determine winning teams, the use of public posting of points, and the effects of splitting the class into teams. Results indicated that public posting of points when compared to private point tallies had little effect on student behavior. In addition, Harris and Sherman (1973) reported changes in the preset point criterion lead to variable but consistent changes in student behaviors. Following a change of point criterion from four to eight points, student disruptive behavior increased by nearly double, suggesting students would engage in as much disruptive behavior as allowed by the preset criterion. For example, when the criterion was set at four points there were half as many occurrences of disruptive behavior than when the set criterion was eight points. The investigators also examined the effects of splitting the class into teams, and found splitting a class into teams instead of the entire class as one team lead to lower levels of disruptive behavior, especially after a group exceeded the point criterion. Should the team exceed the criterion prior to game termination there were no remaining reasons to act appropriately. Finally, Harris and Sherman reported that removing the reward (i.e., permission to leave school early) for winning the game reduced the effectiveness of the game. Interestingly, even when

rewards for winning the game were not provided student disruptive behavior remained lower than baseline levels. These findings replicate the results from Medland and Stachnik (1972).

Findings from Harris and Sherman (1973) and Medland and Stachnik (1972) indicate the importance of contingent rewards as a component of the GBG. Further investigations of the types of contingent rewards were conducted by Kosiec, Czernicki, and McLaughlin (1986). They compared the traditional GBG procedures (Barrish, et al., 1969) with a primary reinforcer (i.e., candy) in the place of access to privileges. They implemented the GBG plus candy condition in two self-contained elementary aged classrooms (i.e., 4<sup>th</sup> and 6<sup>th</sup> grades). In the GBG plus candy condition, a candy reward was provided to teams with point totals below the pre-specified criterion. The investigators reported the GBG condition lead to significant reductions of inappropriate verbalizations, and the GBG plus candy condition yielded further reductions of inappropriate verbalizations (Kosiec et al., 1986).

In the traditional implementation of the GBG, the intervention agent (i.e., classroom teacher) would also administer the reward delivery. Fishbein and Wasik (1981) utilized a GBG variation where the game was implemented in the library by the school librarian and the reward delivery was conducted by classroom teacher. During another experimental condition, the librarian implemented the game, but the teacher was instructed to not deliver the tangible reward. Results from the first condition, game plus teacher reward delivery, showed similar levels of behavior change as would be expected based on data from implementation of the GBG in a classroom setting; however, during this GBG without reward condition, student disruptive, off task and task relevant

behaviors returned to baseline levels. Further extending the literature base and demonstrating the necessity of the reward component is part of the interdependent group contingency structure.

Dolan et al. (1993) and others initially implemented the GBG where winning teams were awarded tangible rewards (e.g., stickers, candy, pencils); however, to promote generalization, tangible rewards were gradually replaced with social activities (e.g., free-time, extra recess, or privileges). In another effort to program for generalization, the schedule of reward delivery was gradually moved from immediate reward delivery following announcement of winning teams to delayed reward delivery at end of school day and later reward delivery at the end of the week (Kellam & Anthony, 1998; Kellam, Ling, Merisca, Brown, & Ialongo, 1998; Kellam, Rebok, Ialongo, & Mayer, 1994).

Johnson et al. (1978) initially conducted the GBG on a purely competitive nature. In this arrangement the team with the lowest point totals would win the game; on the occasion of a tie both teams were considered as game winners and given access to the rewards. The winning team(s) was given access to a variety of teacher selected rewards including food, special activities, or privileges. The losing teams were required to remain in their seats and complete assignments during the allotted reinforcement time. Following ten intervention sessions the investigators implemented a ten point criterion, where teams were required to earn less than ten points to be eligible to earn the reward. There is no discussion in the article regarding this change from a competitive game to a competitive plus criterion reward arrangement; however, the purely competitive arrangement could allow a team with high levels of disruptive behavior to be considered the winning team as



long as their point totals remained equal to or below the other team point totals.

Traditional implementation of the GBG involves setting and announcing the criterion for determining winning teams (Barrish, et al., 1968). Both Darveaux (1984) and Theodore et al. (2000) had the teacher inform the students of the criterion for reinforcement prior to game implementation. The stated criterion has a limitation exemplified in Harris and Sherman's (1973) implementation of the GBG. They compared levels of student disruptive behavior under two conditions, low and high announced point criteria. They reported that when the announced criterion was low (i.e., four points) students would engage in approximately half of the disruptive behavior than when point criteria were set higher (i.e., eight points).

Lannie and McCurdy (2007) utilized a strategy to limit student reactivity to stated criteria. The teacher selected at random a criterion from a collection of numbers. The criterion remained unknown to the teacher and students while the game was being implemented, at the conclusion of the game session team points were tallied and at that point the teacher revealed the mystery point criterion to the students and identified the winning teams. Student's levels of disruptive behaviors decreased when compared to baseline levels.

In 2006, Winn implemented an independent group contingency comparing student academic performance during conditions of a stated and an unstated criterion. During the known criteria conditions, students were assigned a writing activity and prior to initiation of the assignment, the teacher announced the number of words they were required to write to earn a reward. In the unknown criterion condition students were given similar writing assignments; however, the teacher informed the students they if they beat the

criterion they would earn a reward but the criterion remained a mystery. Winn reported that implementation of the independent group contingency conditions increased student words written, but there were no uniform differences between the known and unknown criterion conditions. To date no comparison of known and unknown criterions have been conducted with interdependent group contingencies addressing student disruptive behavior.

The preceding discussion emphasizes the importance of reward delivery as a component of the GBG. The variation in the types of rewards that have been delivered has been considerable. Barrish et al. (1968) and other investigators allowed the winning team(s) access to classroom privileges including stickers on a behavior chart, lining up first for lunch, and free-time at the end of the day. To provide a visible sign of being the winning team, winning team members were provided “victory tags” to wear for the remainder of the school day (Saigh & Umar, 1983). Kosiec et al. (1986) utilized a primary reinforcer in the form of candy as a reward to winning team members. Harris and Sherman (1973) allowed winning team members to leave school 10 minutes early. Other reinforcers that have been utilized following implementation of the GBG include choice of free time activities (Robertshaw & Hiebert, 1973), tokens that could be exchanged for candy or extra recess time (Maloney & Hopkins, 1973; Sweizy et al., 1992), positive attention from a school administrator (Darch & Thorpe, 1977), other tangible rewards (Kellam, Rebok et al., 1994; Lannie & McCurdy, 2007; Swain et al., 1982) and combinations of tangible items, free time, and class activities (Gresham & Gresham, 1982; Hegerle et al., 1979).

The majority of examinations for the GBG have employed many strong single subject research designs including reversal designs (i.e., ABAB, etc.; Bostow & Geiger, 1976, Darch & Thorpe, 1977; Gresham & Gresham, 1982; Lannie & McCurdy, 2007; Salend, et al., 1989) and multiple baseline designs (Lorhmann & Talerico, 2004; Patrick, Ward, & Crouch, 1998, Sweizy et al., 1992); others have used changing criterion designs (Hegerle et al., 1979; Tingstrom et al., 2006). However, single subject experimental designs have attenuated external validity of the results because they report results of individual or small groups of teachers. Addressing these limitations the Baltimore Prevention Project implemented the GBG using randomized conditions with large numbers of students. Field trials with a large number of teachers randomly assigned to treatment and control conditions allow for greater confidence regarding the generalizability of findings to other groups or settings. During the initial phase of the study the GBG was implemented in first grade classrooms where classrooms were randomly assigned to intervention or control conditions across 19 public schools in Baltimore, Maryland during the 1985-1986 school year. During implementation of the GBG the classes were divided into three teams, with students who were known to be disruptive and shy students being assigned to each group. Initially the GBG was implemented three times a week for 10-minute intervals with a known maximum criterion of four points. Throughout the duration of the project, game intervals were increased by 10-minutes per week and the four point criterion remained. At the conclusion of the year the GBG was being implemented up to three hours a day. Throughout implementation of the project, ratings of student academic behaviors were collected through teacher and peer structured interview, direct observation, and periodic

academic achievement measures. Participant students were followed through their sixth grade year. At the conclusion of their sixth grade year teachers rated student levels of disruptive behavior (Dolan et al., 1993; Kellam, Ling et al., 1998).

Dolan et al. (1993) presented initial short-term results of the Baltimore Prevention Project claiming dramatic decreases in aggressive and shy behaviors of both male and female students as reported by classroom teachers. Peer reports suggested that the GBG was effective at reducing the aggressive male behaviors; however, it was not effective at decreasing female aggressive behaviors. Regarding shy behaviors, the results suggest the GBG intervention was associated with lower teacher ratings of both male and female shy behaviors. On the other hand, peer ratings of shy behavior were unchanged. Finally the GBG condition was associated with increases in on-task behavior, but not associated with increases on the California Achievement Test. The results from the longitudinal research suggests students rated as aggressive in control assigned to first grade classrooms that had high rates of disruptive behavior were more likely to be rated by sixth grade teachers as highly aggressive and disruptive when compared to same age aggressive peers in classrooms with lower levels of disruptive behavior, suggesting the classroom environment does impact students at risk for developing behavioral disorders. The GBG was used as part of this study to modify the immediate context of the first grade classroom and assess long term effects of student behavior (Kellam, Ling et al., 1998).

Following six years of follow up as part of the Baltimore Prevention Project, students with the highest levels of disruptive and aggressive behaviors during first grade profited the most from receiving the GBG intervention condition. They were rated by teachers as being better behaved six years following the GBG condition in the first grade

(Kellam, Mayer, Rebok, & Hawkins (1998). Another finding of the longitudinal project, male students who had been assigned to the GBG condition in the first grade were half as likely to begin smoking during early teen years (i.e., 13-14 years) as control peers that did not receive the GBG intervention, and those male students were also rated by teachers as better behaved six years later (Kellam & Anthony, 1998).

Ialongo, Werthamer, Kellam, Brown, Wang and Lin (1999) combined the GBG and a highly structured academic curriculum as a universal (i.e., applied to all students) intervention. They found that the universal intervention resulted in significant effects on academic achievement and student behavior. The researchers reported the combined universal classroom intervention resulted in higher academic achievement, greater concentration abilities, and less shy and aggressive behaviors.

Building on this study Ialongo, Poduska, Werthamer, and Kellam (2001) conducted a six year follow up to identify long term influences of the universal classroom intervention with behavioral and academic components. Integrating teacher reports of classroom behavior, diagnostic interviews, and surveys of mental health workers in the school, results suggest that the students who received the classroom intervention in the first grade had better conduct ratings by teachers than control students, were less likely to have been suspended from school in the past 12 months and less likely to meet the diagnostic criteria for Conduct Disorder.

GBG Acceptability. Initial reports of the GBG focused on the utility of the intervention and reductions of disruptive target behaviors (Barrish et al., 1968; Bostow & Geiger, 1976). The social validity of group contingency procedures has also been examined relevant to school psychologist, teacher and student ratings of acceptability.

Various problem behavior scenarios paired with descriptions of group contingency strategies (dependent, independent, and interdependent) were presented to students (5<sup>th</sup> grade), school psychologists, and teachers rated intervention acceptability. The examiners reported that the students, teachers, and school psychologists rated each of the group contingency strategies as acceptable methods to address student disruptive behavior. Ratings were higher for the independent (individual student access to the reward was based on the individual student's behavior) and interdependent (group access to the reward was based on the behavior of the entire group) group contingencies. The dependent (group access to the reward was based in the behavior of an individual or small group of students behavior) group contingency strategy was rated as unacceptable by the school psychologists and as the least acceptable by teachers and students (Elliot et al., 1987).

Specifically, teacher ratings of acceptability regarding the GBG have been collected and are consistently appraised to have high levels of acceptability (Theodore et al., 2001; Tingstrom, 1994). Overall effectiveness (Darveaux, 1984; Kosiec et al., 1986; Lannie & McCurdy, 2007) simplicity of procedures (Axelrod, 1973), efficiency (Darveaux, 1984; Warner, Miller, & Cohen, 1977), and expense (Darveaux, 1984) are noted as reasons for high levels of teacher ratings of acceptability.

Saigh and Umar (1983) conducted interviews with school administrators, teachers, parents and students. Although no empirical data are presented in the report, the experimenters reported the interviews showed all participants in the project were very happy with game results and procedures used during the GBG. They briefly accounted high ratings of acceptability for the GBG procedures and results from the school

principal, teacher, students and parents. Student ratings suggested general liking of the GBG procedure (Saigh & Umar, 1983). Student acceptability data suggests a preference for the GBG with candy as rewards as compared to class privileges (Kosiec et al., 1986; Lannie & McCurdy, 2007; Theodore et al., 2001).

The GBG is highly praised as a prevention strategy described as a promising practice according to the Center for the Study and Prevention of Violence. The Substance Abuse and Mental Health Administration has identified the GBG as promising practice. Embry (2002) designated the GBG as a “behavioral vaccine” because its powerful outcomes serve to inoculate children against a variety of problems, including impulsive, disruptive, violent, and substance abusing behaviors. For all of the strong effects described above, there have consistently been criticisms of the traditional GBG.

#### Limitations and Variations of the GBG

Baer, Wolf, and Risley (1968) have argued that increasing socially significant behavior is an integral element of applied behavior analysis. Relying strictly on the reduction of problem behavior, as in traditional versions of the GBG, only addresses part of the problem. In 1990, a paper by Horner et al. encouraged a movement away from use of punishment based procedures with individuals with developmental disabilities. They supported the use of non-aversive behavior management as an alternative to punishment based procedures. Horner, et al. recognized the need for a well-defined and well-researched knowledge base of these positive approaches and comparison of their effectiveness individually or in combination with the incumbent aversive procedures.

Positive consequences have been identified as a necessary component of a classroom management strategy to teach and maintain appropriate in-class behaviors.

Behavior specific praise statements (BSPS) have been identified and examined as a positive intervention that is not intrusive, but an effective approach in a classroom management system (Shores, Cegelka, & Nelson, 1973). The components of a BSPS include a) gaining student attention, b) recognition of appropriate behavior, c) praise statement. Each of the three steps are necessary for the interaction to qualify as a BSPS or else the statement becomes a simple praise statement. The focus of BSPS is recognizing specific students and their specific behavior in a way that they understand which behaviors have resulted in the positive attention.

Low base rates of BSPS have been reported in special education classrooms. Rates that have been reported include 0.02-0.04 BSPS per hour (Shores, Jack Gunter, Ellis, DeBriere, & Wehby, 1993) and 4.4 BSPS per hour (Wehby, Symons & Shores, 1995). When used often BSPS is associated with decreases in problem behaviors and infrequent BSPS is associated with increases rates of classroom disruption. Thomas, Becker, and Armstrong (1968) and Madsen, Becker, and Thomas (1968) report the removal of positive statements by teachers were associated with increases in student disruptive behaviors. In addition, negative consequences have also been shown to be a necessary piece of classroom management. The removal of reprimands and other negative consequences (e.g., removal of privileges and timeout) and the use of only positive consequences (e.g., praise statements and access to privileges) has been associated with increases in disruptive behaviors (MacMillan, Forness, & Trumbull 1973; Rosen, O'Leary, Joyce, Conway, & Pfiffner, 1984). Teacher procedural integrity of exclusively positive interventions is limited due to the teacher's inability to ignore dramatic increases in classroom disruption (Hall, et al, 1971; Sajwaj, Twardosz & Burke,



1972). Either positive or negative consequences in isolation can paradoxically result in increases in student disruptive behavior; however, in combination reductions in student disruptive behaviors and increases in on-task behavior have been observed.

Traditional use of the GBG involves combining response cost (i.e., team point assignment) with a reward for the team(s) with the least point earnings. One argument against using interventions that employ punishment is that appropriate replacement behaviors are not taught. If appropriate replacement behaviors are not developed, children may identify other behaviors, adaptive or maladaptive, that serve the same function, a concept known as “extinction-induced variability,”(Morgan, Spalding, & Lee, 1996) a form of behavioral creativity. For example, if teachers punish out-of-seat and talking-out behaviors, students may begin to move around the room while remaining seated, or students may pass a note to a peer instead of having a conversation during the lesson. Implementing an interdependent group oriented contingency in a manner that avoids the use of response cost, while at the same time reinforcing appropriate and desired behavior, will prevent extinction-induced variability. In implementing variations of the GBG that focused on teaching and the reinforcement of appropriate behavior, Swiezy et al. (1992) and Fishbein & Wasik (1981) taught expected behaviors and assigned points contingent on the entire group or team engaging in the expected behaviors during variable interval scans. Despite its effectiveness, there is a limited amount of research on positive variations of interdependent group oriented contingencies and, to date, no studies comparing a positive variation and the traditional GBG have been conducted.

Warner et al. (1977) briefly discussed potential ethical considerations when implementing the GBG. They pointed out the role of peer influence/pressure utilized in the GBG was a component that influences behavior change, but acknowledged the potential for that peer pressure to foster intimidation and resentment instead of the mutual interest of group success. Others have also acknowledged the potential for negative behaviors toward peers (e.g., frustration, aggression) and suggest planning ahead to ensure student misbehavior is a performance deficit, failure to perform a well established skill, rather than not performing a skill because of inability or lack of knowledge of the skill (Cashwell, Skinner, Dunn, & Lewis, 1998; Hayes, 1976). To address this issue, Warner et al. (1977) suggested changing the rule structure from statements of what not to do, to positively stated rules that communicate the expected behavior in the classroom and award points for engaging in appropriate classroom behavior.

Darveaux (1984) listed three major limitations of the GBG as a strategy to evoke some form of behavior change. The first limitation, described by Darveaux, was that teacher attention was only focused on the student disruptive behaviors. Focusing attention on negative behaviors limits the GBG in many ways, because this may inadvertently increase the disruptive behaviors for students seeking any type of attention available. Another limitation is addressing negative behaviors may decrease the disruptive behaviors but not teach and increase more adaptive and socially acceptable student behaviors (Darveaux, 1984; Tankersley, 1995). Finally, Darveaux acknowledged the emphasis the GBG placed on identifying behaviors students should not engage in as opposed to identification and reward of appropriate setting (i.e., classroom, playground, and cafeteria) behaviors. Like Morgan et al. (1996), Darveaux emphasized appropriate

replacement behaviors identification, instruction and reinforcement, so children will be more likely to engage in the specified target behaviors, thus avoiding extinction-induced response variability (Morgan, Spalding, & Lee, 1996). This section will discuss variations of the GBG and interdependent group contingencies that have focused on teaching, reinforcement and maintenance of classroom appropriate behaviors.

Darveaux (1984) implemented the GBG with a classroom of second grade students. Darveaux addressed his previously stated limitations of the GBG by adding merits to the GBG procedure. Students earned merits (tokens) for engaging in identified appropriate classroom behaviors, including completion of assigned academic work with high levels of accuracy (above 75%) and participation in class activities. Points were still assigned to teams based on disruptive behavior; however, a point could be nullified if the team accumulated five merits. Utilizing this strategy, Darveaux reported dramatic increases in task completion along with decreased levels of student disruptive behaviors.

Schmidt and Ulrich (1969) implemented an interdependent group contingency procedure to reduce classroom noise (i.e., audible noise in the classroom above 42 decibels). During a free class period used for homework completion and studying, the experimenters implemented a procedure that if student's noise level remained below the criterion (i.e., decibel level over a 10-minute interval) the entire class would earn extra time to talk and socialize. If classroom noise exceeded the criterion the teacher would notify the group and reset the 10-minute interval. Schmidt and Ulrich reported significant decreases in classroom noise levels; however, they also reported increases in negative peer interactions (i.e., threatening gestures, facial expressions and other nonverbal

responses indicating displeasure) toward noisy students and other school staff (e.g., school nurse, other teachers, teacher aides) entering the classroom.

In another study comparing individual contingency strategies and interdependent group contingency methods, Axelrod (1989) reported similar decreases in student disruptive behavior in both conditions, but reported increases of student verbal threats directed to disruptive students that further disrupted the class during the interdependent group contingency condition. Conversely, this limitation was tempered by feasibility of implementing procedures, both record keeping of points and administration of reward, by the classroom teachers. Axelrod suggested implementing the group contingency procedure due to the effects on disruptive behavior and the ease of procedure execution; however, the teacher needs to be aware of potential negative behaviors and change the procedure as necessary.

Fishbein and Wasik (1981) implemented a variation of the GBG in the library. Following multiple occurrences of fourth grade student disruptive behavior during weekly sessions, the librarian requested assistance to reduce student misbehavior and increase behaviors relevant to the lesson (e.g., listening to the story or lesson, raising hand to speak, reading selected book). The librarian was the intervention agent and the classroom teacher delivered the rewards for students following a return to the classroom. Implementation of the GBG variation resulted in sudden increases in task-relevant behaviors and decreases in off-task behaviors.

Patrick et al. (1998) developed an adaptation of the GBG to address student behavior during recess and physical education settings. The investigators noticed increasing levels of inappropriate physical, verbal, and gestural social behaviors. During

new activities (i.e., volleyball) these inappropriate social behaviors were not only unacceptable for the physical education class, but were also hypothesized to limit the number of student attempts to participate in the lesson. Implementation of the GBG variation included teacher awarding points to students engaging in socially appropriate behaviors (e.g., verbal, physical, and gestural responses to good plays and supportive statements). They reported results from the study showing dramatic increases in socially appropriate behaviors and decreases in inappropriate behaviors during the GBG condition and increases in the number of skill attempts (forearm and overhead pass).

Davies and Witte (2000) combined an interdependent group contingency strategy much like the GBG with a self-management component to address the talking without permission behavior of students with Attention-Deficit/Hyperactivity Disorder (ADHD). During intervention conditions the frequency of student uncontrolled verbalizations decreased for each of the four target students in comparison to their matched peer controls. The results of this study are similar to the effects found using the GBG to address inappropriate vocalizations and consistent with the self-management literature addressing classroom behavior.

The “timer-game,” another classroom management technique, has been utilized to modify out-of-seat behavior of elementary aged children (3<sup>rd</sup> and 4<sup>th</sup> grades) in a remedial classroom. The timer-game was implemented throughout the duration of a 3 hour class. The GBG was an added component to the classroom token reinforcement system where students earned tokens that could be exchanged for rewards including candy, snacks, clothes, and field trips. The game consisted of a timer set to ring on 20 minute variable intervals. When the timer rang, each student seated would earn 5 points to contribute to

their token reinforcement system. During baseline observations, 17 intervals were scored as out of seat behavior occurring per student. Following the initiation of the timer-game, out-of-seat behavior decreased on average to 2 intervals scored of out-of-seat behavior per student. In an extension to the first study, the timer game was paired with a dependent group contingency to address the especially difficult behaviors of a female student. In this condition, the student would continue earning individual points but also had to opportunity to earn bonus points for her peers (i.e., capitalizing on peer influence) and self, resulting in dramatic decreases in the student's out-of-seat behavior (Wolf, Hanley, King, Lachowicz, & Giles, 1970).

McLaughlin, Dolliver, and Malaby (1979) implemented a similar version of the timer game with a special education class specialized for students with emotional and neurological handicaps to address the on-task behavior of the students during math instruction. The timers were set to a 5 minute variable interval schedule and 10 points were awarded for being on-task when the timer rang. The experimenters reported that during the timer-game condition on-task rates increased and students completed more math problems.

The timer-game (Wolf et. al, 1970) and other previously discussed variations of classroom management strategies identified the target behaviors needing to be reduced and appropriate alternative behaviors; these appropriate behaviors were then reinforced. These approaches resulted in dramatic increases in the adaptive behaviors and decreases in the disruptive behaviors.

Babyak, Luze, and Kamps (2000) applied modified components of the GBG (Barrish, et al., 1968) to the classroom behaviors of three fourth grade classes. They

called the game the Good Student Game (GSG). This procedure differed from the GBG because it implemented a self-monitoring component, removing the teacher's responsibility to monitor student behavior and placing the responsibility on the students. This responsibility for monitoring their own behavior brings a heightened awareness of the student's own behavior. Another difference in the GSG is that teachers are asked to identify disruptive behaviors typically displayed in their class and then identify appropriate replacement behaviors, or behavior that they would rather see. Those replacement behaviors are selected as the targets for the game. Changing the focus of the target behaviors ensures that the students are taught and reinforced when engaging in the expected/appropriate behaviors as opposed to only providing feedback to rule violation. Procedures of the game included a timer being set by the teacher, on teacher determined intervals, following timer sounding; students were reminded to record whether or not they were following the rules. The teacher had to set a criterion to identify the winning student teams; however, in this game points were desirable and winning teams needed to meet or exceed the criterion as opposed to the GBG procedures. Teachers were encouraged to provide behavior-specific praise by stating the student's name with the specific behavior and a praise statement during the game sessions. When implemented in three classrooms, student in-seat behavior increased from low baseline levels (M= 56%) to 88% of observed intervals the students remained in their assigned seats. Following an extended implementation of the GSG teachers and students were asked to provide their ratings of acceptability for the GSG. Over 90% of the students reported enjoying the game and attributed increased productivity in the classroom to GSG, and all the students enjoyed earning the reward after playing the game. The teachers also reported that the

game made a difference in their classroom and appreciated the flexibility the game allowed.

The GBG employs response cost procedures and peer influences to change behavior (Salend, et al., 1989; Sweizy et al., 1992). Classroom management strategies and behavior change approaches have recently placed increased importance on the utilization of positive approaches to not only increase the occurrence of adaptive replacement behaviors but also as an approach to prevent maladaptive behaviors. GBG variations including adaptations of game rules (Darveaux, 1984; Fishbein & Wasik, 1981; McLaughlin et al., 1979), use of merits (Darveaux, 1984), self management (Babyak et al., 2000; Davies & Witte, 2000), focus on target behaviors (Fishbein & Wasik, 1981; Patrick et al., 1998; Schmidt & Ulrich, 1969) and behavior specific praise all have yielded or potential merit if added to the GBG procedures.

#### Purpose and Rationale of Current Study

The classroom environment can have a dramatic influence on student skill acquisition. Disruptive classroom environments adversely affect the ratio of allocated academic time and actual academically engaged time (Shinn, Ramsey, Walker, Steiber, & O'Neill, 1987). The major purpose of this study is to assess the impact of procedural variations of the Good Behavior Game as strategies for managing classroom behavior. As discussed previously, an orderly classroom does not ensure academic gains will be attained by students; however, classroom teachers' instructional ability can be attenuated by disruptive talk, out-of-seat behavior, and other distractions (Carpenter & McKee-Higgins, 1996). Much of the current literature has described the effectiveness of the GBG as an evidence-based strategy addressing disruptive and off-task behavior (Barrish, et al.,



1969; Maloney & Hopkins, 1973; Medland & Stachnik, 1972; Johnson et al., 1978; Warner et al., 1977). There is a call for movement away from punishment only interventions (Horner et al., 1990). Punishment only procedures focus on the reduction of a behavior occurring in the future. The limitation follows if an increase in an appropriate behavior is the ultimate goal, instruction and reinforcement of the appropriate target behavior is a more proactive approach and avoids the side effects of punishment only based approaches.

This study will directly compare two interdependent group oriented contingency strategies, the GBG and the GBG with a behavior specific praise statement (BSPS) component (i.e., GBG+BSPS) to examine the relative effectiveness of each as a tool for class-wide behavior management, to inspect the effect on teacher interactions with students, and to assess the relative teacher and student acceptability of both games. The Good Behavior Game has been identified as an evidence-based intervention to manage class-wide behavior difficulties, but recently has been criticized for not being proactive in teaching appropriate classroom behavior. The relative effectiveness and acceptability of each game as a class-wide behavior management tool will be examined. This experiment will extend the literature on the GBG by comparing the GBG to a similar, more positive variation of the game where teacher initiated behavior specific praise is included in the procedures (GBG+BSPS).

## Method

This experiment directly compared two interdependent group contingency strategies to examine the relative effectiveness and acceptability of each as a tool for class-wide behavior management. Direct observation data of student behavior (i.e. on-task and disruptive), teacher behavior (i.e., behavior specific praise and reprimands) and acceptability ratings, by teachers and students, were collected and compared.

### Setting and Participants

The participants in the study were five elementary grade school teacher volunteers. Teachers were recruited from a public school in the Southeastern United States. The most recent school achievement data reports 51% of third grade students in the school as at or above basic level of understanding in language arts and literacy and 47% as at or above basic level of understanding in mathematics (Louisiana Department of Education, 2006). The participating school served just over 300 students, in grades pre-kindergarten to fifth grade, over 99% of the student population at the school was African American, 92% of students were eligible to receive free or reduced price lunch. Average student teacher ratio in the school was 11 students for each teacher.

Teacher participants were general education teachers assigned to first and second grades; the mean grade level was 1.60 (two in 1<sup>st</sup> and three in 2<sup>nd</sup> grades). Potential teacher participants volunteered to participate in a study designed to address student behavior in the classroom. In the beginning, 11 teacher volunteers were identified. The five participants were selected based on need (i.e., disruptive behavior rates) and administrator recommendation. These teachers were trained to implement both the Good

Behavior Game (GBG) and the Good Behavior Game with Praise (GBG+BSPS) in their classrooms.

Ms. Mosby, a second grade teacher completing her first year of teaching, participated in the study during her reading class period. Her classroom included 14 students (6 males and 8 female). Like Ms. Mosby, Ms. Erikson, was included in the project due to classroom management struggles during reading instruction, with 10 students (8 male and 2 female) in a first grade classroom during her first year of teaching. Ms. Stinson, was entering her third year of teaching and her classroom included 18 students (9 male and 9 female). Her second grade classroom was selected to participate in the investigation during the English and Language Arts instructional period. Ms. Sherbatsky was a former special educator (2 years experience) finishing her first year in the general education classroom. She participated with her second grade English and Language Arts class serving 11 students (5 male and 7 female). Finally, Ms. Aldrin reported an extreme need of classroom management strategies to address the behavioral excesses of her 18 (10 male and 8 female) student first grade math class.

### Materials

Training. Materials necessary for teacher training of the GBG and GBG+BSPS include a teacher manual and script (see appendix A). The manual provided the general classroom operating procedures, rule development materials, along with definitions and examples of target behaviors for each condition. The script served as a prompt for the teacher to explain the games to students.

The Good Behavior Game and Good Behavior Game with Behavior Specific Praise Statements (GBG & GBG+BSPS). The following materials were required for daily

implementation of the GBG: Game rules, daily and weekly score boards, point sheets, digital timer, and integrity checklist (see appendix A). The daily point sheets were divided into four quadrants with team names. Point sheets provided space to log the date, start/stop time, daily point criterion and space for the team point tally. A digital timer was used to ensure duration of the game. Materials for the Good Behavior Game with Behavior Specific Praise Statements (BSPS) included the same materials as discussed above and a vibrating cueing device to signal the teacher at fixed intervals to scan for and praise appropriate behavior. Daily tangible rewards were provided to winning teams including candy, pencils, erasers, coupons, etc.

Classroom Observations. Materials for classroom observation of student behaviors included an audio tape recorder, earphone and an observation recording sheet. The audio tape contained a cue at a 15s fixed time interval. Recording sheets were divided into forty, 15s intervals to record student (i.e., on-task and disruptive) behavior and a section to record behavior specific praise and reprimand frequency counts.

#### Dependant Measurement, IOA, and Acceptability

Dependant Measures. Student on-task behavior was defined as the student attending to the teacher or assigned material (e.g., eyes oriented toward work or teacher). Both passive and active forms of on-task behavior were included (e.g., listening to a lecture, reading out loud). Student disruptive behavior was defined as any activity which is not academically related to the situation. Disruptive behavior consists of non-academic verbal (e.g., callouts, talking to peers that is academically unrelated) and/or motor (e.g., out of seat, throwing paper) behaviors.

Teacher behavior specific praise was defined in three parts 1) gaining student attention, 2) identification of appropriate behavior, and 3) praise statement. All three components were necessary for a statement to be coded as specific praise. Reprimands were defined as any verbal or physical warning redirection or other negative statement from the teacher to a student(s).

On-task and disruptive behaviors were measured using momentary time sampling and partial interval recording procedures, respectively. Data collection involved the observation of one student for one 15s interval in a rotation across teams. Forty student observations occurred for each 10-minute observation. Teacher behavior specific praise and reprimand behaviors were measured using frequency counts. Data collection involved 5-minute observations of the teachers' interactions with students. One observation was conducted per session.

Interobserver Agreement. Interobserver Agreement (IOA) data were collected by two independent observers simultaneously observing and recording student and teacher target behaviors. Percentage agreement for student on-task and disruptive behaviors were calculated for each interval by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100. IOA was collected on 28.07% of the total number of baseline and intervention (i.e., GBG and GBG+BSPS) conditions. Mean IOA for student on-task behavior was 95.07% (range, 84% to 100%) and for disruptive behavior 97.88% (range, 93% to 100%).

A second experimenter was trained in the scoring procedures for the student and teacher acceptability ratings. The second independent experimenter scored at least 30% of all acceptability ratings. Total count IOA was calculated by dividing the smaller of the

counts by the larger and multiplying by 100. IOA was collected on 30.19% of the total student acceptability ratings. Mean IOA was 98.59% (range, 71% to 100%). IOA was collected on 100% of the total teacher acceptability ratings. Mean IOA was 100%.

**Treatment Acceptability.** The teachers completed the Intervention Rating Profile (IRP-15; Martens, Witt, Elliot, & Darveaux, 1985) at the conclusion of each condition. The IRP-15 has 15 statements regarding intervention acceptability. When completing the IRP-15 the teachers, using a 6 point Likert-type scale, respond to the statements indicating the degree of their agreement or disagreement with each item (e.g., “I would suggest this intervention to other teachers”, “I liked the procedures used in this intervention.”). Higher scores on the scale are associated with acceptable interventions (Martens, et al., 1985). The students completed the Children’s Intervention Rating Profile (CIRP) by responding to 6 statements of acceptability (Turco & Elliott, 1986). Like the IRP-15 a 6 point Likert-type scale is used to rate student opinions of acceptability on statements for example “The Game is fair,” or “I like the Game.” Scores on the CIRP have a possible range of 6 to 36. Lower scores on the CIRP are associated with acceptable interventions.

### Procedures

**Baseline.** Data were collected on student (i.e., on-task and disruptive) and teacher behaviors (i.e., behavior specific praise statements and reprimands). Baseline data collection continued for a minimum of three sessions until a stable pattern of responding was observed or student disruptive behavior trended in an increasing direction.

**Training.** Teacher training occurred in three separate training sessions. The primary investigator conducted each training session, 45-60 minutes in duration, with

each teacher individually. The initial training session involved training in the general game operating procedures. With the assistance of the primary investigator, teachers developed game rules and identified student teams. Game rules were limited to five brief, positive statements of expected classroom behavior. Posters with the rules were printed and posted in the classroom. Following the development of game rules the teachers divided their class into teams each containing approximately 3-7 students. The teachers were directed to equally distribute students known to be disruptive across teams. Prior to game implementation the teachers established the game rules with the students by providing exemplars and non-exemplars of rule following behavior. Teams were instructed to select a team name that was posted along with other team names on the scoreboard prior to game initiation.

Following baseline, the teachers were trained by the primary investigator in the procedures to implement the GBG and GBG+BSPS. After reviewing the purpose of the games, training included four main topics 1) the assignment of points, 2) specific game procedures, 3) determining a winner(s), and 4) distribution of rewards (see appendix A).

Opportunities for observation and role play were provided with feedback. Training terminated when the classroom teacher met a criterion of 100% procedural integrity in a role-play test using the procedural integrity checklist (see appendix A).

A script was provided for teacher use in introducing each game to students. The script also served as a prompt to remind the teachers of the specific procedures for each condition.

Intervention. Following initial baseline data collection and teacher training one of the two intervention conditions was implemented. The assigned intervention was

implemented once daily for the duration of the predetermined academic activity.

Teachers were assigned to their initial intervention condition randomly.

Good Behavior Game (GBG). An initial explanation of the GBG procedures included a review of game rules (e.g., raise hand to speak, keep hands and feet to self), an explanation of point assignment (e.g., in this game points are assigned to teams with members breaking game rules), criteria used for point assignment (e.g., not following game rules will lead to point assignments) and the identification of winning teams (e.g., teams with point totals of 4 or less will earn the reward). The teacher signaled game initiation to the students. In the GBG, following each occasion of student disruptive behavior (i.e., out of seat, talking without permission, playing with objects, or not following directions) the teacher assigned a point to the team to which the student belonged. At the end of the period, the teacher tallied the points. The teams with point earnings not exceeding a mystery point criterion were identified as game winners and earned a reward (Lannie & McCurdy, 2007). Each team's points were recorded daily on the scoreboard posted in the classroom (Medland & Stachnik, 1972).

The Good Behavior Game with BPS (GBG+BSPS) was implemented in a similar fashion to the GBG. In addition to the GBG procedures, in the GBG+BSPS, the teacher scanned the room immediately following the occurrence of a device-generated cue occurring at 2 minute fixed intervals, identified a student following game rules and provided a behavior specific praise statement to the student. Teams were still assigned points if a team member engages in a disruptive behavior. Like the GBG, winning team(s) earned rewards daily if their points were below the mystery point criterion.



Design. An ABCACB withdrawal design was used to evaluate the results of the experiment. The order of intervention was varied across participants to provide a limited examination of potential order effects. The order of treatments for Teachers Mosby, Stinson, and Aldrin was ACBABC design, and an ABCACB design with Teachers Erikson and Sherbatsky. Phase changes occurred when visual inspection of a stable pattern of responding was observed or when the behavior trended in an opposite/undesired direction.

Procedural Integrity. Using a checklist of procedural steps, an observer recorded teacher adherence to game procedures. Procedural integrity was calculated as the number of procedural tasks completed divided by the number of intervention tasks required. Initially, performance feedback was provided to the teacher daily following each session. Once the teacher met the criterion of 85% of steps completed correct for two consecutive days, integrity measurement was reduced to one time weekly with no feedback to the teacher. Following initial training, Ms. Stinson had one occurrence of treatment integrity falling below the 85% criterion where performance feedback was necessary, session 38. Following the performance feedback session implementation returned to and remained above the 85% criterion. Implementation for all other teachers never fell below the 85% criterion.

## Results

### Disruptive and On-task Behaviors

Figure 1 presents student disruptive and on-task behavior as a percentage of intervals observed across conditions in Ms. Mosby's classroom. Student's disruptive and on-task behaviors were variable during baseline with student on-task behavior on a decreasing trend ( $M=59.64$ ) and disruptive behavior following an increasing trend ( $M=48.57$ ). Implementation of the GBG+BSPS resulted in a rapid change in level and stabilizing of both student disruptive behavior and on-task ( $M=18.58$ ,  $M=80.48$ , respectively) behaviors, student disruptive behavior continued on a slightly decreasing trend. When the praise component of the intervention was removed (GBG), similar levels of student on-task behavior ( $M=78.13$ ) were observed; however, the data were more variable. Student disruptive behavior remained stable and at similarly low levels ( $M=16.25$ ). During the withdrawal phase, a level and trend change was evident for both on-task ( $M=62.72$ ) and disruptive ( $M=39.80$ ) behaviors. Following the withdrawal phase, reimplementation of the GBG resulted in student disruptive and on-task behaviors ( $M=16.98$ ,  $M=82.72$ , respectively) returning to previous intervention levels and increased stability. When the behavior specific praise was restored to the game (GBG+BSPS) student on-task behavior ( $M=90.23$ ) slightly increased in level and disruptive behavior ( $M=9.47$ ) level decreased.

Figure 2 depicts student behavior in Ms. Erikson's classroom. Variable student on-task ( $M=55.00$ ) and disruptive ( $M=36.00$ ) behavior was observed during the initial baseline phase of the project. Introduction of the GBG in classroom 2 resulted in changes in level and stability of student behavior. Student on-task behavior level changed quickly

and showed a slightly increasing trend with little variability ( $M=80.90$ ), while disruptive behavior quickly decreased ( $M=14.63$ ) to a more appropriate and stable level. Following the addition of the behavior specific praise component to the intervention (GBG+BSPS), student on-task ( $M=85.99$ ) and disruptive behavior ( $M=11.71$ ) remained at similar levels. Following the withdrawal of the GBG+BSPS condition student disruptive ( $M=32.94$ ) and on-task ( $M=58.91$ ) behaviors returned to previous baseline levels. Subsequent implementation of the GBG+BSPS condition produced some initial variability and a rapid return to previous on-task ( $M=84.79$ ) behavior intervention levels. Student disruptive ( $M=14.10$ ) behavior immediately returned to previous low levels following implementation of the GBG+BSPS procedures. Removing the praise component (GBG) did not result in any major change in level, trend, or stability of student on-task ( $M=83.87$ ) or disruptive behavior ( $M=15.77$ ).

Ms. Stinson's student's on-task and disruptive behavior is presented in Figure 3. Baseline levels of student on-task behavior remained consistently on the same level and showed no change in trend ( $M=61.39$ ). Disruptive behavior was more variable ( $M=40.28$ ) during baseline observations. Following implementation of the initial intervention condition (GBG+BSPS), student on-task and disruptive behavior ( $M=84.5$ ,  $M=15.5$ , respectively) quickly improved with regard to level, trend, and variability. Initial implementation of the GBG condition resulted in slightly more variable disruptive student behavior ( $M=17.30$ ) initially, yet quickly improved. Initial variability can be attributed to low levels of treatment integrity during session 20. Student on-task behavior remained at a similar high level ( $M=84.73$ ). A withdrawal of intervention conditions resulted in a rapid increasing trend of student disruptive behavior ( $M=33.13$ ) and

decreasing trend of on-task behavior ( $M=70.63$ ). Next the GBG, followed by the GBG+BSPS, were repeated yielding similar and even slightly lower levels of disruptive behavior ( $M=12.30$  and  $M=14.04$ , respectively) than the previous implementations. Student on-task behavior returned to previous high levels of behavior with less variability in the GBG ( $M=85.19$ ) and GBG+BSPS ( $M=86.72$ ) conditions.

Highest levels of student disruptive behavior ( $M=66.25$ ) were observed during initial baseline conditions in Ms. Sherbatsky's classroom. This data is represented in Figure 4. Low levels of student on-task behavior ( $M=63.13$ ) were also observed during this condition. Following implementation of the GBG procedures, student behavior improved considerably. Student on-task behavior ( $M=81.07$ ) changed level and stabilized quickly along with student disruptive behavior ( $M=17.14$ ), which dropped dramatically and continued on a decreasing trend before stabilizing. After adding the praise component to the GBG, student on-task and disruptive behavior ( $M=84.52$  &  $M=14.35$ ) remained at similar previous intervention condition levels. After intervention procedures were removed improvements in student behavior were reduced, student on-task behavior ( $M=66.50$ ) quickly changed level and followed a decreasing trend, student disruptive behavior ( $M=48.00$ ), like on-task behavior, dramatically changed in level and continued on a slight increasing trend. Intervention order was reversed following the return to baseline, the GBG and praise procedures were implemented next. On-task and disruptive behavior ( $M=84.87$  &  $M=15.79$ , respectively) were observed again and promptly changed for the better; though more variable initially, they quickly stabilized. When the praise component was removed, student behavior remained at similar levels; however, student on-task behavior was more variable than disruptive behavior. Student

behavior in Ms. Sherbatsky's classroom during baseline observations suggested some of the highest rates of disruptive behavior and lowest rates of on-task behavior, but during intervention conditions student's in classroom 4 seemed to respond more quickly than in other classrooms.

Like Ms. Sherbatsky's class, during initial baseline observations, students disruptive behavior (M=64.38) in Ms. Aldrin's classroom occurred at high levels and on-task behavior (M=55.00) occurred at levels lower than disruptive behavior. GBG and Behavior Specific Praise procedures were associated with improved student behavior. On-task behavior (M=80.62) changed in level and stabilized quickly. Student disruptive behavior quickly changed level and stabilized following initial implementation. Teacher Behavior Specific Praise procedures were then removed from the GBG resulting in little change in student behavior. When intervention procedures were removed completely, student on-task behavior was observed on a slightly decreasing trend only approaching previous baseline condition levels. Student disruptive behavior was observed on a rapidly increasing trend toward previous baseline levels. Following the withdrawal of intervention procedures, the GBG procedures were implemented followed by GBG and praise components. These intervention conditions resulted in student behavior quickly returning to previous intervention levels. Student on-task behavior remained at high levels in the GBG and GBG with Behavior Specific Praise Statements (M=84.38, M=81.15, respectively); on-task behavior was slightly more variable in the GBG with praise condition.

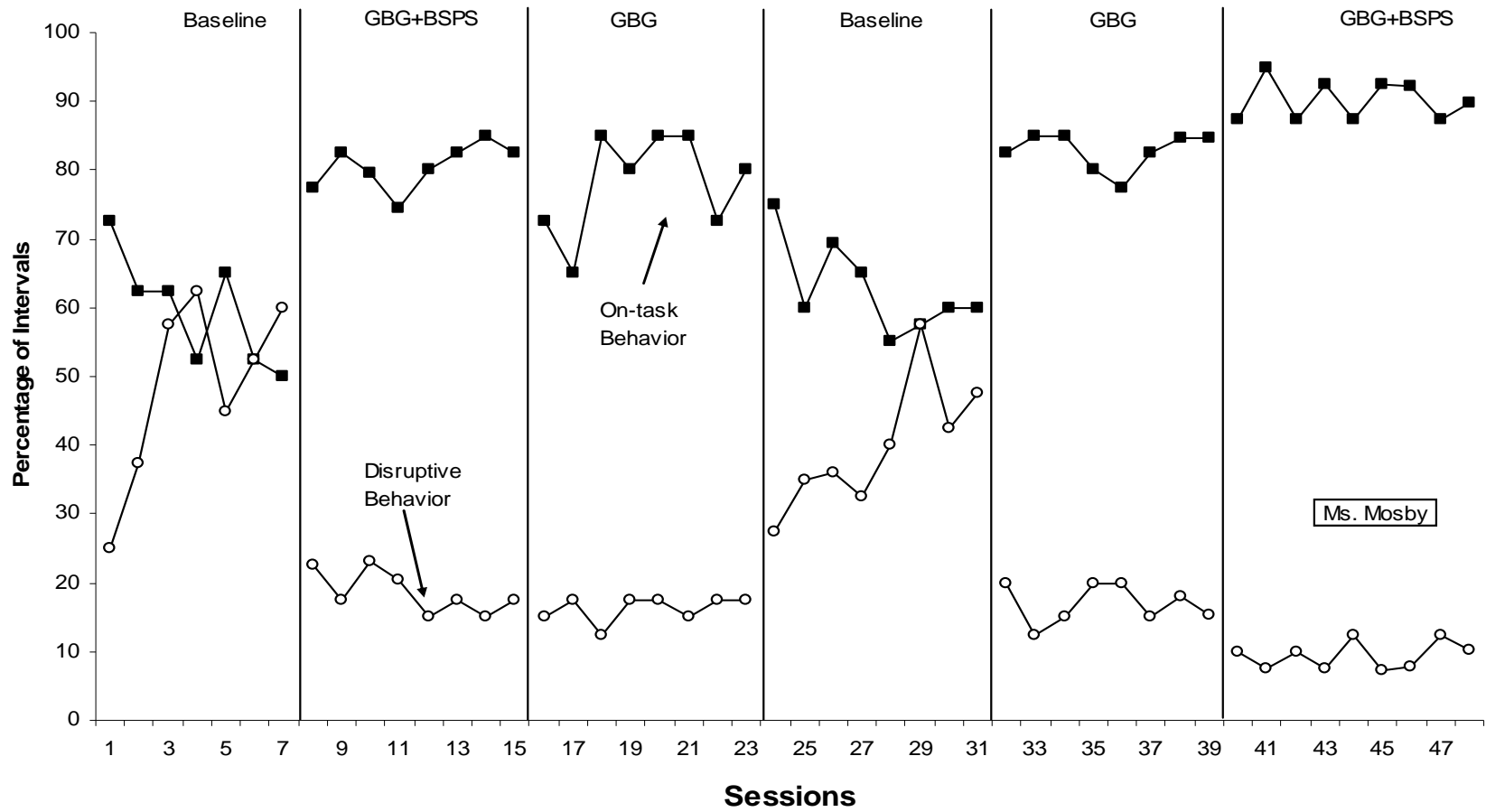


Figure 1. Percentage of student on-task and disruptive behavior intervals for Ms. Mosby's class.

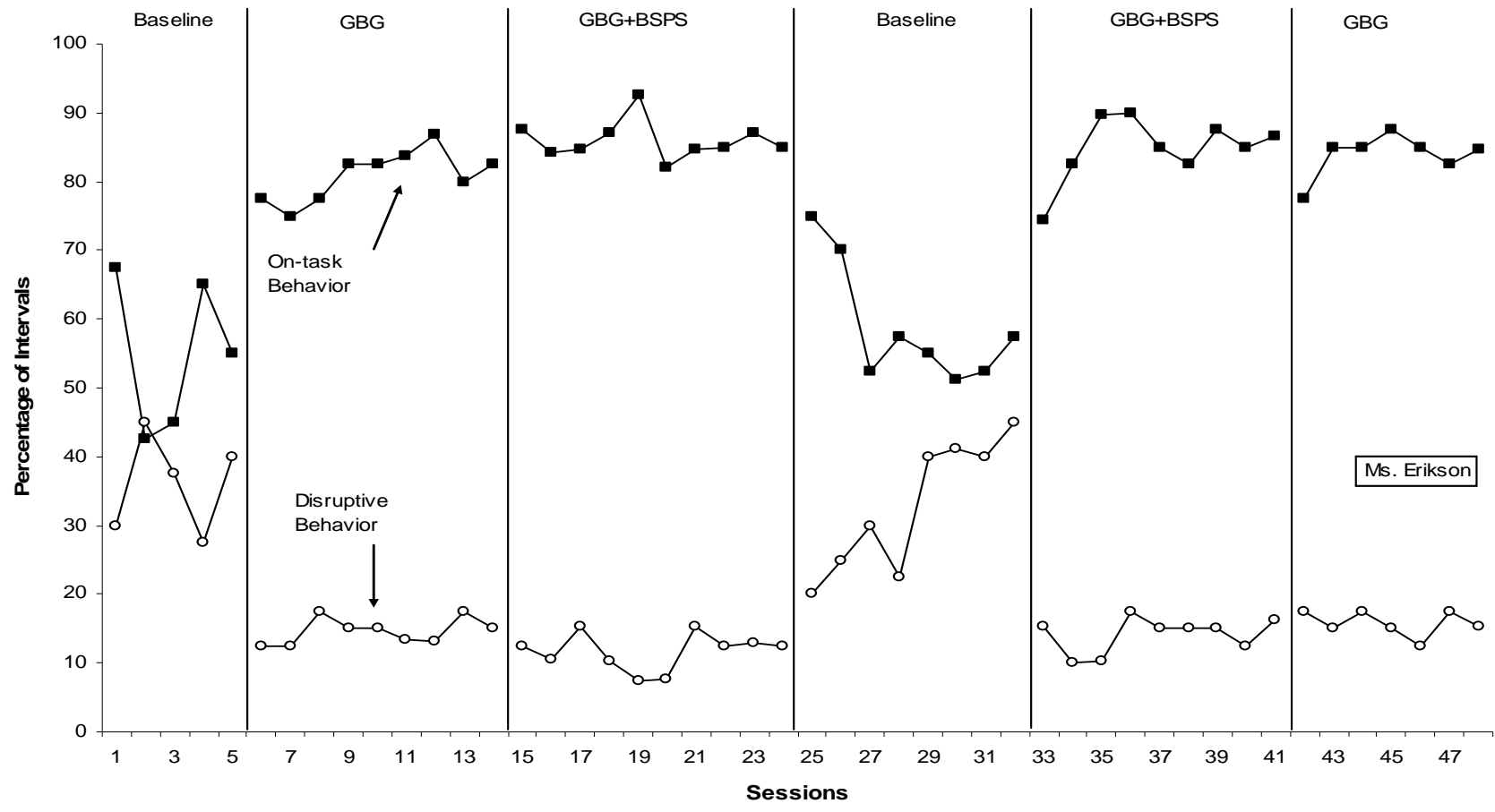


Figure 2. Percentage of student on-task and disruptive behavior intervals for Ms. Erikson's class.

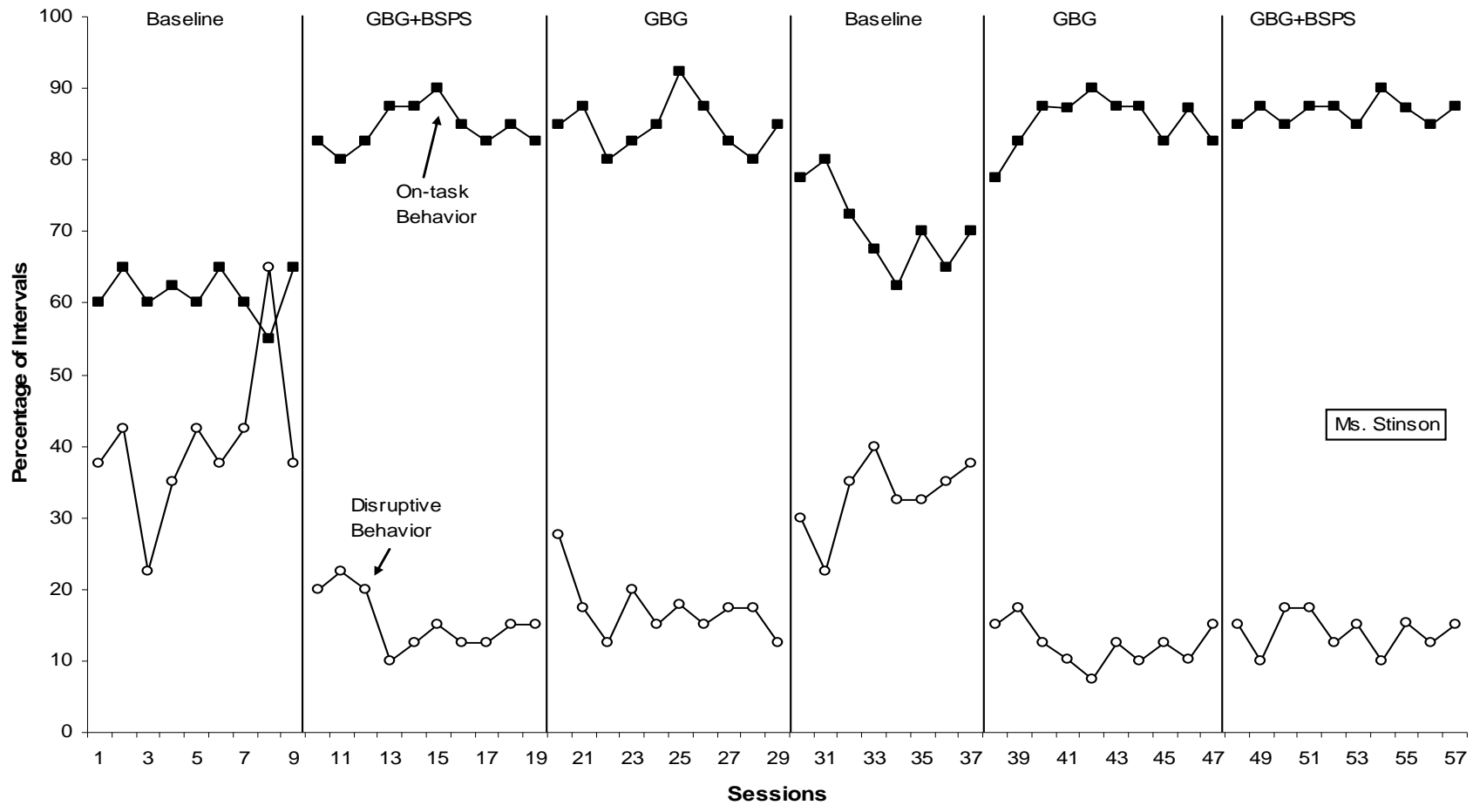


Figure 3. Percentage of student on-task and disruptive behavior intervals for Ms. Stinson's class.



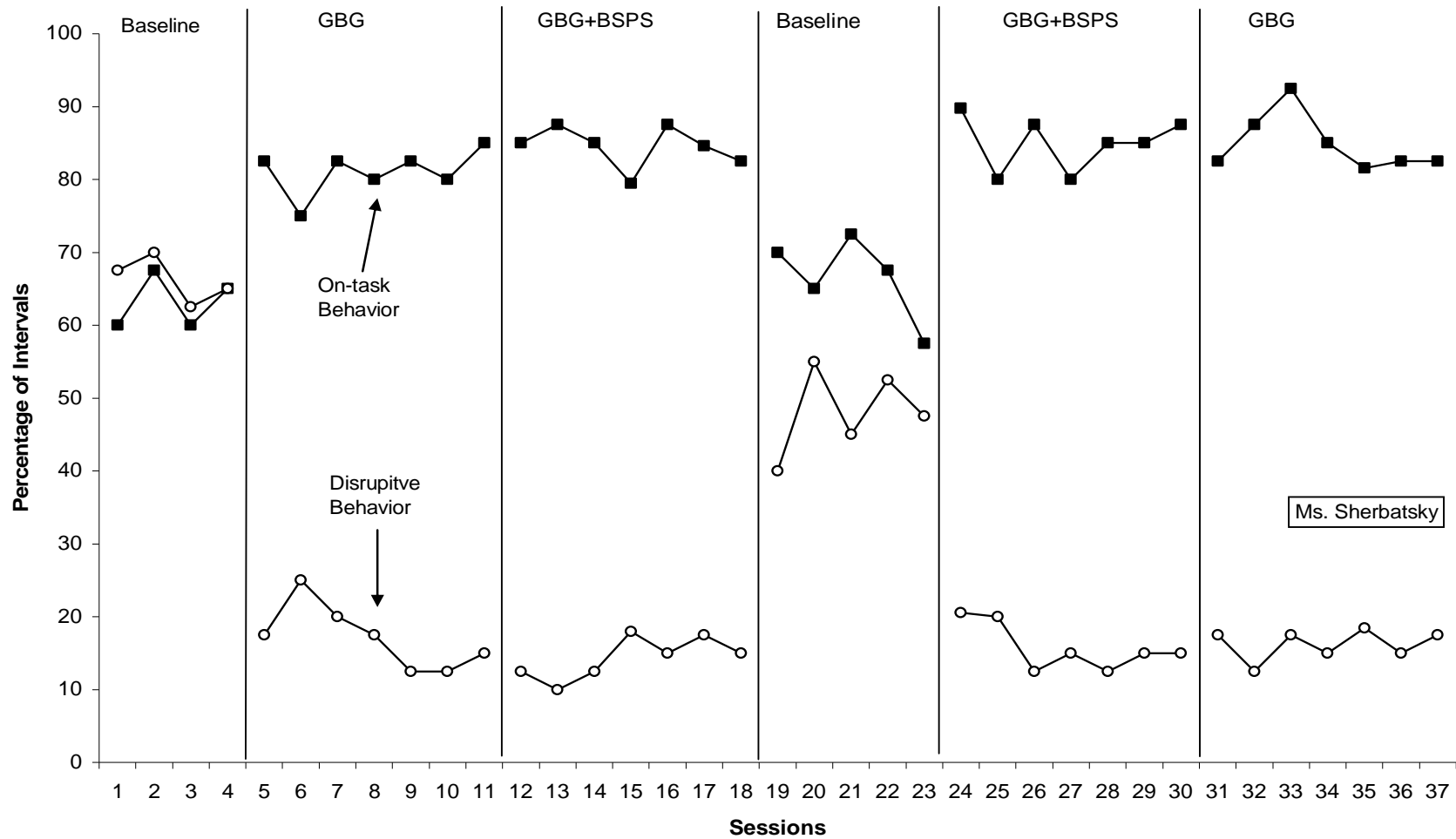


Figure 4. Percentage of student on-task and disruptive behavior intervals for Ms. Sherbatsky's class.

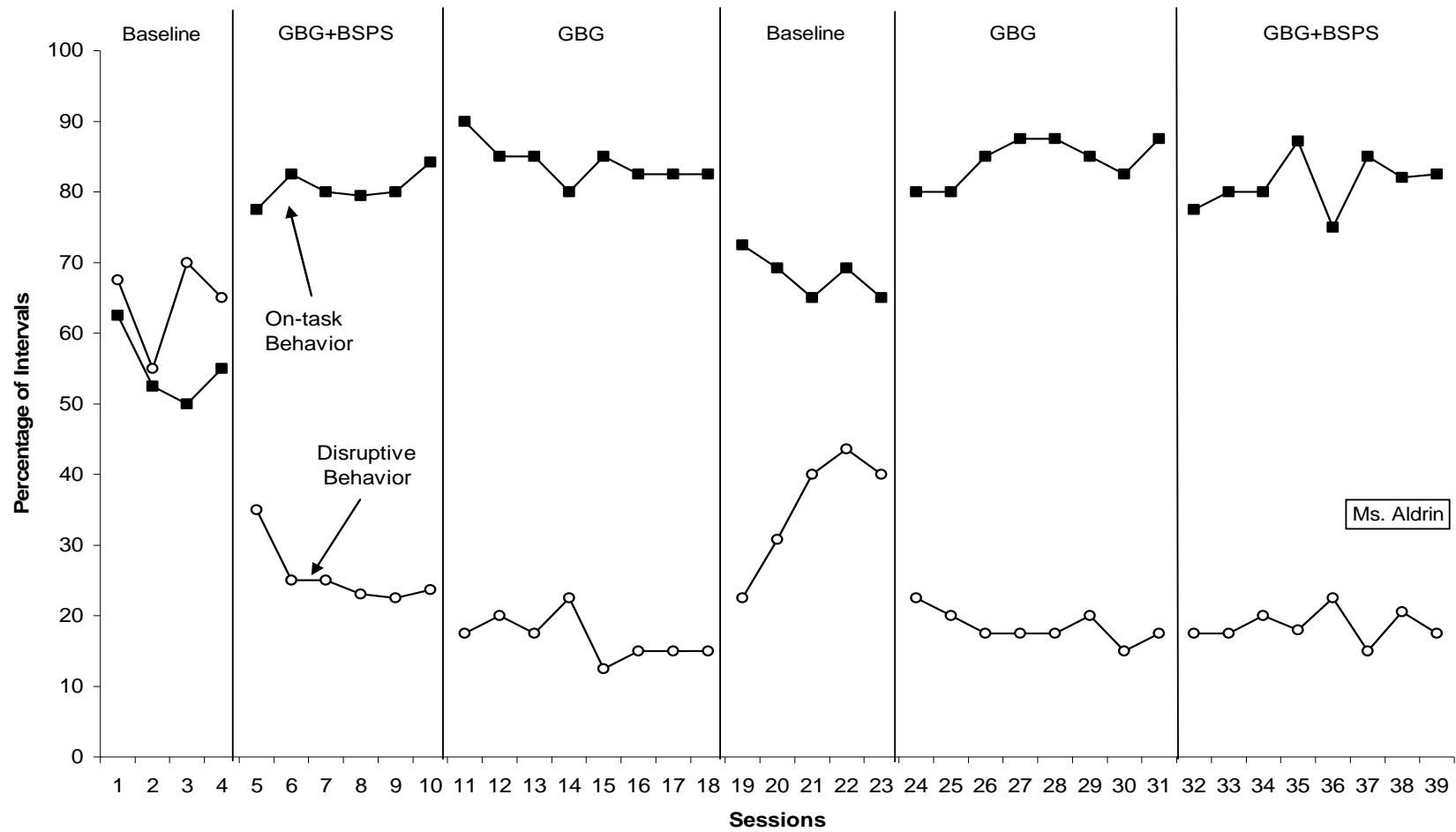


Figure 5. Percentage of student on-task and disruptive behavior intervals for Ms. Aldrin's class.

## Behavior Specific Praise Statements and Reprimand Behaviors

Teacher interaction behavior data is displayed as a rate of behavior (i.e., behavior specific praise and reprimand) per minute. With Ms. Mosby, teacher behavior specific praise only occurred once during the baseline and GBG conditions. During the GBG+BSPS conditions, teacher behavior specific praise occurred consistently throughout the initial (M=0.33) and final (M=0.42) intervention implementation phase. In contrast, initial variability and high levels of teacher reprimands (M= 1.06) during baseline observations stabilized and decreased in level across the remaining phases of the project.

Ms. Erikson's teacher interaction data is presented in Figure 7. Consistent behavior specific praise statement (M=0.36, M=0.49, respectively) occurrences were observed in the GBG+BSPS conditions only. No occurrences of behavior specific praise were observed in baseline observations and observed only once in observations during GBG phases. High rates of teacher reprimands (M= 1.56) were observed during initial baseline observations. Following GBG intervention implementation, the teacher reprimand (M=0.84) rates decreased quickly in a dramatic downward trend. The addition of Behavior Specific Praise to the GBG did not result in dramatic changes in teacher reprimand rates. Following the withdrawal of intervention procedures, teacher reprimands became more variable and continued on an increasing trend. Reimplementation of the GBG+BSPS resulted in a return to even lower than previous intervention levels (M=0.31). Removal of Behavior Specific Praise was associated with more variable and a slightly higher level of teacher reprimands (M=0.53).

Figure 8 displays teacher interaction data for Ms. Stinson. Her rates of behavior specific praise remained at or near zero levels across all conditions except for the

GBG+BSPS conditions where on average 0.30 praise statements occurred per minute during the initial implementation and 0.50 praise statements in the subsequent condition.

Ms. Sherbatsky's interaction data is depicted in Figure 9. During initial baseline observations she engaged in high levels of reprimands per minute ( $M=2.05$ ) directed at student behavior. Following implementation of the intervention conditions, teacher reprimands decreased dramatically and remained at levels below 0.75 reprimands per minute. Teacher behavior specific praise was not observed until the implementation of the GBG+BSPS procedures in session 12. During the GBG+BSPS condition teacher behavior specific praise occurred at an average rate of 0.34 statements per minute and 0.37 statements per minute in the repeated implementation. Outside of the GBG+BSPS conditions, a behavior specific praise statement was observed only once in session 36.

Ms. Aldrin is the only participant observed where behavior specific praise training generalized to other conditions; this data is presented in Figure 10. Initial baseline observations yielded the observation of one behavior specific praise statement during four, five-minute observations and high and variable rates of reprimands ( $M=1.95$ ). Following training and implementation of behavior specific praise and GBG procedures, teacher interactions were observed to have slightly reduced the occurrence of reprimand statements ( $M=1.27$ ) and increased behavior specific praise statements ( $M=.60$ ). Removal of the praise prompt resulted in slightly lower rates of behavior specific praise ( $M=0.55$ ) and continued reductions in reprimands ( $M=1.00$ ). Removal of all intervention procedures resulted in lower rates of behavior specific praise ( $M=0.36$ ), yet BSPS remained higher than previous baseline observations. Teacher reprimands continued to be variable and consistent ( $M=.84$ ). Reintroduction of the GBG procedures resulted in

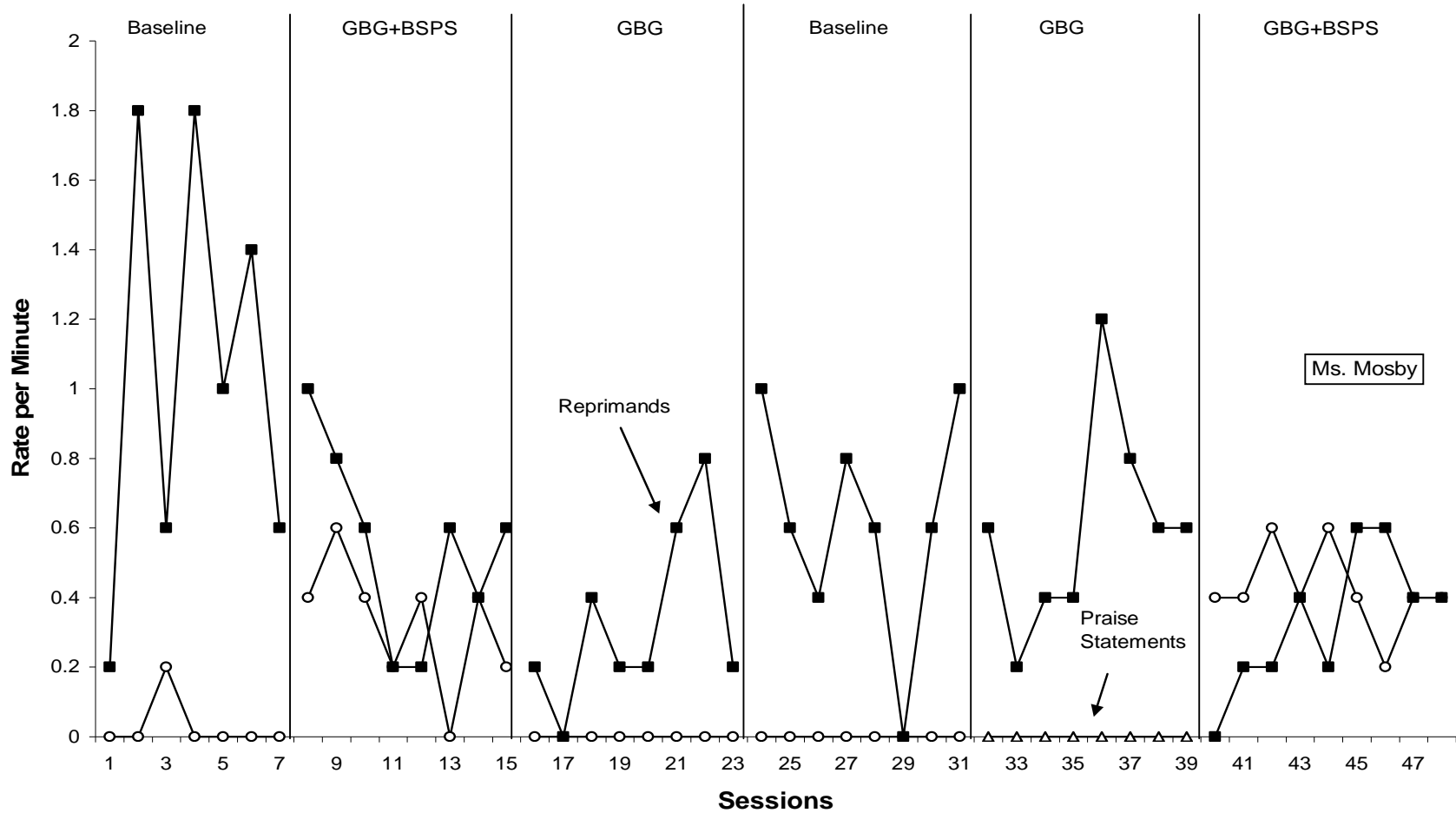


Figure 6. Rate of teacher behavior specific praise statements and reprimands per minute in Ms. Mosby's classroom.

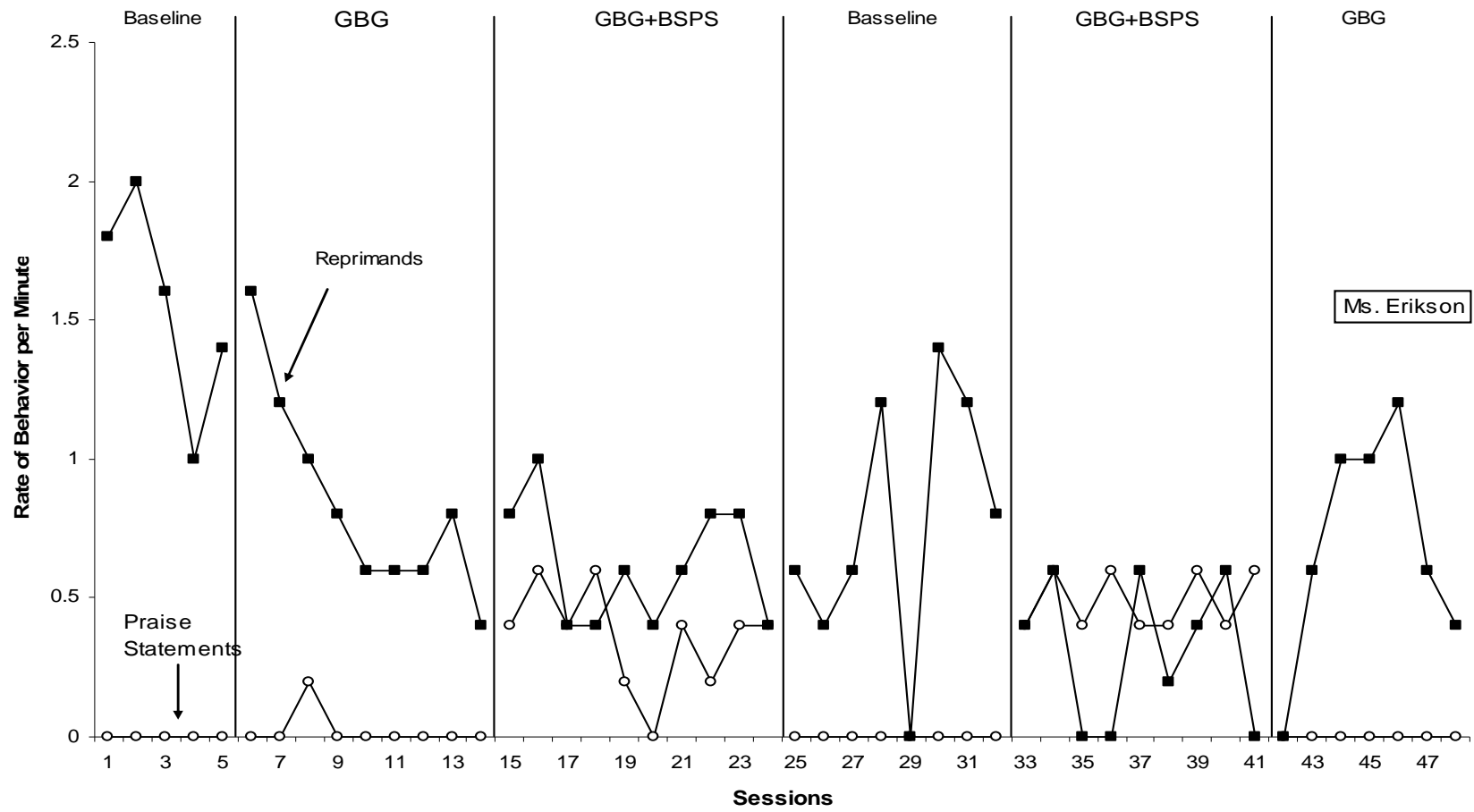


Figure 7. Rate of teacher behavior specific praise statements and reprimands per minute in Ms. Erikson's classroom.

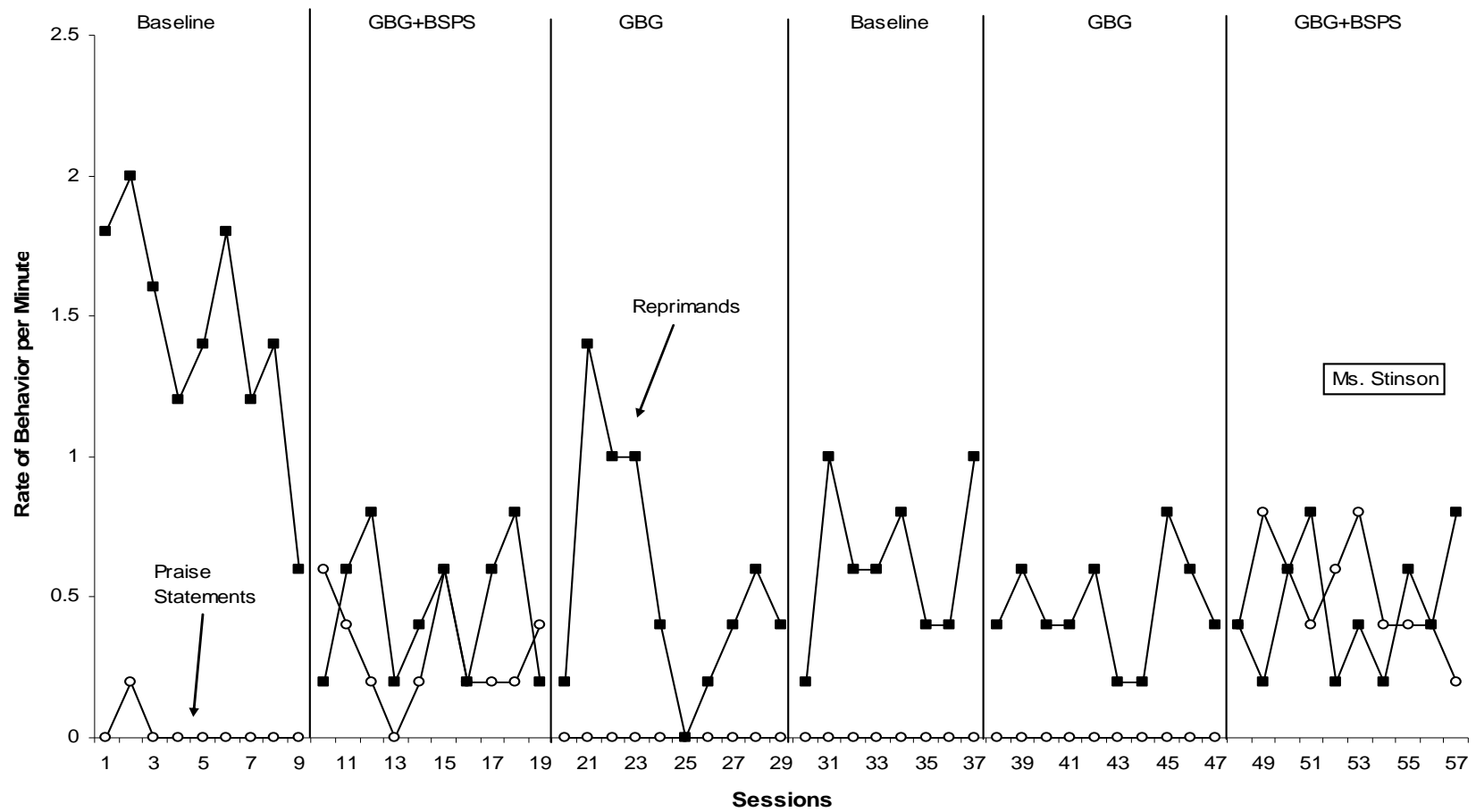


Figure 8. Rate of teacher behavior specific praise statements and reprimands per minute in Ms. Stinson's classroom.

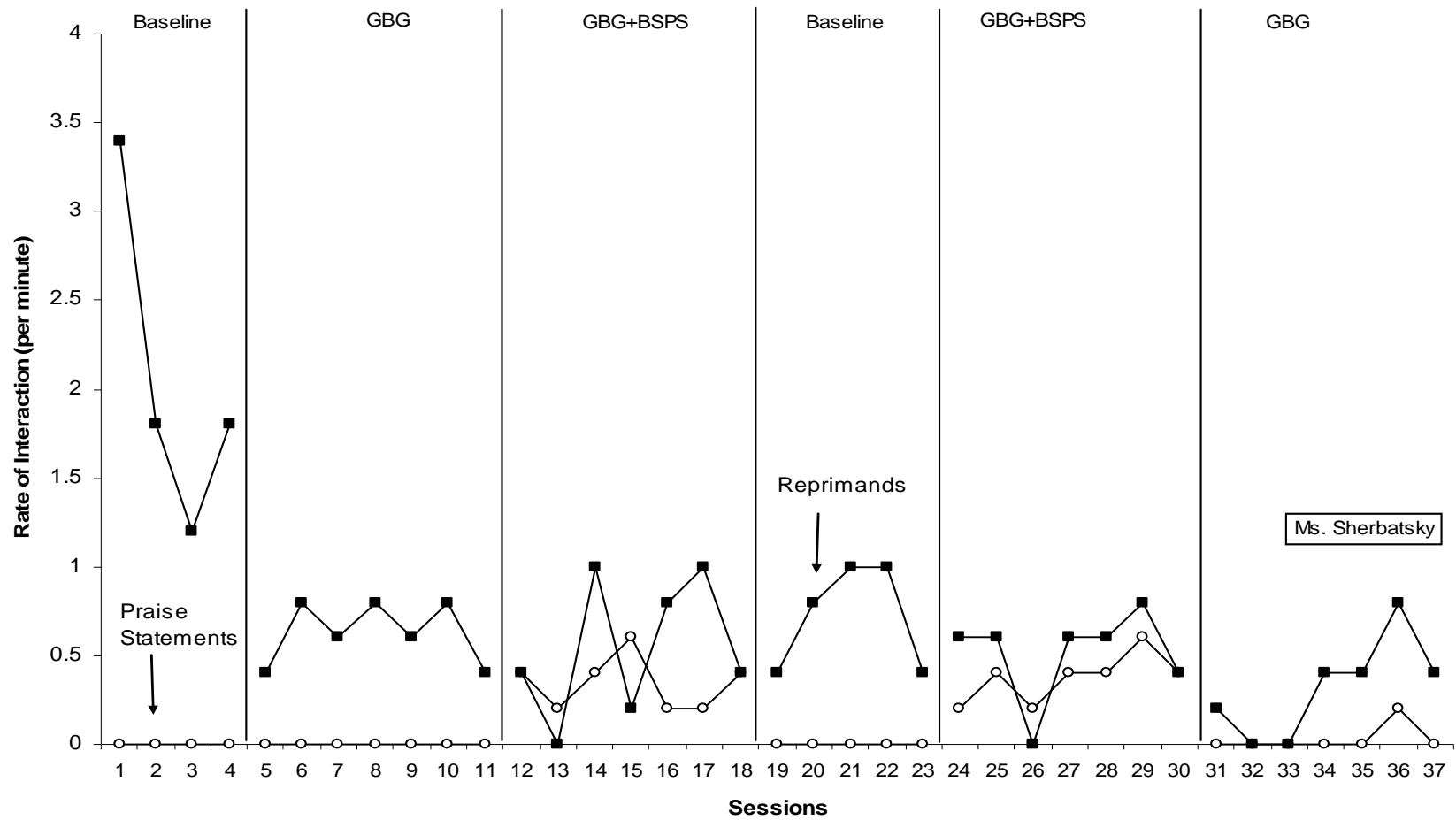


Figure 9. Rate of teacher behavior specific praise statements and reprimands per minute in Ms. Sherbatsky's classroom.



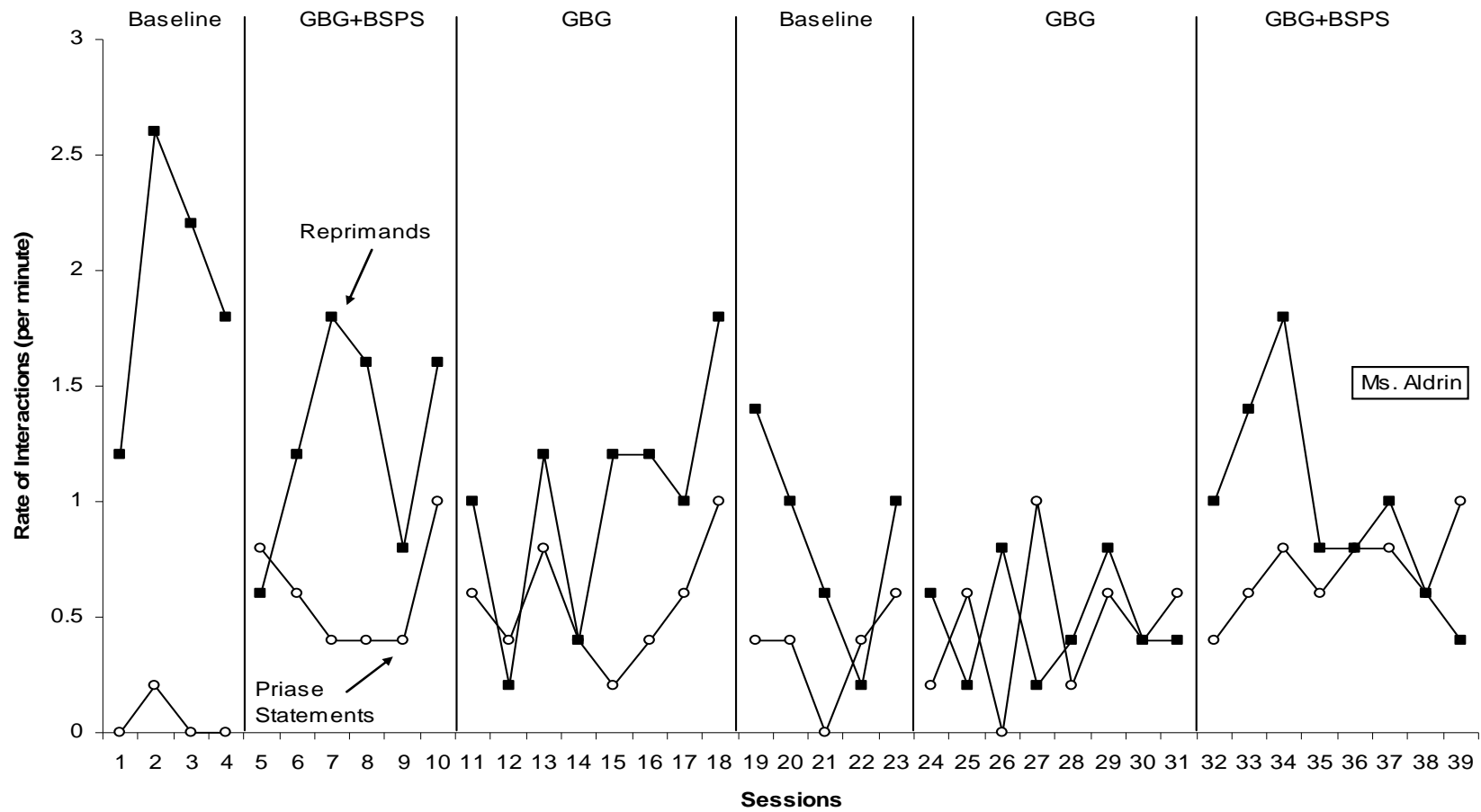


Figure 10. Rate of teacher behavior specific praise statements and reprimands per minute in Ms. Aldrin's classroom

increased behavior specific praise statements ( $M=0.45$ ) and further reduced reprimands ( $M=0.48$ ). Addition of the praise component lead to higher behavior specific praise statements ( $M=.70$ ) and, like previous implementation, higher rates of reprimands ( $M=0.98$ ).

### Student and Teacher Acceptability

Treatment Acceptability. Following implementation of each intervention condition, teachers were asked to complete the IRP-15 reporting their ratings of acceptability for the designated condition. Teacher treatment acceptability was calculated for both the GBG ( $M=84.6$ ,  $SD=32.8$ ) and GBG+BSPS ( $M=84.8$ ,  $SD=52.7$ ). Using a paired samples t-test, teacher ratings of acceptability of the GBG was compared to the acceptability ratings of the GBG+BSPS. Results showed no significant difference,  $t(4) = 0.002$ ,  $p=0.439$ .

Students in each of the classrooms were asked to provide their ratings of acceptability of the GBG and GBG+BSPS procedures. Students from each of the five classrooms rated the GBG and GBG+BSPS conditions as acceptable. Students from Ms. Mosby's classroom rated the GBG and GBG+BSPS ( $M=10.58$ ,  $SD=0.99$ ;  $M=10.92$ ,  $SD=32.27$ , respectively), using a paired samples t-test; student ratings of acceptability of the GBG were compared to their ratings of the GBG+BSPS. Results showed no significant difference,  $t(11)= 0.213$ ,  $p=0.42$ . These results are replicated in the data from the remaining classrooms

Students from Ms. Erikson's classroom rated the GBG and GBG+BSPS ( $M=11.20$ ,  $SD=15.73$ .;  $M=10.10$ ,  $SD=20.10$ , respectively), using a paired samples t-test;

student ratings of acceptability of the GBG were compared to their ratings of the GBG+BSPS. Results suggested no significant difference,  $t(9)=1.160$ ,  $p=0.12$ .

Ms. Stinson's students rated the GBG and GBG+BSPS ( $M=12.80$ ,  $SD=10.18$ ;  $M=12.6$ ,  $SD=9.16$ , respectively), using a paired samples t-test; student ratings of acceptability of the GBG were compared to their ratings of the GBG+BSPS. Results showed no significant difference,  $t(9)=0.156$ ,  $p=0.44$ .

Students in Ms. Sherbatsky's class rated the GBG and GBG+BSPS ( $M=12.43$ ,  $SD=22.29$ ;  $M=11.00$ ,  $SD=15.33$ , respectively), using a paired samples t-test; student ratings of acceptability of the GBG were compared to their ratings of the GBG+BSPS. Results showed no significant difference,  $t(6)=0.826$ ,  $p=0.22$ .

Ms. Aldrin's students rated the GBG and GBG+BSPS ( $M=12.57$ ,  $SD=9.96$ ;  $M=13.5$ ,  $SD=24.88$ , respectively), using a paired samples t-test; student ratings of acceptability of the GBG were compared to their ratings of the GBG+BSPS. Results showed no significant difference,  $t(13) = 0.858$ ,  $p=0.20$ .

Table 1  
Intervention Acceptability Descriptive Statistics by Measure and Condition: GBG and GBG+BSPS

Measure	Condition			
	GBG		GBG+BSPS	
	Mean	SD	Mean	SD
IRP-15				
Teachers	84.60	32.80	84.80	52.70
CIRP				
Classroom 1	10.58	0.99	10.92	32.27
Classroom 2	11.20	15.73	10.10	20.10
Classroom 3	12.8	10.18	12.6	9.16
Classroom 4	12.43	22.29	11.00	15.33
Classroom 5	12.57	9.96	13.5	24.88

Note: IRP-15 = Intervention Rating Profile-15. IRP-15 judgments were made on a 6-point Likert rating scale; CIRP = Children's Intervention Rating Profile. CIRP judgments were made on a 6 point Likert rating scale.

Table 2  
Intervention Acceptability Descriptive Statistics by Children's Intervention Rating Profile  
Question and Condition: GBG and GBG+BSPS

Measure	Statement	Condition	
		GBG Mean	GBG+BSPS Mean
CIRP	Statement		
Question 1	Helps me do better	1.32	1.25
Question 2	I like the game	2.91	2.51
Question 3	Should be used with other schools	2.85	2.98
Question 4	There are better games/ways	2.36	2.26
Question 5	Causes problems with peers	1.23	1.34
Question 6	Game is fair	1.17	1.43

Note: CIRP = Children's Intervention Rating Profile. CIRP judgments were made on a 6 point Likert rating scale. Low scores suggest agreement with the statement.

## Discussion

Effective classroom management provides a safe and distraction free environment for students to learn. High levels of appropriate classroom behavior do not automatically result in student academic gains; however, it is commonly viewed as a requirement (Carpenter & McKee-Higgins, 1996). As discussed earlier, teachers today face the increased pressures for students to achieve along with students entering school with fewer school readiness (i.e., pre-academic and behavioral) skills compounded by the fact that many professionals are not well prepared to address the behavioral deficits and excesses of students (Sternberg & Williams, 2002). The GBG is one of many procedures that have been developed to help manage student behavior in the classroom. The GBG is supported by the Center for the Study and Prevention and Violence and the Substance Abuse and Mental Health Administration has even been nominated as a behavioral vaccine by Embry (2002).

The GBG is a group oriented contingency utilized to modify the behavior of an entire classroom of students effectively and efficiently (Darveaux, 1984; Elliot, Turco, & Gresham, 1987; Warner, Miller, & Cohen, 1977). The GBG procedures implement behavior reduction techniques but rarely teach appropriate classroom behavior, which has driven recent criticism. Positive behavioral intervention supports have drawn increasing interest and are mandated in some school systems (Horner et al., 1990). Horner et al., advocates the use of non-aversive techniques to reduce problem behavior by the teaching and reinforcement of appropriate behaviors that would replace the maladaptive behaviors. Behavior specific praise statements have been utilized as an effective yet subtle positive approach. In combination with behavior reduction techniques, BSPS has resulted in

dramatic reductions of disruptive behaviors and increases in on-task behaviors; however, evidence for positive only approaches (e.g., praise only) has not been as positive. Rosen, O’Leary, Joyce, Conway, and Pfiffner (1984) report the complete removal of punishment procedures is very difficult and increased student disruptive behaviors are associated with the use of only positive approaches (MacMillian, Forness, & Trumbull, 1973).

The purpose of this study was to directly compare the GBG and the GBG with a behavior specific praise component (GBG+BSPS) and take a more in-depth examination of student (i.e., on-task and disruptive) behaviors and teacher interactions (i.e., reprimands and behavior specific praise statements). Identifying the most effective and efficient intervention strategy will allow for the greatest decreases in student disruptive behavior and increases of on-task behavior, with the ultimate goal of greater amounts of uninterrupted engaged instruction of students.

It was predicted and found that both intervention conditions (i.e., GBG and GBG+BSPS) would be effective in reducing students’ disruptive behavior and increasing students’ on-task behaviors in first and second grade classrooms when compared to the baseline and withdrawal conditions; however, the hypothesis regarding the GBG+BSPS condition being associated with greater improvements in student behavior was not supported. During the current examination, differentiation between the GBG and GBG+BSPS results may not have been observed due to ceiling effects (i.e., dramatic reductions in disruptive behavior due to the GBG procedures) or the limited duration of the intervention conditions. Teaching and reinforcement of appropriate student behavior may take additional time to yield differential effects. However, in light of the near

maximal levels of appropriate behavior and very low levels of disruptive behavior for the GBG conditions, it remains that ceiling effects appear to be a sufficient explanation.

As predicted, the GBG and GBG+BSPS conditions were associated with lower levels of reprimands in the classroom and the GBG+BSPS condition was the only condition associated with consistent occurrences of teacher BSPS directed toward student appropriate behavior. Not predicted but observed teacher rates of reprimand remained low even during the withdrawal condition. These results suggest that reductions of student disruptive behavior and simultaneous increases in on-task behavior are not associated with increases in teacher behavior specific praise statements and that behavior specific praise statements need to be targeted specifically if rate increases are desired.

Both interventions were hypothesized to be rated with high levels of acceptability with the GBG+BSPS to be rated as more acceptable than the GBG. This hypothesis was not supported; the GBG and GBG+BSPS were both identified, by teachers and students, as highly acceptable; however, no differences between teacher and student acceptability ratings of GBG and GBG+BSPS were found. Overall, findings from the current investigation suggest student and teacher behavior can be influenced by the implementation of a group oriented contingency strategy in isolation.

The findings of this study extend the literature base of previous studies in several ways. The results found are similar to previous studies reporting the GBG as an effective intervention to improve student disruptive and on-task behavior in the classroom (Barrish, Saunders & Wolf, 1969; Darveaux, 1984; Tingstrom, et al., 2006). Acceptability ratings during this investigation continue a past history of high acceptability rating of the GBG as implemented traditionally (Darveaux, 1984; Kosiec, et



al., 1986; Lannie & McCurdy, 2007; Theodore, et al., 2001; Tingstrom, 1994; Warner, Miller, & Cohen, 1977) and with various positive adaptations (Babyak, Luze & Kamps, 2000; Davies & Witte, 2000; Fishbein & Wasik, 1981; McLaughlin, Dolliver & Malaby, 1979).

The addition of the behavior specific praise component extends the GBG literature base by contributing another extension of the GBG with a positive variation. Past research has employed positive approaches with the GBG to confront student disruptive behavior while teaching and reinforcing adaptive classroom behaviors (Babyak, Luze & Kamps, 2000; Davies & Witte, 2000; Fishbein & Wasik, 1981; McLaughlin, Dolliver, & Malaby, 1979; Patrick et al., 1998). This investigation specifically targeted behavior specific praise statements to recognize appropriate student behavior.

Baseline observational data regarding rates of praise statements expands the literature base on behavior specific praise statements naturally occurring in the general education classroom. Previous investigations reported low rates of BSPS in general education classrooms (Gable, Hendrickson, Young, Shores, and Stowitschek, 1983); however, the current investigation found rates of BSPS comparable to rates observed in classrooms for students with emotional and behavioral disorder special education classification (Shores, Jack, Gunter, Ellis, DeBriere & Wehby, 1993).

The current investigation replicated results reported by Lannie and McCurdy (2007), finding teacher behavior specific praise statements did not increase following reductions of student disruptive behavior. The current investigation's results extended the

literature with the addition of the behavior specific praise component resulting in increased occurrences of teacher behavior specific praise statements.

#### Limitations and Directions for Future Research

This study has several limitations. Results reported in the current exploration could have been affected by student reactivity due to the presence of outside observers in the classroom. Examination of the data through the replication of intervention and baseline conditions suggest this effect, if present, remained at a consistent level throughout the examination periods. Future research should be implemented in a way that observations could be conducted in a less obvious method (e.g., through one-way mirror, closed circuit video observation).

The experimental design implemented in the investigation allowed the researchers to assess the additive effects of teacher initiated BSPS to the already research proven effects of the GBG. Implementation of a praise only condition would have allowed the investigators to examine the effects of the individual procedures (i.e., GBG and BSPS alone) and an examination of the combined effects of the procedures.

None of the teachers participating in the study had more than three years of teaching experience in an elementary school and 100% of the students included in the study were African American and over 90% were eligible for free or reduced price lunch. The limited scope of the demographics of the group does not devalue the results reported; only limit the extent to which the results may generalize to other groups of students and teachers. The limited sample size implementing the GBG and GBG+BSPS conditions and the experimental design limits the generalizability of the results to other groups. As

previously stated, these results are considered valuable initial data, but require further investigation before extending the findings to other groups.

More research is necessary to examine the GBG and positive approaches further. In the current investigation, all students were observed in a rotating manner during the current investigation. This provides valuable information for the reader in terms of entire class behavior; future examinations should consider observing those students known to be disruptive and examine differences based on invention conditions. Another necessary consideration is the procedures used during the GBG+BSPS. For consistency the teacher prompt for praise statements was on an FR 2 minute schedule. Further examination is needed to identify effects of BSPS schedule.

As previously discussed, the GBG+BSPS procedures were not associated with greater improvements in student behavior than the GBG. The scope of the observation method during the current investigation could be a potential explanation and considered a limitation. The BSPS procedures may have resulted in significant behavior change that was not detected due to the limited and general scope of the observation code. Future examination should utilize more specific observation methods to assess more specific variations of student behavior.

Fishbein and Wasik implemented a variation of the GBG, in the school library, where student teams were awarded points on a variable interval, if all team members were following class rules. To identify winning teams point totals were required to meet or exceed a specified criterion. How the librarian was supposed to react to student disruptive behavior was not specifically addressed by the method, but this procedure targeted the occurrence of task relevant behaviors and their reinforcement, more

specifically differential reinforcement of other behavior, as opposed to the disruptive behavior reduction methods. This procedure was implemented in the school library with significant student behavior improvements during intervention phases. Implementation of this procedure in the general education classroom would provide evidence, supportive or not, on a more positive variation of the GBG in the classroom that focuses on appropriate skill development rather than reductions of troublesome behavioral excesses.

Current developments in educational and psychological practices encourage positive approaches to improve child behavior. The GBG remains a valuable tool for teachers struggling to manage classroom behavior yet the limitations linger. The GBG in combination with BSPS was not associated with additional improvement in student behavior in early elementary school classrooms. Further experimentation is necessary to examine the value of positive approaches in combination with GBG procedures in the general and special education classrooms.

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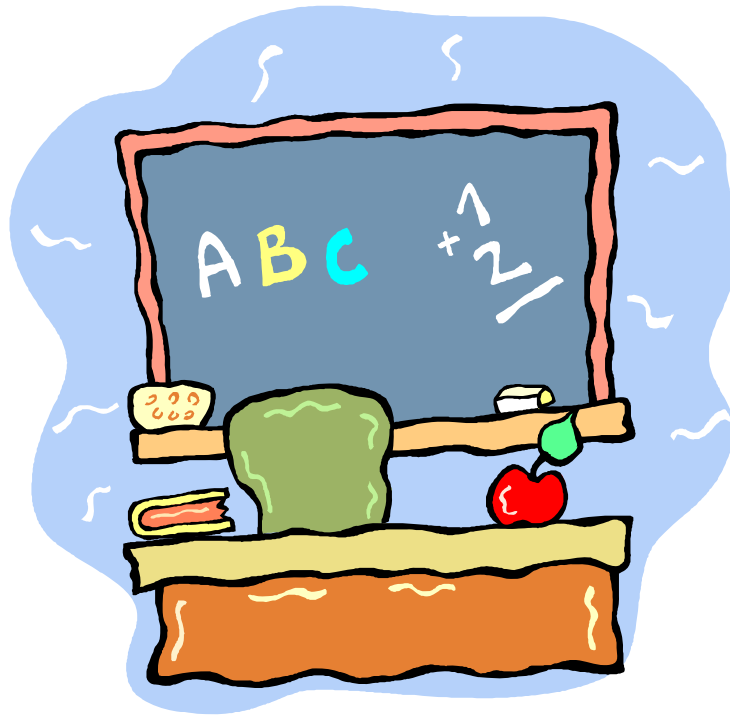
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## Appendix A: The Good Behavior Game and Caught Being Good Technique: A Manual

# The Good Behavior Game and the Caught Being Good Technique:



## A Manual

Prepared by Robert A. Wright  
Louisiana State University at Alexandria

# Module I

## General Operating Procedures: Organizing the Classroom



## Module I: General Operating Procedures: Organizing the Classroom

**Rationale:** Establishing classroom rules is an excellent way to increase structure in your classroom and help you manage students' behavior. By teaching and posting the rules, you clearly communicate your expectations. The rules will provide a framework for each version of the games (Good Behavior Game and the Caught Being Good Game).

Formation of and identifying classroom teams provides structure for your classroom and promotes team unity. The game uses team unity and peer competition, along with rewards to increase appropriate behavior and decrease disruptive behavior.

### Part One: Establish Classroom Rules

#### Steps:

1. Prioritize 3-5 behaviors that are most important for your classroom.
2. It is important to use language that the students can understand. Rules should be short, use 5-6 words.

#### *Remain in Seat*

3. Describe the behaviors you want your students to do.

#### *Raise your hand to speak*

4. State rules in a positive way. Instead of telling the students what not to do, tell them what you want them to do.

#### *Keep hands and feet to self versus Don't touch others*

5. The most important part of establishing classroom rules is to teach the rules to the students. Teaching the rules should include a verbal review of the rules, and providing examples behaviors for following each rule along with examples of behaviors that would violate the rules.
6. Post the rules in the front of the classroom to serve as a reminder to the students.

### Part 2: Identifying Student Teams

#### **Rationale**

#### Steps:

1. Arrange the students' desks into small groups (4-5) with 5-7 desks per group. The groupings of desks will designate the teams for the games. Grouping the desks will make it easier for you to distribute team points.

2. Assign students to teams. Try to assigned similar numbers of more disruptive students to each team (1-2 on each team).
3. Once the students are assigned to a team, allow the teams 2-3 minutes to come up with a team name. Allow the teams to be creative. You can choose a theme for team names if you wish (Sports Teams, Animals, Colors, etc.)

***Eagles, Jets, Yankees, Blue Crocodiles, Purple Hippos, Silly Snakes***

4. The team names will be used throughout the games. The purpose of allowing the teams select a name is to promote team unity and to make it easier for you to notify a team of point assignments.

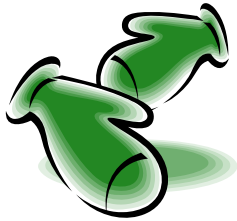


# GENERAL OPERATING PROCEDURES FORMS

Form 1. Sample: Game Rules

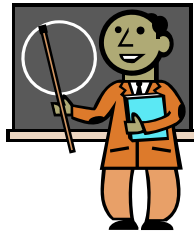
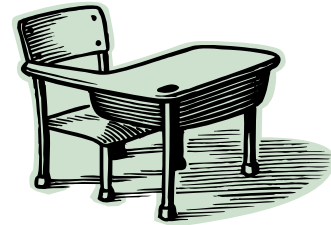
# Game Rules

**1. Raise your hand to speak**



**2. Keep hands, feet and objects to self**

**3. Remain in seat**

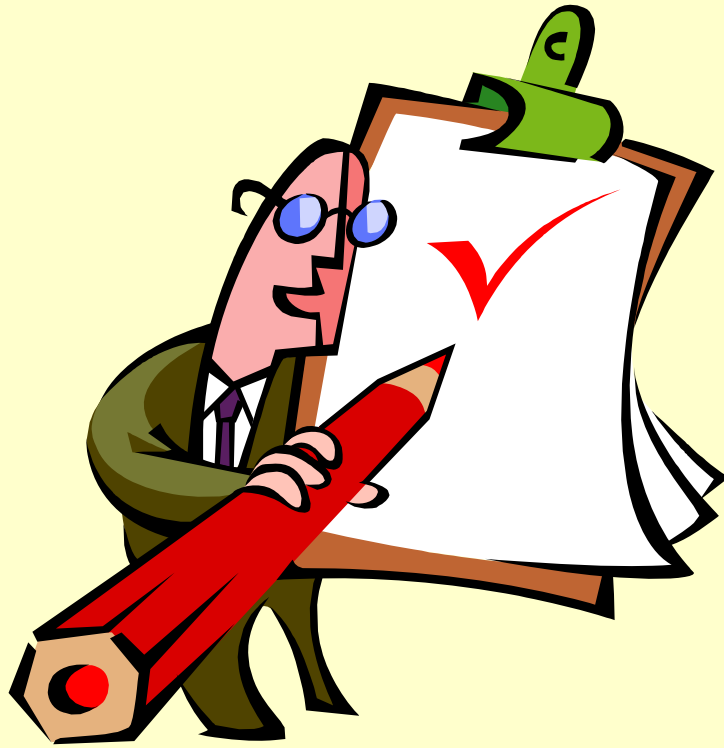


**4. Follow directions the first time given**

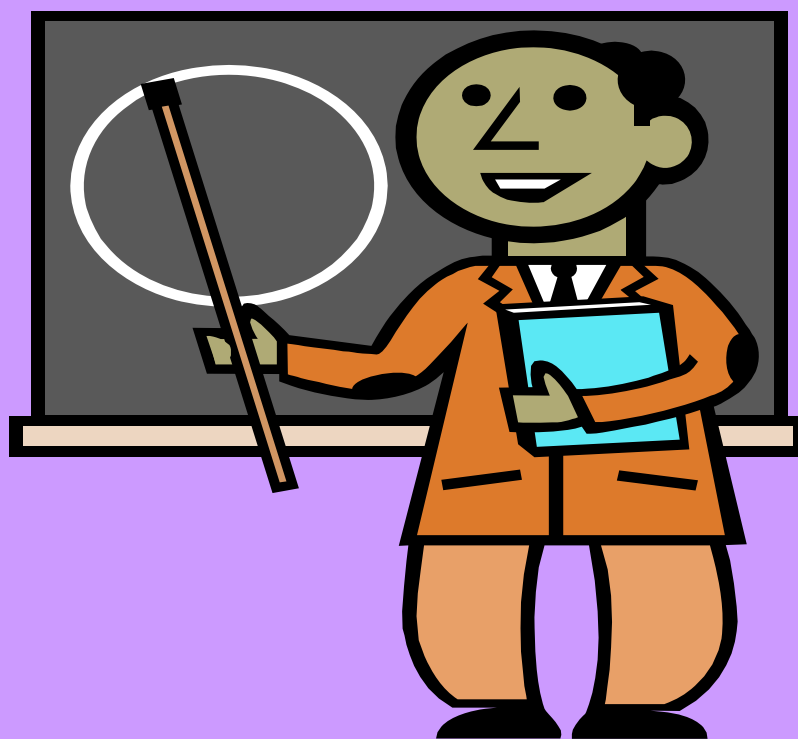
**5. Complete Assigned Tasks**



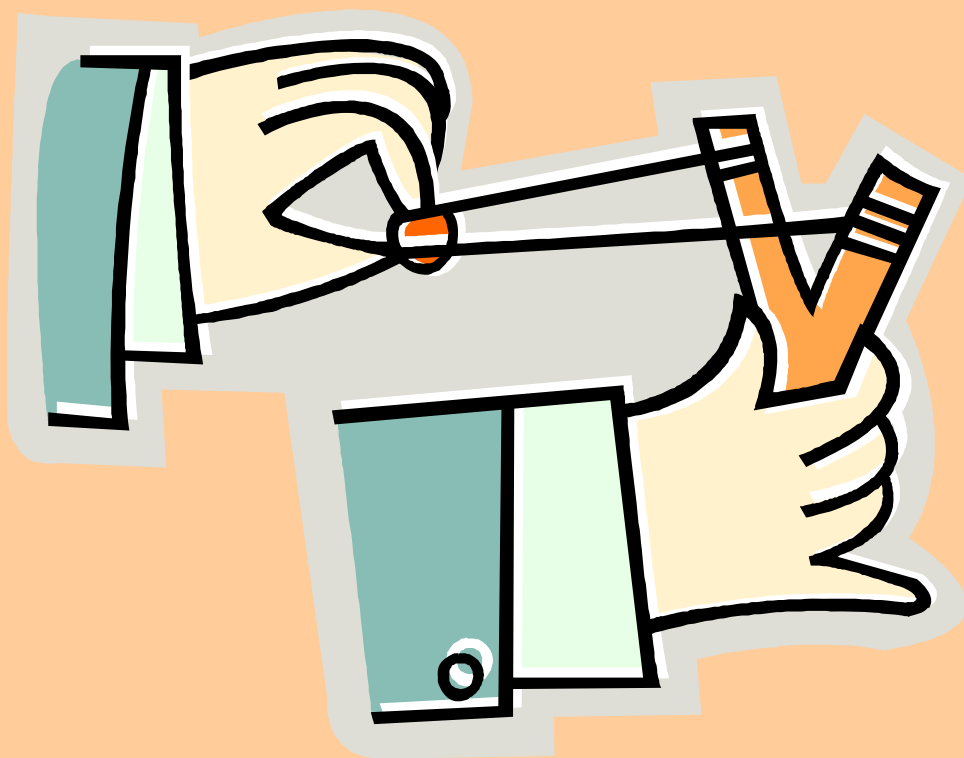
# Complete Assigned Tasks



# Follow directions the first time given



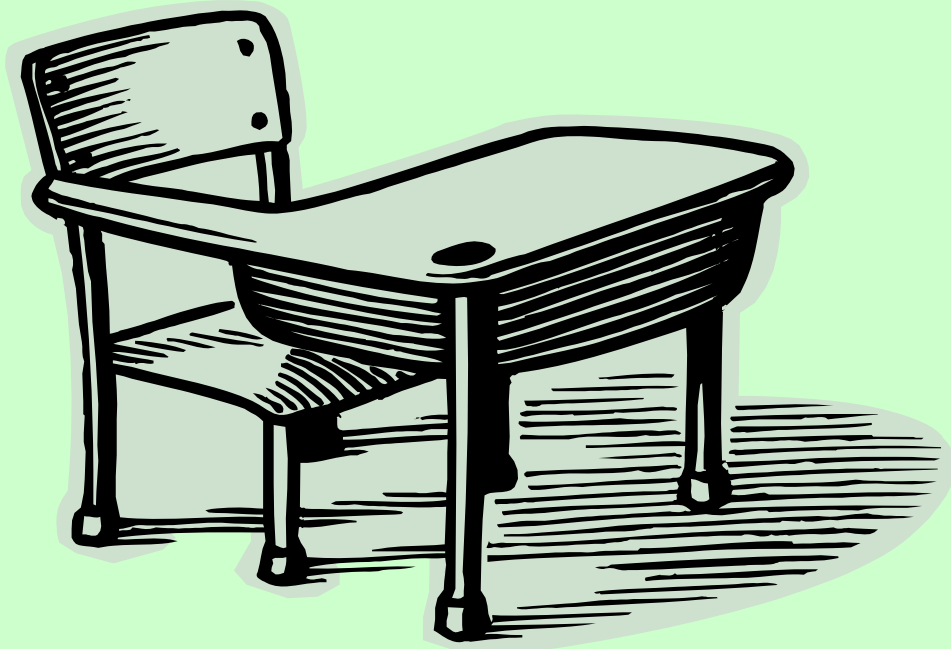
**Keep hands,  
feet and  
objects to self**



# Raise your hand to speak



# Remain in your seat



# Module II

## Good Behavior Game





## Module II: The Good Behavior Game

### Description of the Game:

The Good Behavior Game is a game developed for classroom teachers to help decrease disruptive behavior (i.e., out of seat, talking without permission) and increase appropriate classroom behavior. The Good Behavior Game involves students assigned to teams working together to earn a reward at the end of the class period. The teams must behave appropriately to earn a reward at the end of the class period. In this game, teams are trying to have as few points as possible. Teams are assigned points by the teacher when a team member engages in a rule breaking behavior (i.e., throwing paper, getting out of seat without permission). When misbehavior occurs points are recorded on a daily score board at the front of the class. Teams earn a reward daily if team marks for disruptive behavior are below a preset number, this number will be determined by you and the game trainer. Each team below the preset limit is allowed to pick a reward from the Goodie Box. Weekly the teams will have the opportunity to earn rewards if their points remain below a weekly limit.

### Part One: Steps of the Good Behavior Game

The following activities must be completed on a daily basis (See the Materials section for a daily checklist).

Steps:

1. Post the Score Board and note the date
2. Announce to class that the game will be starting.

***“Ok Class we will be starting the Good Behavior Game in just one minute.”***

3. Remind students of the game rules and that there is a mystery point limit and they should not exceed it to earn the reward.

***“Remember there is a Mystery Point Limit and to win you need to keep you points below the limit.”***

4. Start game and record Start time on Daily Record Sheet
5. When a student violates a classroom rule place a mark on the Score Board for the students team.

***Identify the student, the rule breaking behavior, and that the student’s team has earned a point. “Sara you were talking without permission, The Spotted Leopards earned a point.”***

6. At the end of the class period, announce the end of the game and note the end time on the Daily Record Sheet.

***“The Good Behavior Game is now over for today. Let me tally team point totals and determine the winning teams.”***

7. Count the number of points for each team and record on the Daily Record Sheet.
8. Announce the Mystery Point Limit and congratulate the winning teams (those that did not go over the point limit).

***“The Mystery Point Limit was \*15. That means the Lions with 12 points, the Purple Iguanas with 10 points, and the Mighty Mice with 13 points win today’s game. Spotted Leopards you just missed the limit. We will play again tomorrow. Let’s try to be below the limit next time.”***

9. Allow winning teams to choose rewards.

# GOOD BEHAVIOR GAME FORMS

- Form 1. Sample: Daily Score Board
- Form 2. Sample: Weekly Score Board
- Form 3. Daily Point Record
- Form 4. Checklist of Necessary Steps for the Good Behavior Game

# SCORE BOARD

Date: \_\_\_\_\_


<u>Team Name</u>	<u>MONDAY</u>	<u>TUESDAY</u>	<u>WEDNESDAY</u>	<u>THURSDAY</u>	<u>FRIDAY</u>	<u>TOTAL</u>



## Checklist of Necessary Steps for the Good Behavior Game

**Teacher:** \_\_\_\_\_ **Date:** \_\_\_\_\_

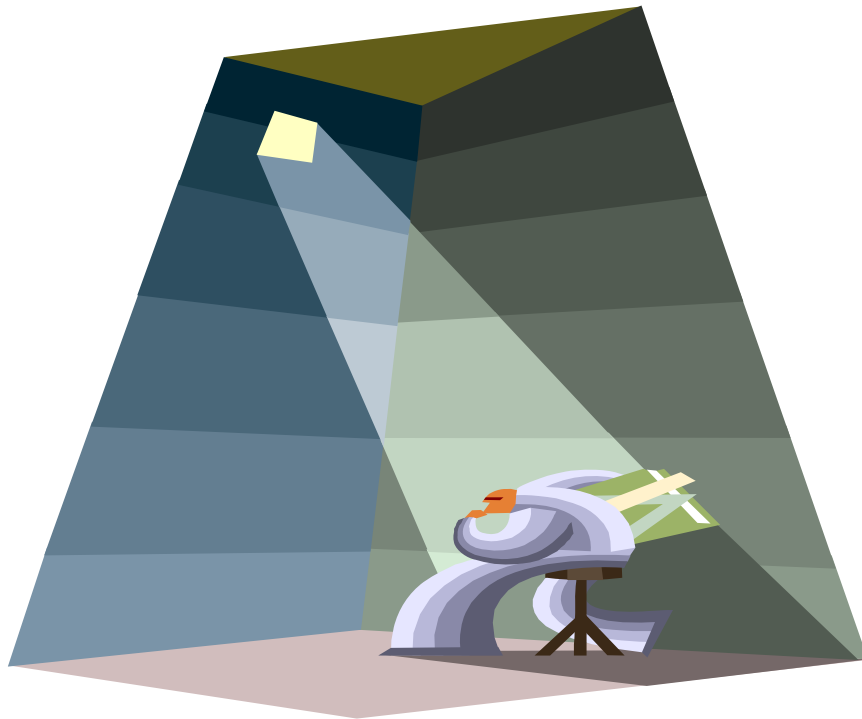
### The Good Behavior Game Daily Steps

- |  |   |
|--|---|
|  | 1. Post Score Board and note the date   |
|  | 2. Announce to class that the game will be starting   |
|  | 3. Remind students of the game rules and that there is a mystery point limit and they should not exceed it to earn the reward         |
|  | 4. Start Game and record start time on Daily Record Sheet   |
|  | 5. For each occurrence of disruptive behavior record a point on the Score Board next to the team whose member engaged in the behavior |
|  | 6. At the end of the class period, announce the end of the game and note the end time on the Daily Record Sheet                       |
|  | 7. Tally the number of points for each team and record on the Daily Record Sheet  |
|  | 8. Announce the mystery point limit and the teams that won (those that did not exceed the criterion)                                  |
|  | 9. Allow winning teams to choose rewards  |
|  | <b>TOTAL STEPS COMPLETED</b>  |

**Notes:**

# Module III

## Good Behavior Game plus the Caught Being Good Technique





## Module III: The Good Behavior Game plus the Caught Being Good Technique

### Description of the Game:

In this game we will combine the Good Behavior Game procedures discussed in Module II with the Caught Being Good Technique. The Caught Being Good Procedure is another method developed for classroom teachers to help decrease disruptive behavior (i.e., out of seat, talking without permission) and increase appropriate classroom behavior. During the Caught Being Good Technique the teacher uses a computer program or other device that periodically makes a signals the teacher. Following the tone, the teacher will immediately scan the classroom, identify a student following a classroom rule and provide a behavior specific praise statement.

### Part One: Behavior Specific Praise Statements

1. Components of Behavior Specific Praise Statements
  - a. Gain student attention

*(i.e., state student's names, gesture, make eye contact, touch).*

- b. List the appropriate behavior.

*“You are sitting quietly”, “Has completed his assignment quickly”, “Raised her hand to speak”*

- c. Provide and approval statement

*“Great job”, “Keep it up”, “Excellent”, “I really appreciate it”*

- d. Examples of Complete Behavior Specific Praise Statements

*“I really like how Tommy walked quietly into class, thank you.”  
“Sarah, great job finishing your work and then reading silently!”*

### Part Two: Steps of the Good Behavior Game and the Caught Being Good Technique

The following activities must be completed on a daily basis (See the Materials section for a daily checklist).

Steps:

1. Post the Score Board and note the date
2. Announce to class that the game will be starting.

*“Ok Class we will be starting the Good Behavior Game in just one minute.”*

3. Remind students of the game rules and that there is a mystery point limit and they should not exceed it to earn the reward.

***“Remember there is a Mystery Point Limit and to win you need to keep you points below the limit.”***

4. Start Game by running the computer audio cueing program and record Start time on Daily Record Sheet.
5. Following each cue the teacher will scan the room, identify a student following classroom rule and will provide a behavior specific praise statement.
6. When a student violates a classroom rule place a mark on the Score Board for the students team.

***Identify the student, the rule breaking behavior, and that the student’s team has earned a point. “Sara you were talking without permission, The Spotted Leopards earned a point.”***

7. At the end of the class period, announce the end of the game and note the end time on the Daily Record Sheet.

***“The Good Behavior Game is now over for today. Let me tally team point totals and determine the winning teams.”***

8. Count the number of points for each team and record on the Daily Record Sheet.
9. Announce the Mystery Point Limit and congratulate the winning teams (those that did not go over the point limit).

***“The Mystery Point Limit was \*15. That means the Lions with 12 points, the Purple Iguanas with 10 points, and the Mighty Mice with 13 points win today’s game. Spotted Leopards you just missed the limit. We will play again tomorrow. Let’s try to be below the limit next time.”***

10. Allow winning teams to choose rewards.

# GOOD BEHAVIOR GAME AND CAUGHT BEING GOOD TECHNIQUE FORMS

Form 1. Daily Point Record

Form 2. Checklist of Necessary Steps for the Good Behavior Game and  
the Caught Being Good Technique



## Checklist of Necessary Steps for the Good Behavior Game and the Caught Being Good Procedure

**Teacher:** \_\_\_\_\_ **Date:** \_\_\_\_\_

### The Good Behavior Game and the Caught Being Good Procedure Daily Steps

	1. Post Score Board and note the date
	2. Announce to class that the game will be starting
	3. Remind students of the game rules and that there is a mystery point limit and they should not exceed it to earn the reward.
	4. Start Game by running the computer audio cueing program, and record start time on Daily Record Sheet
	5. Following each cue the teacher will scan the room, identify a student following classroom rule and will provide a behavior specific praise statement.
	6. When a student violates a classroom rule place a mark on the Score Board for the students team.
	7. At the end of the class period, announce the end of the game and note the end time on the Daily Record Sheet
	8. Count the number of points for each team and record on the Daily Record Sheet
	9. Announce the Mystery Point Limit and congratulate the winning teams (those that did not go over the point limit).
	10. Allow winning teams to choose rewards
	<b>TOTAL STEPS COMPLETED</b>

**Notes:**

Appendix B: Good Behavior Game Integrity Checklist

Teacher: \_\_\_\_\_

Date: \_\_\_\_\_

<b>X = No Occurrence</b> <b>O = Occurrence</b> <b>-- = N/A</b>	<b>The Good Behavior Game Daily Steps</b>	
	10. Post Score Board and note the date	
	11. Announce to class that the game will be starting	
	12. Remind students of the game rules and that there is a preset criterion and they should not exceed it to earn the reward	
	13. Start Game and record start time on Daily Record Sheet	
	14. For each occurrence of disruptive behavior as defined in the manual make a mark on the Score Board next to the team whose member engaged in the behavior	
	15. At the end of the class period, announce the end of the game and note the end time on the Daily Record Sheet	
	16. Tally the number of marks for each team and record on the Daily Record Sheet	
	17. Announce the criterion and the teams that won (those that did not exceed the criterion)	
	18. Allow winning teams to choose rewards	
	<b>TOTAL STEPS COMPLETED</b>	
	<b>Percentage of Steps Completed = _____ %</b>	
<b>Notes:</b>     		

Appendix C: Good Behavior Game with Praise Integrity Checklist

Teacher: \_\_\_\_\_

Date: \_\_\_\_\_

<b>X = No Occurrence</b> <b>O = Occurrence</b> <b>-- = N/A</b>	<u><b>Good Behavior Game with Praise Daily Steps</b></u>
	1. Post Score Board and note the date
	2. Announce to class that the game will be starting
	3. Remind students of the game rules and that there is a preset criterion and they should earn more points to earn the reward
	4. Start Game by running the computer audio cueing program, and record start time on Daily Record Sheet
	5. Following each cue scan the room. Identify a student following the game rules and provide a behavior specific praise statement.
	6. At the end of the class period, announce the end of the game and note the end time on the Daily Record Sheet
	7. Tally the number of marks for each team and record on the Daily Record Sheet
	8. Announce the criterion and the teams that won (those that exceeded the criterion)
	9. Allow winning teams to choose rewards
	<b>TOTAL STEPS COMPLETED</b>
<b>Percentage of Steps Completed = _____%</b>	
<b>Notes:</b>	

## Appendix D: Teacher Consent Form

1. Study Title: Examining the effects of interdependent group oriented contingency strategies on teacher and student behavior.
2. Performance Site: X Elementary School
3. Investigators: The following investigators are available for questions about this study:  
M-F, 8:00 a.m. - 4:30 p.m.  
Dr. George H. Noell (225) 578-4119  
Mr. Robert A. Wright (318) 473-6514
4. Purpose of the Study: The purpose of this research project is to identify the effects of the Good Behavior Game and variations on teacher and student classroom behavior.
5. Subject Inclusion: Individuals serving as teachers of classrooms experiencing difficulty managing disruptive behaviors of students.
6. Number of Subjects: 6
7. Study Procedures: While participating in the project you will be asked to attend three 1 hour training sessions after school and play the games during one class period a day. In the initial training session, classroom rules will be determined along with a schedule for the rest of the project. The remaining training sessions will cover the necessary skills for you to play both games with your class. You will be asked to play the games with your class. Each game will be played for 1-2 weeks and then play the other game for 1-2 weeks followed by a brief break and then play each game again with your class. Throughout the project a consultant or student observer will attend your class daily to observe student and teacher behavior and assist you in learning the procedures for the game.
8. Benefits: Benefits for participating in the project include the potential for increased student on-task behavior, increased academic engaged time and an increased opportunity for instruction, all of which will promote student learning and academic gains. Another benefit of the study is that you will gain the knowledge and skill to develop and implement an effective classroom intervention that can be easily continued with little or no support by the consultant.



9. Risks: The potential risks for you are minimal in this study. One may include increased negative reactions by students when points are assigned for inappropriate behavior. In addition, the increased time necessary at the beginning of each game to familiarize you with the procedures may initially lead to less time for instructional preparation.
10. Right to Refuse: Subjects may choose not to participate or to withdraw from the study at any time without penalty or loss of any benefit to which they might otherwise be entitled.
11. Privacy: Results of the study may be published, but no names or identifying information will be included in the publication. Your identity will remain confidential unless disclosure is required by law.
12. Signatures: The study has been discussed with me and all my questions have been answered. I may direct additional questions regarding study specifics to the investigators. If I have questions about subjects' rights or other concerns, I can contact Robert C. Mathews, Institutional Review Board, (225) 578-8692, [irb@lsu.edu](mailto:irb@lsu.edu), [www.lsu.edu/irb](http://www.lsu.edu/irb).

I agree to participate in the study described above and acknowledge the investigator's obligation to provide me with a signed copy of this consent form.

Subject Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix E: Parent Consent Form

Date: \_\_\_\_\_

Dear Parent(s),

We are writing to request your permission to work your child. The purpose of this study is to identify student preferences for classroom management procedures that teachers may use to address student disruptive behavior in the class. You have been offered this opportunity because your child's school is participating in a project trying various ways to increase appropriate classroom behavior.

If you agree, your student will be asked to complete two forms about their feelings about the effectiveness of the classroom management strategies. Each form consists of six statements (i.e., I like the game, I think the game helps me do better in the classroom), and each form takes less than five minutes to complete. Students will be asked to rate their level of agreement with the statements (1 = I agree a lot, 6 = I do not agree). The child's classroom teacher will meet with your student to complete the form following each strategy.

After the project is complete the results will be shared with your child's teacher and will be included in a study report. Your child's identity will remain confidential unless disclosure is required by law.

The benefits of this study include the potential for identifying classroom management strategies that increase student on-task behavior and increases opportunity for classroom instruction which promote student learning and academic gains. There are no known risks of participation in the study.

Participation in the project is voluntary and a child will become part of the study only if both child and parent agree to the child's participation. At any time, the child or parent withdraw from the study with no penalty to yourself or your child, or you may choose not to participate in the project if you prefer.

If you have any questions about this study, please contact us at your earliest convenience. We are available for questions Monday through Friday 8:00 a.m. – 4:30 p.m.

Sincerely,

Robert A. Wright, M.A., BCBA  
Consultant  
[rwright@lsua.edu](mailto:rwright@lsua.edu)  
(318) 473-6514

George Noell, Ph.D.  
Professor  
Supervisor  
(225) 578-4119

**Please Keep the Top Page for Your Records**  
Please Check One and Return This Page to School

\_\_\_\_\_ Yes, I agree to allow my child to participate in this project.

\_\_\_\_\_ No, I DO NOT agree to allow my child to participate in this project.

Print Student's Name:

---

Print Parent's Name:

---

Parent's Signature:

---

If I have questions about subjects' rights or other concerns, I can contact Robert C. Mathews, Chairman, Institutional Review Board, (225) 578-8692, [irb@lsu.edu](mailto:irb@lsu.edu), [www.lsu.edu/irb](http://www.lsu.edu/irb).

## Appendix F: Child Assent Form

I, \_\_\_\_\_, agree to be in a project that can help find ways to make classroom behavior better for students. I understand that I will have to answer some questions about the behavior games we play during school, and that I can decide to stop being in the study at any time without getting in trouble.

Child's Signature \_\_\_\_\_

Age \_\_\_\_\_ Date \_\_\_\_\_

Witness \_\_\_\_\_ Date \_\_\_\_\_

### **General Coding Procedure**

Fifteen second intervals will be used for a 20-minute observation. Students are observed on a rotating basis every interval.

### **General Observation Categories**

The code is designed to elicit information on two general response categories: (1) student on- task behavior, and (2) student problem/disruptive behavior. Problem/disruptive behavior is broken down into the two types of motor and verbal.



On-task behavior is coded utilizing a momentary time sampling procedure. Problem/disruptive behavior categories are coded on a partial interval basis.

### **Operational Definitions**

1. **On-Task Behavior** - student is attending to the assigned work or teacher

Includes “active”, “doing” behavior such as:

- ❖ Writing
- ❖ Raising hand
- ❖ Reading aloud
- ❖ Answering questions
- ❖ Talking concerning academics
- ❖ Flipping through pages of a book

Also includes “passive”, “watching” behavior such as:

- ❖ Reading silently
- ❖ Listening to teacher
- ❖ Reading aloud
- ❖ Looking at academic materials
- ❖ Looking at the blackboard during instruction
- ❖ Flipping through pages of a book

2. **Problem/Disruptive Behavior** - any verbal or motoric activity which is not academically related to the situation

**A. Problem/Disruptive Motor:** any instance of motor activity that is not academically related to the situation. Examples include:

- ❖ Out-of-seat behavior – not seated with both feet on or towards the floor including leaving the room for any reason, standing at table, walking.
- ❖ bending or reaching such as obtaining book bag, picking up pencil on the floor
- ❖ physical contact, such as touching another student, passing nonacademic material
- ❖ drawing or writing that is not permitted
- ❖ manipulating objects that are not academically related, such as playing with a pen, folding paper, playing with shoelaces, playing with hair, writing on body parts

Not included is the manipulation of objects when it is apparent that the child is engaged with the academics at hand, such as attending to academic materials and playing with an object

**B. Problem/Disruptive Verbal:** verbalizations that are not permitted and/or are not task related. Examples include:

- ❖ talking to others that is unrelated to the academic situation
- ❖ talking to others about academic materials that is prohibited by the instructor
- ❖ laughing that is not appropriate to the situation (laughing at group jokes is acceptable)
- ❖ personal comments or remarks
- ❖ whistling, humming, any audible sound is included

### **Coding Procedures**

Response Category	When Coded	How Coded
On-Task Behavior	At Beginning of Interval	Hash Mark
Problem/Disruptive Behavior	Any Time During Interval	Hash Mark

### **Scoring Procedures**

For all response divide the number of scored intervals by the total number of intervals observed.

### **Tips for Conducting the Observation**

1. Enter the room quietly.
2. Stand or sit in a position where you can see all students.
3. Complete the top of the observation code.
4. Scan the room and determine the sampling procedure you will use for the observation. ([See Sample Seating Charts](#))
5. Students may ask you what you are doing. Simply tell them that you are observing for a project.
6. If interrupted by a student, teacher or class transition, stop the audio tape and observation process. Press play when you are ready to observe again.
7. If your view of the target student is obstructed for any reason during an observation interval, do not record a behavior for that interval. Simply put a line through the interval and do not include this interval when determining percent of intervals with problem behavior or academic engagement.
8. If a student in the in the observation sample leaves the room, skip to the next student. Should the student leave the room in the middle of the interval (with or without permission) simply do not record behavior for that interval.
9. To the extent possible, keep the walkman out of view. Many schools do not allow students to have a walkman in the classroom.
10. If any student indicates refusal to be observed, make sure to skip over that student during the observation.
11. Should the target student be unobservable for the full interval skip student and continue with the next student in the rotation.
  - a. Student leaves room
  - b. Student in timeout and you are unable to see student
12. If the student is in timeout and the observer can see the student include the student in the observation. Do not code behavior as on-task but you can code off-task motor and verbal.
13. If a new student enters the classroom add the student to the end of the observation rotation

## Classroom Observation Protocol

Condition:

Teacher \_\_\_\_\_

School:

Date \_\_\_\_\_

Subject \_\_\_\_\_

Observer:

Reliability: Y N

### Systematic Observation Results

	Total	% of Intervals
On-Task Behavior	_____	<div style="background-color: yellow; width: 100px; height: 15px; border: 1px solid black;"></div>
Disruptive Behavior (Total)	_____	<div style="background-color: yellow; width: 100px; height: 15px; border: 1px solid black;"></div>
<i>Off-Task Motor</i>	_____	_____
<i>Off-Task Verbal</i>	_____	_____

**Observer Notes:**

# Students \_\_\_\_\_

# Adults \_\_\_\_\_

*Seating Chart*

								Front of Classroom

### Classroom Observation Code

Teacher: \_\_\_\_\_

Date: \_\_\_\_\_

Observer: \_\_\_\_\_

Observation #: \_\_\_\_\_

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40					
<b>On-task</b>																																													
<b>Motor</b>																																													
<b>Verbal</b>																																													
<b><u>Totals</u></b>	<b>Total On-Task</b>										<b>Total Motor</b>										<b>Total Verbal</b>										<b>Total Off-task (M+V)</b>														
<b>Praise Statements</b> 1. Gain Student Attention 2. State Behavior 3. Praise															<b>Public Reprimand Statements</b>																														



## Appendix H: Teacher Intervention Rating Profile -15

Please rate the intervention along the following dimensions. Please circle the number which best describes your agreement or disagreement with each statement.

	Strongly Disagree	Disagree	Disagree Slightly	Slightly Agree	Agree	Strongly Agree
1. This would be an acceptable intervention for a child's problem behavior.	1	2	3	4	5	6
2. Most teachers would find this intervention appropriate for behavior problems in addition to the one described.	1	2	3	4	5	6
3. This intervention should prove effective in changing a child's problem behavior.	1	2	3	4	5	6
4. I would suggest this intervention to other teachers.	1	2	3	4	5	6
5. The child's behavior is severe enough to warrant use of this intervention.	1	2	3	4	5	6
6. Most teachers would find this intervention suitable for behavior problem described.	1	2	3	4	5	6
7. I would be willing to use this intervention in the classroom setting.	1	2	3	4	5	6
8. This intervention would <i>not</i> result in negative side-effects for the child.	1	2	3	4	5	6
9. This intervention would be appropriate for a variety of children.	1	2	3	4	5	6
10. This intervention is consistent with those I have used in classroom settings.	1	2	3	4	5	6
11. The intervention was a fair way to handle the child's problem behavior.	1	2	3	4	5	6
12. This intervention is reasonable for the problem behavior described.	1	2	3	4	5	6
13. I liked the procedures used in this intervention.	1	2	3	4	5	6
14. This intervention is a good way to handle this child's behavior.	1	2	3	4	5	6
15. Overall, this intervention would be beneficial for a child.	1	2	3	4	5	6

## Appendix I: Child Intervention Rating Profile

Student Number \_\_\_\_\_ Grade \_\_\_\_\_

### *Tell Us What You Think!!!*

	I agree			I do not		
	1	2	3	4	5	6
1 The Game is fair.	1	2	3	4	5	6
2 The Game may cause problems with my friends.	1	2	3	4	5	6
3 There are better ways to deal with behavior than the Game.	1	2	3	4	5	6
4 Game is good to use with other schools.	1	2	3	4	5	6
5 I like the Game.	1	2	3	4	5	6
6 I think the Game helps me to do better in the classroom.	1	2	3	4	5	6



## Vita

Robert Wright is currently a graduate student in the School Psychology Program at Louisiana State University under the direction of Dr. George H. Noell. He received both his Bachelor of Science degree (2002) and his Master of Arts degree (2004) from Louisiana State University in the major area of psychology. Robert Wright is a candidate for the degree of Doctor of Philosophy to be awarded in December of 2008.