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Reducing Off-Task Behaviors in First Graders with Disabilities through an Adaptation of the Good Behavior Game

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REDUCING OFF-TASK BEHAVIORS IN FIRST GRADERS WITH

DISABILITIES THROUGH AN ADAPTATION

OF THE GOOD BEHAVIOR GAME

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Master of Education: Special Education

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by

Chelsey Lee Martin

August 2017

CENTRAL WASHINGTON UNIVERSITY

Graduate Studies

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ABSTRACT

REDUCING OFF-TASK BEHAVIORS IN FIRST GRADERS WITH

DISABILITIES THROUGH AN ADAPTATION

OF THE GOOD BEHAVIOR GAME

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The purpose of this mixed methods, single subject quasi-experimental study was to measure if an adaptation to a group-based contingency intervention, known as the Good Behavior Game, lead to decreases in off-task behaviors for first-grade students with disabilities during whole group instruction, and if the classroom teacher viewed the intervention positively. Three first grade, male students with disabilities, their first-grade teacher, and the first-grade class were participants in the study. The class was split into two teams and reminded of the expectations for on-task behavior. Positive reinforcement in the form of verbal praise and a team point were rewarded at randomized three-minute intervals to teams which had all students following expectations. Access to a reinforcer was provided to the team with the most points, at the end of the instructional session. An observation form was used to determine the percentage of observed intervals the students with disabilities were off-task. A teacher questionnaire was also used to determine how the teacher viewed the intervention. Results indicate that off-task behaviors decreased

during the duration of the GBG and the teacher viewed the intervention positively.

Limitations and further recommendations for research are also discussed.

Key words: off-task behaviors, elementary, students with disabilities, behavior intervention, group contingency

ACKNOWLEDGEMENTS

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CHAPTER I INTRODUCTION

The Individuals with Disabilities Education Improvement Act (2004) mandated

that students with disabilities are educated to the maximum extent appropriate with their

typically-developing peers in the least restrictive environment (LRE). In reviewing

national data, it is evident that students with disabilities are increasingly being educated

in general education settings. In 1989, 31.7% of students with disabilities, aged 6-21,

were educated in their neighborhood school with 80% or more time spent in the general

education setting (National Center for Education Statistics, 2015). This percentage of

students has steadily increased to 61.8% of students with disabilities educated in general

education settings for 80% or more of the school day in 2013. In Washington state

55.21% of students with disabilities are educated in the general education setting for 80-

100% of the school day (Office of Superintendent of Public Instruction, 2016). This is an

improvement from 2009 LRE data which reported 50.06% of students with disabilities

were educated in the general education setting for 80-100% of the school day (OSPI,

2009). Given the recent mandates and increasing number of students educated in the

general education setting, one may ask, "Why is it important if students with disabilities

are educated in settings with typically developing peers?" and "What are the

repercussions typically developing peers experience when students with disabilities are

included in the general education classroom?"

Aside from the obvious implication that students should be included to provide

social justice for people with disabilities in our schools, and largely society, there is a

large body of research which documents the positive effects experienced by all when

inclusive efforts are made. Positive academic effects have been demonstrated in reading

and math. In a two-year study, Waldron, Cole, and Majd (2001) found that 41.7% of students with learning disabilities made progress in math in general education settings, while 34% made progress in traditional special education settings. In reading 43.3% of students made progress in general education settings, while 35.9% made progress in special education settings. Kliewer and Biklen (2001) demonstrated that inclusive learning environments facilitated the acquisition of literacy skills, adaptive skills, and social relationships in students with severe disabilities.

As noted in the previous study, non-academic benefits are also experienced when students are included in general education settings. In a longitudinal study of 11,000 students with a range of disabilities, Wagner, Newman, Cameto and Levine (2006) found positive correlations between time spent in the general education setting and (a) fewer absences from school, (b) fewer referrals for disruptive behavior, and (c) better outcomes after high school in areas of employment and independent living. Similarly, Fisher and Meyer (2002) conducted a two-year longitudinal study and found that students with severe disabilities in inclusive learning environments had higher mean scores on the Assessment of Social Competence (ASC). While their peers educated in self-contained classrooms made gains, these gains were not statistically significant. In fact, Falvey (2004) concluded that no studies since the 1970's have demonstrated an academic advantage for students with disabilities being educated in separate settings.

On the other hand, many people assume that including students with disabilities will negatively impact the learning and behaviors of nondisabled peers. In a recent review of the literature regarding the impact of inclusion on typically developing peers, Kalambouka, Farrell, Dyson, and Kaplan (2007) found that there are no negative effects

experienced by students without disabilities when students with special needs are included in classrooms. Specifically, 81% of the outcomes reported were either positive or neutral effects. In fact, Kalambouka and colleagues (2007) cited research which suggested that including students with disabilities in elementary schools may have a positive impact on the academic achievement of their nondisabled peers (Saint-Laurent et al., 1998). While the positive impacts of inclusion are evident, inclusion is not initiated without issue.

Statement of the Problem

Due to the IDEA mandate, students with challenging behaviors are increasingly being educated in general education settings. While classroom teachers are legally required to teach academic content, oftentimes challenging behaviors impact teaching and learning (Cameron, Connor, Morrison, & Jewkes, 2008; Hastings & Bham, 2003; Westling, 2010). In a recent survey of teachers, Harrison, Vannest, Davis, and Reynolds (2012) found that general distractibility and difficulty following directions are the most challenging behaviors found in students. Unfortunately, many teachers report that they are not be prepared in classroom management or ways to respond to challenging behavior (Buchanan, Gueldner, Tran, & Merrell, 2009; Fox, Dunlap, & Cushing, 2002; Justice & Espinoza, 2007; Stormont, Lewis, & Beckner, 2005). If these behaviors are addressed and mediated early in students' educational careers, evidence suggests long-term positive effects (Embry, 2002). In fact, Rhoades, Warren, Domitrovich, and Greenberg (2011) found that supporting young children's social emotional regulation and attention skills had positive effects on their reading achievement in later grades.

However, if problem behaviors of students are not addressed, students at-risk for emotional and behavioral disorders face grim outcomes. Unfortunately, these students receive high rates of negative teacher attention (Wehby, Symons, Canale, & Go, 1998). In fact, a study by Nelson and Roberts (2000) found that students receive more attention from teachers following inappropriate behaviors than appropriate behaviors. Naturally, this is problematic because increased attention for one behavior increases the likelihood that behavior will continue. The most likely way the student will access teacher attention is to engage in inappropriate behavior. Further, the presence of inappropriate behaviors decreases the likelihood students will encounter rich academic instruction (Levy & Vaughn, 2002). When a student is known to exhibit inappropriate behaviors, classroom teachers will naturally lessen the instructional interactions they have with the student to avoid an outburst of misbehavior (Levy & Vaughn, 2002).

Unfortunately, many students with disabilities engage in off-task behaviors that inhibit their ability to access the general education curriculum during whole group instruction. To realize academic success, behavior problems must be addressed and mitigated early in these students' educational careers (Levy & Vaughn, 2002; Nelson & Roberts, 2000; Wehby, Symons, Canale, & Go, 1998). General and special education teachers need to work together to implement effective supplementary aids and services which can be delivered effectively in the classroom environment to support prosocial behaviors which facilitate positive social interactions, increased instructional time, and access to academic content and curriculum.

To support positive behaviors in students with disabilities, teachers should evaluate approaches which can influence off-task behaviors in early elementary students.

First, teachers should consider effective, evidence-based classroom management

techniques which prevent problem behaviors. Secondly, teachers can consider evidence-

based individualized behavior plans and supports. It may be difficult for classroom

teachers to manage multiple individualized behavior plans, so teachers should also

consider effective group contingencies which can support appropriate behaviors in all

students while also addressing the misbehaviors of target students. Lastly, teachers

should consider the Good Behavior Game (GBG), which is a form of a group

contingency to promote prosocial behavior (Lastrapes, 2013).

General Classroom Management Techniques

The first step to supporting positive behaviors is to practice evidence-based,

effective general classroom management techniques. This should be the first area

teachers should start when examining problem behaviors in their classroom. However,

oftentimes teachers are quick to react to problem behaviors, without considering what

approaches they can take to establish a classroom environment which promotes desirable

behaviors and reduces inappropriate ones before problem behaviors occur.

Individualized Behavior Interventions

Secondly, teachers should consider individual behavior interventions to address

specific students' misbehaviors. There are three problems teachers oftentimes experience

when considering individualized plans. First, teachers may overlook the function of

student misbehaviors. Teachers will implement a plan without foresight regarding the

function of the behavior (Van Acker, Boreson, Gable, & Potterton, 2005). Secondly,

teachers will implement a plan then fail to track the effectiveness of the intervention by

comparing if problem behaviors have decreased since implementation of the intervention.

Teachers will unknowingly keep doing something that doesn't work, or continue an individualized plan when it is no longer needed. It can be difficult and time-consuming to implement these individual plans with fidelity and track the effectiveness of the plan (Theordore, Bray, & Kehle, 2004). This may be more difficult if a teacher has more than one individual plan to track.

Efficient Group Contingencies

The difficulty of managing multiple individual behavior plans may be mediated by a contingency plan for the whole class (Theodore, Bray, & Kehle, 2004). However, teachers need to have a firm understanding of group contingencies. Group contingencies can be implemented in three formats: independent, dependent, and interdependent (Theodore, Bray, & Kehle, 2004). An independent group contingency requires that all students follow the same criteria to have access to the same reinforcer, depending on each individual student's behavior. For example, the teacher might say to students, "Everyone must complete their homework by tomorrow to get five extra minutes of recess. Then, students who complete their homework get five extra minutes of recess, and students who don't do their homework don't get the five extra minutes. In dependent group contingencies, all students have access to reinforcement depending on an individual student's performance (Coogan, Kehle, Bray, & Chafouleas, 2007). For example, the teacher might say to students, "If Student A does their homework, everyone will get five extra minutes of recess. Lastly, interdependent group contingencies require that all students in the group attain a certain level of performance in order for the group to have access to the reinforcer (Theodore, Bray, & Kehle, 2004). For example, the teacher might

say, "If everyone does their homework, the whole class will get five extra minutes of recess."

Another problem with group contingencies is some students may sabotage the contingency if students perceive that another student is preventing their access to a reinforcer (Bailey, Bailey, & Burch, 2006). The student whose behavior is prohibiting access to a reward may be isolated by peers. Similarly, some students may enjoy preventing peers from having access to a reward (Theodore, Bray, Kehle, & Dioguardi, 2004), or students may tire of a reward. Teachers should understand the components of group contingencies and plan to ameliorate potential issues before implementing a group contingency in their own classroom. Group contingencies hold the promise to ensure collaborative, cooperative work among their class.

The Good Behavior Game

The Good Behavior Game (GBG) is one example of a researched and evidence-based interdependent group contingency which has been researched with many groups of students, been shown to be effective, and has a high approval rate from teachers and students. The GBG has been shown to be effective in decreasing disruptive and off-task behaviors. However, it has not been researched regarding the effects it has on misbehaviors of individual students with disabilities.

As noted, some students with disabilities engage in off-task behaviors which inhibit their ability to access content during whole group instruction. Classroom teachers should consider multiple influences they can examine to positively influence the behaviors of students. Teachers can evaluate their effective use of general classroom management techniques. Teachers can also examine the use of individual behavior plans to support the

behavioral needs of individual students. Lastly, teachers should consider effective whole group contingencies, like the GBG (Barrish, Saunders, & Wolf, 1969), to positively promote on-task behaviors of all students while simultaneously mitigate misbehaviors of target students.

Purpose of the Study

Purpose Statement

The purpose of this study was to determine if implementing an adaptation of GBG intervention lead to a decrease in off-task behaviors for three first-grade students with disabilities during whole group instruction in their first-grade classroom. The study will examine how favorably the classroom teacher views the intervention.

Rationale for this Study

Many students with disabilities who are educated in general education settings exhibit problem behaviors which inhibit their ability to access the general education curriculum (Cameron, Connor, Morrison, & Jewkes, 2008; Hastings & Bham, 2003; Westling, 2010). General and special education teachers need to work together to implement effective, evidence-based methodologies to decrease the existence of problem behaviors which will provide student's access to the content being taught in the classroom (Levy & Vaughn, 2002).

Description of the Study

To decrease off-task behaviors in three first-grade students with disabilities, the researcher implemented an adaptation of the Good Behavior Game intervention during whole group instruction. During this intervention, the class was split into two heterogeneous teams. The teacher set a vibrating timer to go off in her pocket at a

randomized 3-minute interval. When the timer went off the teacher awarded points to the team who is exhibiting 3 on-task behaviors defined operationally as (1) hands to self, (2) talk when it's my turn, and (3) looking at the teacher or my work. Specific data regarding off-task behaviors of the targeted students was also be observed and marked at each time interval when groups receive points. Instruction continued as regular then at the end of the approximate 30-minute instructional time, the team with the most points won a reinforcer. Specific observational data for the three students targeted was obtained before implementation of the Good Behavior Game to establish a baseline for off-task behaviors.

Expected Outcomes

The first-grade students with disabilities are expected to decrease off-task behaviors and increase on-task behaviors because of the GBG. Also, the GBG intervention will be viewed positively by the classroom teacher.

Research Questions

The aim of this study was to discover if a modification of the GBG led to the decreases in off-task behaviors for three first-grade students with disabilities. Thus, the research questions for the intervention study are:

(1) Will a modification of the GBG, used during whole group instruction, lead to a decrease in off-task behavior in students with disabilities?

(2) Will the GBG be viewed positively by the general education teacher?

Significance to the Field

Students will experience short and long-term benefits from this research study. If the results of the study indicated an increase in on-task behaviors, the students will be

able to access the content being taught in their general education classrooms. This will have long-term effects for the students because they will be able to progress in the first-grade curriculum, therefore making commensurate gains compared to their typically developing peers for the rest of their educational career. This research also adds to the research literature by documenting the positive effects the GBG has on students with disabilities in first grade.

Definitions

The GBG: an interdependent group contingency which involves splitting the class into teams, creating rules, and arranging contingencies (or reinforcers) when the rules are followed (Donaldson, Vollmer, Krous, Downs, & Berard, 2011).

Off-task behaviors: Students engage in off-task behaviors if they aren't (1) looking at the person speaking, (2) talking when it's their turn, and (3) keeping their hands and objects to self (Donaldson et al., 2011).

On-task behaviors: Students engage in on-task behavior if they are (1) looking at the person speaking, (2) Talking when it's their turn, and (3) keeping hands and objects to self (Kamps, et al., 2015).

Group contingency: a behavioral classroom intervention program where all students or groups of students receive reinforcement for displaying a certain behavior (Kamps, et al., 2015).

Interdependent group contingency: a classroom intervention which requires that all students in the group attain a certain level of performance for the group to have access to a set reinforcer (Theodore, Bray, & Kehle, 2004).

Limitations

Though this study sheds light on how the Good Behavior Game may decrease off-task behaviors for students with disabilities, the research presents limitations in internal validity and external validity. The study did not document classroom management skills of the teacher. The study did not have a control group to determine what a group's off-task behaviors were if they did not have access to the Good Behavior Game intervention. This affects the internal validity of the study because it is difficult to draw conclusions regarding how effective the intervention was compared to a group which didn't have access to the intervention.

In addition, there is a limitation with the number of participants engaged in the study. This small participant size of three affects the external validity of the research because the results of the study may be difficult to generalize amongst other groups. Another limitation is the age of the participants. Since the participants in the study were six and seven, this small age group sample may prove difficult to generalize to younger or older students with disabilities. Finally, the short duration of the intervention and limited amount of data collected impedes with the ability to determine the lasting impacts the GBG may have on student's behavior over time and in different settings.

Ethical Considerations

There were many ethical considerations to note in this study. First, the study was reviewed and accepted by Central Washington University's Institutional Review Board, the Human Subjects Review Council (HSRC). The research was evaluated by the HSRC to ensure the safety and welfare of human subjects participating in the study. The HSRC

also ensures that the researcher is familiar with the ethics of human subjects' research and reviews the research to ensure it complies with institutional, state, and federal laws.

Since the researcher was conducting research within the confines of her job, as a special education teacher, parental permission was not needed for the students participating in the study. The researcher also obtained permission from the principal of the school site and the first-grade classroom teacher where the research took place.

Chapter II LITERATURE REVIEW

Students with disabilities are increasingly educated in general education settings

due to recent federal mandates like IDEA 2004 which state that students should be

educated to the greatest extent possible with typically developing peers. Students with

disabilities are likely to engage in off-task behaviors which may inhibit their ability to

access the general education curriculum in inclusive settings. Unfortunately, many

teachers report they are not adequately prepared to handle inappropriate student

behaviors which impede academic learning (Buchanan, Gueldner, Tran, & Merrell, 2009;

Justice & Espinoza, 2007; Fox, Dunlap, & Cushing, 2002; Stormont, Lewis, & Beckner,

2005). Therefore, classroom and special education teachers need to work together to

discover and implement classroom-based interventions which support prosocial behaviors

of all learners, especially students with disabilities.

This literature review will address four areas related to off-task behaviors

exhibited by special education students in the general education classroom. The first

section will address effective management techniques teachers can use at a classroom

level. The second section will focus on research studies about individualized behavioral

supports which teachers can use for students who continue to struggle with on-task

behaviors. The third section with discuss research related to group contingencies. Lastly,

the fourth section will discuss research related to a specific type of group contingency

known as the GBG.

Classroom Level Effective Management Techniques

To promote behaviors which support academic and social outcomes for all

students in the classroom, teachers need to utilize effective classroom management

techniques (Westling, 2010). Efforts to intervene with individual student behaviors are negligible if effective classroom management practices are not in place. Teachers should provide specific, positive feedback to students regarding classroom expectations and routines which have been well-established and taught. Students who receive positive feedback are more likely to experience positive prosocial outcomes, while students who receive negative feedback are more likely to experience issues with self-regulation, concentration, and academic performance (Reinke, Herman, & Newcomer, 2016).

Positive Feedback

The purpose of the first study reviewed, by Reinke and colleagues (2016), was to investigate an observation measure known as the Brief Student–Teacher Classroom Interaction Observation (ST-CIO) in elementary classrooms (Grades K–3), specifically in how the ST-CIO can predict student social behavior outcomes. The ST-CIO assessed the occurrence of teacher positive or negative attention and the study associated end-of-the-year behavioral and social outcomes with observations of teacher attention. Participants in the study included 53 teachers and 896 students from nine elementary schools in a low-income, urban, midwestern school district. Teachers were recruited to participate as part of a larger trial which evaluated the effectiveness of a universal classroom management intervention over the course of three years.

Classrooms were observed directly by independent observers to document teacher and student behaviors. Teachers were observed for the frequency of behavior-specific praise, general praise, explicit reprimands, and harsh reprimands directed towards individual students. These data were converted to a rate per minute. To determine the rate of positive versus negative interactions the total number of reprimands was subtracted

from the total number of praise statements. A student with a positive rate received more positive interactions and a student with a negative rate received more negative interactions.

Students were observed for disruptive behaviors for five minutes of academic instructional time. One observation of each student was conducted in the fall (October) and the spring (April) of the school year. Teachers also rated individual student behaviors in October and April using the Teacher Observation of Classroom Adaptive-Checklist. This measure provided information about the teacher's perspective on student's prosocial behaviors, disruptive behaviors, concentration problems, and/or emotional regulation issues.

All variables measured met or exceeded the 80% reliability level for both fall and spring observation points. In the fall, student race and teacher positive to negative interactions were negatively correlated, meaning that the teachers provided more negative attention to African American students. Teachers also provided more negative attention to students who received free or reduced lunch and more positive attention to girls than boys. It was also found that teacher reports of prosocial behavior were positively correlated with teacher positive interactions, while teacher reports of concentration problems, emotional dysregulation, and disruptive behavior were correlated to teacher negative interactions. Finally, students who were observed to have more positive attention in the fall were reported to have improved levels of prosocial behavior in the spring.

Several conclusions can be made from the findings of the study by Reinke and colleagues (2016). First, ST-CIO is a reliable and valid tool for assessing teacher and

student classroom behaviors. Second, offers utility to school practitioners because it is a succinct and short measure to implement. Third, ST-CIO is a useful tool for identifying students at-risk for continuing problem behaviors. ST-CIO is also a valuable feedback tool for teachers to use early in the school year to alter their classroom behaviors and lessen a student's risk for continuing behavior issues. Finally, ST-CIO is a valuable tool to help teachers become more cognizant of their positive interactions with all children. This study is applicable to the present study because it emphasizes the importance of positive interactions between teachers and students to promote prosocial behaviors in students. The study does possess some limitations. First, the findings are obtained from a predominantly African American K-3 sample. It may be difficult to generalize the findings to other grade levels or demographics. Secondly, future research should consider examining the use of ST-CIO to identify students in need of Tier 2 supports for prosocial behaviors.

Positive Reinforcement

While it is apparent positive interactions with students is important to influence prosocial behaviors, another way teachers can support positive behaviors in classrooms is through specific feedback delivered in the form of reinforcement after a student complies with a teacher request. There are two types of reinforcement discussed: positive and negative reinforcement. Positive reinforcement involves providing a student with a reward after a behavior. Negative reinforcement involves removing something from the environment that is already present after a behavior.

The purpose of the second study reviewed was to compare the effects of reinforcing compliant behaviors with positive or negative reinforcement (Carter, 2010).

This study took place in a therapy room or changing room where the participant engaged in self-care activities like handwashing, wiping face, or putting on and removing his jacket. The participant was a 19-year-old man with a severe intellectual disability who could follow a two-step direction and communicated through gestures and vocalizations. He also engaged in destructive behavior to escape demands, therefore extinction paired with positive reinforcement could not be used to increase compliance due to safety concerns for the student.

The student participated in many phases in reversals to document the effectiveness of positive or negative reinforcement. In all phases, a 30-second break was given for destructive behavior (negative reinforcement). In the first phase, the participant was provided high-preference edible items, such as cookies and soda, for compliance of verbal tasks (positive reinforcement). In the second phase, the participant earned a 30-second break for compliance and destructive behavior (negative reinforcement). In the third phase, a high-preference leisure item, either music or stickers, was given following compliance. In the fourth phase, low preference food items, such as crackers, chips, cereal, pretzels, applesauce, and peanuts were awarded for compliance.

As noted, the intervention was conducted across multiple therapy sessions in a reversal order with returns to baseline. No specific information was given regarding the length of individual sessions or how many phases were conducted across multiple days. There were two dependent variables measured in the experiment: compliant behavior and destructive (escape-maintained) behavior. Compliant behavior was measured as completing the task within five seconds after a verbal prompt was given. Destructive

behavior was defined as aggression such as slapping, hitting, pushing or head butting or disruption such as throwing or destroying items.

Data were analyzed regarding the percentage of intervals the participant engaged in compliant behavior and the percentage of intervals the participant engaged in disruptive behavior during each phase. Results indicated that the delivery of a high-preference food item contingent on compliance increased compliance and reduced the percentage of disruptive behavior. The delivery of a high-preference leisure item produced similar results. However, the delivery of a 30-second break for compliance and destructive behavior (negative reinforcement) produced similar results as baseline.

This study by Carter (2010) supports a large body of research which documents the powerful effects positive reinforcement has on increasing compliant behaviors, including students with more severe disabilities. This study supports the need to find behavioral interventions which utilize positive reinforcement to increase the likelihood compliant behaviors will occur. This study is applicable to the present study because it documents the need for positive reinforcement to increase compliant, on-task behavior in classrooms.

There were several limitations of the present study. One limitation of this research is the single participant. Future research should replicate the findings with additional participants. Another limitation of the research is the variations made among treatment conditions. Future research should use a more rigorous experimental design which returns to baseline treatments more often, as lingering effects from one treatment or delivery of reinforcement may have influenced compliant or destructive behaviors exhibited by the participant.

Increase Opportunities to Respond

Finally, teachers can support prosocial behaviors in their classroom by increasing the rate of opportunities to respond (OTR) to academic requests. The Council for Exceptional Children (CEC) documents the importance of eliciting frequent responses from students because it allows teachers to adjust lessons based on student feedback and increase attentiveness of students, therefore positively impacting students' classroom behaviors and academic outcomes (as cited in Sutherland, Alder, & Gunter, 2003).

The purpose of the third study regarding classroom management techniques was to examine the effect an increased rate of OTR on the classroom behaviors of students with emotional and behavioral disorders (EBD) (Sutherland, Alder, & Gunter, 2003). The study took place in a self-contained classroom for students with EBD. The participants were nine students identified as having emotional disturbance: one girl and eight boys. Students in the self-contained classroom were taught by a Caucasian male with two years of teaching experience, a teacher assistant, and a 49-year-old African American man. During the duration of the study the instructional context remained the same.

Prior to the beginning of the intervention, a primary observer collected data on the OTR observed during math lessons to establish baseline data. For the intervention, the primary observer met with the teacher and asked him to predict his OTR rate per minute. Then, the observer shared the actual ate of OTR per minute with the teacher. The observer shared the benefits of increasing OTR with the teacher and set a goal of three OTR per minute. Lastly, the observer provided the teacher with a graph and asked him to graph his rate daily. After an observation period, the observer would give the teacher a paper with a card that had the teacher's rate of OTR written on it.

While the researchers do not report how many weeks the intervention occurred, there were about 31 sessions observed and data were recorded for those sessions. The researchers used an ABAB withdrawal design to analyze the effect OTR had on the student outcomes. After baseline and the initial intervention phase, a withdrawal phase occurred where the observer ceased to provide the teacher with feedback and collected the teacher's graph. Then, the observation/feedback intervention was reinstated again.

The dependent variables measured were OTR, teacher praise, correct responses, disruptive behavior, and on-task behavior. OTR was measured with a frequency count, that is each time the teacher provided an OTR, where a specific response was elicited, a mark was counted. Teacher praise and correct responses were also recorded using a frequency count. Disruptive behavior was recorded using a frequency count and was defined as a behavior that interrupted or had the potential to interrupt instruction. On-task behavior was recorded using a momentary time-sampling procedure where each 1-minute interval the observer would observe one quadrant of the classroom, which was split into four, and mark if all the students in that quadrant were observed to be on-task. On-task behavior was defined as following directions, paying attention to the speaker, and working on assigned tasks.

The data were analyzed across sessions. OTR were measured as the mean rate of OTR for the given session. During baseline, the mean rate of OTR was 1.68. This rate increased to 3.52 during intervention, decreased to 2.25 during withdrawal, then increased to 3.49 during the reintroduction to intervention. Praise was analyzed as the mean rate of praise over sessions. The mean rate of praise during baseline was 0.16 per minute, which increased to 0.37 during intervention and remained the same during

withdrawal. During the reintroduction of intervention teacher praise increased to 0.45 per minute. Correct responses and disruptive behaviors were analyzed as the rate per minute for each session. During baseline, the rate of correct responses was 1.42 and increased to 2.68 during intervention. During withdrawal, correct responses decreased to 1.35, then increased to 2.60 during reintroduction. The mean of disruptive behaviors was 2.64 during baseline and 2.01 during intervention. During withdrawal, disruptive behaviors increased to 3.05 and decreased to 1.91 during the reintroduction of intervention. Lastly, the percentage of on-task intervals was measured and reported for each session. During baseline, the percentage of on-task intervals was 55.2%, 78.9% during intervention, 65.4% during withdrawal, and 82.6% during reintroduction.

The study supports the assertion that increased effective teaching practices such as increased OTR leads to more appropriate classroom behaviors. It should be noted that increases in OTR contributed to increases in students' correct responses. Therefore, a combination of increased rates of OTR, increased praise, and students' correct responses led to students behaving more appropriately as evidenced by lower rates of disruptive behavior and higher percentages of on-task behaviors.

The study does present some limitations and weaknesses. First, the study was conducted in one classroom for students with EBD. It may be difficult to generalize the findings to other classroom settings such as an inclusive classroom. Secondly, the classroom was in an inner-city community, so generalization to more suburban or rural settings should be cautioned. Third, the study did not gather information on students' academic achievement, so conclusions cannot be made regarding whether an increase in

OTR leads to better academic outcomes. Fourth, the study did not measure the distribution of teacher behavior and students' responses to that behavior.

The research literature indicates that teachers can engage in effective teaching practices which promote the learning of all students. The three research articles that were evaluated in this section provide support for using effective general classroom management techniques to positively impact students' behaviors. Providing students with specific, positive feedback and reinforcement increases the occurrence of compliant, prosocial behaviors. Similarly, increasing the rate of OTR also leads to less disruptive behaviors. While general methods discussed in these research articles are effective for most students, some students may require more intensive, individualized behavior supports.

Individualized Behavior Supports

As classroom teachers implement evidence-based classroom management techniques with their whole class, some students may require more individualized attention, plans, and interventions to access the general education curriculum. Teachers should consider using behavior contracts to influence positive behavior change. Behavioral contracting has been used as a behavior intervention for more than 45 years (Bowman-Perrott, Burke, de Marin, Zhang, & Davis, 2015). Behavior contracts usually include clearly stating behavioral expectations, incorporating rewards for adhering to the contract, and consequences for not following agreed-upon expectations. Many single-case research (SCR) studies have been conducted to document the effectiveness of behavior contracting.

Behavior Contracts

The purpose of the first study by Bowman and colleagues (2015) was to

quantitatively summarize the SCR on the use of behavior contracts with children and

youth through a meta-analysis. The study examines the effectiveness of behavior

contracts in 18 SCR studies which involved 58 children and youth aged 5-21. To select

which studies to include in the meta-analysis the authors searched the literature for terms

such as behavior contract, contingency contract, and learning contract. To be included in

the meta-analysis the studies needed to use SCR design, implement a behavior contract to

reduce a problem behavior or increase appropriate behavior, involve school-age

participants, and be published or conducted in a peer-reviewed journal.

This meta-analysis was the first conducted to document the effectiveness of

behavior contracts in SCR. The meta-analysis also examines the impact of behavior

contracts on multiple behaviors across a variety of settings while also examining the

effectiveness for a variety of youth across ages and with and without disabilities.

Effectiveness of behavioral contracting was documented through effect sizes.

Specifically, the meta-analysis addressed two questions: "(1) What is the overall effect of

behavior contracts across SCR studies? (2) What are the effects of potential moderators

such as grade level, gender, disability or at-risk status and target behavior on academic

and behavioral outcomes?" (p. 251).

The studies were coded across four potential moderator variables: grade level,

gender, disability status, and target behavior. Behaviors were analyzed by category:

inappropriate behaviors, appropriate behaviors and academic responses. While all studies

use a form of behavior contracting, four studies used behavior contracts with another

intervention. Teachers implemented most of the behavior contracts, except for two studies where parents implemented the contract. Interventions were carried out in rural, suburban, and urban settings in classroom settings, across school settings, hallways and in homes.

The results indicated that the overall effect size for use of behavior contracts was moderate at .57. Similar results were found for elementary and secondary school settings at effect sizes of .55 and .54. A slightly larger effect size was found for males at .58 than females at .51. The largest effect sizes were found for children and youth with and at-risk for disabilities: effect size for children and youth with ADHD was 1.00, emotional behavioral disorders were .86, learning disabilities was .78, autism spectrum disorder was .65, and students at risk was .66. Students seemed to experience the greatest benefit from behavior contracts which examined academic responses, at an effect size of .60, a reduction in inappropriate behaviors was .57, and an increase in appropriate behaviors was .44.

The findings from this study pose many implications for classroom teachers using behavior contracts with individual students in their classrooms. First, behavior contracts are equally effective with elementary and secondary students. Secondly, males may benefit slightly more from behavior contracts than females. Third, students in disability categories and at-risk experience greater benefits from behavior contracts. This is especially encouraging since students with ADHD, EBD, LD, and ASD are at the greatest risk for continued behavioral issues in school. However, behavior contracts may be time-consuming for classroom teachers to implement. Designing materials, training, and

continued support may decrease the likelihood behavior contracts are implemented with fidelity.

There were several limitations in this study. First, findings may not be generalized to settings outside of school. Second, many of the studies examined were dated. Future, current research should work to document the effectiveness of behavior contracts. Third, the intervention setting was not considered when evaluating the effect size. It may be important to note that the classroom setting may influence the effectiveness or ineffectiveness of behavior contracts.

Check-in, Check-out

Since behavior contracts are moderately effective for the general population, teachers may look for other individual behavior interventions. Check-in, check-out (CICO) is a targeted intervention designed to be an effective behavior support for students at-risk for more severe behavior problems (Todd, Campbell, Meyer, & Horner, 2008). CICO is a simple approach to support positive behaviors in students through ongoing feedback through a behavior report card. CICO provides structure and prompts for students throughout the day and provides written and verbal feedback to students regarding personal goals. CICO also facilitates easy data collection and improves communication between adults at school and home.

The purpose of this study was to document a functional relationship between the CICO intervention and a reduction in problem behaviors of four boys. Trevor (a third-grade student), Chad (a first-grade student), Kendell (a second-grade student), and Eric (a kindergarten student). The study took place in a rural elementary school located in the Pacific Northwest. The school which the participants attended had implemented a

schoolwide positive behavior support (SWPBS) program and had attained a mean score of 97% for fidelity of implementation for the past three years as measured by the School-Wide Evaluation Tool. Participants were chosen based on several factors: First, administrators nominated students who had frequent office visits for disrupting class. Second, teachers verified that students' disruptive behavior continuously occurred. Last, parents and students consented to participate in the study. Seven teachers (six primary teachers and one special education teacher) and three CICO program staff also participated in the study.

The intervention consisted of three phases: check in, performance and feedback during the school day, and check-out with staff and family. First, individual participants would check in with a school staff member before school started. The staff member would collect the parent report from the previous day and provide a new CICO behavior form for the present day. On the form was the student's name, date, CICO schedule, an area to rate the student's performance on the three school rules, and a place to record the daily goal and points earned for the day.

Students received feedback regarding their performance of the school rules five times throughout the school day: at check-in, before morning recess, before lunch, before afternoon recess, and at check-out at the end of the day. Students would approach their teachers at the three times in the classroom and teachers would rate their performance of each school rule on a point scale from 1 to 3: 1 meaning the student had a difficult time, 2 meaning the student acceptably performed the rule, and 3 meaning the student did very well. If a student's misbehavior warranted an office discipline referral, the student would receive no points for the given time.

At the end of the day, students would check out with a designated staff member. Students could spend the points they earned on specific awards, choosing to either spend on smaller prizes or save for bigger prizes. At check-out time, the staff member would complete a report to be sent home with the student. Parents would sign the report and the student would bring the report back to school the next day to share at morning check-in time.

CICO was used school-wide, all day, and in all settings of the school. Direct observations of the participants occurred in classroom settings during academic activities. To examine the effects of CICO on problem behaviors the study used a multiple baseline across subjects' design. The study was completed across 10 weeks, beginning in April of the school year and completing at the end of the school year. There were two phases completed: baseline and CICO.

Several measures were included to document the effectiveness of the CICO intervention. Prior to beginning the CICO intervention a functional behavior assessment was conducted with each student to determine the function of the students' misbehaviors using the Functional Assessment Checklist for Teachers and Staff (FACTS) by March and colleagues (2000) (as cited in Todd, Campbell, Meyer, & Horner, 2008). Also, direct observations of problem behaviors were recorded 3 to 4 days per week during a 20-minute session using interval recording. These observations occurred at times the teachers reported the most problematic time of the day during the FACTS interview. Observers recorded behavior information at 10 second intervals. Problem behaviors which were to be observed were being in the wrong location, talking out, noncompliance,

talking to peers, being disruptive, and negative physical and verbal interactions. Another

data source measured was the number of office discipline referrals.

Social validity of the CICO program was also assessed by teachers at the end of

the second week using CICO and again at the end of the program. Similarly, contextual

fit information was gathered through a 16-item checklist to assess whether the

intervention could be implemented with fidelity. All seven teachers and three CICO staff

members completed this questionnaire. Last, interobserver agreement was measured for

the problem behavior data.

Results of the functional behavior assessment indicated that adult attention was

the maintaining function for all participants. During baseline, all students displayed

unacceptable levels of problem behaviors. Trevor averaged 30% intervals with problem

behavior, which is significantly higher than the scores of nontarget students observed at

3.5%. Chad averaged 26% (13.3% higher than nontarget students), Kendall averaged

34% (19.5% higher than non-target students), and Eric averaged 27% (23.6% higher than

nontarget students). All participants displayed a reduction in problem behaviors after

implementation of CICO. Trevor averaged 14%, Chad averaged 8%, Kendall averaged

13%, and Eric averaged 12%. Over all students 17.5% average reduction was

demonstrated in problem behaviors.

The number of office discipline referrals significantly dropped after baseline.

Across participants and days ODRs was 0.14. After CICO implementation ODR was

0.04. Social validity measures from staff indicated that overall teachers and staff thought

the intervention was acceptable and easy to implement. From the contextual fit

assessment, staff rated the intervention as effective, efficient to implement, and in the best interest of the students.

Several conclusions can be made about the effectiveness of the CICO intervention to decrease problem behaviors in students. First, CICO resulted in a reduction of problem behaviors. Second, CICO provides regular times for students to achieve adult attention, so it seems to work well with attention-maintained students. This may be a problem for students who engage in off-task behaviors to escape task demands, such as the three students in the present study. Third, contextual fit and social validation results indicated that CICO procedures were viewed as doable and effective.

The study does present some limitations. First, the small number of participants make findings difficult to generalize across many students. Second, the present study only examined a reduction in problem behaviors for attention-maintained behaviors. Future research should consider escape-maintained problem behaviors. Third, the end of the school year prohibited the study from documenting long-term effects of CICO on reducing problem behaviors. Lastly, CICO was implemented in a school already using school-wide positive behavior supports, so it may be difficult to experience the same results in a school which isn't utilizing SWPBS. It may be helpful to examine individualized behavior supports which can be implemented and effective even if a school does not have SWPBS in place.

Self-Monitoring

Another individual behavior intervention discussed in the literature is self-monitoring. Many studies have examined and documented how self-monitoring can improve on-task behaviors. Self-monitoring is more cost-effective and less intrusive for

teachers because the locus of control is with the student, not requiring the teacher to be the sole implementer of the intervention. The present study examined the effectiveness of self-monitoring on reducing off-task behaviors for students with ADHD within a group contingency approach (Davies & Witte, 2000). The study included 30 third-grade students from an urban school district located in southwestern Ohio. Four of the third-grade students were diagnosed with ADHD. Students in the classroom were arranged in seven table groups of four students, with students with ADHD randomly dispersed.

The intervention consisted of three parts: (1) training session, (2) active intervention, (3) reinforcers. First, the teacher trained students on the target behavior, talking out, they were trying to decrease. Training also discussed how to appropriately tolerate group members who were responsible for moving group tokens. Students rehearsed the intervention and training sessions. Teacher evaluated the students' understanding of the target behavior. Second, each group had a chart to monitor their behavior, divided into three sections: one-half green, one-fourth blue, and one-fourth red. Five black dots were put on the chart using Velcro. A child would move a Velcro dot from green to blue if they exhibited the target behavior. If the child did not self-monitor within 10 seconds the teacher would move the Velcro to red. Students also had an individual chart where they could tally how many dots they moved themselves and how many dots the teacher moved. Lastly, reinforcers were discussed and decided upon as a class. Reinforcers were delivered immediately following an intervention period.

First, baseline data were collected for 4 school days in September. Then, the training session occurred on a Friday after baseline data were collected and the first session began on Monday after a quick training session. The self-management/group

contingency intervention was conducted every morning Monday through Thursday for 12 school days. Also, a group meeting was held for five minutes before the intervention occurred where students could discuss what went well the day before and how they can improve today. After the 12-day intervention period, baseline data were gathered again, then 10 more school days of intervention occurred.

As discussed, the target behavior was inappropriate verbalizations. Data were gathered through event recording to record the frequency of inappropriate verbalizations by each student with ADHD. Two research assistants gathered this data over a 30- minute period. The observers also counted inappropriate verbalizations of match controlled students to compare the rates of inappropriate verbalizations of students with ADHD compared to typically developing peers. Interobserver reliability was also calculated.

During baseline, students with ADHD evidenced higher rates of inappropriate verbalizations than their peers, 2.5-22.5 per half hour for students with ADHD and 0-15 times per half hour for matched peers. During Intervention Phase I the number of inappropriate verbalizations reduced for both students with ADHD (0-4) and their peers (0-2). During the return to baseline, inappropriate verbalization increased, but not to the original level in baseline I. During intervention phase II inappropriate verbalizations decreased significantly again. There was no significant difference between the number of times a student moved a Velcro tab and the number of times a teacher moved it.

The self-management and group contingency system promoted positive interdependence and decreased inappropriate talking-out behaviors of students with and without ADHD. Some limitations of the current study include a limited group size and geographical region. The study also possesses limitations regarding generalization. Since

the students had a chart in front of them during intervention it may have cued appropriate behavior. Future research should consider how to scaffold out the chart to generalize self-monitoring behaviors in other settings. Lastly, self-monitoring within a group contingency makes it difficult to document which aspect had the largest effect on decreasing student off-task behaviors: self-monitoring or the group contingency.

The research literature indicates individualized behavior interventions can be used with students who do not respond to effective general classroom management techniques aimed at increasing prosocial behavior. The three research articles that were evaluated in this section provide support for using individualized behavior interventions to positively influence students' behaviors. Using behavior contracts have been shown to have a large effect size, especially for students with high-incidence disabilities. CICO behavior interventions can help support prosocial behaviors in students, especially for students whose misbehaviors are attention-maintained. Lastly, self-monitoring holds promise to support on-task behaviors for students with disabilities. The issue with individualized behavior plans is they can be time-consuming and difficult to manage for teachers (Theodore, Bray, & Kehle, 2004). Group contingencies may be an effective way to positively influence on-task behaviors of all students without requiring the teacher to implement and track multiple individualized behavior supports.

Group Contingencies

To promote behaviors which support academic and social outcomes for all students in the classroom teachers can use group contingencies where groups of students have access to a reinforcer contingent upon set behaviors or outcomes. (Theodore, Bray, & Kehle, 2004). There are three types of group contingencies discussed in the literature:

independent, interdependent, and dependent. An independent group contingency occurs when the expectations and reinforcers are the same for everyone in the group, but access to the reinforcer depends on an individual student's performance. An interdependent group contingency occurs when the same reinforcer is available to the whole group, contingent on everyone in the group achieving the same criterion. A dependent group contingency is in effect when the whole group has access to a reinforcer based on the performance of one student.

Reducing Disruptive Behavior through Group Contingencies

The purpose of the study by Theodore, Bray and Kehle (2004) was to examine the effectiveness of group contingencies on reducing disruptive behavior and compare effects of independent, interdependent, and dependent contingencies on reducing disruptive behaviors of adolescent males identified with serious emotional disturbance. Three 17-year-old males in a predominantly middle class, Caucasian community in New England participated in the study. Each student received special education services as students with Serious Emotional Disturbance (SED). The students were educated in a self-contained classroom taught by a male instructor with three years of experience and a female classroom aide in her first year of experience.

During the intervention, the classroom rules were posted on the blackboard and a jar of potential reinforcers based on students' suggestions was placed at the front of the room. The classroom rules were (1) no voicing obscene words, (2) follow the teacher's directions, (3) orient in the direction of the teacher or assignment, (4) don't talk to students who are working, (5) don't make verbal putdowns. If students broke any of the rules a check was placed next to their name on a record sheet the teacher had. At the end

of the phase if students had five or fewer checks they had access to the reinforcer. In the

independent phase, students had access to the reinforcer contingent on their own

behavior. In the dependent phase, a student's name was randomly chosen at the end of

the intervention and if that student met the criteria of five or fewer checks all students had

access to reinforcer. In the interdependent phase, all students had access to the reinforcer

if all students met criteria.

Baseline data were gathered over a two week period for five to six sessions. Each

intervention phase was utilized for 15 school days, with a 24-hour period of no

intervention used between phases. At the end, the most successful phase was

implemented again for five days to document the effectiveness of the intervention.

Direct observations were employed to gather information regarding students'

disruptive behavior which was defined as voicing obscene words, not following

directions the first time within five seconds, orienting a direction other than the teacher or

assignment, talking to others who are working, or verbal putdowns. Partial interval

sampling was used for 80 15-second intervals over a 20-minute time frame. Inter-

observer agreement was obtained by having two observers rate behaviors. Treatment

integrity was also measured to ensure the classroom teacher was using the intervention as

intended. After an intervention phase the teacher rated the session based on pre-

determined questions. Consumer satisfaction information was gathered at the end of

intervention to gain insight towards the degree to which the student participants felt the

intervention was fair, useful, and successful. Information regarding how the teacher

accepted the intervention was also gathered at the end of the intervention.

The study employed an alternating treatment design to determine effectiveness. To determine the efficacy of independent, dependent, and interdependent group contingencies effect sizes were derived by subtracting the baseline mean of disruptive behavior from the intervention mean and dividing the difference by the standard deviation from baseline for each type of group contingency for each student.

Results indicate that interobserver agreement ranged from .77 to .86 across baseline and intervention phases. Table 1 summarizes the mean percentage of disruptive intervals for each student participant during the different phases.

Table 1

Percentage of Disruptive Intervals Across Research Phases

Student	Baseline (%)	Interdependent (%)	Dependent (%)	Independent (%)
1	34	4	0.6	2.8
2	26	1.5	0.3	0.6
3	38	3.8	1.3	0.5

Results from the consumer satisfaction survey suggest that the students were overall neutral towards the intervention. The students reported that they somewhat disliked the classroom rules and did not like or dislike the classroom observations. Teacher acceptability indicated that the teacher did not find the observations bothersome, the classroom rules were appropriate and that the intervention could be used again. The teacher reported that the students did not seem to agree or disagree with the notion that the students cared about the performance of their classmates.

Implications of this study are that all three group-oriented contingencies reduce disruptive behavior, with dependent group contingencies being slightly more effective. Teams should consider using dependent group contingencies when the behavior or one or couple of students is of concern. If there is a possibility of retaliation towards those students, though, independent contingencies should be considered. Interdependent contingencies should be considered when the goal of the intervention is to change the behavior of the whole class. Similarly, randomizing the reinforcers helped to increase the likelihood students will meet the behavioral criteria since all reinforcers considered student input, each student was interested in earning the reinforcers. This study poses implications for the present study by suggesting that randomizing reinforcers may lead to more positive outcomes and supports the idea that an interdependent contingency should be used so the targeted students are not ostracized by their class.

One limitation of the current study is that few students participated. Also, there is a potential multiple treatment threat since the intervention went from one group contingency to the next with only one day of interference, rather than returning to baseline in between each group contingency format. Although treatment fidelity was considered and measured the protocol did not specify how reinforcers would be chosen, so the classroom teacher did not use the reinforcer jar to randomize the reinforcers every time students had access to a reward. Therefore, the randomizing the reinforcer was not studied as thoroughly as the study wished.

Group Contingencies with Self-Monitoring and Peer Feedback

Coogan, Kehle, Bray, and Chafouleas (2007) furthered the research by Theodore, Bray and Kehle (2004) by exploring the randomization of reinforcers more thoroughly

along with other components such as target behaviors, reinforcers, the criteria, and target students. Coogan and colleagues (2007) also explored the use of group contingencies which involved peer feedback and self-monitoring. Both peer feedback and self-monitoring have been shown to increase the effectiveness of the GBG by helping students bond together and work towards a mutual goal.

The purpose of their study was to examine the effects of a multicomponent intervention had to reducing inappropriate classroom behavior. The multicomponent intervention included interdependent and unknown dependent group contingencies, peer feedback, self-monitoring, and randomization of both reinforcers and the criteria students need to meet to access the reinforcement. A single classroom was chosen to participate in the research due to the high number of referrals for inappropriate student behaviors, specifically five 12-year-old male students who had most frequent inappropriate behaviors were targeted during the intervention.

To begin the intervention student desks moved together in four groups with 2-3 students per group. One of the five target students were included in each grouping. Each group was given a monitoring board divided in half (one side green and one side blue). Five push pins were attached to the board on the green section. Students moved a pin to the blue side if they exhibited an inappropriate behavior corrected by the teacher, or the teacher would move the pin if student refused. This resulted in the loss of a point for the group. Students also completed a blue self-monitoring data sheet during intervention sessions where they placed a check on the sheet if they lost a point for their team.

Individual sheets and group boards were collected to determine if the class received reinforcement. Reinforcement was decided upon randomly: if the selected

criterion was interdependent, meaning the performance of all groups, then all groups must have at least one point remaining to receive reinforcement. If the criteria were dependent, meaning the performance of a selected individual then the student must have no lost more than two points for their team for the whole class to get an award.

To randomize the components three jars were placed on the teacher's desk: (1) Criteria for reinforcement (performance of all groups vs performance of one student), (2) Names of individual students in the classroom (if dependent group contingency was chosen from jar 1), and (3) Potential awards. At the end of the session, the jars were chosen to decide upon criteria for reinforcement and the type of reinforcement. It should also be noted that the start of each session began with a group meeting where the class facilitated peer feedback.

An ABAB reversal design was used, where A denotes baseline and B denotes treatment. Direct observations were conducted using a partial-interval time sampling method consisting of 15 second intervals over a 30-minute period. The school psychologist and counselor observed in about 25% of sessions across all phases. The teacher was given instruction on how to implement intervention and students received a one day training with practice and role-play and an oral quiz where students demonstrated their understanding of the intervention. Students also decided upon team names. During baseline, the teacher taught a typical lesson and students were observed on 4-10 occasions. Intervention was implemented for 28 school days over a period of six weeks, observer 12 sessions during intervention period. Baseline II was conducted for 9 school days. Finally, Intervention II was reimplemented for 26 days, and data were gathered for 12 intervention sessions.

Five measures were studied. First, inappropriate behavior was the dependent variable measured. Inappropriate behavior was defined as touching, verbalizations, aggression, playing, disorienting, making noise, or being out of seat during classroom instruction time. The occurrence of one behavior was recorded as an inappropriate behavior. Second, interobserver agreement was calculated by using point-by-point agreement. Third, treatment integrity was measured in 25% of sessions to make sure intervention was administered properly. Fourth, consumer satisfaction data were gathered at the end of the intervention to determine whether students were satisfied with the intervention. Fifth, teacher acceptability was also gleaned from a rating profile after the intervention.

Table 2 presents the average percentage of observed times students engaged in inappropriate behavior during each phase.

Table 2

Average Percentage of Observed Intervals Students Engaged in Inappropriate Behavior

Student	Baseline 1 (%)	Intervention 1 (%)	Baseline 2 (%)	Intervention 2 (%)
1	25	3.07	21.06	5.71
2	30.44	5.96	20.33	8.17
3	30.35	6.37	25.33	8.95
4	38.25	5.81	32.33	12.6
5	34	3.96	19.89	4.96

Effect sizes were also calculated for each student by subtracting the average of the two intervention means from the average of the baseline mean and dividing the difference

by the standard deviation of the initial baseline. Every student experienced a large effect size. Table 3 reports the effect sizes for each student.

Table 3

Effect of Intervention on Individual Student's Appropriate Behaviors

Student	Effect Size
1	1.88
2	1.36
3	1.30
4	2.24
5	2.26

Interobserver agreement averaged 0.88, with 0.80 acceptable rate. An average score of 3.37 on a Likert-type scale was reported for consumer satisfaction, indicating that students were neutral towards the intervention. The mean ranking for teacher acceptability ratings was 4, indicating satisfaction with the program on the teacher's part. Treatment integrity was measured to occur with 100% accuracy for almost all the items, expect two. First, the teacher forgot to implement the group discussion on two occasions. Second, the reward was not immediately delivered when earned on one occasion.

From this research, one can conclude that the multicomponent intervention offers another option for teachers looking to select an effective, easy to implement intervention to increase appropriate behaviors in their classroom. However, this study does present some limitations including a limited sample size. Further research should include larger groups of students.

CW-FIT

Kamps et al. (2015) studied a group contingency known as Class-Wide Function-Based Intervention Teams (CW-FIT) with a larger sample size of students. Like the two studies examined previously, CW-FIT is an intervention program which uses group contingencies to increase on-task, appropriate classroom behaviors. However, the previous group contingencies consisted of the teacher reprimanding misbehaviors and removing points when target misbehaviors were exhibited. CW-FIT focuses on teaching classroom rules and uses the group contingency to reinforce appropriate behaviors.

The purpose of the study was to determine if the implementation of CW-FIT leads to improvements of students' on-task behavior and increases in teacher's attention to appropriate behavior. Several elementary schools which served students in grades K-5 in urban and culturally diverse communities participated over four years. Each of the seven schools participated for one year. Overall, 86 teachers were assigned to a CW-FIT intervention classes while 73 teachers were assigned to a control group with class sizes ranging from 18-25 students. Schools which participated in the study were not currently implementing School-Wide positive behavior support (SWPBS) systems. Schools were chosen to participate on the recommendation of district administrators then researchers met with principals to ensure interest.

Before implementing the intervention three skills were taught class wide: (1) gaining teacher's attention, (2) following directions, and (3) ignoring inappropriate behaviors. The intervention was implemented in a game format with class teams of 2-5 students. The teacher set a timer to beep every 2-3 minutes on a variable schedule. At the beep, the teacher would award a point on a chart to each team with all members engaging

in appropriate behaviors. Rewards were given to teams who met the stated goal. Teacher would praise teams and individuals throughout the lesson while giving minimal attention to inappropriate behaviors.

Each teacher selected a time in the day where challenging classroom behaviors typically occurred. Building coaches served as CW-FIT trainers for intervention teachers and provided ongoing support as needed. Group on-task data were collected using a 30-second time sampling procedure over a 20-minute session. Every 30-seconds the observer would scan and record a plus for each team when all students were on-task, defined as (1) attending to material or task, (2) making appropriate responses, (3) asking for assistance in an acceptable manner, and (4) waiting for teacher to begin or continues with instruction. On task data were collected 1-2 sessions per week, per class during baseline and intervention for both experimental and control groups. Baseline data gathering occurred over a two to three-week period and CW-FIT was implemented 3-4 times per week beginning in mid to late October and continuing through march.

Researchers gathered and considered several forms of data. First, group on-task data were collected as noted above. Second, teacher praise statements, points, and reprimands were recorded on a frequency basis during the 20-minute session. Third, procedural fidelity was measured from a checklist and collected 1 to 2 times per week. Fourth, classroom management ratings were gathered from an eight-item checklist for each observation period. Fifth, interobserver agreement was gathered for on-task data, teacher behavior, and fidelity of implementation data. Lastly, consumer satisfaction data were gathered from teachers and students at the end of intervention.

To analyze the data descriptive statistics like means, ranges, and standard deviations were used to determine effects on intervention and control groups. Class-wide student on-task behavior improved from a baseline average of 51.95% to 82.99% in all intervention classes. Comparison groups also increased on-task behavior from base line 50.18% to 56.31%, but not as significantly as intervention groups. On average, teachers implemented with fidelity (96%). Teacher praise increased from 4 to 40 praises in CW-FIT classes, whereas comparison groups went from 4.46 to 4.62. Teacher reprimands decreased from 7.48 to 4.45 in CW-FIT classes, while reprimands increased from 8.42 to 9.49 in comparison classes. These results were replicated in classrooms each of the four years the study was conducted. Classroom management rating averaged about 50% possible points in baseline to 84% points in CW-FIT classrooms and 52% in comparison classes. Data from consumer satisfaction surveys suggest that teachers reported overall satisfaction, and 89% of the 1,055 students said they liked CW-FIT intervention.

This study demonstrates to practitioners that on-task behaviors increased dramatically when teachers taught classroom behaviors, gave attention to appropriate skills, used a point system, and gave rewards for the skills. Another significant finding is that a SWPBS system may not be necessary for successful outcomes. Also, the high levels of fidelity data show that CW-FIT is effective and easy to implement. Lastly, CW-FIT leads to improved teacher praise and less reprimands which supports prior studies that denote the important effect positive teacher interactions have on student behaviors and learning (Reinke, Herman, & Newcomer, 2016). CW-FIT provides insight for the present study to include more positive praise for appropriate behaviors rather than

moving or taking away points for targeted inappropriate behaviors in the implementation and modification of the GBG.

This study does present some limitations. First, each participating building had a part time intervention coach, and most districts which use the intervention will not have access to this resource. Also, effects were not observed across the day, only during CW-FIT times, so it may be difficult to generalize these findings to other times throughout students' days. Finally, measures were not collected on student academic performance during CW-FIT. It would be helpful to find information regarding how CW-FIT impacted students' academic outcomes.

The research literature indicates that group contingencies may be an effective way to increase on-task, appropriate classroom behaviors on individual students, the whole class, and teachers. The three research articles evaluated in this section provide support for using group contingencies to positively influence students' and classroom teachers' behaviors. Theodore, Bray and Kehle (2004) demonstrated that all three types of group contingencies have positive influence to decrease disruptive behaviors in three adolescent males with serious emotional disturbance. However, dependent contingencies were slightly more efficacious in reducing disruptive behavior, where a random student's performance was chosen as the criteria for all students to access the reinforcer. Coogan and colleagues (2007) demonstrated that a multicomponent group contingency which included peer feedback, self-monitoring, and randomization of the reinforcer lead to a decrease in inappropriate behavior of 5 adolescent boys. Lastly, Kamps and colleagues (2015) explored the CW-FIT group contingency which focused on teaching and praising on-task behaviors rather than reprimanding and correcting misbehaviors as the previous

group contingency studies have. Kamps and colleagues demonstrated positive influences on students' on-task behavior and teacher's praise of appropriate behavior.

The Good Behavior Game

Unfortunately, teachers rarely plan preventive approaches to discourage disruptive behavior and promote adaptive behavior, so when children engage in disruptive behavior teachers react in negative ways which may lead to more inappropriate behaviors to escape academic tasks and gain more attention from the teacher (Wehby, Tally, & Falk, 2004).The Good Behavior Game (GBG) is a preventive intervention group contingency which has been shown to promote prosocial behavior and reduce disruptive behavior. The purpose of the present study was to examine whether the GBG positively effects teacher behavior management and children's classroom behavior and whether these effects reduce the chances of students experiencing hyperactive and oppositional behavior compared to control groups who did not participate in the GBG intervention (Leflot, van Lier, Onghena, & Colpin, 2010).

There were 570 students in second to third grade from 15 rural to moderately urban schools in Belgium who participated in the study. During the GBG intervention, children are placed into teams of four to five members and are given a certain number of cards. Teachers praise teams and individuals who follow the predefined rules. When one of the team members violates a predefined rule, a card is removed. At the end of the session, when one of the cards remains that group gains a reward. The classroom rules, material and activity rewards were chosen by the teacher and children before implementation of the intervention.

The intervention had 3 implementation phases. During the first introduction phase, GBG playtime was gradually increased from 10 minutes per session to 45 minutes per session over a period of 3 months. During the second expansion phase, the GBG is played for up to half day per session over a period of 3 months. Finally, during the generalization phase, the GBG is played three times a week for the remaining 2 months with the teacher focusing on prosocial behaviors and less attention on negative behavior outside of GBG moments. The intervention design, with randomized experimental and control groups and repeated measures, was set up in September. One second grade class was assigned to the intervention and one was assigned to the control. Data collection occurred at four points in time: (1) prior to the intervention at the beginning of second grade, (2) at the end of second grade, (3) at the beginning of third grade, and (4) at the end of third grade when the intervention was terminated. These observations were obtained when the intervention was not being implemented, so that generalization effects could be measured.

Observations of teacher behavior management were collected for 10-minute sessions before and after student observations and after the second three rounds. All teachers positive and negative remarks were tallied. Children's on-ask and off-task behavior was observed by two trained observers during the morning session. Each child was observed for 20 seconds until all children were observed for six rounds. The child received a score of 0-3, with 0 meaning the child was not on task during the whole interval and 3 meaning they were on task during the whole interval. The observer recorded each disruptive behavior like talking out or out of seat. Peer reports of hyperactive and oppositional behavior through interviews with research team members

were also collected. Lastly, a school consultant also measured the implementation fidelity using six category questions and assigning a score of 0 to 2, with higher scores meaning more quality implementation.

To analyze the data means and standard deviations for teacher behavior management and child classroom behavior were reported for both GBG classes and control groups. The less negative remarks teachers used, the less likely students engaged in talking out behavior and the more likely they engaged in on-task behaviors. Implementation fidelity was 9.21 across classrooms, with 10 being a perfect score. Control group children had an increase in hyperactive behavior, and a slower rate of increase of hyperactive behavior among GBG children. In control classrooms, there was no increase in oppositional behavior. In GBG classrooms children experienced a decrease in oppositional behavior.

The results of this study illustrate the importance of improving teachers' classroom management strategies to improve child behavior and reduce disruptive behavior. The reduced use of negative remark predicted higher level of on-task behavior and decreases in disruptive and oppositional behavior. Since the results of this study come from a causal mechanism can be implied by the finding. To improve child functioning, attention should be focused on professional practices of adults to prevent and respond effectively to problem behaviors. Similarly, this study supports the present study's adaptation of the GBG to increase positive remarks towards appropriate behaviors. This study did possess some limitations including that students were only followed for two years and the sample was ethnically homogenous.

Donaldson and colleagues (2011) expanded the research by Leflot and colleagues (2010) by studying the effect the GBG has on kindergarten students. The purpose of Donaldson and colleagues' research was to replicate the effectiveness of the GBG on decreasing disruptive behaviors in children younger than first grade. Donaldson and colleagues stressed the importance of intervening early on disruptive behaviors can have lasting impact on student's educational career. Five kindergarten classrooms and teachers in three elementary schools in Iowa participated.

Each class was divided into two teams and children were told how to play the game, the rules, and how to win. Before playing each session, children were reminded of the rules and the rewards. Teams won the game if they had fewer points than the other team or if they both met the criteria of 80% reduction in behaviors from baseline. The intervention took place during group instruction twice per day in the classroom where children are expected to sit on carpet in front of teacher. Sessions lasted from 10 to 35 minutes.

Three target behaviors were observed and data were collected regarding the frequency that these behaviors occurred: (1) out of seat, (2) talking out of turn, and (3) touching another student. Interobserver agreement data were gathered and treatment integrity was measured to make sure GBG was implemented correctly. Lastly, social validity assessment was also gleaned from students through an interview.

To analyze the data a nonconcurrent multiple baseline design was used to document the effectiveness of the GBG. Results indicated that a mean of 84% was collected for interobserver agreement. Disruptive behavior markedly decreased because of intervention from an average of 7.4 disruptions per minute during baseline to 1.4 after

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implementation of the GBG. From social validity interviews 78% of students voiced that they would wish to continue playing the GBG.

The main implication of this study is that GBG is a simple and effective classroom-management technique. However, the study poses some limitations. First, a reinforcer assessment was not conducted. Second, it is difficult to pinpoint which aspect of GBG leads to decreases in disruptive behavior. Third, data on the change in behavior for individual students was not collected. This data will be collected for the present study to determine the effectiveness the GBG has on individual student performance. Lastly, future research should study the effects the GBG has on academic performance.

Dion and colleagues (2011) addressed the effect the GBG has on academic performance through a study to promote reading progress in early elementary school students. Dion and colleagues state that teachers need to consider ways to increase student attention and improve reading instruction, so the purpose of their study was to examine the effectiveness of a multicomponent intervention which uses the GBG to increase student attention and peer-tutoring activities to improve reading instruction.

Fifty-eight first-grade classrooms from 30 schools in some of Montreal's poorest neighborhoods participated in the intervention. Two interventions were used in the study. First, teachers implemented the Peer-Assisted Learning Strategies (PALS) intervention activities with their students for 30 minutes three timers peer week from mid-October to April. Students were paired together with one stronger reader and one weaker reader. Students were trained how to correct partner's errors and read letter sounds, blend sounds, read sight words, and decode a short story. The class was divided into two teams

and partner groups could earn team points based on their performance during PALS. New pairs and teams were formed every month.

The second intervention is GBG. The intervention was implemented from November to April, daily for 15 minutes. During GBG teachers presented content in the usual way and signaled the beginning of GBG by placing a logo on the board. Every time students were disruptive they cost their team points and lessened the chances of their team winning a weekly reward. At the end of the 15-minute period teachers commented on each team's performance and assigned a maximum of five points to teams that were extra attentive.

To study the effectiveness of the interventions, teachers and students in their classrooms were randomly assigned to one of three conditions: a control group (20 classrooms), a peer-tutoring only condition (20 classrooms), and a combination peer-tutoring and GBG condition (18 classrooms). All students participated in the intervention, but only a few students were assessed including students who were rated as inattentive and at-risk for reading difficulties along with peers who were less at-risk. Four Students were identified as at-risk based on a rapid letter naming (RLN) assessment and based on teacher's nominations for students with inattention problems. Teachers were trained in a half day workshop and in class support was offered to teachers who made requests or where less than optimal implementation was observed.

Several measures were assessed to document effectiveness of the interventions. Firstly, RLN is a one-minute assessment where students name letters. Second, teacher-rated inattention was gathered using an adaption to the Conner's' Teachers Rating Scale where teachers rate student behaviors on five items, with higher scores indicating

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attention problems. Third, observed classroom attention data were gained through a time-sampling procedure of 12 consecutive 5 second intervals. During the 5 second interval, a student's behavior was coded as optimally attentive, disruptive, or inattentive. Fourth, interobserver agreement was gathered for observed classroom attention data. Fifth, reading progress assessments were conducted from October to April every other week to measure grapheme-phoneme correspondence. Sixth, end of year assessments included word recognition skills and comprehension skills. Lastly, fidelity of implementation was also gathered to determine how well PALS and GBG were implemented.

Overall, peer-tutoring activities helped students improve reading skills. However, students identified as inattentive at pretest did not become better readers when both interventions were used. Attention was higher when GBG was implemented for both attentive and inattentive students. Non-responders were identified as students who did not achieve a rate of progress enough to achieve a satisfactory performance level. There were 47.1% non-responders in the control group, 19.8% in the peer-tutoring group, and 18.1% in the combined intervention group. The effect size for attentive students was 0.81 for attentive students and 1.22 for inattentive students. Interobserver agreement was between .88 to .95, a successful rate. Fidelity implementation was 92% in PALS condition and 95% in combined condition.

The study does present some implications and limitations. Firstly, not all students benefited equally from the peer-tutoring activities and attention seemed to be the moderating factor. During the 15-minute GBG implementation all students seemed to be optimally attentive, so perhaps more intensive implementation of GBG for more than 15 minutes would produce better reading outcomes for inattentive students. This supports

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the present study's need to utilize the GBG intervention for longer periods of time than 15 minutes, especially during whole group instruction. Unfortunately, the present study didn't examine the effect other factors may have on a student's ability to learn to read. For example, inattention is often associated with low vocabulary or working memory deficits. Future research should consider how to intervene for vocabulary and working memory in a multicomponent intervention which also addresses attention.

The research literature indicates that the GBG may be an effective way to increase on-task, appropriate classroom behaviors of the whole class. However, little research has been done to document the effectiveness of group contingencies on individual, primary students with disabilities. Leflot and colleagues (2010) demonstrated the importance of increasing positive remarks about appropriate behaviors to students, as increased negative reprimands predicted disruptive and oppositional behaviors in second and third grade students. Donaldson and colleagues (2011) demonstrated the that the GBG leads to decreases in disruptive behaviors of early elementary school children, but verified the need for studies which use a reinforcer assessment and study the effect the GBG has on individual students with behavior problems. Lastly, Dion and colleagues (2011) demonstrated the positive influence the GBG has on attentive and on-task behaviors and addressed the need to utilize the GBG for longer periods of instructional time.

Summary

To ensure that students with disabilities have access to the general education curriculum in general education settings, it is imperative that classroom teachers utilize effective classroom management techniques and incorporate further individualized and group interventions if behavior problems continue to inhibit students' abilities to learn in

the classroom (Rhoades, Warren, Domitrovich, & Greenberg, 2011). Teachers should use specific, positive reinforcement to provide students with feedback regarding how they are following classroom rules and expectations (Carter, 2010; Reinke, Herman, & Newcomer, 2016) and increase opportunities for students to respond (Sutherland, Alder, & Gunter, 2003). When general classroom management techniques are not effective at increasing prosocial behavior, teachers can consider individual behavior supports like contracts (Bowman-Perrott et al., 2015), CICO (Todd, et al., 2008), or self-monitoring (Coogan et al., 2007). Behavior contracts may be difficult for teachers to implement. Similarly, CICO has some downfalls. CICO may only work for students whose behaviors are maintained by adult attention or in schools already implementing a SWPBS system.

Teachers can consider group contingencies such as the GBG which increase positive interactions among teachers and students. The reviewed studies demonstrate that the GBG paired with randomized reinforcers and self-monitoring may lead to better behavioral outcomes. Some limitations of the studies include a lack of data regarding the behavioral changes observed for individual students in early elementary school with disabilities. This present study wishes to contribute to the existing research literature by measuring the effects of the GBG on individual student's on-task behaviors with disabilities.

CHAPTER III METHODS

As discussed in chapter I, many students with disabilities engage in off-task behaviors that inhibit their ability to access the general education curriculum during whole group instruction. To lower the rate of off-task behaviors, the present research study initiated a whole-class group contingency intervention known as the Good Behavior Game (GBG). The study addressed the following research questions:

(1) Will a modification of the GBG, used during whole group instruction, lead to decreases in off-task behavior in students with disabilities?

(2) Will the GBG be viewed positively by the general education teacher?

This mixed methods, single-subject, quasi-experimental research design incorporated qualitative and quantitative measures to help answer the research questions (Creswell, 2012). Firstly, quantitative data were taken from an observation form to describe the off-task behaviors of students with disabilities during whole group instructional time through baseline, intervention, and post-intervention. Observations forms were used to collect off-task data of students with and without disabilities. Secondly, qualitative data in the form of a questionnaire were used to gather the classroom teacher's perceptions of the GBG and its effectiveness in her classroom. Both forms of data were gathered to answer the research questions and support the effectiveness of the GBG in classrooms for both students and teachers (Creswell, 2012).

Setting

This study took place in a semi-rural elementary school located in North-Central Washington which served approximately 638 students in grades kindergarten through fifth grade. Sixty-nine percent of the students at the school qualified for free or reduced

lunches. The demographics of the students were 56.3% Hispanic, 42.3% white, 0.8% Asian, 0.5% two or more races, and 0.2% black. Specifically, this study took place in a first-grade classroom of 21 students. The class was one of five first grade classrooms at the elementary school. The school is in a resort town in north central Washington with a year-round population of about 4,000, which can grow to 25,000 in the summer due to tourism and seasonal residents.

Participants

The researcher used convenience sampling because the participants were willing and available to be studied (Creswell, 2012). The participants were restricted to those at the researcher's school site who attended the elementary school. The researcher worked directly with the students and the teacher on a daily basis. Consent was gained from the principal as the gatekeeper to the elementary school (Creswell, 2012). Participants included 21 first-grade students and one first-grade classroom teacher. Specifically, three students with disabilities in the first-grade classroom were selected to participate because they continually exhibited off-task behaviors which impeded their own ability to learn the classroom content.

One of the students was Hispanic and other two were Caucasian. They were all males identified as students with disabilities. Student A was a six-year-old first grader who received special education services as a student with a developmental disability in the areas of language, social skills, adaptive skills, and fine motor skills. Student B was a seven-year-old first grader who received special education services as a student with a specific learning disability in the areas of reading, written expression, social skills, and received related services in speech. Student C was a seven-year-old first grader received

special education services as a student with a specific learning disability in reading. All students received core content instruction in their classroom from their classroom teacher with a walk-to intervention model for reading and math where students received more intensive instruction in those areas. Student A and B also received pull out instruction for speech and language. The first-grade teacher was a Caucasian female with 9 years of teaching experience. Informed consent was gathered from the classroom teacher before beginning the study.

Intervention

The independent variable measured by this study was an adapted version of the GBG intervention program. The adapted GBG was intended to decrease off-task behaviors by providing positive reinforcement in the form of verbal praise and team points. The class was split into two teams and students could earn a point for their team when all students were engaging in on-task behaviors when a timer set for three-minute random intervals would go off. The teacher would praise teams and individuals throughout the lesson while giving minimal attention to inappropriate behaviors. At the end of a session, the students on the team with the most points were given a piece of candy. This adapted GBG intervention is different from the traditional version where students receive demerits for not following expectations, and the team with the least demerits has access to the reinforcer at the end of the GBG session. Table 4 outlines the difference between the traditional GBG and the adapted GBG used in the present research study.

Table 4

Difference between Traditional GBG and Adapted GBG

Traditional	Adaptation
1. Split class into teams	1. Split class into teams
2. Set 2-3 clear expectations	2. Set 2-3 clear expectations
3. When a team member does not follow expectations, a demerit is given	3. Teachers wears vibrating timer which is set for a randomized 3-minute interval. When timer vibrates teacher praises and awards a point to teams of students who are following expectations
4. Team with least amount of demerits accesses reinforcer	4. Team with most points accesses reinforcer

The dependent variable measured was student's on-task/off-task behaviors. Within the dependent variable there were three observable behaviors which needed to be observed: (1) look at the person speaking or your work, (2) talk when it's your turn, (3) hands and objects to yourself.

Materials

Materials needed for the intervention were a white board and a vibrating timer. The board was used to teach and write the three expectations students needed to follow. The board was also used to tally points each team won at the given intervals. The timer

was used to remind the teacher to stop teaching and award points to the teams where all students were following the three expectations at the randomized 3-minute interval.

Measurement Instruments

Observation form

The researcher also used an observation form to collect data regarding the on-task behaviors of the three primary student participants (see Appendix A for observation form). This observation form was researcher-designed and consisted of the date and time of observation and a table with a time interval for the rows and the students' names across the top. At each time interval, the observer would record a 0 if the students were not exhibiting any off-task behaviors (meaning they are on task), or a 1-3 depending on the off-task behavior performed during the time interval measured. This observation form is valid because it measures the existence of off-task or on-task behaviors for the target students. Interrater reliability was not measured for these observation forms. Future research should document the reliability of the observations of student behaviors.

Teacher questionnaire

A researcher-made questionnaire was used to collect data regarding the teacher's perception of the GBG. Before beginning the GBG intervention, the classroom teacher answered questions about her students' classroom behaviors and how it affects her ability to do her job (see Appendix A for pre-intervention teacher questionnaire). After the intervention, she answered questions regarding her perceptions of the GBG and its effectiveness (see Appendix A for post-intervention teacher questionnaire). This questionnaire is valid because the instrument was intended to help answer the second research question: Will the GBG be viewed positively by the general education teacher?

However, it may be difficult to make conclusions regarding the reliability of the questionnaire for two reasons. Firstly, the researcher works closely with the teacher and the teacher may not be willing to offer criticisms of a colleague. Secondly, the questionnaire was interpreted by the researcher for themes which may or may not document the teacher's views of the GBG. Interrater reliability was not gathered because only the researcher interpreted the questionnaire results.

Procedure

The intervention occurred during the students' math/writing time for 20-40-minute sessions for seven sessions over the course of two weeks. The intervention consisted of three phases: baseline, practice and instruction, and intervention. During baseline, the researcher completed the observation form for two sessions to document off-task behaviors for three target students and two sessions to documented off-task behaviors for three typically-developing peers, identified by the classroom teacher. During the practice phase the researcher provided instruction regarding the three on-task behaviors students needed to exhibit to earn points. Students were given time to practice these behaviors. The researcher also discussed and role-played with students how to positively encourage peers who were not following the expectations.

The following session the intervention began. Teams were given verbal praise and points for following the three expectations for the following sessions. During the duration of the intervention, the observation form was completed one time to document behaviors of target students. For the final session, an observation form was completed to document on-task/off-task behaviors of the three target students after the intervention phase.

Data Analysis

Descriptive statistics were used to describe the central tendencies of the students' scores before the intervention (during baseline), during the intervention, and after the intervention. (Creswell, 2012). The mean score for the percentage of observed off-task intervals was determined for all three participants to measure the central tendency of all three participants (Creswell, 2012). The effect size was also determined for all three participants, individually and collectively, to determine the effectiveness of the GBG intervention on decreasing off-task behaviors. Effect size was calculated by subtracting the post-intervention percentage from the average of the baseline means and dividing the difference by the average standard deviation. Information gathered from the teacher questionnaire was explored, coded, and categorized into themes regarding the teacher's perceptions regarding the GBG and its effectiveness (Creswell, 2012).

CHAPTER IV RESULTS

Students with disabilities are frequently educated in the general education classroom and are likely to engage in off-task behaviors which inhibit their learning. This study used an adaptation of a group contingency intervention known as the Good Behavior Game (GBG) in the general education classroom. As discussed in chapter III, the GBG is a group contingency which teachers use to teach expected behaviors. Historically, student teams are given a set amount of points to start and when students on a team do not follow the expectations the points are removed (Dion, Roux, Landry, Wehby, Dupere, 2011; Donaldson, et al., 2011; Leflot, van Lier, Onghena, & Colpin, 2010). This adaptation of the GBG used a vibrating timer to remind the teacher to check if students were following the expectations and award points to teams following the expectations, rather than removing points. This adaptation is supported by research which documents the effectiveness of positive feedback and reinforcement (Carter, 2010; Reinke, Herman, & Newcomer, 2016) and the negative effects of negative teacher attention (Levy & Vaughn, 2002; Nelson & Roberts, 2000; Wehby, Symons, Canale, & Go, 1998).

When it was time to play the GBG this was announced to the class and the class was reminded of the three expectations: (1) talk when it's your turn, (2) look at person speaking or work, (3) hands and objects to yourself. Then, the teacher began her timer and rewarded points to teams which were following all expectations when the vibrating timer would at a randomized three-minute interval. At the end of the session, each student on the winning team received a piece of candy.

This chapter will evaluate whether the GBG led to decreases in off-task behavior. Information in this chapter will also be examined to suggest if the GBG is viewed as a favorable intervention for the general education teacher. Preliminary results from the study indicate that the adaptation of the GBG lead to decreases in off-task behavior of students with disabilities and is favorably valued by general education teachers.

Observation Form

When the timer would go off, the observer would scan the three students with disabilities to determine if they were following the three expectations. Baseline data were gathered for three 25-minute instructional sessions. During the first baseline observation, data were gathered for the three students with disabilities and converted into an average number of observation intervals where the students were observed to be off-task. Student A engaged in off-task behaviors 6/12 observation intervals. The off-task behavior Student A engaged in for all 50% of the intervals was not looking at the person speaking or his work. Student B engaged in off-task behaviors for 2/12 observation intervals, or 17%. The off-task behavior Student B engaged in for the two intervals was not looking the person speaking or his work. Student C engaged in off-task behaviors for 5/12 observation intervals, or 42%. Four of those observation intervals Student C was not looking at the person speaking or his work, and one of the intervals he wasn't looking at the person speaking and he was talking when it wasn't his turn.

During the second baseline session, data were gathered for three typically developing peers and were converted into an average number of observation intervals where the students were observed to be off-task. The three peers scores were: Student D: 3/15 (20%), Student E: 4/15 (27%), and Student F: 0/15 (0%). Student D was not talking

when it was her turn for one interval, not looking at the person speak or her work for another interval, and not keeping hands and objects to self and not looking at person speaking for the third interval. Student E was not looking at the person speaking or her work for all four intervals observed to be off-task.

During the final baseline session, data were gathered for the three students with disabilities and the three identified typically-developing peers. The scores were as follows: Student A: 2/3 (67%), Student B: 7/9 (78%), Student C: 6/9 (67%), Student D: absent, Student E: 4/9 (44%), and Student F: 5/9 (56%). An average for all three baseline sessions was calculated for each student. Table 5 illustrates the percentage of off-task behaviors observed at each session, and the average over the three sessions.

During baseline, all three students with disabilities displayed unacceptable levels of off-task behaviors. Student A averaged 58.5% intervals with off-task behavior, which is significantly higher (30.7%) than 27.8% which is the average score of nontarget students. Student B averaged 47.5% (19.7% higher than nontarget students), and Student C averaged 54.5% (26.7% higher than non-target students).

Table 5

Percentage of Observed Off-Task Behaviors During Baseline

	Students with Disabilities			Typically-Developing Peers		
Baseline	Student A (%)	Student B (%)	Student C (%)	Student D (%)	Student E (%)	Student F (%)
1	50	17	4	--	--	--
2	--	--	--	20	27	0
3	67	78	67	--	44	56
Average		47.5	54.5	20	35.5	28

Next, the intervention was implemented for 3 days, but observations for

individual student performance were not gathered because the researcher was

implementing the GBG intervention until the general education teacher felt comfortable

using it on her own. Since the researcher was implementing the intervention for the

whole class, she could not use the observation form for individual student data and award

points to the teams in the class. On the fourth day, the observation form was completed

by the researcher to document how the GBG effected off-task behaviors during

intervention. Student A engaged in off-task behaviors for 2/6 (33%) observed intervals.

The off-task behavior student A was engaging in was not looking at the person speaking

or their work. Student B and Student C engaged in off-task behaviors for 0/6 (0%)

observed intervals.

The GBG intervention was used for one more trial where individual student data

were not gathered because the researcher was teaching the lesson. The researcher could

not teach the lesson, implement the GBG, and collect individual student observation

notes. Then, on the final day, the observation form was used to determine the percentage

of off-task behaviors post-intervention. Student A engaged in off-task behaviors for 3/9

(33%) observation intervals. For two of the intervals, Student A was not looking at the

person speaking or their work, and for one interval Student A was not speaking when it

was their turn. Student B and Student C engaged in 0/9 (0%) off-task behaviors for the

observation intervals. Table 6 presents the average percentage of observed intervals

students were observed to be off-task across the three phases.

Table 6

Average Percentage of Observed Off-Task Intervals Across Phases

Student	Baseline (%)	Intervention (%)	Post-Intervention (%)
A	58.5	33	33
B	47.5	0	0
C	54.5	0	0

All participants displayed a reduction in off-task behaviors after the

implementation of the GBG, during intervention, and post-intervention observation

periods. During baseline, the mean score for all students was 53.5% of observed intervals

off-task. During intervention and after intervention, the mean score for all students was

11% of observed intervals off-task. Figure 1 illustrates the percentage of intervals

students with disabilities were observed to be off-task during whole-group instruction.

The effect size for the whole group was -2.11. Table 7 presents the effect size for

individual participants.
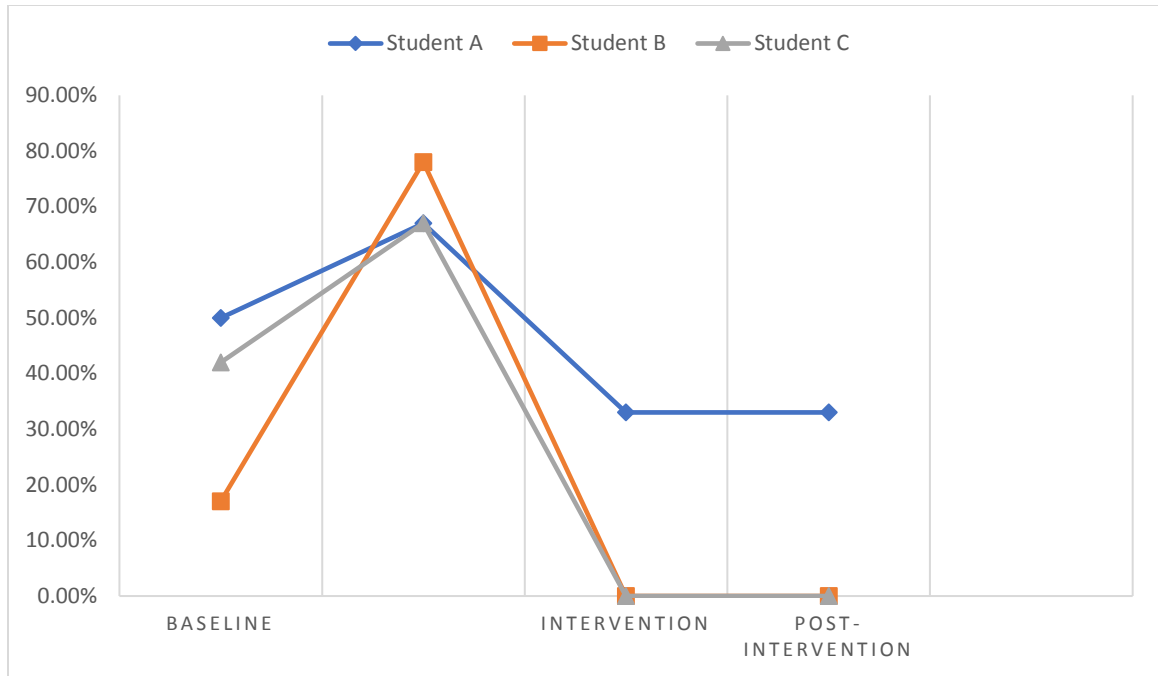
Figure 1. Percentage of off-task intervals observed for student participants

Table 7

Effect of GBG on Individual Student's Off-Task Behavior

Student	Effect Size
Student A	-1.27
Student B	-2.36
Student C	-2.71

Teacher Questionnaire

The questionnaire aimed to measure how positively or negatively the teacher viewed the GBG intervention, specifically how the teacher felt that the GBG impacted the learning of students in her classroom and how she enjoys her job. Results from the teacher questionnaire indicate that the classroom teacher was satisfied with the GBG intervention. (See Appendix B for pre- and post- intervention questionnaires and

answers). Since questions #4-7 were the same for pre-intervention to post-intervention questionnaires, comparisons can be made between both questionnaires. The teacher's perceptions changed from a score of 14 at pre-intervention to 11 and post-intervention. Specifically, the teacher indicates that the GBG contributed to positive learning in all her students. For example: on the pre-intervention questionnaire, the teacher strongly agreed that off-task behaviors inhibit the learning of students in her classroom. However, after the intervention she somewhat agreed. This may indicate that the intervention helped lead to less off-task behaviors and more learning. Similarly, the teacher strongly agreed that when some students engage in off-task behaviors other students also become off-task during pre-intervention, indicating that off-task behaviors were extremely disruptive for the learning and performance of other students before the GBG intervention.

The teacher somewhat agreed that some off-task behaviors lead to other students being off-task on the post-intervention survey. This may indicate that the game aspect of the GBG helped other students stay on task even in the presence of peer's off-task behaviors. Similarly, the classroom teacher indicated that the students in her classroom "really increase in their engagement which increases learning. They [the students] also encouraged others to do the same."

Lastly, before intervention the teacher indicated that she somewhat agreed that off-task behaviors inhibit her ability to enjoy her job. However, after the intervention the teacher indicated that she somewhat disagreed that off-task behaviors impact her ability to enjoy her job. One may conclude that the implementation of the GBG lead to decreases in off-task behaviors which help the teacher enjoy her job.

CHAPTER V DISCUSSION

Students with disabilities are increasingly educated in the general education classroom and are more likely to engage in off-task behaviors than their typically-developing peers (Cameron, Connor, Morrison, & Jewkes, 2008; Hastings & Bham, 2003; Westling, 2010). Therefore, classroom teachers need useful tools to decrease off-task behaviors and increase the learning of students in their classroom. The purpose of the present study was to determine the effectiveness of a group-based contingency intervention known as the Good Behavior Game (GBG) in reducing off-task behaviors (Lastrapes, 2013). The study utilized mixed-methods through a quantitative behavioral observation to determine whether the implementation of the GBG would lead to decreases in off-task behaviors for three first grade students with disabilities. The study also used a qualitative data approach through a teacher questionnaire to determine if the classroom teacher viewed the intervention positively.

The first research question was, "Will a modification of the Good Behavior Game, used during whole group instruction, lead to a decrease in off-task behavior in students with disabilities?" After the implementation of the GBG, all three students demonstrated a decline in off-task behaviors. The effect size for all participants was greater than -1, which means a strong effect was experienced from the independent variable, meaning exposure to the GBG intervention lead to a strong decrease in off-task behaviors for all participants.

The second research question was, "Will the Good Behavior Game be viewed positively by the general education teacher?" Results from the teacher questionnaire

indicate that the teacher experienced positive outcomes from implementation of the GBG in both her teaching and her students' learning.

As noted, decreases in off-task behaviors were observed after the implementation of the GBG. The presence of the GBG may have been related to the decrease in off-task behaviors for many reasons. First, specific reminders before the game began provided students with a reminder of the expectations which were not present during baseline data-gathering sessions. Second, the teacher gave individual students and teams specific praise by stating which expectations the students were following. This served as a reminder to students to engage in the positive behavior that was stated by the teacher. Third, positive reinforcement in the form of team points and access to the reinforcer decreased off-task behaviors. Finally, peers were observed reminding their teammates about the expectations during GBG sessions. For example, a student tapped their peer's shoulder when their classmate was looking around the room and quietly whispered, "Look at the teacher."

Similarly, the teacher questionnaire indicated that the GBG was viewed positively. The teacher reported that the students really increased their engagement which also increase learning. Also, the teacher's differing responses on the pre- and post-intervention questionnaires indicated a change in the teacher's attitude after implementation of the GBG, as summarized in table 8. The teacher indicated that she agrees less with the statement that off-task behaviors inhibit learning in her classroom after the intervention, which indicates that the intervention was viewed as helping lead to less off-task behaviors and more learning. The teacher also changed the degree to which she agrees with the statement that when some students engage in off-task behaviors other

students also become off-task. This indicates that after the intervention, the teacher viewed students as less likely to engage in off-task behaviors even in the presence of off-task peers. This finding makes sense because an unexpected result from the research was that peers would encourage other students to follow the expectations if their friend was off-task, rather than become off-task themselves. This finding is also supported by the teacher's open-ended response that students encouraged each other to do well, which helped increase learning.

Table 8

Summary of Teacher's Different Responses Between Pre- and Post-Intervention

Pre-intervention	Post-intervention
Teacher ***strongly agrees*** that off-task behaviors inhibit the learning of students in her classroom	Teacher ***somewhat agrees*** that off-task behaviors inhibit the learning of students in her classroom
Teacher ***strongly agrees*** that when some students become off-task other students also become off-task	Teacher ***somewhat agrees*** that when some students become off-task other students also become off-task

Limitations

Although the GBG intervention helped decrease off-task behaviors, there were some limitations to the study. A limitation on the whole study is present because the study was conducted near the end of the academic year which prohibited the study from documenting the long-term effects of the GBG on reducing off-task behaviors.

There were also limitations to the quantitative data gathered from the observation form for the three students with disabilities. The first limitation was a threat to the

reliability of the findings because interobserver agreement data were not collected. The researcher was the sole observer to collect data on individual student performance. Another limitation is the baseline data were collected on different days for typically-developing peers and students with disabilities. The reliability of the study is effected because there may have been confounding variables present on the different days which make it difficult for the researcher to compare the groups of students' behaviors.

Limitations were also present in the qualitative data gathered from the teacher questionnaire. First, the researcher and the classroom teacher work closely together to meet the needs of students on a daily, professional basis. This relationship may have limited the feedback the classroom teacher gave the researcher. To be collegial and professional the teacher may have withheld honest critiques of the GBG and its implementation. Similarly, the questionnaire had limited information. It would have been helpful to explicitly elicit negative feedback Finally, the results obtained from the teacher questionnaire may not be reliable or generalizable since one teacher provided the information, rather than multiple viewpoints.

Recommendations for Future Research

As discussed in the limitations section, inadequate information was gathered from the teacher questionnaire, possibly due to the collegial relationship between the researcher and the teacher. Future research should elicit information about ways the GBG could be improved. It may also be helpful to follow up the teacher questionnaire with an interview.

To increase the reliability of the findings, future research should be conducted in more than one classroom. This would increase the reliability of both the observation form

and the teacher questionnaire findings. Another way to increase the reliability of the observations is to utilize more than one observer and determine interobserver agreement. Lastly, baseline data for all students should have been collected on the same days to increase reliability to control for confounding variables which may have been present.

Since this study utilized a modification of the GBG, it would be beneficial for future research to examine which version of the GBG is more effective: the traditional, punitive approach which removes points from teams when they do not follow expectations or the present approach which awards points to teams at randomized intervals for following expectations. Similarly, since the goal of the GBG was to increase on-task behaviors which would, in turn, positively impact academic performance, future research should document the academic performance of students who had access to the GBG intervention compared to students who did not play the GBG.

Future research should include questionnaires for students to document the social validity for students, as well as teachers. If students view the intervention positively, then one may conclude that the intervention will be more effective. Also, future research should use a reinforcement survey before beginning the intervention to document which reinforcements would motivate students to do well in the GBG. Finally, future research should consider how to intervene for Student A regarding the behavior they have the most difficulty with: looking at the person speaking or their work. The practitioner/researcher can implement a future action research cycle by using this information to develop an individualized plan for Student A through IEP goals and self-monitoring.

Conclusions

The present study provides educators with helpful findings to promote on-task behaviors of students with disabilities educated in the general education setting. First, the GBG may lead to decreases in off-task behaviors in students with disabilities. Second, the GBG may be easier for classroom teachers to implement than individualized behavior plans. Third, the GBG is viewed positively by all participants in the classroom.

The first conclusion is that the GBG helped facilitate a decrease in off-task behaviors. Other studies have documented the correlation between implementation of the GBG and a reduction in disruptive and off-task behaviors for students in the general education classroom (Donaldson, et al., 2011; Leflot, van Lier, Onghena, & Colpin, 2010), but have not specifically documented a reduction in off-task behaviors for students with disabilities. In schools where students with disabilities are increasingly being included and educated in the general education classroom, using the GBG may help improve on-task behaviors and learning outcomes for students who typically struggle in the general education curriculum.

The second conclusion is that the GBG offers a helpful alternative to individualized behavior modification plans which may be difficult for classroom teachers to implement when they have a host of other duties to manage. Other studies have documented the effectiveness of the GBG on decreasing off-task behaviors in all students ((Donaldson, et al., 2011; Leflot, van Lier, Onghena, & Colpin, 2010)), and the present study adds to this body of research by documenting its effectiveness on students with disabilities. Therefore, the GBG is effective because it corrects behavior concerns for the

whole class, but also has the potential to correct more perpetual behavior concerns for students with disabilities.

Not only is the GBG easy to implement but it is also viewed positively by all class members, including the students in the general education classroom. An unintended discovery was how receptive and excited typically-developing peers were to play the GBG. This was made evident by comments from students made to the researcher when the researcher was in the classroom for different reasons than the GBG. Such comments included, "Are we going to play the GBG?" Similarly, students asked the researcher around the school building on multiple occasions, "When are you coming to our class to play the GBG?" The teacher questionnaire also documented the positive views the classroom teacher held for the GBG being utilized in her classroom.

In sum, the present study provides support for the effectiveness of using the GBG to improve on-task behaviors for children with disabilities. Due to the group contingency format, the GBG may be easier for primary level teachers to implement, as compared to individualized behavior plans, which are commonly used for students with disabilities. Lastly, the study supports the body of research which demonstrates that the GBG is viewed positively by all classroom players, including students with and without disabilities and classroom teachers.

REFERENCES

Bailey, J. S., Bailey, J. S., & Burch, M. (2006). *How to think like a behavior analyst.* New York: Routledge.

Barrish, H. H., Saunders, M., & Wolf, M. M. (1969). Good Behavior Game: Effects of individual contingencies for group consequences on disruptive behavior in a classroom. *Journal of Applied Behavior Analyses, 2,* 119-246.

Bowman-Perrott, L., Burke, M. D., de Marin, S., Zhang, N., & Davis, H. (2015). A meta-analysis of single-case research on behavior contracts: Effects of behavioral and academic outcomes among children and youth. *Behavior Modification, 39*(2), 247-269.

Buchanan, R., Gueldner, B. A., Tran, O. K., & Merrell, K. W. (2009). Social and emotional learning in classrooms: A survey of teachers' knowledge, perceptions, and practices. *Journal of Applied School Psychology, 25*(2), 187-203.

Cameron, C., Connor, C., Morrison, R., & Jewkes, A. (2008). Effects of classroom organization on letter-word reading in first grade. *Journal of School Psychology, 6,* 173-192.

Carter, S. L. (2010). A comparison of various forms of reinforcement with and without extinction as treatment for escape-maintained problem behavior. *Journal of Applied Behavior Analysis, 43*, 543-546.

Coogan, B. A., Kehle, T. J., Bray, M. A., & Chafouleas, S. M. (2007). Group contingencies, randomization of reinforcers, and criteria for reinforcement, self-monitoring, and peer feedback on reducing in appropriate classroom behavior. *School Psychology Quarterly, 22*(4), 540-556.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research.* Boston: Pearson.

Davies, S., & Witte, R. (2000). Self-management and peer-monitoring within a group contingency to decrease uncontrolled verbalizations of children with attention-deficit/hyperactivity disorder. *Psychology in the Schools, 37*, 135-147.

Dion, E., Roux, C., Landry, D., Wehby, J., & Dupere, V. (2011). Improving attention and preventing reading difficulties among low-income first-graders: A randomized study. *Preventing Science, 12*(1), 70-79.

Donaldson, J. M., Vollmer, T. R., Krous, T., Downs, S., Berard, K. P. (2011). An evaluation of the good behavior game in kindergarten classrooms. *Journal of Applied Behavior Analysis, 44*(3), 605-609.

Embry, D. D. (2002). The good behavior game: A best practice candidate as a universal behavioral vaccine. *Clinical Child and Family Psychology Review, 5,* 273-297.

Falvey, Mary A. (2004). Toward realization of the least restrictive educational environments for severely handicapped students. *Research and Practice for Persons with Severe Disabilities, 29*(1), 9-10.

Fisher, M., & Meyer, L. H. (2002). Development and social competence after two years for students enrolled in inclusive and self-contained educational programs. *Research and Practice for Persons with Severe Disabilities, 27*(3), 165-174.

Fox, L., Dunlap, G., & Cushing, L. (2002). Early intervention positive behavior support, and transition to school. *Journal of Emotional and Behavioral Disorders, 10*, 149-157.

Harrison, J., Vannest, K., Davis, J., & Reynolds, C. (2012). Common problem behaviors
of children and adolescents in general education classrooms in the United States.
Journal of Emotional and Behavioral Disorders, 20, 55-64.

Hastings, R. P., & Bham, M. S. (2003). The relationship between student behavior
patterns and teacher burnout. *School Psychology International, 24*(1), 115-127.

Individuals with Disabilities Education Improvement Act of 2004, (2004). Retrieved
from http://idea.ed.gov.

Justice, M., & Espinoza, S. (2007). Emotional intelligence and beginning teacher
candidates. *Education, 127*, 456-461.

Kalambouka, A., Farrell, P., Dyson, A., & Kaplan, I. (2007). The effect of inclusion on
non-disabled Children: A review of the research. *Educational Research, 49(*4),
365-382.

Kamps, D., Wills, H., Dawson-Bannister, H., Heitzman-Powell, L., Kottwitz, E., Hansen,
B., &Fleming, K. (2015). Class-wide function-related intervention team "CW-
FIT" efficacy trial outcomes. *Journal of Positive Behavior Interventions, 17*(3),
134-145.

Kliewer, C., & Biklen, D. (2001). "School's not really a place for reading:" A research
synthesis of the literate lives of students with severe disabilities. *Journal of the
Association for Persons with Severe Handicaps, 26*(1) 1-12.

Lastrapes, R. E. (2013). Using the good behavior game in an inclusive classroom.
Intervention in School and Clinic, 49(4), 225-229.

Leflot, G., van Lier, P. A. C., Onghena, P., & Colpin, H. (2010). The role of teacher

      behavior management in the development of disruptive behaviors: an intervention

      study with the good behavior game. *Abnormal Child Psychology, 38,* 869-882.

Levy, S., & Vaughn, S. (2002). An observational study of teachers' reading instruction of

      students with emotional and behavioral disorders, *Behavioral Disorders, 27,* 215-

      235.

Maryland Coalition for Inclusive Education (2010). *Inclusive education research &*

      practice. Maryland: Bui, X., Quirk, C., Almazan, S., & Valenti, M. Retrieved

      from http://www.mcie.org/usermedia/application/6/inclusion_works_final.pdf

National Center for Education Statistics. (2015). Percentage distribution of students 6 to

      21 years old served under Individuals with Disabilities Education Act (IDEA),

      Part B, by educational environment and type of disability [Data file]. Retrieved

      from https://nces.ed.gov/programs/digest/d15/tables/dt15_204.60.asp?current=yes

Nelson, J. R., & Roberts, M. L. (2000) Ongoing reciprocal teacher-student interactions

      involving disruptive behaviors in general education classrooms. *Journal of*

      Emotional and Behavioral Disorders, 8, 27-37.

Office of Superintendent of Public Instruction. (2009). Implementation of least restrictive

      environment requirement ---IDEA-B. [Data file]. Retrieved from

      http://www.k12.wa.us/SpecialEd/Data/Childcount-Placement.aspx

Office of Superintendent of Public Instruction. (2016). Implementation of least restrictive

      environment requirement ---IDEA-B. [Data file]. Retrieved from

      http://www.k12.wa.us/SpecialEd/Data/Childcount-Placement.aspx

Reinke, W. M., Herman, K. C., & Newcomer, L. (2016). The brief student-teacher classroom interaction observation: Using dynamic indicators of behaviors in the classroom to predict outcomes and inform practice. *Assessment for Effective Intervention, 42*(1), 32-42.

Rhoades, B. L., Warren, H. K., Domitrovich, C. E., & Greenberg, M. T. (2011). Examining the link between preschool social–emotional competence and first grade academic achievement: The role of attention skills. *Early Childhood Research Quarterly, 26*, 182-191.

Saint-Laurent, L., Dionne, J., Giasson, J., Royer, E., Simard, C. & Pierard, B. (1998) Academic achievement effects of an in-class service model on students with and without disabilities, *Exceptional Children, 64*(2), 239–253.

Stormont, M., Lewis, T. J., Beckner, R. (2005). Positive behavior support systems: Applying key features in preschool settings. *TEACHING Exceptional Children, 37*(6), 42-49.

Sutherland, K.S., Alder, N., & Gunter, RL. (2003). The effect of varying rates of opportunities to respond to academic requests on the behavior of students with EBD. *Journal of Emotional and Behavioral Disorders, 11*, 239-248.

Theodore, L. A., Bray, M. A., Kehle, T. J. (2004). A comparative study of group contingencies and randomized reinforcers to reduces disruptive classroom behavior. *School Psychology Quarterly, 19*(3), 253-271.

Theodore, L. A., Bray, M. A., Kehle, T. F., & Dioguardi, R. J. (2004). Contemporary review of group-oriented contingencies for disruptive behavior. *Journal of Applied School Psychology, 20*(1), 79-101.

Todd, A. W., Campbell, A. L., Meyer, G. G., & Horner, R. H. (2008). The effects of a targeted intervention to reduce problem behaviors: Elementary school implementation of check in-check out. *Journal of Positive Behavior Interventions, 10*(1), 46-55.

Van Acker, R., Boreson, L., Gable, R. A., & Potterton, T. (2005). Are we on the right course? Lessons learned about current FBA/BIP practices in schools. *Journal of Behavioral Medicine, 14*(1), 35-56.

Wagner, M., Newman, L., Cameto, R., and Levine, P. (2006). The Academic Achievement and Functional Performance of Youth with Disabilities: A Report from the National Longitudinal Transition Study-2 (NLTS2). (NCSER 2006-3000). Menlo Park, CA: SRI International

Waldron, N., Cole, C., & Majd, M. (2001). The academic progress of students across inclusive and traditional settings: A two-year study Indiana inclusion study. Bloomington, IN: Indiana Institute on Disability & Community.

Wehby, J. H., Symons, R. J., Canale, J.A., & Go, R. J. (1998). Teaching practices in classrooms for students with emotional and behavioral disorders: Discrepancies between recommendations and observations. *Behavioral Disorders, 24*, 51-56.

Wehby, J. H., Tally, B. B., & Falk, K. B. (2004). Identifying the relation between the function of student problem behavior and teacher instructional behavior. *Assessment for Effective Intervention, 30,* 41-51.

Westling, D. L. (2010). Teachers and challenging behavior: knowledge, views, and practices. *Remedial and Special Education, 31*(1), 48-63.

Appendix A: Measurement Instruments

- Observation form

- Pre-intervention questionnaire

- Post-intervention questionnaire

Observation Form

Date: _____

Time: _____

Time (in minutes)	Student A	Student B	Student C
0-3:00			
3:00-6:00			
6:00-9:00			
9:00-12:00			
12:00-15:00			
15:00-18:00			
18:00-21:00			
21:00-24:00			
24:00-27:00			
27:00-30:00			

1. Looking at the person speaking or your work
2. Talk when it's your turn
3. Hands and objects to yourself

Pre-Intervention Questionnaire

1. What is your gender? _____

2. How long have you been a teacher? _____

3. How long have you worked at your current school? _____

    Please rate how you agree with the following questions.

    1 strongly disagree

    2 somewhat disagree

    3 somewhat agree

    4 strongly agree

4. My students engage in on-task behaviors during whole group instruction.

    1   2   3   4

5. Off-task behaviors inhibit the learning of students in my classroom.

    1   2   3   4

6. When some students engage in off-task behaviors other students also become off-task.

    1   2   3   4

7. The off-task behaviors students engage in, impact my ability to enjoy my job.

    1   2   3   4

    Please answer the following questions:

8. What interventions or classroom management techniques do you currently use to

manage off-task behaviors?

    _____

    _____

    _____

9. If off-task behaviors were managed well how would that improve your classroom

culture and learning?

_____

_____

_____

Post-Intervention Questionnaire

1. What is your gender? _____

2. How long have you been a teacher? _____

3. How long have you worked at your current school? _____

   Please rate how you agree with the following questions.

   1 strongly disagree

   2 somewhat disagree

   3 somewhat agree

   4 strongly agree

4. My students engage in on-task behaviors during whole group instruction.

   1   2   3   4

5. Off-task behaviors inhibit the learning of students in my classroom.

   1   2   3   4

6. When students engage in off-task behaviors other students also become off-task.

   1   2   3   4

7. The off-task behaviors students engage in, impact my ability to enjoy my job.

   1   2   3   4

8. The good behavior game was easy to implement.

   1   2   3   4

9. The Good Behavior Game improved behaviors of my students during whole group instruction.

   1   2   3   4

   Please answer the following questions:

10. How did the Good Behavior Game improve student's on-task behaviors and learning?

_____

_____

_____

11. In what ways could the Good Behavior Game been more effectively utilized?

_____

_____

_____

Appendix B: Teacher Questionnaire Results

- Pre-intervention questionnaire

- Post-intervention questionnaire

Pre-intervention Questionnaire

1. What is your gender? <u>Female</u>

2. How long have you been a teacher? <u>9 years</u>

3. How long have you worked at your current school? <u>4 years</u>

   Please rate how you agree with the following questions.

   1 strongly disagree

   2 somewhat disagree

   3 somewhat agree

   4 strongly agree

4. My students engage in on-task behaviors during whole group instruction.

   1   2   ③   4

5. Off-task behaviors inhibit the learning of students in my classroom.

   1   2   3   ④

6. When some students engage in off-task behaviors other students also become off-task.

   1   2   3   ④

7. The off-task behaviors students engage in, impact my ability to enjoy my job.

   1   2   ③   4

   Please answer the following questions:

8. What interventions or classroom management techniques do you currently use to

manage off-task behaviors?

   <u>PBIS System, verbal praise, positive rewards, proximity, redirection</u>

   _____

   _____

9. If off-task behaviors were managed well how would that improve your classroom

culture and learning?

_____(No answer provided)_____

_____

_____

Post-Intervention Questionnaire

1. What is your gender? <u>Female</u>

2. How long have you been a teacher? <u>9 years</u>

3. How long have you worked at your current school? <u>4 years</u>

    Please rate how you agree with the following questions.

    1 strongly disagree

    2 somewhat disagree

    3 somewhat agree

    4 strongly agree

4. My students engage in on-task behaviors during whole group instruction.

    1   2   (3)   4

5. Off-task behaviors inhibit the learning of students in my classroom.

    1   2   (3)   4

6. When students engage in off-task behaviors other students also become off-task.

    1   2   (3)   4

7. The off-task behaviors students engage in, impact my ability to enjoy my job.

    1   (2)   3   4

8. The good behavior game was easy to implement.

    1   2   3   (4)

9. The Good Behavior Game improved behaviors of my students during whole group

instruction.

    1   2   3   (4)

    Please answer the following questions:

10. How did the Good Behavior Game improve student's on-task behaviors and learning?

Student really increased in their engagement which increases learning.

They also encouraged others to do the same.

_____

11. In what ways could the Good Behavior Game been more effectively utilized?

It was really well utilized.

_____

_____