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THE GOOD BEHAVIOR GAME: EVALUATION OF A CLASSROOM BEHAVIOR INTERVENTION WITH ENGLISH LANGUAGE LEARNERS

Abstract: Various reinforcement strategies have been used to manage classroom behavior, including group contingencies such as the Good Behavior Game (GBG). This study examined whether the Good Behavior Game could be effective in increasing academic engagement and decreasing verbal disruptions in a classroom of kindergarten students who are English Language Learners (ELLs). An ABAB reversal design was used to compare baseline conditions to intervention conditions where the GBG was implemented. Academic engagement was measured using momentary time sampling, and verbal

disruptions were measured using partial interval recording. Visual analysis of the data demonstrated a clear functional relation, providing evidence that the GBG intervention successfully increased academic engagement and decreased verbal disruptions. Immediate changes in behavior were observed and remained consistent across conditions. A measure of social validity indicated that the intervention was easy to implement, effective, and beneficial for the students.

Keywords: good behavior game, English language learners, classroom management.

INTRODUCTION

For years, teachers have been experimenting with various reinforcement strategies to manage their classrooms. Since it is often not feasible to use an individual reinforcement schedule for each student, many teachers use group contingencies to increase appropriate classroom behavior (Litoe & Pumroy, 1975). Group contingencies involve providing reinforcement to multiple students at once and can be categorized as dependent, independent, or interdependent (Litoe & Pumroy, 1975). Dependent

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group contingencies provide reinforcement to the class if one target student meets the criteria, while independent group contingencies provide reinforcement to each individual student who meets the criteria (Litoe & Pumroy, 1975). Interdependent group contingencies provide reinforcement to the class if the entire class meets the criteria (Litoe & Pumroy, 1975). Although all three group contingencies are equally effective in increasing appropriate classroom behaviors, interdependent group contingencies are often preferred because they encourage group cooperation towards earning a goal and are more efficient for teachers to use (Theodore, Bray, Kehle, & Jensen, 2001).

One example of a popular interdependent group contingency is the Good Behavior Game (GBG). The GBG consists of reviewing classroom rules, marking a tally when a student breaks one of the rules, and providing a reward if students receive less than a predetermined number of tallies (Barrish, Saunders, & Wolf, 1969). Previous research has shown that the GBG has been successful in reducing out-of-seat behavior and talking out of turn as well as increasing on-task behavior (Barrish et al., 1969; Groves & Austin, 2017; Tingstrom, Sterling-Turner, & Wilczynski, 2006). Additionally, the GBG can be successful whether it is used with individual students or with groups of students (Groves & Austin, 2017). Others have studied how variations of the GBG can fit in with school-wide positive behavior support systems. Rather than providing tallies for undesired behaviors, teachers provided tallies for desired behaviors. Studies have revealed that both the traditional GBG and positive variations of the GBG improved student behavior, but neither intervention was found to be more effective than the other (Wahl, Hawkins, Haydon, Marsicano & Morrison, 2016; Wright & McCurdy, 2011).

With the rapidly changing demographic trends in the United States, more students and more diverse populations are receiving education than ever before (Merrell, Ervin, & Gimpel, 2012). As a result, a growing body of research is examining how to better serve culturally and linguistically diverse students. For example, one study explored the effects of the GBG with a 3rd grade English Language Learner (ELL) population and found that the GBG had a moderate effect on reducing interrupting behaviors in two third-grade ELL students (Ortiz, Bray, Bilius-Lolis, & Kehle, 2017). Another study conducted by Babyak, Luze, and Kamp (2000) used a variation of the GBG called the Good Student Game (GSG) with a diverse classroom that included ELL students. This version involved students, rather than teachers, monitoring desired behaviors. Results showed that both in-seat behavior and quiet working behavior increased when the Good Student Game was used (Babyak et al., 2000).

Previous research provides some evidence that the GBG can be effective with diverse populations. However, these studies have used a small-group setting (Ortiz et al., 2017) or have used variations such as the Good Student Game (Babyak et al., 2000). The purpose of the current study was to examine whether the traditional GBG can be effective with a kindergarten class that included ELLs in a whole-group classroom setting. The study examined two research questions:

1. Is there a difference in academic engagement between the GBG conditions and baseline conditions in a classroom of students that includes English Language Learners?
2. Is there a difference in verbal disruptions between the GBG conditions and baseline conditions in a classroom of students that includes English Language Learners?

METHOD

Participants

A classroom of kindergarten students in a Midwest urban school district in the United States was used for this project. The classroom included 26 students, and 15 students in the classroom were identified as English Language Learners (58%). Fourteen students were male (54%), and 12 were female (46%). The teacher indicated her classroom could benefit from classroom management support.

Measures

Data were collected on two dependent variables: academic engagement and verbal disruptions. Academic engagement was measured using momentary time sampling by marking students as on-task or off-task. On-task was operationally defined as when a student is attending to teacher instruction, which could include being actively on-task (actively attending to the lesson, including raising a hand or responding to questions presented by the teacher) or passively on-task (passively attending to the lesson, looking at the teacher, and quietly following along with teacher instruction). Verbal disruptions were measured using partial interval recording. A verbal disruption was operationally defined as talking or any other audible verbalization during carpet time without permission from the teacher, such as calling out answers, whistling, humming, or talking to a peer. Both academic engagement and verbal disruptions were selected as target behaviors by the classroom teacher and identified as areas that were difficult for the teacher to manage in the classroom.

To collect data on academic engagement, the observers rotated from left to right across each row of students to a different student in the class for each 15-second interval and marked them as on-task or off-task. All students in the class were included. After each student was observed, the observers started at the beginning and rotated through the class again. Data were collected 3–4 days per week by school psychology graduate students from 11–11:30 A.M. To determine the percentage of intervals in which students were engaged in the lesson, the number of intervals where students were marked as on-task were divided by the total number of intervals and multiplied by 100. The same calculation was used to determine the percentage of intervals in which students engaged in verbal disruptions during the lesson.

Inter-observer agreement (IOA). A second observer collected data during 21% of the observations. IOA was calculated by taking the two percentages calculated by the observers, dividing the lower percentage by the higher percentage, and multiplying by 100. The overall mean IOA for academic engagement was 89%, with a range of 83% to 93% agreement. The overall mean IOA for verbal disruptions was 87%, with a range of 67% to 100% agreement.

Procedures

An ABAB reversal design was used to compare baseline conditions to intervention conditions using the Good Behavior Game. Data collection procedures were the same across conditions.

Baseline conditions. The baseline phases consisted of the teacher using her normal classroom management strategies, including verbal corrections and verbal praise. For example, when students blurted out, the teacher would verbally remind them to wait until they were called on. When students were lying on the carpet instead of sitting, the teacher would verbally remind the students to sit facing forward. Although students were reminded of the classroom expectations if they were not following one of the expectations, the teacher did not review classroom expectations before the lesson began. If a student needed several reminders, the teacher used a clip chart and would ask the student to clip their name down on the chart. While the teacher did use verbal praise frequently when students were following the expectations, no tangible rewards were given to students during the baseline conditions.

Intervention conditions. The intervention conditions consisted of the teacher playing the Good Behavior Game with the students. Before the intervention began, the researcher met with the classroom teacher to review the specific components of the intervention and come up with a list of acceptable rewards. The game was played during reading instruction at the carpet from 11–11:30 A.M. Each day the GBG was played, the teacher began by reviewing classroom expectations with the students. Students were reminded to be ready to learn (on-task, eyes on the teacher, engaged in the lesson) and to raise their hand when they wanted to speak. The teacher then divided the class into two teams and explained that each time they engaged in disruptive behavior (i.e., blurring out) or were not ready to learn, a tally mark would be placed next to their team name on the board. Next, the teacher began the lesson and tallied each instance of disruptive behavior during the lesson. After the lesson, a reward was provided to the winning team with the least amount of tally marks. If both teams earned fewer than the criterion of 10 tally marks determined by the teacher and the researcher, both teams earned a reward. Rewards varied daily and included candy, school-wide reward tickets, 5 minutes of extra recess, clipping up on the classroom clip chart, or 5 minutes of free time in the classroom. A mystery envelope with a reward inside was displayed to the students so that students had a visual reminder of the potential for earning a reward, but the reward remained unknown until the end of the lesson.

Treatment fidelity/integrity. The fidelity checklist (see Appendix A) included all the main components of the GBG intervention to ensure the teacher was using the intervention correctly. Observations were conducted using the fidelity checklist during 8 of the 12 intervention sessions. Fidelity checks ranged from the teacher completing 5/7 steps (71%) to 7/7 steps (100%) for an average percentage of completing 82% of the intervention steps. The two steps that were not always completed were reviewing the components of the GBG using the handout and tallying each instance of disruptive behavior during the lesson.

Social validity. To gather information on the social validity of the GBG, the classroom teacher was asked to respond to a short survey of intervention acceptability after the study was completed. The teacher was asked to respond to questions using a scale of 1 (*strongly disagree*) to 5 (*strongly agree*). Questions were created to assess whether the GBG was easy to implement, effective, beneficial for students, and if the teacher would continue to use the game in the future.

RESULTS

Data Analysis

To address research question 1, a visual analysis of the data on academic engagement was conducted. The initial baseline phase was stable with no increasing or decreasing trend (see Figure 1). Initial baseline percentages ranged from 63% to 65% with a mean of 64.3%. After the intervention was first implemented, academic engagement showed a clear change in level with a stable trend and little variability. Percentages in the first intervention condition ranged from 82% to 89% with a mean of 86.5%. When the intervention was removed in the reversal condition, academic engagement decreased, with a stable and slightly increasing trend. Percentages in the second baseline condition ranged from 63% to 72% with a mean of 68.5%. In the final phase when the intervention was reintroduced, academic engagement again increased and showed a stable trend with some variability. Percentages in the second intervention condition ranged from 75% to 89% with a mean of 80%. A clear change in level is displayed across conditions. These data provide evidence that using the GBG in a classroom of ELL students increased academic engagement during teacher instruction. Percentage of Non-Overlapping Data (PND) was calculated to determine the effectiveness of the intervention. The PND was calculated to be 100%, indicating that the intervention was highly effective in increasing academic engagement.

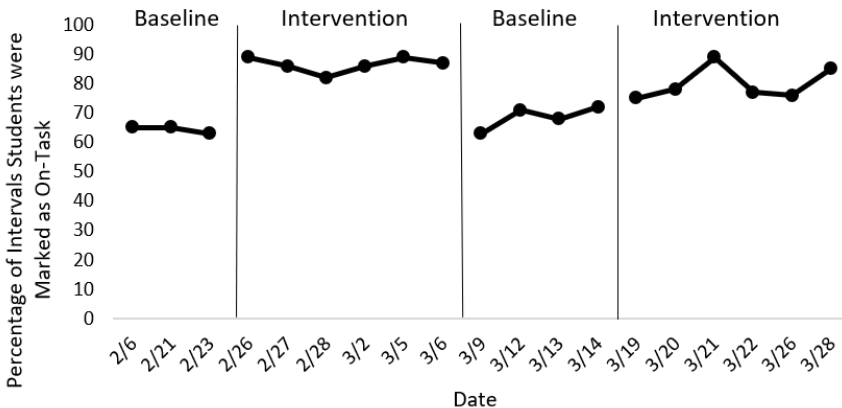


FIGURE 1. Academic Engagement Data

Visual analysis was completed with the data on verbal disruptions to answer research question 2. For the percentage of intervals with verbal disruptions, the baseline data show an increasing trend with no variability (see Figure 2). Percentages in the first baseline condition ranged from 45% to 65% with a mean of 55.3%. After the intervention was implemented, verbal disruptions displayed a stable trend except for one data point and a change in level since the percentage of intervals with verbal disruptions decreased. Percentages in the first intervention condition ranged from 15% to 43% with a mean of 24.2%. When the intervention was removed, the data show high variability and a clear change in level. Percentages in the second baseline condition

ranged from 47% to 80% with a mean of 59.5%. In the final intervention condition, verbal disruptions were highly variable, but overall showed a decrease from the baseline conditions with the exception of one data point. Percentages in the second intervention condition ranged from 25% to 85% with a mean of 40.7%. The data collected on verbal disruptions provide evidence that using the GBG in a classroom of ELL students decreased verbal disruptions during teacher instruction. PND was calculated to be 83%, indicating that the intervention was moderately effective in decreasing verbal disruptions.

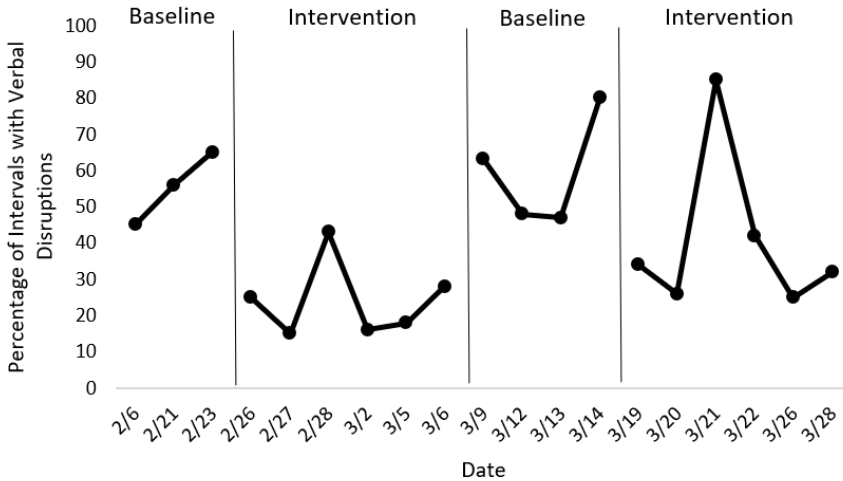


FIGURE 2. Verbal Disruption Data

SOCIAL VALIDITY

On the social validity measure, the classroom teacher agreed that the intervention was “easy to implement”, “effective in reducing disruptive behavior”, and “beneficial for the students”. The teacher also agreed that she “would implement the GBG or similar interventions in the future”. The classroom teacher strongly agreed that “the students enjoyed the intervention”. Additionally, the teacher reported that the students reacted very positively to the game and worked hard to earn their reward. One concern noted by the teacher was that one student would often earn most of the points for the team, which made the rest of the team lose out even if they were doing well.

DISCUSSION

The data demonstrate a clear functional relation, and calculations of PND indicated the intervention was highly effective in increasing academic engagement and moderately effective in decreasing verbal disruptions. These results are consistent with previous research on the GBG conducted by Barrish et al. (1969) and Groves and Austin (2017). The results also provide further evidence that the GBG can be effective with

a diverse population (i.e., ELLs), consistent with research conducted by Ortiz et al. (2017). While it was originally hypothesized that it would take several days for students to acclimate to the game and learn the expectations, immediate changes in behavior were observed and students benefited greatly from continual reminders of the classroom expectations. As indicated by the social validity survey filled out by the teacher, students were excited to play the game and responded positively to the game each day. However, the teacher did note that students would get upset if their team did not win or if one student earned the majority of the team's points. If students became upset because their team did not win, the teacher reassured students they were still learning and they could practice again tomorrow. To prevent one student earning the majority of the team's points, the teacher made sure to adjust the teams each day the game was played. If one student earned the majority of the team's points, the teacher would provide additional reminders of the expectations and the potential to earn a reward, which typically solved this issue. Additionally, the teacher was excited to play the game and helped with planning and determining the target behaviors. Teacher involvement in the planning process likely played a role in the high degree of fidelity of implementation.

Several limitations were identified within this study. The study was completed in only one kindergarten classroom, and only 58% of the students in the classroom were English Language Learners. Observations were completed over a 30-minute period during reading instruction at the carpet rather than throughout the entire school day. Additional research would be needed to generalize the findings of this study. Another limitation of the study was that calculations of IOA indicated a wide range of agreement with data collection on verbal disruptions. When collecting data, it was difficult to determine what counted as a verbal disruption. At times, the teacher would ask a question and expect a choral response, while other times she would require students to raise their hands. Additional teaching of the expectations of when students were expected to respond and when they were expected to raise their hands would make the collection of verbal disruption data clearer.

An additional limitation of the current study is related to the different components of the intervention condition. When looking at each of the components of the intervention condition, it is unclear whether the reward, the competition between teams, the tallies, or the reminders of classroom expectations resulted in increased academic engagement and decreased verbal disruptions. While it is hypothesized that all components of the intervention together resulted in positive effects, the current study does not address the components individually to determine whether one of the components alone was powerful enough to result in changes in the students' behavior.

It is important to note that there was one outlier data point for verbal disruptions in the final intervention condition. On this day, students were completing an assignment at their tables rather than at the carpet. Since the teacher was more lenient on talking during this activity, verbal disruptions were more frequent. However, students were recorded to be on-task for 89% of the intervals during this lesson. This implies that the GBG can be effective during other parts of the day such as seatwork rather than just during carpet time as evidenced by previous research (Barrish et al., 1969; Harris & Sherman, 1973), but the intervention would need to be adjusted to measure other variables such as staying in seats or appropriately raising hands to gain teacher attention. Future research could look at using the GBG with ELLs during other parts of the day and focusing on other target behaviors. Another potential area for future

research would be to look at how to fade out the reward component of the game. This could include collecting maintenance data to determine the intervention's continued effectiveness.

The current study provides further evidence that the Good Behavior Game can be effective with diverse populations of students. Additionally, the GBG resulted in immediate changes that remained consistent across conditions, increasing academic engagement and decreasing verbal disruptions. The GBG presents an easy-to-implement solution to managing classroom behaviors that is effective and beneficial for students.

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APPENDIX A

Good Behavior Game Fidelity Checklist

Date: _____

Observer: _____

Intervention: Good Behavior Game

Steps	Yes	No
1. Teacher reviews components of GBG using handout		
2. Teacher reviews expectations with the class – Answer when called on – Ready to learn		
3. Class is divided into two teams		
4. Students are reminded of the rules (every time they engage in disruptive behavior, a tally mark is placed next to their team name on the board)		
5. Teams are told whichever team has the fewest marks against it at the end of the game will earn a reward. Additionally, both teams can earn a reward if they have fewer than a specified number of marks.		
6. Teacher records (tallies) each instance of disruptive behavior (blurting out) during the lesson		
7. Teacher provides a reward to the winning team OR both teams if both teams earned fewer than the specified number.		

Summary:

Steps	# of Yes	Total # Possible	%
Steps 1–7		7	

To calculate percentage: # of yes / 7 × 100 =

GRA W DOBRE ZACHOWANIE: EWALUACJA INTERWENCJI BEHAWIORALNEJ PRZEPROWADZONEJ W ŚRODOWISKU PRZEDSZKOLNYM WŚRÓD OSÓB UCZĄCYCH SIĘ JĘZYKA ANGIELSKIEGO

Streszczenie: Do zarządzania zachowaniem w klasie są wykorzystywane różne strategie wzmacniania zachowania, w tym interwencje grupowe, takie jak Gra w Dobre Zachowanie (*Good Behavior Game*, GBG). W ramach prezentowanego eksperymentu zbadano, czy Gra w Dobre Zachowanie może być skuteczna w zwiększeniu zaangażowania i zmniejszeniu zakłóceń werbalnych w grupie przedszkolnej podczas nauki języka angielskiego. W celu porównania interwencji w postaci GBG z warunkami kontrolnymi zastosowano odwrócony projekt eksperymentalny. Zaangażowanie edukacyjne zostało zmierzone poprzez pomiar próbek czasowych, a zakłócenia słowne – przy użyciu

częściowej rejestracji interwałowej. Analiza danych wykazała wyraźny związek funkcjonalny, dostarczając dowodów na to, że GBG skutecznie zwiększyła zaangażowanie w naukę i zmniejszyła poziom zakłócania zajęć poprzez mówienie. Zaobserwowano także natychmiastowe zmiany w zachowaniu, które pozostawały spójne w różnych warunkach. Miara zasadności społecznej badania sugeruje, że interwencja była łatwa w realizacji, skuteczna i korzystna dla uczących się.

Słowa kluczowe: Gra w Dobre Zachowanie, osoby uczące się języka angielskiego, zarządzanie w klasie.