The Effects of Randomized Group Contingencies on Disruptive Classroom Behaviors in an Urban School Setting

By

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CERTIFICATION OF PROJECT WORK

We, the undersigned, certify that this project entitled ***The Effects of Randomized Group Contingencies on Disruptive Classroom Behaviors in an Urban School Setting*** by Elizabeth Nowicki, Candidate for the Degree of Master of Science in Education, Department of Curriculum & Instruction, is acceptable in form and content and demonstrates a satisfactory knowledge of the field covered by this project.

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Abstract

Disruptive behaviors have been known to take away from valuable classroom instruction. Researchers have documented the positive effects of group contingencies. This study investigated the effects of group contingencies with randomized components in an urban fourth – grade classroom watching the top disruptive students. Each student was observed on five negative behaviors: inappropriate shout outs, out of seat, disruptive noises, being off task and being disrespectful to classmates. The study incorporated a behavioral intervention known as the Jars Game in which the class worked together to win a mystery motivator. The intervention was set up using a multiphase baseline design (i.e., A-B-A-B design) and results showed that when the Jars Game was in action disruptive behaviors decreased significantly for each student being observed.

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Introduction

Disruptive behaviors happen every single day in a variety of educational settings. These disruptions can take time away from critical instruction (Theodore, Bray, & Kehle, 2004). Theodore, Bray, Kehle, & Jenson (2001) say that student behaviors in classrooms can be frustrating and time consuming factors, impacting students' academic achievement and Hawkins, Musti-Rao, Hughes, Berry and McGuire (2009) state, "the struggle is especially high in urban schools with greater numbers of students at-risk for academic failure" (p.302). Each disruptive incident can take minutes away from what an educator is trying to teach (Thomson, 2014). Not only does disruptive behaviors affect each student's learning but also the learning of others (Ling, Hawkins & Weber, 2011). Learning how to approach these behaviors and finding ways to decrease them is essential to creating a positive and effective universal learning environment (Lohrmann & Talerico, 2004).

Mark Townsend (2013) reported that schools are trying to deal with disruptions especially with the funding cuts over the past few years. Townsend (2013) states, "A survey by the Association of Teachers and Lecturers (ATL) found that the vast majority of staff had recorded a rise in the number of children with emotional, behavioral or mental health problems" (Massive rise in disruptive behavior, warn teachers, para 2). In one case 76% of teachers say that they would be able to reach higher academic achievement while 33% of teachers considered quitting because behaviors were uncontrollable (Kowalewicz & Coffee, 2013; Public Agenda, 2004). The most common assistance asked for by educators is classroom management (Oliver, Wehby, & Daniel, 2011).

One of the main reasons I want to study this problem is I think behavioral interventions are fascinating; especially strategies that decrease classroom disruptions. Decreasing disruptions

will provide more opportunity for learning. Classroom management is a difficult area for teachers and if I can offer a technique that is proven to be effective I can help others. Plus, incorporating a technique such as the jars takes minimal time away from instructional period because the procedure is nominal. The student and the behavior to be observed can be chosen while the students are getting situated at the beginning of class, the lesson proceeds as normal, and the reward is chosen at the end of class or the allotted time. Another benefit of The Jars Games is that it does not affect the curriculum or lesson plans already in place.

Therefore, the main purpose of my study is to see how The Jars Game works inside a city school on decreasing disruptive behaviors. I will be working in a fourth-grade classroom with 23 students playing the Jars Game during their math block. During an initial observation I will use a checklist to determine the top five disruptive students that I will collect data on. The data will be collected through multiple observations. The class will have two days the Jars Game is not in action and 2 days when the Jars Game is in action. The Jars Game will be a combination of three separate labeled jars and all three jars will have randomized components. Through the data collected I want to show that not only does this intervention work but the results will work in challenging behavioral situations.

The research question that drives this project is:

- Does the use of The Jars Game help decrease disruptive behaviors in a 4th grade class in an urban school setting?

What are Group Contingencies?

Group contingencies have been successful in decreasing disruptive behaviors in classrooms (Theodore, Bray, Kehle, & Jenson, 2001).Group contingency is a style of intervention meant to work as a proactive method to bolster compliance by causing an increase

in individual students motivation, which affects the whole group (Hulac & Benson, 2010; (McKissick, Hawkins, Lentz, Hailly, & McGuire 2010).There are three types of group contingencies: independent, interdependent and dependent (Litow & Pumroy, 1975). An independent group contingency is when the teacher monitors one person's behavior. An interdependent group contingency is when the teacher monitors the whole group's behavior. A dependent group contingency is when the teacher monitors one or a few people's behaviors. Kelshaw-Levering, Sturling – Turner, & Henry (2000) state, "A distinct advantage of interdependent group reinforcement procedures is that, they require students to work together or rely on each other" (p.524). Monitoring these behaviors using group contingencies allows teachers to provide students with reinforcement if certain criteria are met (Theodore et al., 2001).

How Group Contingencies Decrease Disruptive Behaviors?

In the classroom student behaviors are monitored to provide them with reinforcement if certain behavioral criteria are met. Group contingencies become even more effective when randomized components are added especially with randomized reinforcements (Murphy, Theodore, Alosio, Alric -Edwards, Hughes, 2007). Murphy et al., (2007) say that since students are unaware of the reward anticipation and interest are maintained. They have the power to not only reduce unwanted negative behaviors but increase positive behaviors in situations where students are capable but lack motivation (Theodore et al., 2001). By adding the randomized component students get excited and that excitement spreads across the classroom from the not knowing what the reinforcement can be (Coogan, Kehle, Bray, & Chafouleas, 2007). Not knowing what the reinforcement is may also refer to as a mystery motivator in which delivers a secret rewards (Rhode, Jenson, & Reavis, 1994).

Randomized components are when the group of participants does not know either one part of the intervention or all parts; participants may not know the targeted behavior being observed, who is being observed, or the reward (Kelshaw-Levering, et al., 2000). There have been several explanations for the motivation essential in group contingencies. First, students get excited by not knowing what their reward is and work together to receive it (Coogan, Kehle, Bray, & Chafouleas, 2007).Trying to reach the criterion is a fun game for them to participate in with a surprise ending. This also motivates students who would generally want to ruin it for the class because they do not like the reward (Theodore et al., 2001).

A second reason that this strategy works is because students look for peer acceptance in the classroom (Coogan et al., 2007). Students work efficiently to meet the criteria because they do not want to let the class down with their actions causing everyone to work together as a team (Reinhardt, Theodore, Bray and Kehle, 2009).By wanting that peer acceptance students will work to complete a specific task and their academic performances will increase as well (Litlow & Pumroy, 1975). Heerring and Wilder (2006) say that keeping the unmet criteria unkown will reduce the negative social aspect that could happen if the class knows the "who" and in returns builds a positive social situation.

Lastly, Sharp and Skinner, (2004) discussed the importance of group contingencies on an individual. A classroom may have a student that generally does not receive rewards and feels left out so they get excited when the criterion is met. This can motivate the student to want to choose better behaviors and be less disruptive. Overall, this will build a classroom that works as a team versus everyone trying to get their own reward.

The Impact of the Jars

The Jars Game has been effective in classrooms by combining group contingencies with randomized components (Theodore et al., 2001).The first study that incorporated the jars was done by Kelshaw-Levering, Sterling-Turner, Henry, & Skinner. The jars game was introduced in two ways first with one jar with only reinforcers in it and second with four jars labeled "behaviors," "group or individual," "names" and "reinforcers" in which all were randomized (Maheady & Jabot, 2012). Kelshaw-Levering, Sterling - Turner, Henry and Skinner (2000) broke the intervention down in two different parts.The intervention took place in a rural second grade classroom of 12 students. In the first part, the teacher only randomized the reinforcers and referred to it as "The One Jar Game" because they had only one jar labeled "reinforcers." During this part, the teacher used a check system; if the students received fewer than 36 total checks as a class within an hour and 15 minute time block, they got to choose a reward from the jar.

The second part of the intervention was called "The Four Jar Game." This time the jars were used with all components randomized. The teacher had four jars labeled "behaviors," "group or individual," "names" and "reinforcers." Unlike "The One Jar Game," the students did not know what the behavior was or who was being monitored. The students were observed and data were collected in a six- phase cycle: baseline A_1-B- baseline A_2-C-B-C. In the baseline, no intervention occurred. In phase B, the participants were observed using the group contingency with randomized reinforcers. In phase C, the group contingency randomized all factors.Students did not know who was being monitored, the potential reward, the behavior being watched, or the criterion being set (Kelshaw-Levering, et al., 2000). Overall, after all the phases were completed the data showed that with each of the interventions in place all behaviors decreased. However, "The Four Jar Game" condition showed more overall improvement.

Coogan, Kehle, Bray, & Chafouleas (2007) also conducted a study and documented the effectiveness of group contingencies with randomized components while using the jars. Their investigation included five-12-year-old boys in a single classroom. The teacher focused on 7 inappropriate behaviors such as touching, playing, making noise and out of seat. She used three jars and if the students met the criteria they received a mystery motivator. Before the teacher implemented the intervention she did a one day training session. The students were broke into four small groups of three for the study. Each group received a board divided into two parts a blue side and a green side when the group experienced an inappropriate behavior they would have to move one of their pins to the blue side. After they moved the pin that student would have to fill out a small data sheet with a check to the behavior and they would lose a team point. At the end of the session the teacher had a wheel that she would spin with the names of each child. That child would pick from the jars to determine the criteria. If they pulled an individual student and they had no more than two marks on their data sheet the whole group got a mystery reward. If they pulled a group and they had at least one pin left in the green section the whole group was rewarded. The teacher focused and emphasized the excitement of randomized components. Inappropriate behaviors decreased with all students when the intervention was in place. This study can be used with my investigations to show a comparison.

Group Contingencies

In another study, researchers compared the effects of group contingencies with randomized components, Theodore, Bray, Kehle, & Jenson (2001) studied disruptive behaviors in a classroom of five Caucasian adolescent males with serious emotional disorder (SED).In this single-subject design, students were observed in a four - phase cycle that included the first baseline, first intervention, second baseline and second round of intervention. Two jars were

placed on the teacher's desk labeled "criteria" and "reinforcer". First, the teacher picked one piece of paper from the criteria jar that let her know what criterion she was watching for that day. Next, if the criterion was met, she would pick a piece of paper from the reinforcer jar and the students would receive a secret prize. If the criterion were not met, she would tell the class that they did not win the game that day and encourage them to do better tomorrow.

The teacher collected baseline data for three weeks then used two 45- minute blocks daily for two weeks to implement the intervention. After the two weeks the teacher took away the intervention for two weeks. Next, the intervention was reinstated for an additional two weeks. Through all four phases, data were collected. Results indicated that when the intervention was in place, the disruptive behaviors dropped significantly (Theodore et al., 2001).

Another empirical study (Campbell & Skinner, 2004) showed the effects of interdependent group contingencies on transition times rather than classroom behavioral problems such as outbursts, getting out of seats and inappropriate language. The teacher and a consultant teacher worked together to monitor and measure five transition times throughout the day. At the end of the day they pulled two slips of paper one was the transition and the second was a time. If the students completed the transition in less time that was showed they earned a letter. The letters were collected if they completed a task each day to spell out a reward for example: P-I-C-N-I-C or M-U-S-I-C. Once they collected all the letters they received that reward. The study showed that when the game was in place the transition times decreased. This is important with classroom management because teachers can lose valuable time with improper transitions.

Sharp & Skinner, (2004) documented the positive results of group contingencies on an individual. One example they give is if a class receives a reward as a whole everyone gets

rewarded. They stress the importance that excitement is created when everyone is involved especially for the individuals that normally do not get a tangible reward. This helps the individual feel part of the group and as a whole the class builds a positive environment. This study included 13 African-American students; between the ages of 7 and 9 in a second grade classroom. Sharp & Skinner used group contingencies to increase reading performance on Accelerated Reader (AR) quizzes. They used an AB design with fixed criteria: all students had to pass at least one quiz in the 6 weeks being monitored to receive an ice cream party. Also, the study had a randomized component in which the teacher would pull a numbered slip of paper from a bag representing one quiz for each student. If they passed the number pulled or more they all received free time. During baseline a total of 2 quizzes were passed between the 13 students in 2 weeks. When the intervention was in place 45 quizzes were passed during the 6 week phase. This study shows that even applied in a different way group contingencies and randomized components increased performance and was effective.

McKissick et al. (2010) conducted an intervention to decrease classroom disruptions as well as increase student engagement; in this study, all components were randomized. The data was collected during the entire instructional 40 minute period. The first 20 minutes of the observation was spent recording disruptive behaviors and the second half was spent watching for student engagement. The class was instructed that they could earn a reward for appropriate behaviors during the entire instructional time. The teacher used a color card system of green, yellow and red. All students started on green and the intent was to keep them there since the others represented bad choices.

The teacher kept track of inappropriate behaviors, at the end of the time allotted, the teacher randomly selected a behavior, and what the criteria needed to be (in which the students

could have up to four incidents). If the class met the criteria, the teacher would pick a reward. The researchers kept all components randomized so that the students worked together to monitor all behaviors instead of just one predetermined behavior. In addition, students did not know the criteria for the reinforcer (McKissick et al., 2010). At the end of the study not only did disruptive behaviors decrease the overall class engagement increased which showed strong success.

Most of the research showed the positive impacts of group contingencies throughout different settings using a wide variety of participants. This study is designed to contribute to the current literature and to see if the Jars Game can be an effective strategy to decrease disruptive behaviors in a 4th grade urban school setting.

Method

Subjects and Settings

The study conducted was based on group contingencies with randomized components focusing on a classroom management technique called The Jars Game (Theodore, Bray, Kehle & Jenson, 2001). The game was played in an inner city public school in order to investigate the effect of decreasing disruptive behaviors such as shout outs and being off task. These can be major issues inside classrooms in which take away from valuable instructional time. The main objective is that when The Jars Game is in place do the classroom disruptions decrease.

Research Setting

The participants were students (N= 23; 15 girls, 8 boys) who attend a fourth- grade elementary classroom in an inner city school district through purposive sampling. The students are a culturally mixed classroom of White and Hispanic with a high percentage of low socioeconomic background. After talking to their teacher she says that they have problems with staying on task and inappropriate shout outs. She currently only uses a district wide incentives plan that looks for the right behaviors. If a student is caught doing the right behavior than they receive a paper paw that is pulled at monthly assemblies involving the whole school. Overall, she is struggling with disruptive behaviors with this class using that incentive plan.

Research Frameworks

The project design was on the principles of quantitative research; by collecting data quantitatively I can see an increase or decrease in behaviors from using The Jars. For this project the data collected concentrated on quantitative observations focusing on time-interval sampling. This is important because as Johnson and Christenson state that, “Quantitative observation involves the standardization of all observational procedures in order to obtain reliable research

data" (Johnson & Christenson, 2010 p. 207). By observing The Jars Game with a time –interval sampling method it will show a consistency and have structure to the data collected.

Data Collection

My primary mode of data collection was the Jars Game. The Jars Game was set up with three jars. The first jar labeled "behavior," the second labeled "who" and the third labeled "reward." The group contingency focused on if the class wins the whole class gets rewarded and the randomized components were that the class did not know the behavior or "the who" being watched as well as the reward they received. After observing the class for a few days I noticed that the majority of their disruptions were done during Math and during this time block all 23 students were present in class; based on my observations I chose to play the Jars Game during Math, which is a 60 minute block.

The Jars were set up as followed: the first jar labeled, "Behaviors" and had five slips of paper: inappropriate shout outs, out of seat, disruptive noises, off task and being disrespectful to classmates. The second jar labeled, "Who" had slips of paper with the individual names of each student and groups of students either by rows, whole class or boys and girls and the third jar had slips of rewards. The list of rewards was compiled from what the students picked during a survey by asking what their top choices were. When the students were told that the game is in place that was the time I picked the "behavior" and the "who." The students were not told what behavior I was watching for or who I was watching. During the game if "the who" did not use the behavior that was pulled then the class wins and "the who" got to come up and chose a reward. However, if "the who" does do the behavior at the end of the time allotted the class was simply told, "I'm sorry the criteria was not met today" and they will not be told the behavior or "the who" that was

being watched. Along with the jars the rules of the game were posted along with the behaviors that are in the jar so the students can refer back to them as needed.

The targets of the intervention are the top five disruptive students watched during an initial observation. The behaviors watched were: inappropriate shout outs, out of seat, disruptive noises, off task and being disrespectful to classmates. I used a checklist to determine what five students had the most disruptive behaviors during the observation. Although the class played as a whole to receive the reward and the person's name or group that was pulled determined if the class won or not; my main data was collected on the five students. The time length of the game was 50 minutes during the scheduled math block. The five students were watched in ten minute intervals to record their disruptive behaviors. They received one tally mark for each of the behaviors listed in the classroom and in the jar which is inappropriate shout outs, out of seat, disruptive noises, off task and being disrespectful to classmates. The tallies were added together to receive a total amount at the end of each session.

Data Analysis

The data was collected in an A-B-A-B withdrawal of intervention design with A being the baseline and B being when the intervention is in place. After, the data is compared to see if there were decreases in disruptive behavior when the intervention was in place. Once the data was collected during the four phase A-B-A-B design I my data I analyzed it using a line graph to show the percentage of the disruptions during each phase for each student. The purpose of the A-B-A-B design is so I could see if the results changes when the intervention was taken away and put back into place versus just using an A-B design. This gave me the data I needed to see the overall outcome of my investigation.

By using this design and method I can help close the gap with educational research by having a better understanding of how to implement strategies such as The Jars Game to help with classroom management.

Results

The effects of the Jars Game on disruptive behaviors can be seen in Figure 1 and Figure 2. During the initial observation it was very clear who the top five disruptive students were. Their disruptive behaviors were very close ranging from 17 to 10 total disruptions during a ten minute block including inappropriate shout outs, out of seat, disruptive noises, being off task and being disrespectful to classmates. When the intervention was put into place there was an immediate improvement with the number of disruptive occurrences that took place. The disruptions decreased and ranged from 4 to 0 in each ten minute observation block. The intervention was then taken away and the disruptions increased again but were not as high as the first original day without the intervention in place with the disruptions ranging from 12 to 5 during the 10 minute block. Finally, when the intervention was put back into place there was a noticeable decrease in negative behaviors across the board. Each of the five student's negative behaviors decreased ranging from 3 disruptions to 1.

The Jars Game showed an overall decrease in disruptive behaviors not only as a whole but for each of the five students. They displayed improvement in each of the behaviors being watched for. Student 1 originally started off with 14 disruptions in a 10 minute block they were marked as followed: 4 shout outs, 2 out of seat, 6 disruptive noises, 2 off task and 0 being disrespectful to classmates. When the intervention was in place the disruptions decreased to 2 which were 1 shout out and 1 off task. When the intervention was taken away they disruptions increased largely to 12 and were marked as 3 shout outs, 1 out of seat, 5 disruptive noises, 2 off task and 1 being disrespectful to classmates. When the intervention was put back into place student 1's disruptions dropped again to only 2 and was marked as 0 shout outs, 0 out of seat, 2

disruptive noises, 0 off task and 0 being disrespectful to classmates. Student 1 showed a decrease each time the intervention was in place.

Student 2 originally started off with 17 disruptions in their 10 minute block and marked as followed: 8 shout outs, 0 out of seat, 5 disruptive noises, 4 off task and 0 being disrespectful to classmates. When the intervention was in place the disruptions decreased to 4 which were: 1 shout out and 3 off task the rest were 0. When the intervention was taken away they disruptions increased noticeably to 10 and were marked as 6 shout outs, 0 out of seat, 2 disruptive noises, 2 off task and 0 being disrespectful to classmates. When the intervention was put back into place disruptions changed significantly again to only 2 and was marked as 0 shout outs, 0 out of seat, 1 disruptive noises, 1 off task and 0 being disrespectful to classmates. Again, student 2 showed a decrease each time the intervention was in place.

Student 3 started off with 9 disruptions during their first 10 minute block and marked as followed: 2 shout outs, 0 out of seat, 2 disruptive noises, 5 off task and 0 being disrespectful to classmates. When the intervention was in place the disruptions decreased to 1 which was 1 shout out. When the intervention was taken away they disruptions were raised to 8 and were marked as 3 shout outs, 0 out of seat, 1 disruptive noise, 4 off task and 0 being disrespectful to classmates. When the intervention was put back into place disruptions changed to only 3 and was marked as 3 shout outs, 0 out of seat, 0 disruptive noises, 0 off task and 0 being disrespectful to classmates. Student 3 displayed a decrease each time the intervention was in place.

Student 4 had a total of 11 disruptive behaviors during their first 10 minute observation and was marked as followed: 1 shout outs, 1 out of seat, 5 disruptive noises, 3 off task and 1 being disrespectful to classmates. When the intervention was in place the disruptions decreased to 2 which were off task twice. When the intervention was taken away student 4’s disruptions

increased to 7 and were marked as 0 shout outs, 0 out of seat, 4 disruptive noises, 1 off task and 2 being disrespectful to classmates. When the intervention was put back into place disruptions changed to only 1 and was marked as 0 shout outs, 0 out of seat, 0 disruptive noises, 1 off task and 0 being disrespectful to classmates. Each time that the intervention was in place student 4's disruptive behavior decreased.

Student 5 started off with 10 disruptions the first 10 minute observation and was marked as followed: 2 shout outs, 0 out of seat, 3 disruptive noises, 4 off task and 1 being disrespectful to classmates. The first time the intervention was in place student 5 did not have any disruptive behaviors and was marked 0. When the intervention was taken away they disruptions were raised to 5 and were marked as followed, 2 shout outs, 0 out of seat, 0 disruptive noises, 3 off task and 0 being disrespectful to classmates. When the intervention was put back into place disruptions changed to only 3 and was marked as 1 shout outs, 0 out of seat, 0 disruptive noises, 2 off task and 0 being disrespectful to classmates. Student 5 had a decrease each time the intervention was in place. Overall, each of the five students showed a noticeable decrease in disruptive behaviors each time the intervention was in action.

Discussion

The present investigation was conducted to see if group contingencies with randomized components could decrease behaviors in a 4th grade urban city school classroom. The results of this study showed significant improvements in disruptive behaviors each time the Jars Game was being played as an intervention. When I first started collecting my data on the five participants there were multiple outbursts, several off task behaviors such as playing with items in their desks, fooling around, unnecessary disruptions and being disrespectful. The first day the game was in action there was an immediate decrease in all disrupted behaviors within the class even though I was only collecting data on the 5 participants. Student 1 showed great improvement by not shouting out and when they wanted to answer a question raised their hand and patiently waited. Student 2 did much better with following along and being only slightly off task. Student 3 got a little frustrated during the material which caused them to have an outburst but besides that their disruptive behavior decreased. Student 4 started off with playing with different items in their desk but once eye contact was made the behavior stopped and student 5 was extremely focused during the first day and did not have one disruption. Day 1 of the Jars Game showed immediate results and the class won in which they all received a mystery motivator.

The second day when the Jars were not in action the disruptions increased. Student 1 had difficulty remaining still and had multiple inappropriate noises especially talking and not following along. Students 2 had a decrease in disruptions then they had during original data collection however, their behaviors doubled then when the game was not being played. They also did not complete the math problems that were being addressed during this time. Students 3, 4 and 5 also increased drastically with behaviors such as banging on desk, playing with toys, not following along and telling other classmates what to do.

The following observation was the Jars in Action and I really noticed the class working together. There were multiple reminders that the game was being played. The five students being watched were somewhat disruptive but again their disruptions decreased significantly during the 50 minutes. Overall, it was a great day and the class won the mystery motivator.

Lastly, the game was not in action and disruptions increased and I could see the class not working together as they did when the game was in action. The students had behaviors such as singing, playing with different items at their desks, complaining, not completing work that was being presented, yelling at other students while talking themselves and reading during math. Although, one common observation that was made is that when the game was being played then taken away the disruptions increased for all five students but each time the behaviors were lower than the data collected before. Overall, each time the game was in effect the disruption decreased and the whole class worked together to receive the mystery motivator.

Significance

These results were consistent with prior research done that showed group contingencies with randomized components can decrease disruptive behavior (e.g., Campbell & Skinner, 2004; Coogan, Kehle, Bray, & Chafouleas, 2007; DiMartini, Bray, & Kehle, 2000; Heering & Wilder 2006; Henry and Skinner, 2000; Kelshaw-Levering, Sterling - Turner 2000; McKissick, Hawkins, Lentz, Hailly, & McGuire, 2010; Murphy, Theodore, Alosio, Alric -Edwards, Hughes, 2007; Ling, Hawkins, & Weber 2011; Theodore, Bray, & Kehle 2001). Current findings show positive results in a 4th grade class and content area (i.e. math).

The Jars Game required little time to set up as with other group contingencies (e.g., Heering & Wilder 2006; Kelshaw-Levering, Sterling - Turner 2000; Sharp & Skinner 2004) which required other components. It also took minimal time away from the instructional period during the lesson

because the procedure is nominal. The student and the behavior observed was chosen while the students were getting situated at the beginning of class, the lesson proceeds as normal, and the reward was chose at the end of class if they won. The Jars Games did not affect the curriculum or lesson plans already in place. Incorporating the jars as a group contingency showed powerful behavior changing results that were minimally invasive plus the students enjoyed playing the game and encouraging each other.

Limitations

Although, the study completed showed positive, effective and rewarding results there are some important limitations to consider with the findings. First, the study was conducted in one urban school setting with 23 participants, even though the whole class was playing the data was only collected on five students, and the data collected was limited to an initial observation, 2 days of the Jars Game in action and 2 days of the Jars Game not in action. The game was played for a sixty minute math block when all students were present. Also, the data collection was done by one person and even with fidelity procedures in place the results could be different with a professional data collector versus an educator that works with the class on a daily basis.

Future Research

For future investigations some things that could be looked at are: How the Jars Game impacts other grade levels? What are long term academic results of The Jars Game? Does the Jars game get old to the students when played as a daily behavioral intervention? How does the Jars Game differ in an urban school setting verses and rural school setting? I asked myself all of these questions during my investigation and as an educator plan on answering them through future investigations.

Conclusion

In summary, the study investigated the effects of group contingencies with randomized components on disruptive behaviors of a 4th grade class in an urban school setting in Western New York. The findings showed a decrease in all five behaviors watched for: inappropriate shout outs, out of seat, disruptive noises, off task and being disrespectful to classmates as well as an overall team building being delivered with the class offering encouragement to each other. Not only did the intervention show positive results it was fun, easy to play, engaging and rewarding for the teacher and the students.

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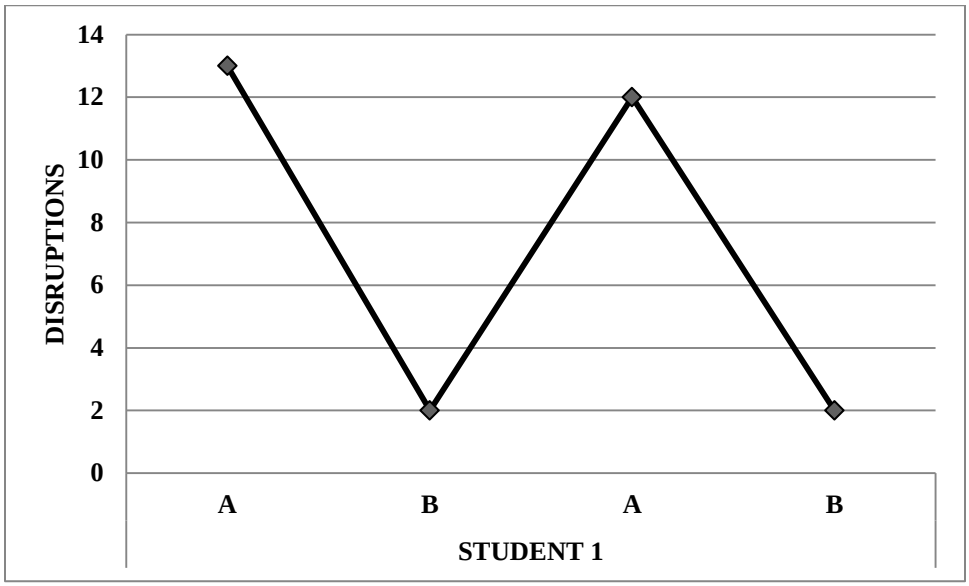
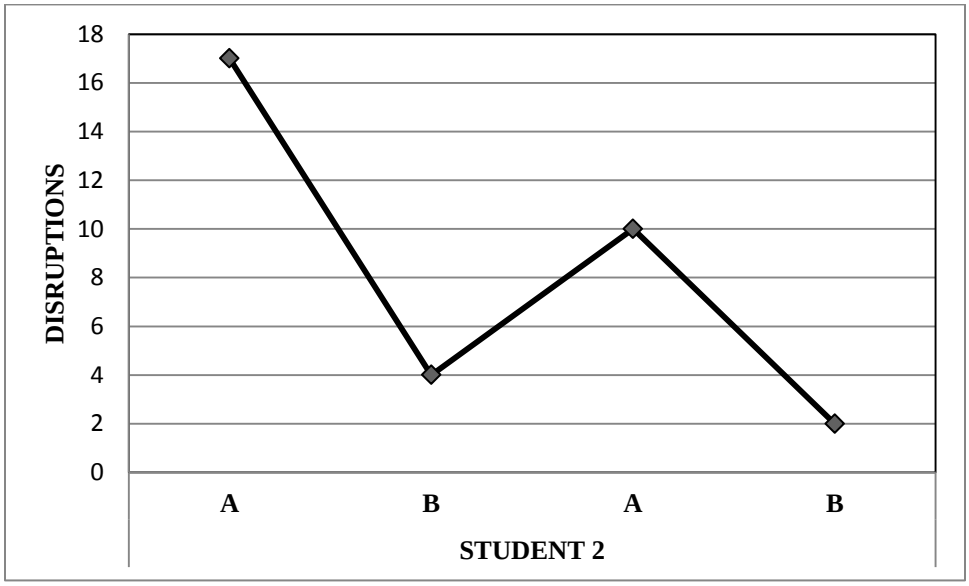
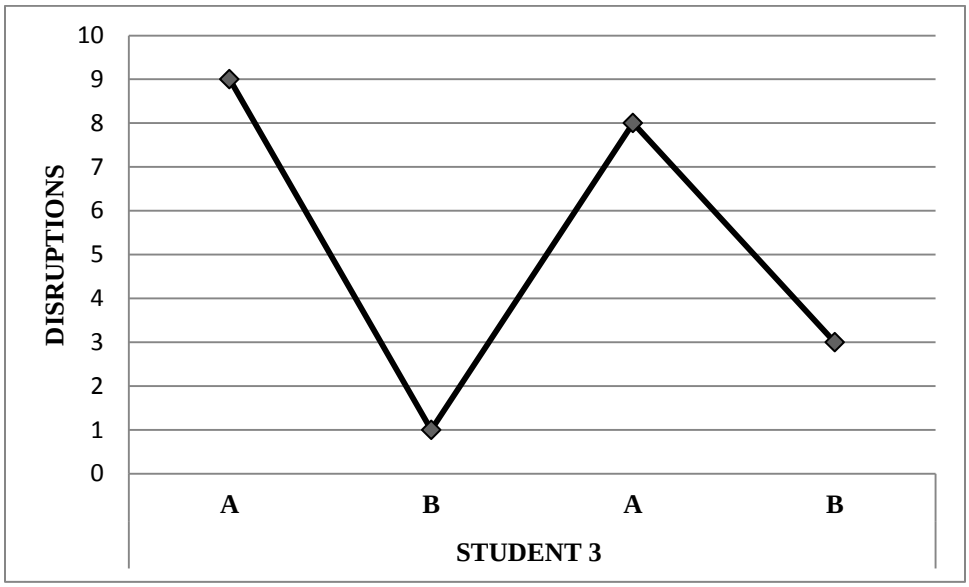
Figure 1 shows the data collected during my observations on each student when the Jars Game was in place and when the Jars Game was taken away

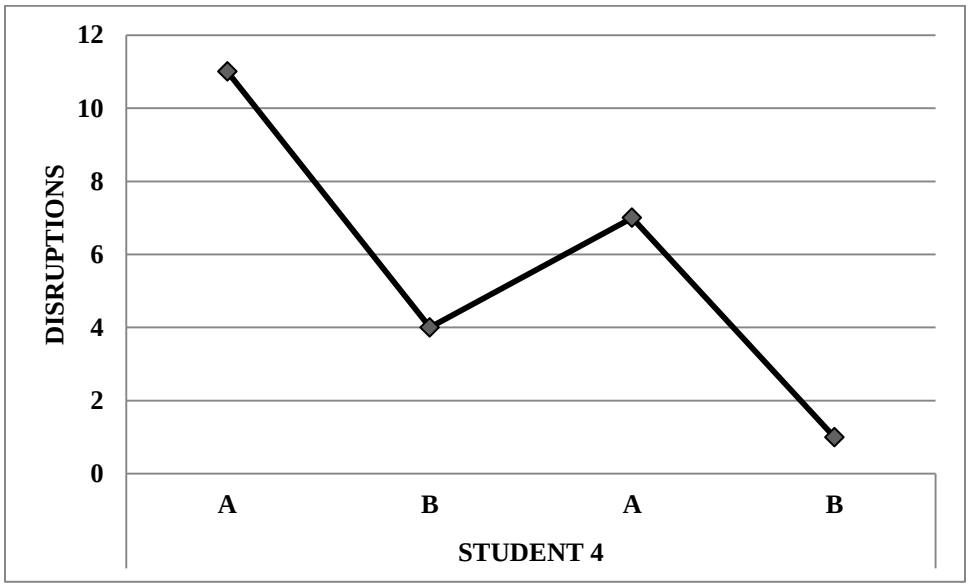
Top 5 Disruptive Students	Baseline (A)	Intervention (B)	Baseline (A)	Intervention (B)
Student 1	𝍸 𝍸 IIII	II	𝍸 𝍸 II	II
Student 2	𝍸 𝍸 𝍸 II	IIII	𝍸 𝍸	II
Student 3	𝍸 IIII	I	𝍸 III	III
Student 4	𝍸 𝍸 I	II	𝍸 II	I
Student 5	𝍸 𝍸		𝍸	III

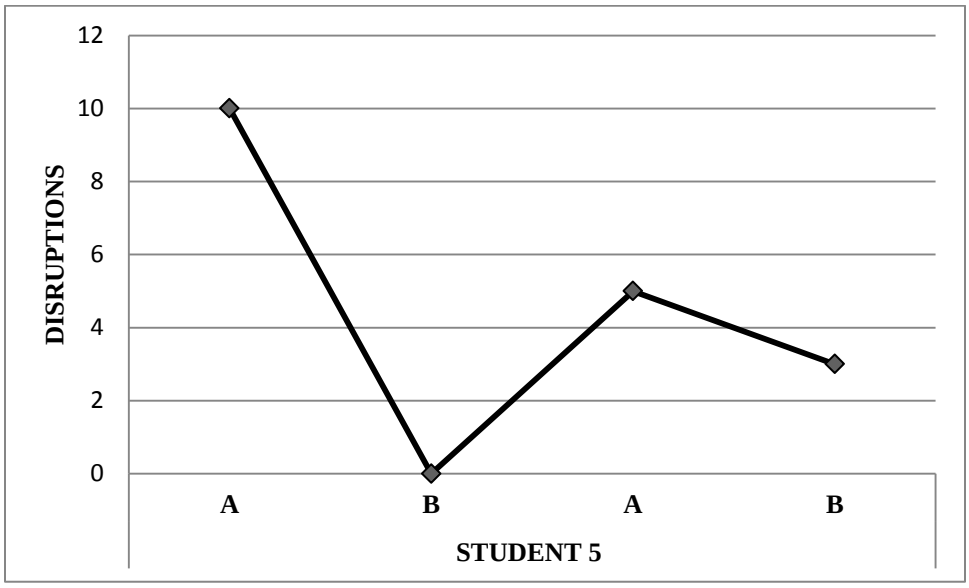
Figure 2 shows the effects it had on each student and the occurrences of disruptions presented on a line graph






10
9
8
7
6
5
4
3
2
1
0
DISRUPTIONS
A
B
A
B
STUDENT 3


12
10
8
6
4
2
0
DISRUPTIONS
A
B
A
B
STUDENT 4


12
10
8
6
4
2
0
DISRUPTIONS
A
B
A
B
STUDENT 5

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GROUP 1.

COURSE/STAGE:	Basic Course/1
PASSED ON:	05/06/2013
REFERENCE ID:	10200077

REQUIRED MODULES	DATE COMPLETED
Introduction	05/03/13
History and Ethical Principles - SBE	05/03/13
Defining Research with Human Subjects - SBE	05/03/13
The Regulations - SBE	05/03/13
Assessing Risk - SBE	05/03/13
Informed Consent - SBE	05/03/13
Privacy and Confidentiality - SBE	05/03/13
Research with Prisoners - SBE	05/04/13
Research with Children - SBE	05/04/13
Research in Public Elementary and Secondary Schools - SBE	05/04/13
International Research - SBE	05/04/13
Internet Research - SBE	05/08/13
Avoiding Group Harms - U.S. Research Perspectives	05/08/13
Vulnerable Subjects - Research Involving Workers/Employees	05/08/13
Conflicts of Interest in Research Involving Human Subjects	05/08/13
SUNY Fredonia State College	05/08/13

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