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The Effects of Utilizing Behavior Modification Techniques

to Reduce Off-Task Behavior

Mayra A. Rangel

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Abstract

Challenging and disruptive behaviors in the middle school classroom have been identified as an area affecting student performance and reducing teacher directed instructional time. This study used Behavior-Specific Praising (BSP) and School Dollars as a form of incentive to aid the teacher in reducing the amount of strikes for off-task behavior among middle school students in a math classroom. A single case A-B-C-BC design was used with three middle school students to determine if BSPs and incentives (School Dollars) reduced the amount of strikes (i.e., off-task behavior) they received each class period. The results indicated that all three participants responded favorably to the implementation of School Dollars as an incentive. There were no overlapping data points with School Dollars and baseline, indicating a functional relationship between School Dollars and a reduction in disruptive behavior. The use of BSP revealed variable results indicating a positive impact for some students, but there is no one size fits all approach that will be effective for all students.

Keywords: behavior specific praise, social incentives, behavior modification

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The Effects of Utilizing Behavior Modification Techniques

to Reduce Off-Task Behavior

Literature Review

Teachers nationwide are under pressure to accelerate their students' learning to meet the

proficiency requirements of the No Child Left Behind Act (NCLB; 2002; Will et al., 2010). This

task can be more effortful when teachers are faced with the dual challenge of meeting both the

academic and behavioral needs of their students. Disruptive behavior in any classroom impedes

learning (Dunlap, Lovannone, Wilson, Kincaid, & Strain, 2010), and the time spent in

redirecting students back to task takes away valuable instructional time, which in turn affects

student academic performance (Nelson, Benner, Lane, & Smith, 2004). More than five decades

of research on effective classroom based behavior management strategies support the use of

classroom rules, use of incentives, pre-correction, planned to ignore, and praise to improve

classroom climate and manage disruptive behaviors (Gable, Hester, Rock, & Hughes, 2009;

Hester, Hendrickson, & Gable, 2009; Jung, 1971; Eckert, Lovett, & Little, 2004).

Behavior modification techniques, such as the usage of rewards as a positive

reinforcement, can be implemented to promote positive changes in behavior within the

classroom (Henderlong & Lepper, 2002). According to Axelrod (1977), positive reinforcement is

any consequence of behavior, that when presented, increases the future rate of that behavior. The

process of increasing rates of behavior is known as positive reinforcement. Positive

reinforcement can also be techniques that teachers use to gain and maintain students' motivation

and success in the classroom. Some of the most common positive reinforcements used by

teachers are positive praising and incentives such as: movie day, free time, food and special

privileges (e.g., no homework; Misiowiec, 2006).

According to Bandura (1969), incentive theories of motivation assume that behavior is largely activated by anticipation of reinforcing consequences. Motivation can be regulated through arrangement of incentive conditions and by means of satiation, removal, and conditioning operations that affect the relative efficacy of various reinforcers at any given time (Eckert et al., 2004). For example, in an effort to motivate children who display little interest in their education, teachers could arrange favorable conditions of reinforcements with respect to achievement behavior (Bandura, 1969). These reinforcements could activate a motivation behavior that teachers could use to get students to engage in school material and eventually develop an interest in their education. Middle school students tend to be among the age group that often needs positive reinforcements to keep them focused on school (Haydon & Musti-Rao, 2011). Often, this is due to the transition between elementary school and middle school. During the middle school years, students attempt to fit-in to their environment and they lose track of the purpose of being at a school (Madjar & Cohen-Malayev, 2016). These outside pressures from peers may cause students to lose focus or motivation to perform academically.

Middle school students tend to lose focus and they often need to be motivated to perform well in the classroom (Haydon & Musti-Rao, 2011). The transition to middle school occurs during puberty, which is a period of major cognitive, emotional, and behavioral developmental changes (Madjar & Cohen-Malayev, 2016). All these changes may have a negative impact on students' psychological and academic adjustments, hence affecting school performance (Holas & Huston, 2012), motivation and engagement (Wang & Holcombe, 2010) and increased aggressive behaviors (Pellegrini, 2002). Therefore, teacher practices within the classroom are critical in supporting and aiding students during this transition time. Such practices might include minimizing control, allowing criticism, personal choices, and modeling self-engagement in the

learning process (Madjar & Cohen-Malayev, 2016). These practices have been identified as important for enhancing intrinsic motivation, especially within the educational context (Henderlong & Lepper, 2002; Madjar & Cohen-Malayev, 2016). For example, Henderlong and Lepper, 2002, suggest that the use of enhances student motivation and boost their self-esteem. Intrinsic motivation is important to motivate students in the classroom but they also need other types of motivators that will keep them focus as well. Extrinsic motivators can support the teachers to encourage and motivate students (Eckert et al., 2004; Lipe & Jung, 1971).

Teacher practices also involve extrinsic motivators such as incentives to get students engage in classroom activities (Eckert et al., 2004; Henderlong & Lepper, 2002; Lipe & Jung, 1971). Academic intrinsic motivation is the drive or desire of the student to engage in learning "for its own sake". Students who are extrinsically motivated engage in academic tasks to obtain rewards (e.g., good grades, approval, homework passes, food incentives) or to avoid punishment (e.g., bad grades, parent phone calls; Middleton & Spanias, 1999). The use of incentives can motivate students to work hard in the classroom, but it will only be because of the desire to obtain those classroom incentives (Jung, 1971; Eckert et al., 2004). Together, intrinsic and extrinsic motivators can support the students with the transition to middle school (Henderlong & Lepper, 2002; Madjar & Cohen-Malayev, 2016), and help teachers to decrease disruptive behavior in the classroom (Madjar & Cohen-Malayev, 2016).

Incentives

The use of incentives as a form of extrinsic motivators, such as homework passes, extra credit, food, or praise statements, have been used by teachers to recognize students' work and behavior in the classroom (Eckert et al., 2004; Jung, 1971). According to Jung (1971), the types of incentives must change as the students change. In other words, teachers must get to know their

students because what might work for one student does not necessarily work for all students. Techniques and approaches must be adapted to the students' needs and wants (Jung, 1971). The effectiveness of a teacher can be measured by the variety of reinforcement strategies used and their relationship to student learning and understanding (Haydon & Musti-Rao, 2011).

Within the classroom, the teacher has full control of how and when to use incentives. Teachers often have their own system in place for earning incentives. For example, a classroom system may include productive group work, participating in class, respecting teammates, sharing ideas, being helpful around the classroom and being respectful when teacher is teaching (Jung, 1971). Depending on behavior, students have an opportunity to earn the predetermined incentives, such as homework passes, praise, free time on the computer, extra points, or the whole class might earn a free day for getting high scores on the test (Eckert et al., 2004; Jung, 1971). Whatever the reinforcement is, the students should be notified as to why they are receiving the reward so they know what they did right. Among middle school students, extrinsic motivators can help aid in the process of remaining focused and promoting classroom engagement while reducing off-task behavior (Eckert et al., 2004; Jung, 1971; Madjar & Cohen-Malayev, 2016). In the classroom, when teachers reward certain students for a specific behavior, the rest of the students become aware of what they have to do so that they can also earn a reward (Jung, 1971). Giving incentives during class is also a good strategy as it serves as a model, which can strongly motivate the observing students to perform the same desirable behavior (Bandura, 1969; Eckert et al., 2004).

Furthermore, an experienced and well aware teacher will use different types of positive reinforcements. Some approaches and strategies can be used on a regular basis where some can only be used on certain occasions and/or when a particular behavior is exhibited (Ecker et al.,

2004). Among middle school students, the use of incentives as an extrinsic motivator has been proven to be an effective technique to decrease off-task behavior and promote a healthy learning environment (Bandura, 1969; Eckert et al., 2004; Haydon & Musti-Rao, 2011; Henderlong & Lepper, 2002; Madjar & Cohen-Malayev, 2016), but teachers must also implement other techniques to support the students. Furthermore, students should not become accustomed to earning rewards all the time, because they learn to expect reinforcement for everything that they do (Fefer, DeMagistris, & Shuttleton, 2016; Jung, 1971). If students become saturated with the reinforcement, the reinforcer or reward becomes less effective. Therefore, teachers should diversify reinforcements and incentives because students can get bored and might lose interest with some of the reinforcements (Fefer et al., 2016).

 Usage of praise as an incentive. Teachers often use praise statements in an effort to diversify the techniques used in the classroom and to recognize student performance (Partin, Robertson, Maggin, Oliver, & Wehby, 2009). Teacher praise is an affirmative statement delivered by the teacher immediately following the completion of a specified academic or social behavior (e.g., correct academic response, work completion, following rules; Haydon & Musti-Rao, 2011). Specific, teacher initiated, verbal feedback is a powerful agent to promote academic success (Fefer et al., 2016). In addition, praise from teachers can decrease disruptive behaviors, increase on-task behavior (Sutherland, Wehby, & Copeland, 2000), and enhance motivation, resilience, and persistence on challenging tasks (Dweck, 2007). Praise statements can be delivered in the classroom as a form of incentive. This type of incentive demonstrates acceptance or approval by the teacher towards the actions of students (Floress, & Reinke, 2015; Lipe & Jung, 1971)

Furthermore, teacher praise is the most widely studied social incentive (Delin & Baumeister, 1994; Jenkins, Floress, & Reinke, 2015; Lipe & Jung, 1971). Recently, Wagner and Riener (2014) conducted a field experiment in 25 secondary schools (Middle Schools) in North Rhine Westphalia, Germany. The purpose of their study was to test the power of social incentives on student test scores. The results indicated that social incentives were an effective method to increase test scores. Using social incentives, the students' attention and focus was on the class lessons that prepared them to achieve a high score on the test, which increased student school performance. Students also demonstrated high levels of persistence and motivation at the time of taking the test. Qualities such as persistence are essential in creating life long learners and these qualities can be promoted through the use of praise.

Praise as an incentive has also been shown to be as effective as material incentives (Lipe & Jung; 1971). That is, praise is a low cost, yet effective tool in improving student outcomes. Additional research has proven that the use of praise in the classroom can be a technique that could influence different types of classroom behaviors such following rules and expectations, engaging in activities, working with their peers and paying attention in class (Henderlong & Lepper, 2002). Students learn that they can earn and deserve praise from the teacher if they do what they are asked to do in the classroom. In other words, students make a connection between praise statements and doing the right thing. There is an increase in students' positive behavior and the undesired behavior frequency reduces (Partin et al., 2009). Praise is thought to increase the frequency of behavior because the positive experience of being praised becomes associated with the behavior that elicited praise (Henderlong & Lepper, 2002). Partin and associates (2009) successfully demonstrated how, through consistent and appropriate use of teacher praise,

teachers were able to change the classroom atmosphere. Specifically, when teachers increased their usage of praising statements, negative behaviors decreased.

Praising students is a technique that has been used by teachers across grade levels over the years because of its effectiveness (Sutherland, Copeland, & Wehby, 2001). Sutherland and colleagues (2001), discuss the effectiveness of teacher praise, which has been known to work and be effective in the classroom since the late 1960s when research was conducted on the relationship between teacher praise and the disruptive behavior of students (Sutherland, Copeland, & Wehby, 2001). The use of teacher praise is not only designed to decrease destructive behavior, but also intended to support the teacher in their classroom management (Fefer et al., 2016; Jung 1971). Classroom management is a challenge for many teachers, especially middle school teachers (Holas & Huston, 2012; Madjar & Cohen-Malayev, 2016). Middle school students often have a difficult time focusing, which affects the teacher's classroom management skills; thus, creating a domino effect (Madjar & Cohen-Malayev, 2016).

Teacher praise in the classroom has been shown to be an effective classroom management tool and have an impact on student outcomes (Fefer et al., 2016; Jung, 1971). Using praising statements as a form of positive reinforcement have positive effects on both academic and behavioral outcomes. Therefore, increasing the time the teacher is teaching and reduces the time addressing off-task behavior (Madjar & Cohen-Malayev, 2016). According to Haydon and Musti-Rao (2011), praise statements can be broadly categorized as general praise and behavior-specific praise. Statements such as "good job" or "nice work" are examples of general praise. These statements help build student confidence and reassures them of the work they are doing and to continue working hard to keep getting recognized for their work and effort. Praising statements can be vary depending on the situation or behavior that the teacher is

addressing or they might just be regular praising statements that do not necessarily address any specific behavior (Haydon & Musti-Rao, 2011). These are referred to as Behavior-Specific Praising (BSP) and Non-Behavior-Specific Praising (NBSP).

Behavior-Specific Praise

In a BSP statement, a teacher specifies the behavior for which the praise is delivered. Teachers can provide students with BSP that is either academic-specific or social-specific (Sutherland & Wehby, 2001). An example of a BSP statement is, "Johnny, good job cleaning the play area." In a NBSP statement, a teacher delivers verbal praise without describing the behavior for which the student is praised. Statements such as "good job" or "nice work" are examples of NBSP statements. Sutherland, Wehby, and Copeland (2000) reported that although BSP is the most effective form of praise, it is only a small percentage of the types of praise that the students receive. Praising students every time they demonstrate appropriate behavior helps to decrease the level of disruptive behavior and to improve task engagement and class participation (Haydon & Musti-Rao, 2011; Sutherland et al., 2000). The use of BSP is one teacher practice that could help middle school students adapt to new environment and improve the level of engagement in the class (Madjar & Cohen-Malayev, 2016; Haydon & Musti-Rao, 2011).

Middle school students often misbehave to attract peer attention; yet, recognizing students for their good behavior in front of their peers is a good way for students to receive positive attention that can help to build their self-esteem and motivate them to keep receiving that same attention (Holas & Huston, 2012; Madjar & Cohen-Malayev, 2016). Praising students across grade levels increases task engagement and class participation, instructional time and students' competence level (Haydon & Musti-Rao, 2011).

Researchers have demonstrated that increases in BSP statements are associated with increases in students' on-task behavior, compliance, and task engagement (Fullerton, Conroy, & Correa, 2009; Sutherland & Wehby, 2001), reductions in off-task behavior (Austin & Soeda, 2008), and rates of disruptive behavior (Reinke, Lewis-Palmer, & Martin, 2007). Transition to middle school affects all these areas (Madjar & Cohen-Malayev, 2016), but with the use of BSP, teachers can decrease the negative effects of the transition and improve class and school performance (Haydon & Musti-Rao, 2011). Do to the positive effects of BSP among students, Haydon and Musti-Rao (2011), stress the importance of teachers using BSP in their daily lesson plans to increase instructional time and increase students' competence level.

Middle school teachers need to motivate students to keep performing in class and they can reinforce student performance by reaffirming student appropriate behavior and performance (Haydon & Musti-Rao, 2011). Using praise statements allows teachers to provide feedback on the specific student behavior they are trying to improve and can also be effective in providing encouragement, building self-esteem, and promoting positive teacher-student interactions (Shores, Gunter, & Jack, 1993; Walker, Colvin, & Ramsey, 1999), this being the main goal of educators at the secondary level (Madjar & Cohen-Malayev, 2016; Holas & Huston, 2012).

Conclusion

Transition to middle school can become an obstacle to students and could harm their school performance (Holas & Huston, 2012; Madjar & Cohen-Malayev, 2016). Teachers have the tools necessary to promote a positive classroom environment by engaging students in the curriculum and reducing behavior issues such as off-task behavior (Haydon & Musti-Rao, 2011; Holas & Huston, 2012; Madjar & Cohen-Malayev, 2016). Students who lack motivation and demonstrate behavior issues in the classroom need extra support and guidance (Bandura, 1969;

Eckert et al., 2004; Haydon & Musti-Rao, 2011; Henderlong & Lepper, 2002; Holas & Huston, 2012; Madjar & Cohen-Malayev, 2016). Acknowledging the middle school students through the use of incentives and praising statements, such as BSP could be the tools that change the classroom atmosphere and the level of engagement of students (Fullerton et al., 2009; Haydon & Musti-Rao, 2011; Sutherland & Wehby, 2001; Walker et al., 1999). Both BSP and incentives have been researched separately (Bandura, 1969; Eckert et al., 2004; Haydon & Musti-Rao, 2011; Henderlong & Lepper, 2002; Fullerton et al., 2009; Sutherland & Wehby, 2001 Walker et al., 1999); however, more information is needed about the use of both motivating interventions being used together. This research will focus on the application of BSP and incentives individually and in combination.

Methods

Research Question

Does Behavior-Specific Praise and use of School Dollars as incentives reduce the amount of strikes for off-task behavior of three middle school students in a math class?

Research Design and Procedures

An A-B-C-BC design was used to evaluate the effects of BSP and use of School Dollars on strikes, which represented the number of infractions for off-task behavior. There were four phases: baseline and three interventions. All students started at baseline at the same time. In baseline, the teacher did not modify instruction time or the way students were addressed. During the four phases of the study, the researcher and the observer recorded the number of strikes for off-task behavior each student received during a class session using a simple frequency recording strategy. The frequency represented the number of strikes obtained during each session.

All three students needed to have three stable data points to move from baseline to the three other interventions phases of the study. The three students started baseline together. As they obtained three stable data points (consistency across your numbers/pattern of repeated data points) they were able to move to the first intervention phase. Once they were in the first intervention, again they had to have at least three stable data points to move to the second intervention. When they had reached the three stable points they started the second intervention phase. The students were able to move to the last intervention phase when they had reached three stable data points in the second intervention phase. To exit the study, they had to reach three stable data points for the last intervention phase of the study.

Fidelity. To assure fidelity, a second observer was present during the implementation of the interventions throughout each session and a sign-in sheet was used to track attendance (see Appendix A). Therefore, the study has 100% fidelity. During baseline, the researcher only gave direct praising. BSP was only given during the intervention phase of the study.

Setting & Participants

The study took place along the central coast of California, in a small city with a population of 157,380 people, in a secondary school. The school serves approximately 1,071 students enrolled in 7th and 8th grade that are predominately Hispanic/Latino (84%) and White (10%). Approximately 51% of the populations are females and 49% males. About 68% of the students receive free or reduce lunch. Furthermore, 24% of the students are English Language Learners (School, 2015). The three participants were selected using a purposive sampling on a single classroom. Students were recruited based on teachers' recommendations and school referral records. Students were not included if they did not show behavior problems at school. Pseudonyms were used to protect the identity of the participants.

Student 1. Julian is a 13-year-old Hispanic boy who has been referred for special education services under the autism spectrum.

Student 2. Ricardo is a 13-year-old Hispanic boy who is currently eligible for special education services under the category of ADHD and is also an English Language Learner (ELL).

Student 3. Cassandra is a 13-year-old Hispanic girl who is an ELL student and is general education.

Measures

A frequency count for off-task behavior was collected daily for the duration of the study using a checklist (see Appendix B). Similarly, to Haydon and Musti-Rao (2011), for this study the researcher used measure frequency of off-task behavior. The duration of the study was determined by the number of class periods that each participant needed to obtain three stable points for each of the phases of the study. Stable data points were a representation of a pattern of frequency count. For the three students in the study, the researcher and an observer (i.e., other classroom teacher) recorded the off-task behavior each student demonstrated during each session (class period). There was no limit on the number of strikes (off-task behavior infractions) a student could receive. Observation data across all students were collected using a simple frequency recording strategy. Frequency represented the number of strikes for off-task behavior each participant received during each session.

Validity. To address validity, the researcher and the second-observer created a list of off-task behaviors that were considered for the purpose of this study. The observer and researcher practiced identifying off-task behavior using the list that they created as preparation for the study. This was to prevent other class distractions from being considered in the study. Both the researcher and the observer had the list of off-task behaviors during the sessions.

Reliability. To establish reliability, inter-observer agreement data was used during the intervention and baseline phases of the study. The teacher and the observer kept tracked of the strikes each student received for off-task behavior. Inter-observer was also responsible for using a checklist to identify when the teacher fail to give the BSP (see Appendix C) or the School Dollars (see Appendix D). To ensure consistency and reliability of the measure, the observer was explicitly coached prior to the start of the study on the types of off-task behavior that were to be consider for strikes.

Inter-Observer Agreement (IOA). Inter-observer data was collected during 25% of all phases for each participant using a data collection checklist (see Appendix B) to determine researcher accuracy in calculating the dependent variable, strikes for off-task behavior. Inter-observer agreement was calculated for each participant by dividing the number of agreements by the number of agreements and disagreements, and multiplying by 100%. The IOA should be 80% or more for each participant.

Ethical Considerations

The students were not informed that they were part of a study or of the procedures that the teacher implemented during the intervention phases of the study. To insure further confidentiality, students' names were not used in the study. The study did not interfere with students' normal course of their class time and learning. Students did not encounter any physical, mental, or emotional harm at any point in the study.

Validity threats. Students chosen for the study had similar characteristics to avoid any erroneous interpretation of the results. Also, the students chosen were those that were less likely to move during the study. The students did not know about the study so they would not purposefully participate and show positive behavior during class time. The researcher was

working with his/her own students, to avoid research bias, there was a second observer present during the duration of the study 100% of the time.

Social Validity

At the completion of the study, the inter-observer completed a four-point Likert scale (i.e., 1 = strongly disagree to 4 = strongly agree) social validity questionnaire (see Appendix E). The questionnaire, adapted from Berger, Manston and Ingersoll (2016), consists of nine questions designed to understand the perceived usefulness, significance and satisfaction with the implemented intervention (Kennedy, 2005). Participant responses were kept confidential and descriptive statistics were conducted to gain insights regarding the intervention. The inter-observer agreed that this was an effective intervention that could be replicated in other classrooms.

Data Analysis

Visual analysis was done using graphs, tables and charts to look at trends in the data (Haydon & Musti-Rao, 2011). The number of daily strikes earned during baseline and the intervention phases of the study were analyzed to look at the percentage of non-overlapping data points to attempt to establish a pattern between the use of BSP, the use of School Dollars and the number of off-task strikes participants received during each session for the duration of the study.

Results

The results for Julian are presented in Figure 1 and show the number of strikes for off-task behavior during baseline and each intervention. In Figure 1 the x-axis is the session number and the y-axis is the number of strikes for off-task behavior. For baseline, Julian had a mean score of 10.75 with a range from 10 to 11 strikes. The mean for the BSP phase was 9.57 with a

range of 8-11 strikes. The mean for the School Dollars phase was 5.5 with a range of 5-7 strikes.

The mean for the BSP + School Dollars phase was 4.5 with a range of 4-6 strikes.

Figure 1. Julian's frequency of strikes for off-task behavior per session.

The results for Cassandra are presented in Figure 2 and show the number of strikes for off-task behavior during baseline and each intervention. In Figure 2 the x-axis is the session number and the y-axis is the number of strikes for off-task behavior. For baseline, Cassandra had a mean score of 8.75 with a range from 8 to 9 strikes. The mean for the BSP phase was 7.42 with a range of 6-8 strikes. The mean for the School Dollars phase was 5.5 with a range of 5-7 strikes. The mean for the BSP + School Dollars phase was 4.5 with a range of 4-6 strikes.
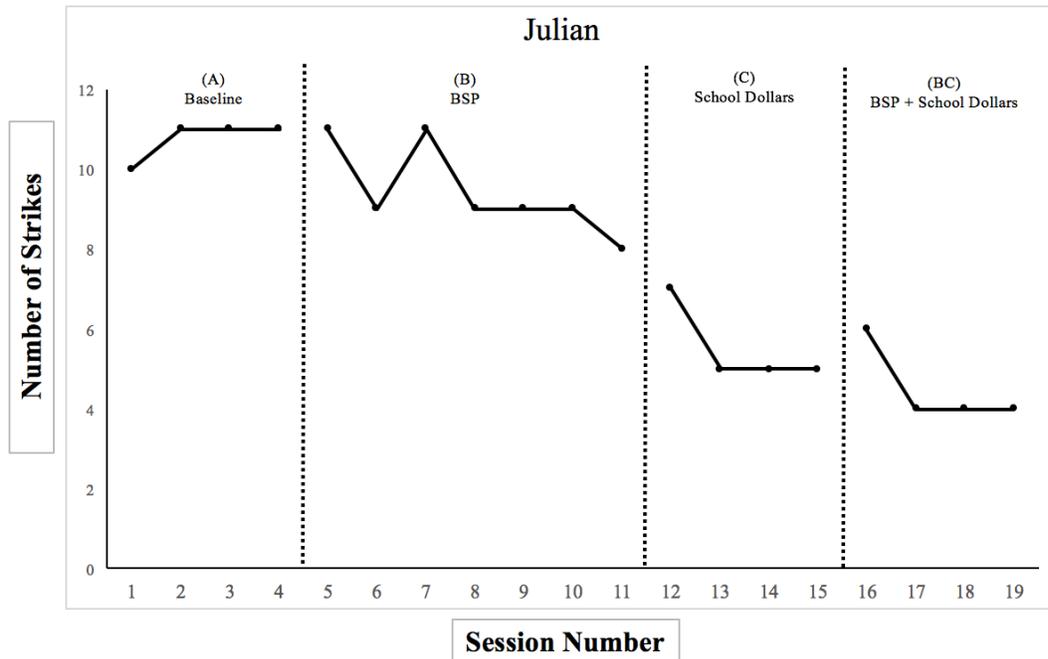
Figure 2. Cassandra's frequency of strikes for off-task behavior per session.

The results for Ricardo are presented in Figure 3 and show the number of strikes for off-task behavior during baseline and each intervention. In Figure 3 the x-axis is the session number and the y-axis is the number of strikes for off-task behavior. For baseline, Ricardo had a mean score of 10.25 with a range from 10 to 11 strikes. The mean for the BSP phase was 10.25 with a range of 9-11 strikes. The mean for the School Dollars phase was 8.75 with a range of 8-9 strikes. The mean for the BSP + School Dollars phase was 9.25 with a range of 7-10 strikes.
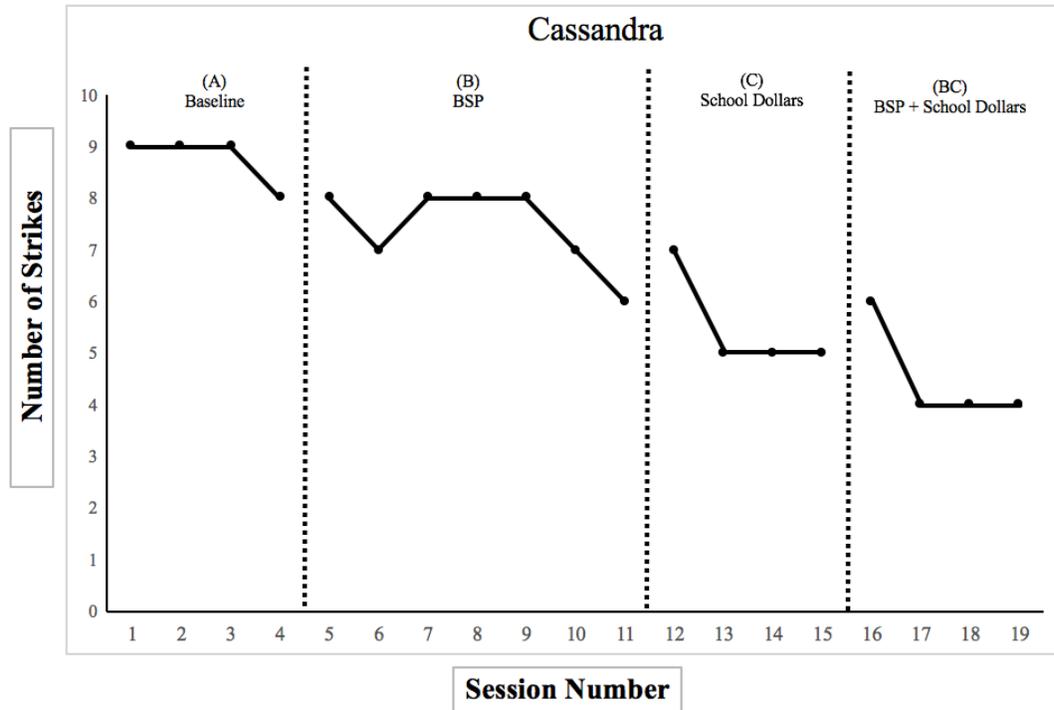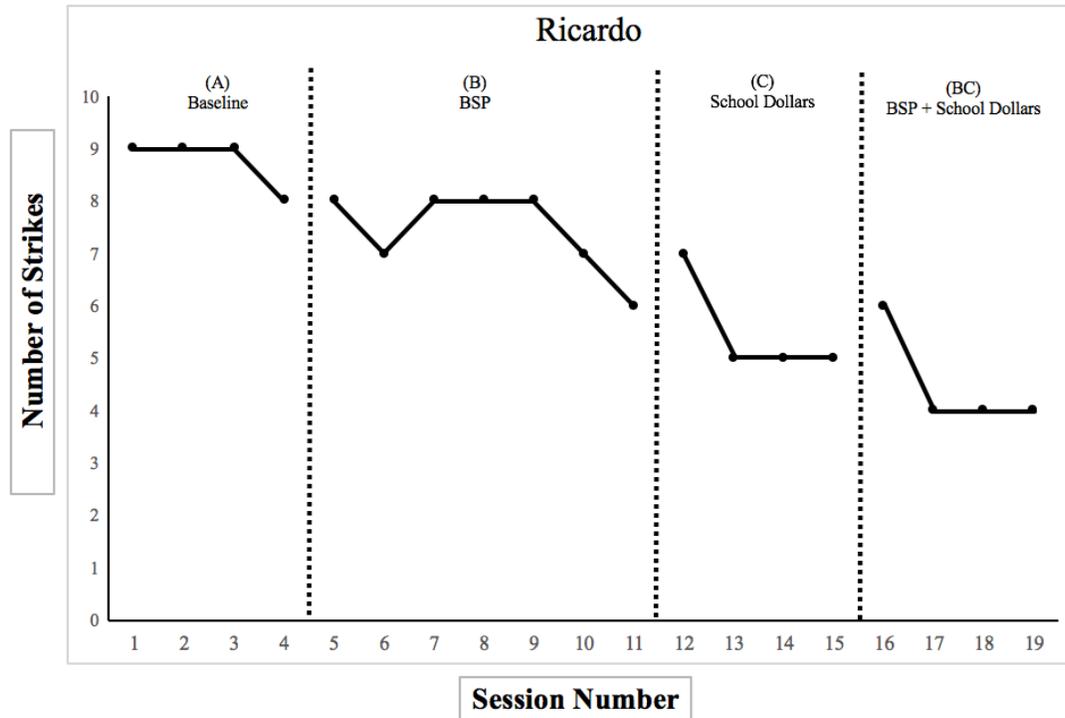
Figure 3. Ricardo's frequency of strikes for off-task behavior per session.

Discussion

This study was designed to examine how BSP and the use of School Dollars could positively influence students' behavior in a math class to reduce their number of strikes for off-task behavior. Based on the data collected, there was a reduction in the number of strikes for the three participants during the School Dollars phase of the study. Furthermore, there were no overlapping data points for the three participants between the School Dollar phase and baseline; thus, indicating a functional relationship between implementation of School Dollars and a decrease in disruptive in-class behavior. The fact that there was no overlapping data indicates that the intervention was highly effective. The results from this current study are similar to findings in previous research; indicating, the use of incentives for middle school students can have a positive impact on in class behavior (Eckert et al., 2004; Jung, 1971; Madjar & Cohen-Malayev, 2016).

Julian and Cassandra showed immediate improvement beginning with the first intervention phase (i.e., BSP); however there was 45% of overlapping data with the baseline phase for both participants. Julian exhibited some difficulties at the beginning of the first intervention. It seemed that he was trying to adapt to the reinforcement that was being given to him. When analyzing the data of Julian and Cassandra, there was no visible evidence as to which of the intervention was more efficient at targeting off-task behavior. This is because as the two participants transition between phases, the number of strikes decreased at each phase. This downward trend was consistent for both Cassandra and Julian; in fact, both participants ended the study with the same number of strikes. However, considering that Julian started with a higher number of strikes than Cassandra, we can conclude that the intervention had a bigger impact on Julian.

As for Ricardo, he did not show much improvement on his overall number of strikes. His beginning number of strikes was 11 and by the end of the study he had 10. However, during School Dollar phase, Ricardo did show an improvement, but then during BSP +School Dollar phase, the number of strikes increased. Even though Ricardo's number of strikes did not go down significantly and he did not improve by much, it is visible by the results that his strikes did go down during the School Dollar phase. Therefore, it seems logical to assert that School Dollars may be the best motivator for Ricardo at this time.

Based on the data analysis and comparison of baseline and interventions for the three participants, the School Dollars phase for the participants did not show any overlapping data points with baseline. Also, all participants demonstrated an improvement in their number of strikes during this phase. Therefore, in this study, School Dollars was an effective intervention to

reduce off-task behavior. Although Cassandra and Julian showed the biggest improvement in this study, Ricardo was able to improve at least during one intervention.

The three students in this study showed more interest in receiving tangible reinforcements (i.e., School Dollars) rather than social incentives (i.e., BSP). The participants in the study improved their number of strikes for off-task behavior during the BSP phase. However, School Dollars were more effective. As both interventions can be used to reduce off-task behavior in the classroom, the used of tangible reinforcements such as, School Dollars, seemed to be more beneficial and effective to reduce off-task behavior in the classroom. It is also important to discuss some of the factors that might have impacted the effectiveness of School Dollars in this study.

This study was conducted on a group of eighth graders. In seventh grade, the students are also exposed to School Dollars. This is because of the implementation of PBIS at the school. Part of the school wide interventions of PBIS is School Dollars. Also, some of the students come from elementary schools where they have been exposed to a form of School Dollars. The students are used to this form of incentive and are aware of what they need to do to receive this incentive from their teachers. The previous connection with School Dollars might have influenced the students' behavior and therefore impacted the results of the study.

Limitations and Directions for Future Research

There are several limitations that may have impacted this study. For example, this study contained a small convenience sample of three participants and was conducted for a short time frame. Future studies should consider a larger sample size and a School Dollar intervention conducted for a longer period. This will allow the researcher to determine if School Dollars can be equally successful for a larger population over a longer period. In addition, before the start of

the study, one student had to be replaced because of changes in classroom placement. It was

challenging to find another student in the same classroom that exhibited the behaviors being

targeted in this study. This unexpected challenge delayed the initiation of the research by three

days.

Another unexpected situation was that Ricardo was going through a difficult time at

home. His parents were getting a divorce. By the time the counselors communicated this

situation to the teachers, it was too late to withdrawal him from the study. The only option was to

continue with the study and the selected interventions. These outside influences may have

impacted the results. During the study, new students were added to the classroom. The

atmosphere of the class changed since the new students were trying to adapt to their new teacher

and the teacher was trying to adapt to them. This might have impacted the way the teacher was

connecting with the students and the effectiveness of intervention delivery.

Based on the results, it was during the School Dollars phase that all three participants

showed an improvement with no overlapping data points between School Dollars and baseline.

The use of incentives as a school-wide approach to positive behavior management in the middle

school setting may be a promising solution to improve behavior on campus. Furthermore,

middle school teachers can easily implement School Dollars as a classroom incentive to

positively influence in class behavior.

References

Austin, J. L., & Soeda, J. M. (2008). Fixed-time teacher attention to decrease off-task behaviors of typically developing third graders. *Journal of Applied Behavior Analysis*, *41*, 279–283. doi:10.1901/jaba200841279

Axelrod, S. (1977). *Behavior Modification for the Classroom Teacher.* New York: McGraw Hill.

Bandura, A. (1969). Principles of behavior modification. New York: Holt, Rinehart and Winston.

Berger, N. I., Manston, L., & Ingersoll, B. (2016). Establishing a scale for assessing social validity of skill building interventions for young children with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 46*, 3258-3269. doi: 10.1007/s10803-016-2863-9

Delin, C., & Baumeister, R. (1994). Praise: More than just social reinforcement. *Journal for the Theory of Social Behaviour*, *24*, 219-241. doi: 10.1111/146859141994

Dunlap, G., Lovannone, R., Wilson, K. J., Kincaid, D. K., & Strain, P. (2010). Prevent-teach-reinforce: A standardized model of school-based behavioral intervention. *Journal of Positive Behavior Interventions*, *12*, 9–22. doi:10.1177/1098300708330880

Dweck, C. S. (2007). The perils and promises of praise. *Educational Leadership, 65,* 34–39.

Eckert, T., Lovett, B., & Little, S. (2004). Extrinsic reinforcement in the classroom: Bribery or best practice. *School Psychology Review*, *33*, 344-362.

Fefer, S., Demagistris, J., Shuttleton, C., Kenkel, M., & Silverman, K. (2016). Assessing adolescent praise and reward preferences for academic behavior. *Translational Issues in Psychological Science*, *2*, 153-162. doi:10.1037/tps0000072

Fullerton, E. K., Conroy, M. A., & Correa, V. I. (2009). Early childhood teachers' use of

     specific praise statements with young children at risk for behavioral disorders.

     Behavioral Disorders, *34*, 118–135.

Gable, R. A., Hester, P. H., Rock, M. L., & Hughes, K. G. (2009). Back to basics: Rules, praise,

     ignoring, and reprimands. *Intervention in School and Clinic*, *44*, 195–205. doi:10.1177/

     1053451208328831

Hancock, D. (2000). Impact of Verbal praise on College Students' Time Spent on Homework.

     *Journal of Educational Research***,** *93*, 384-390. doi: 10.1080/00220670009598733

Haydon, T., & Musti-Rao, S. (2011). Strategies to increase behavior-specific teacher praise in an

     inclusive environment. *Intervention in School and Clinic*, *47*, 91-97.

     doi: 10.1177/1053451211414187

Henderlong, J., Lepper, M., & Eisenberg, N. (2002). The effects of praise on children's intrinsic

     motivation: A review and synthesis. *Psychological Bulletin*, 774-795.

     doi: 10-1037/003329091285774

Hester, P. P., Hendrickson, J. M., & Gable, R. A. (2009). Forty years later-The value of praise,

     ignoring, and rules for pre- schoolers at risk for behavior disorders. *Education and*

     Treatment of Children, *32*, 513–535.

Holas, I., & Huston, A. C. (2012). Are middle schools harmful? The role of transition timing,

     classroom quality and school characteristics. *Journal of Youth and Adolescence, 41,*

     333–345. http:// dx.doi.org/10.1007/s10964-011-9732-9

Jenkins, L., Floress, M., & Reinke, W. (2015). Rates and types of teacher praise: A review and

     future directions. *Psychology in the Schools*, *52*, 463-476. doi: 10.1002/pits.21835

Jung, S.M. (1971). Criterion measures for educational incentives. *Psychology in the Schools,* 8,

121-128. doi: 10.1002/1520-6807

Kennedy, C. H. (2005). *Single-case designs for educational research.* Boston, MA: Allyn and

Bacon.

Lipe, D., & Jung, S. (1971). Manipulating incentives to enhance school learning. *Review of*

Educational Research, *41*, 249-280.

Madjar, N., & Cohen-Malayev, M. (2016). Perceived school climate across the transition from

elementary to middle school. *School Psychology Quarterly*, *31*, 270-288.

doi:10.1037/spq0000129

Middleton, J., & Spanias, P. (1999). Motivation for Achievement in Mathematics: Findings,

Generalizations, and Criticisms of the Research. *Journal for Research in Mathematics*

Education, 30, 65-88. doi:10.2307/749630

Misiowiec, S. (2006). *Positive reinforcement in the classroom.* Available from ProQuest

Dissertations & Theses Global: The Humanities and Social Sciences Collection.

Retrieved from https://search.proquest.com/docview/304915545?accountid=10355

Nelson, J. R., Benner, G. J., Lane, K., & Smith, B. W. (2004). An investigation of the academic

achievement of K-12 students with emotional and behavioral disorders in public school

settings. *Exceptional Children*, *71*, 59–73. doi: 10.1177/001440290407100104

No Child Left Behind Act of 2001, 20 U.S.C. 70 § 6301 *et seq*. (2002).

Pellegrini, A. D. (2002). Bullying, victimization and sexual harassment during the transition to

middle school. *Educational Psychologist, 37,* 151–163. doi: 10.1207/S15326985EP3703

Partin, T., Robertson, R., Maggin, D., Oliver, R., & Wehby, J. (2009). Using teacher praise and

opportunities to respond to promote appropriate student behavior. *Preventing School*

Failure: Alternative Education for Children and Youth, *54*, 172-178.

doi: 10.1080/10459880903493179

Reinke, W. M., Lewis-Palmer, T., & Martin, E. (2007). The effects of visual performance

feedback on teacher use of behavior-specific praise. *Behavior Modification*, *31*, 247–263.

doi:10.1177/0145445506288967

Shores, R. E., Gunter, P. L., & Jack, S. L. (1993). Classroom management strategies: Are they

setting events for coercion? *Behavioral Disorders*, *18*, 92–102. Retrieved from

http://www.jstor.org/stable/23887084

Sutherland, K. S., & Wehby, J. H. (2001). The effect of self-evaluation on teaching

behavior in classrooms for students with emotional and behavioral disorders. *The Journal

of Special Education*, *35*, 161–171. doi: 10.1177/002246690103500306

Sutherland, K. S., Wehby, J. H., & Copeland, S. R. (2000). Effects of varying rates of

behavior specific praise on the on-task behavior of students with emotional and

behavioral disorders. *The Journal of Emotional and Behavioral Disorders*, *8*, 2-8.

doi: 10.1177/106342660000800101

Sutherland, K. S., Copeland, S., & Wehby, J. II. (2001). Catch them while you can:

Monitoring and increasing your use of effective praise. *Beyond Behavior, 11,* 46-49.

doi: 0.1177/0040059916643707

Wagner, V., & Riener, G. (2014). Peers or Parents? On the Working of Social Incentives in

School: Evidence from a Large-Scaled Field Experiment in Germany. Retrieved from

http://www.parthenimpact.com/parthenuploads/78/2015/add_1_258731_5NlSVXFM1c.p

df

Walker, H. M., Colvin, G., & Ramsey, E. (1999). *Antisocial behavior in schools: strategies and best practices* (2nd ed.). Boston, MA: McGraw Hill.

Wang, M. T., & Holcombe, R. (2010). Adolescents' perceptions of school environment, engagement, and academic achievement in middle school. *American Educational Research Journal, 47,* 633– 662. doi: 10.3102/0002831209361209

Wills H. P., Kamps D., Hansen B., Conklin C., Bellinger S., Neaderhiser J., Nsubuga B. (2010). The classwide function-based intervention team program. *Preventing School Failure, 54,* 164–171. doi:10.1080/104598809034962301

Appendix A

Observer Sign-In Sheet

Session	Date	Note/Message	Signature/Initial

Appendix B

Daily Checklist

Off-Task Behavior Definition:

• Light Sounds: mumble, hum • Day Dreaming • Looking around the room or at other students • Looking out window • Playing with; backpack, desk, folders, or materials • Do other things other than the activity • Annoying and distracting to others • Pestering • Ask a lot of obvious questions • Roll on the floor, crawl under tables • Bother other students	• Make frequent and unnecessary comments and questions • Get out of seat frequently • Hands on others and in others' space and belongings • Doing everything but what they should be • Failing to transition appropriately • Out of line, playing around, horse play, etc • Talk to others frequently • Throw objects • Yell out • Make noises

Checklist

	Student 1	Student 2	Student 3
Total:			

Appendix C

Actions to Consider for BSP

Action	**Check if BSP was not given**		
	Student 1	**Student 2**	**Student 3**
Student has materials out and ready to start class.			
Student completed the warm up.			
Student is working productively on the assignment			
Student is working productively with his/her group			
Student is participating in class discussions			
Student is asking questions relevant to the task			
Student is quietly working on an assignment			
Student works until the teacher releases them to pack their materials			
Student cleans his/her materials			

Appendix D

Actions to Consider for School Dollars

Action	Check if school dollars were not given		
	Student 1	Student 2	Student 3
Student has materials out and ready to start class.			
Student completed the warm up.			
Student is working productively on the assignment			
Student is working productively with his/her group			
Student is participating in class discussions			
Student is asking questions relevant to the task			
Student is quietly working on an assignment			
Student works until the teacher releases them to pack their materials			
Student cleans his/her materials			

Appendix E

Social Validity Questionnaire

Questions:	1 Strongly disagree	2 Disagree	3 Agree	4 Strongly Agree
1 This treatment was effective				
2 I found this treatment acceptable for increasing the student's skills				
3 Using the treatment improved skills across multiple contexts (home, classroom, community)				
4 I think the student's skills would remain at an improved level even after the treatment ends				
5 This treatment improved family functioning				
6 This treatment quickly improved the student's skills				
7 I would be willing to carry out this treatment myself if I wanted to increase the student's skills				
8 I would suggest the use of this treatment to other individuals				
9 This treatment decreased the level of stress experienced by the student's family				