

Teachers' Perceptions and Utilization of the PBIS Rewards System

By

Destiny Tidwell

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master  
of Arts in Psychology

Middle Tennessee State University

May 2022

## ACKNOWLEDGEMENTS

I would like to thank the entirety of my support system. Specifically, I would like to thank my grandma, Regenna. I would not be here if it wasn't for you. Lastly, I would like to thank the participating middle school and school district for allowing me to conduct this research.

## ABSTRACT

One way to acknowledge when students meet expectations is to provide some type of an individual reward. The PBIS Rewards system is an automated schoolwide PBIS management system (Positive Behavioral Interventions and Supports Rewards, n.d) that tracks positive behavior points earned per student and number of points given out by individual teachers. The purpose of this study was to explore how middle school teachers' perceptions of positive reinforcement and the PBIS Rewards system is related to their willingness to distribute positive behavior points to students in their classes. Results from qualitative interviews, PBIS Rewards point data, and survey results showed that there was a significant variation in the number of Rewards points that teachers in the schools distributed. Further, many teachers were unsure of what behaviors warrant points and how to implement the system with fidelity. Implementation training and clear PBIS Rewards guidelines are suggested to alleviate these inconsistencies.

## TABLE OF CONTENTS

LIST OF TABLES.....	vii
LIST OF FIGURES.....	viii
CHAPTER I: LITERATURE REVIEW.....	1
Overview.....	1
Three Tiers of PBIS.....	4
Evidence of PBIS Effectiveness.....	5
Rewards Systems.....	7
Teacher Perspectives.....	9
PBIS Rewards System.....	13
Purpose of the Current Study.....	14
Hypotheses.....	14
Hypothesis 1.....	14
Hypothesis 2.....	14
Hypothesis 3.....	15
Hypothesis 4.....	15
Hypothesis 5.....	15

CHAPTER II: METHOD.....	16
Participants.....	16
Materials.....	16
PBIS Rewards Data.....	16
Reinforcement/Rewards Survey.....	18
Qualitative Interviews.....	19
Procedures.....	19
Survey Coding and Teacher Completion.....	19
PBIS Rewards Data Coding.....	20
Teacher Interviews.....	20
CHAPTER III: RESULTS.....	21
Survey Results.....	21
PBIS Rewards System Data Results.....	24
Interview Results.....	25
Positive Qualities.....	26
Lack of Student Buy-In.....	26
Lack of Training.....	27

Distinct Groups of Students Getting More Points than Others.....	28
Funding Issues.....	29
Unsure of What Behaviors Warrant Points.....	30
Rewards Work Better for Younger Students.....	31
Hypotheses Testing.....	31
CHAPTER IV: DISCUSSION.....	35
Limitations and Future Directions.....	41
REFERENCES.....	43
APPENDICES.....	49
APPENDIX A. REINFORCEMENT/REWARDS SURVEY.....	50
APPENDIX B. SURVEY ITEMS BY SCALE/SUBSCALE.....	53
APPENDIX C. INTERVIEW QUESTIONS.....	57
APPENDIX D. IRB APPROVAL.....	58

## LIST OF TABLES

1. Internal Consistency Ratings for Subscales.....	22
2. Descriptive Statistics of Results of PBIS Rewards Scale.....	23
3. Descriptive Statistics of Results of Perspectives Scale.....	23

## LIST OF FIGURES

1. Total Points Distributed by Each Teacher in First Nine Weeks..... 25



## **CHAPTER I: LITERATURE REVIEW**

### **Overview**

Dr. George Sugai and Dr. Rob Horner worked with colleagues in the late 1980's and early 1990's to develop what is now known as Positive Behavioral Interventions and Supports (PBIS). PBIS is an evidence-based three-tiered framework designed to improve and integrate all the data, systems, and practices affecting student outcomes every day (Positive Behavioral Interventions and Supports, n.d). Via PBIS, entire school districts and individual schools generate positive school environments that encourage appropriate behavior of all students (Missouri Schoolwide Positive Behavior Support, 2008). Research has consistently shown that a shift toward universal systems of supports minimizes disruptive and other problem behaviors in school and increases academic achievement (Bradshaw et al., 2010). As of 2018, more than 25,000 schools are implementing PBIS nationwide (Positive Behavioral Interventions and Supports, n.d).

PBIS operates broadly as a school-wide multi-tiered framework, and similarly, teachers implement a full continuum of PBIS practices in the classroom. Examples of PBIS practices in the classroom include things such as clearly posted behavioral expectations, some type of rewards system, and immediate and consistent feedback when students exhibit expected behaviors (Caldarella et al., 2018). When teachers successfully implement PBIS at the classroom level, individual student outcomes improve (Positive Behavioral Interventions and Supports, n.d). However, despite the increasing numbers of schools that are implementing school-wide PBIS practices, teachers are still struggling with managing problem behavior at the classroom level (Reinke et al., 2013). My view is

that these behavior management struggles may in part be related to teacher's views about positive reinforcement and implementation of the classroom rewards system component of PBIS.

A class-wide rewards system is a system in which students work either individually toward personal reinforcers or work with their peers toward group reinforcers (Chazin & Ledford, 2016). The connection between the school-wide rewards system and the classroom rewards system should be apparent to both teachers and students. An example of a classroom rewards system is when tickets given by the teacher to students exhibiting positive behaviors can later be traded in for activity or tangible rewards. Assemblies can be held periodically to recognize the students that have been exhibiting good behavior and receiving tickets in the classroom (Cressey et al., 2014). Having access to a school store where the student can spend the tickets they receive in the classroom is another way to link school-wide rewards with classroom systems.

If a rewards system is used at the classroom level, it is crucial for teachers to embrace the system and use it consistently. Fidelity of implementation is the mechanism by which valued outcomes are obtained (Mathews et al., 2013). This being the case, fidelity should be monitored and maintained when implementing any system aimed toward positively transforming student behaviors.

On a personal note, I met with a school PBIS team as part of my practicum experience and was surprised to find out that the teachers in the school have a variety of

perspectives involving what constitutes a good behavior that should receive PBIS

Rewards points. Some teachers give out points rapidly, while others only give students points when they exhibit exceptional behavior. I am interested in understanding what is behind these differences in teacher application of the same reward system. How do these differences impact the classroom behavior management system and student behavior? How does this influence the classroom participation in the school wide PBIS program? I have always been intrigued by the aspects of positive psychology that can be used in everyday classrooms and feel that a study that examines this topic can benefit teachers and students. School-wide PBIS will not be as effective in supporting positive student outcomes if teachers are implementing ineffective behavioral management at the classroom level (Reinke et al., 2013). Also, if teachers are not consistently implementing their rewards system, this would seem to make their classroom behavior management strategies less effective.

The purpose of this study was to explore teachers' perceptions of a classroom rewards system that is implemented school-wide. I was interested to see what teachers think about the specific rewards system, how they feel about giving out points for good behavior in the classroom, and what behaviors are being rewarded according to individual teachers. I was also interested in seeing how similar or different the amount of reward points distributed are across different groups such as teachers, students, grade level, and time of year.

### **Three Tiers of PBIS**

Positive Behavioral Interventions and Supports is a multitiered framework designed to meet the needs of all students irrespective of which level of support is needed. Tier I systems and practices affect every person in the school. Tier I is where school-wide positive behavioral expectations are defined and taught, and prosocial skills are emphasized and acknowledged (Positive Behavioral Interventions & Supports n.d.). Approximately 80% of students are responsive to the supports provided at Tier I.

Tier II is designed to provide targeted support for students who are not successful with Tier I supports alone, and who are at risk for developing more serious problems. Around 15% of the student population require Tier II supports. The goal is to proactively support these students so new problem behaviors do not arise or continue to get worse. Tier II supports often involve group interventions that include additional instruction for key social, emotional, and/or behavioral skills (Positive Behavioral Interventions & Supports, n.d.). Other common key Tier II practices include increased adult supervision, increased opportunity for positive reinforcement, increased pre-corrections, and increased instruction and practice with self-regulation and social skills.

Between 1-5% of students still need additional support beyond Tiers I and II. Tier III is for students who need more intensive, individualized support to improve their behavioral and academic outcomes. Tier III practices may include function-based assessments and wraparound supports, in addition to all key practices provided under Tier I and Tier II.

## **Evidence of PBIS Effectiveness**

There are eight core features of PBIS at the Tier I level. These include the leadership team, three to five positively stated school-wide behavioral expectations, a system to regularly acknowledge student appropriate behavior, instructional consequences for problem behavior, formal classroom management protocols, collection and use of data for decision-making about behavior, bully prevention procedures, and family engagement (Horner & Macaya, 2018). The core features of PBIS have been easily implemented in schools with high fidelity (Barrett et al., 2008; Horner et al., 2009; Mercer et al., 2017).

PBIS core features are associated with a variety of improvements for schools and students. Data from a five-year longitudinal effectiveness trial showed that schools trained in School Wide Positive Behavioral Interventions and Supports (SWPBIS) implemented the model with high fidelity and exhibited significant reductions in student suspensions and office discipline referrals (Bradshaw et al., 2010). Another study showed statistically significant decreases in office discipline referrals in SWPBIS schools, with increases in comparison schools that had not implemented SWPBIS. Further, as fidelity of SWPBIS implementation increased, office discipline referrals significantly decreased (Flannery et al., 2014). Another study conducted in Canadian schools showed that as one school moved from partial to full implementation of PBIS, office discipline referrals were reduced by more than half from partial implementation (518 office discipline referrals) to full implementation (252 office discipline referrals). PBIS effectiveness data has shown

that the greater the fidelity of implementation, the more likely reduction in problem behavior will occur, as indicated by reduction of school suspensions and number of office discipline referrals (Kelm et al., 2014).

An increase in prosocial behavior is another aspect of improvement associated with implementation of PBIS. Schools should aim to reduce problem behaviors, but a school system should also aim to increase the prosocial behaviors that students exhibit. Educators should teach students positive social skills and create an environment that fosters those positive behaviors. One study evaluated the effectiveness of an SWPBIS program, the Effective Behavior Support Program. The results showed that the program increased positive reinforcement for prosocial behaviors and decreased the occurrence of aggressive behaviors among students (Metzler et al., 2001). Another study found that implementation of the core features of PBIS is associated with increased emotional regulation in students that are at-risk for exhibiting problem behaviors (Bradshaw et al., 2012).

A third area of improvement associated with PBIS is improved academic achievement. As noted by Horner and Macaya (2018), positive behavioral support does not directly improve academic outcomes, but when students are more likely to attend school, more likely to be engaged in class, and more likely to view the school climate as welcoming and comfortable, they are more likely to learn. Horner et al. (2009) used a randomized, wait-list controlled effectiveness trial assessing the impact of SWPBIS in elementary schools. The researchers reported that improved implementation of SWPBIS

was functionally associated with increased third grade reading performance. A study conducted in Canada that followed one school as they moved from partial to full implementation of SWPBIS showed that student scores on the Foundational Skills Assessment (FSA), a high-stakes achievement test for the area, significantly increased from the partial to the full implementation years in all academic areas assessed. Specifically, for the fourth-grade class, results showed a 44% increase in reading scores from the previous year, a 56% increase in writing scores, and a 25% increase in math scores (Kelm et al., 2014). These studies suggest that PBIS can be an effective approach to boost student outcomes behaviorally, socially, and academically.

### **Rewards Systems**

As mentioned previously, one of the eight core features of PBIS at the Tier I level is a system to regularly acknowledge student appropriate behavior (Horner & Macaya, 2018). It is essential that schools have a rewards or recognition program in place to acknowledge students behaving appropriately. I am interested in the PBIS Rewards system and how teachers use it in their school. PBIS Rewards system is a computer-based system, but there are many different rewards systems that schools can implement to reinforce positive student behavior. Each of these systems allow students to work toward a reward while improving their behavior.

An example of a classroom rewards system used by Mr. Jorge, a third-grade teacher, was described in the PBIS Technical Guide on Classroom Data (2017). Mr. Jorge spent most of the first day of school with his 25 third graders explicitly teaching

classroom expectations and establishing his classroom as a positive learning environment. He also had each student sign Mr. Jorge's Class Constitution. According to the constitution, members of the classroom are to be respectful, responsible, and safe (expectations). If the students are able to follow the class constitution most of the time (during 80% of sampled opportunities when the mystery timer goes off) each day, they will earn 10 minutes of quiet music time at the end of the day. During this time, the students can read a book, start their homework, or do a quiet activity with a friend while listening to music. If the students are not meeting these expectations 80% of the times that the mystery timer goes off, they will spend the 10 minutes reviewing their classroom expectations so they can try and meet those expectations again tomorrow (Swain-Bradway et al., 2017). This is an example of a rewards system that is based on an interdependent group contingency.

There are also rewards systems that can be utilized in individual classrooms that carry over into school-wide rewards. A school implemented grade wide expectations for the fourth-grade class represented by the acronym CARE: Class, Academics, Respect, and Effort. For each area represented by the acronym CARE, there was a statement that described expected behavior. Positive behaviors were characterized as sunshine behaviors and problem behaviors were clouds. As a positive reinforcement system, fourth graders were given "sunshine tickets" when they exhibited expected CARE behaviors. Individual classroom teachers held a biweekly raffle where students could exchange their sunshine tickets for prosocial rewards (e.g., extra recess with peers, helping another teacher with an activity). Teachers informed the families about the system at the beginning of the year



and gave daily behavioral reports to parents in the form of a conduct mark on each student's homework agenda so the families can see how their child was doing behaviorally at school each day. The school counselor scheduled six assemblies a year to celebrate success of students in exhibiting CARE values and to recognize model students. Each teacher nominated one student each time that showed exemplary CARE values and that student got a certificate of achievement. During the assemblies, the students performed different skits, songs, etc., on the themes of CARE.

### **Teacher Perspectives**

In an article exploring the trends in the publications of the *Journal of Positive Behavior Interventions* over the past decade, the researchers noted that there has been an increasing interest in the adults in charge of implementation—noting that studies on social validity, fidelity, and staff behavior have doubled in the past decade (Clarke et al., 2018). Tyre et al. (2020) suggested this trend is a shift away from identifying evidence-based practices and toward how such practices are implemented and perceived. It is important to understand teachers' perspectives about how to best manage behavior because their perspectives likely influence their choice of a behavioral management strategy (Tillery et al., 2010) and process of implementation.

Teachers have expressed concerns about sending the message that every time a child behaves correctly, they should expect to be rewarded. One teacher noted that rewarding students for what they are supposed to do each day is like throwing herring bits to seals for doing tricks correctly at SeaWorld (Tyre et al., 2020). Looking at these

beliefs and concerns of teachers regarding reinforcement is critical to understanding their implementation of the rewards component of PBIS. The rewards component is one part of the overall PBIS program and is represented on the Benchmarks of Quality as a critical element for implementation of PBIS in a school system.

Though PBIS is an evidence-based practice that aims to proactively reduce inappropriate behavior by teaching and reinforcing appropriate behavior (Bradshaw & Leaf, 2010), some teachers remain reluctant to implement such practices (Chitoyo & Wheeler, 2009). For example, Roberts-Clawson (2017) interviewed teachers about their viewpoints of the PBIS framework. The researcher found that teachers expressed a variety of concerns such as the framework does not prepare students for the real world, it does not work for some students, and there is an absence of consequences for bad behavior. One of the teachers noted that an immediate consequence for a student exhibiting negative behavior tends to work better than using positive reinforcement to decrease negative behavior. This suggests that some teachers continue to use punitive reactive approaches to inappropriate behavior, even when PBIS practices are in place.

Another study highlighted middle school teacher concerns about differing levels of PBIS implementation by teachers across the school. One teacher hypothesized that a lack of support and consistency from colleagues could be due to individual teacher preferences. “A teacher with 35 years of experience isn’t going to care about these things; they want to run their classrooms their own way. Actually, every teacher wants that. They want some level of autonomy in their classroom...” (Tyre et al., 2020, p. 97).

Horner and Goodman (2009) noted that many teachers view reward systems as time consuming, expensive, and unnecessary. Some teachers believe rewards are good for elementary school students, but ineffective for middle and high school students. A common view that has been explored in research is that the use of extrinsic rewards actually diminishes intrinsic motivation, as expressed by the teachers in the Tyre et al. (2020) study. Researchers have hypothesized that the expectation of rewards can undermine intrinsic motivation and can thwart self-regulation (Deci et al., 1999; Tegano et al., 1991). However, many studies have concluded that effectively using rewards will have no detrimental effect on intrinsic motivation for students (Akin-Little et al., 2004; Cameron & Pierce, 1994; Cameron et al., 2001), and may increase self-regulation (e.g., Lohrmann & Talerico, 2004). Rewards are effective when they are age appropriate, tied to specific behaviors, delivered frequently, and delivered soon after the desired behavior is exhibited (Horner & Goodman, 2009).

So, how do schools secure teacher buy-in for implementing PBIS rewards systems? First, a school system should highlight success stories involving using rewards systems as an effective way to reduce problem behaviors and increase expected behavior. Second, Chitoyo and Wheeler (2009) noted that giving teachers the lead role in the rewards process will likely result in increased staff buy-in, which would help promote successful adoption of the program. One study found that three teachers implementing a variety of group contingencies (Independent, Interdependent, Dependent, and Randomized) with the reward of a Mystery Motivator in the classroom resulted in the reduced occurrence of disruptive behavior (Class 1: 58.7% of intervals with disruptive

behavior to 24.8% with GCs implemented; Class 2: 77.9% to 28.3%; Class 3: 87.9% to 44.4%). After the initial implementation of the four types of group contingencies, the teachers then picked their favorite type to further implement. When the teachers implemented their preferred type of group contingency, the students exhibited even more reduction of disruptive behavior (Class 1: 24.8% to 22.7%; Class 2: 28.3% to 26.9%; Class 3: 44.4% to 34.4%) (Ennis et al., 2016). Teacher 1 reported that she picked her preferred type of group contingency based on student motivation, accountability, and fairness. Teacher 2 reported that accountability was the most critical factor for picking her preferred group contingency, while Teacher 3 reported that efficacy was the most important factor for her choice of group contingency. It is crucial to investigate the perspectives of teachers for rewards implementation in the classroom, for they are the facilitators of student change. Thus, it is important that teachers view the rewards system as acceptable and socially valid because they will ultimately be responsible for implementing and maintaining the program (Chitoyo & Wheeler, 2009).

Feuerborn et al. (2016) noted that teachers in elementary schools are more likely to view teaching and rewarding social and behavioral expectations as a part of their role, while secondary teachers in middle and high schools tend to put increasing responsibility on the students to manage their behavior with no supports. However, research has shown using rewards systems can be beneficial for shaping behavior and improving motivation regardless of age. Kok (2014) found that the majority of college students they interviewed said that extrinsic rewards helped motivate them when learning in high school. Additionally, Swain-Bradway et al. (2013) found that a rewards system for

teachers that worked in one school was allowing teachers to write their name on the back of positive tickets they give to students, that could then be drawn out of a hat at a later time to reward teachers with a gift card. Rewards seem to be universally appreciated when used effectively. Horner and Goodman (2009) noted that staff recognition lunches, staff celebrations, and certificates of training are all different ways to motivate and reward staff in school. When adults realize that extrinsic reinforcements work to motivate them, they may be more likely to view implementation of rewards systems in a positive light.

### **PBIS Rewards System**

PBIS Rewards is a Software-as-a-Service solution that provides an automated schoolwide PBIS management system (Positive Behavioral Interventions and Supports Rewards, n.d). The system is designed to simplify steps for implementation and tracking of the PBIS data in schools. Data includes points per student, points given out by teachers, registration and tracking of who attends what events, and more. Teachers can give out “Positive Behavior” points, which are worth one point and are distributed by teachers to students for completing simple tasks and rewarding them for doing what is expected of them. “Exceptional” points are worth three points and are distributed by teachers to students who go above and beyond what they are expected to. School administrators can track how teachers are using PBIS and how the program is improving the school culture. The PBIS Rewards system can be accessed by school administrators, teachers, students, and even parents. Teachers can reward points to students based on

their exhibition of positive behavior disciplines, and students are able to then trade the points in for incentives, depending on what the school district provides.

I searched the literature and found that there is a gap in knowledge about the usage of the PBIS Rewards System. There are no studies thus far concerning the use of this specific rewards system or teachers' perceptions about distributing points under this system. The current study aimed to partially fill this gap in information by looking at teacher perceptions of the PBIS Rewards System at a rural middle school.

### **Purpose of the Current Study**

The purpose of this study was to determine whether teacher perceptions of SWPBIS and their beliefs about the use of positive reinforcement are related to their willingness to award PBIS Rewards points to individual students in the classroom setting.

### **Hypotheses**

***Hypothesis 1.*** It was hypothesized that there would be a large variation in the PBIS Rewards points distributed among teachers. The PBIS Rewards System allows the administrators to set Rewards points distribution goals for teachers (Positive Behavioral Interventions and Supports Rewards, n.d). However, the school that participated in this study does not utilize this feature of the PBIS Rewards System, so it was hypothesized there would be a large variation in the distribution of Rewards points among teachers.

***Hypothesis 2.*** It was hypothesized that teachers who reflected more negative attitudes about rewards and positive reinforcement, based on Perspectives scale scores,

would distribute fewer points to students than teachers who reflected more positive attitudes about rewards and positive reinforcement. This hypothesis was formulated to explore the link between teacher attitudes and their utilization of PBIS (Chitoyo & Wheeler, 2009; Roberts-Clawson, 2017; Tyre et al., 2020).

***Hypothesis 3.*** It was hypothesized that teachers would distribute more PBIS Rewards points in the first half of the first nine weeks of school than in the second half of the first nine weeks of school. This was hypothesized because I believed when teachers are first meeting students and introducing them to the classroom, they will want to make the students feel comfortable—so they will award more points. When the teachers are acclimated to their classroom and the students they teach, I believed they would start fading out the distribution of Rewards points.

***Hypothesis 4.*** It was hypothesized that there would be fewer office discipline referrals (ODRs) in the classrooms of teachers who gave out more PBIS Rewards points to students than in classrooms of teachers who gave fewer PBIS Rewards points to students. This hypothesis is supported by research that suggests that implementation of SWPBIS can result in reductions of ODRs across the school (Bradshaw et al., 2010; Flannery et al., 2014; Kelm et al., 2014).

***Hypothesis 5.*** It was hypothesized that sixth-grade teachers will distribute more PBIS Rewards points to students than eighth-grade teachers. This hypothesis is consistent with research suggesting that some teachers believe rewards work better for younger students as opposed to older ones (Horner & Goodman, 2009).

## **CHAPTER II: METHOD**

### **Participants**

The participating middle school was located in a rural town in Middle Tennessee. The school consists of 546 (258 female, 288 male) students, and serves sixth through eighth grade. The student to teacher ratio is 15:1, and there are 36 full time teachers and 11 student support service assistants employed at the school. 95.7% of teachers at the school have three or more years of experience. There is a 12% minority enrollment at the school, where 88% of students are Caucasian. Training for implementation of the PBIS Rewards system is offered to teachers in the beginning of the year, then as needed the rest of the year. The school has never conducted a Benchmarks of Quality (BoQ) assessment of their PBIS system. For the current study, 37 teachers/aides at the school completed the consent form and the Reinforcement/Rewards survey. No teachers or aides that were asked to participate refused to do so. These 37 individuals were included in the study and the analysis of Rewards points and survey results.

### **Materials**

#### ***PBIS Rewards Data***

The middle school has been using PBIS Rewards for three years now, beginning in 2018. Teachers reward individual students with points in their classrooms. Students accumulate points and at the end of the quarter a PBIS assembly is held, and students can trade in their points for incentives. There is a wide variety of merchandise that can be bought with the Rewards points. There are small rewards such as cool pens, notebooks,



and other material items. There are also raffles where students can put their points in a drawing for a grand prize such as an iPod or a bike. Some raffles include opportunities such as being the principal for a day or having lunch in the teacher's lounge. Lastly, and the school-wide favorite, students can trade in their points for an Escape Room experience. Students go in a room created by one of the related arts teachers and go through clues and puzzles to find a way to escape. The Escape Room experience is a chance to do something that some of these students might never have the chance to do if it wasn't for the PBIS program.

The middle school's PBIS Rewards data from the first nine weeks of the 2021-2022 school year was used to explore point distributions between different groups of teachers within the school. I received the PBIS Rewards data for the middle school via a flash drive. There are many different types of score reports that can be run using the data set. For example, point distribution can be sorted by groups such as grades or academic subjects. Reports can provide such information as point distribution by teacher ranked from highest to lowest and points received by individual students ranked highest to lowest. The reports also show the amount of "Positive Behavior" points, "Exceptional" points, and "Total" points that are either distributed by each teacher or rewarded to each student. For the current study, I was given three score reports via the flash drive: Total points per teacher for the first half of the first nine weeks, total points per teacher for the second half of the first nine weeks, and total number of office discipline referrals per teacher for the first nine weeks of school.

### ***Reinforcement/Rewards Survey***

A survey aimed at understanding perceptions about reinforcement created by the primary researcher was also administered. The Benchmarks of Quality (BoQ), an assessment created by the Center on PBIS, helped guide the creation of my survey questions. The Tier I Benchmarks of Quality can be found at the Center on PBIS website. The BoQ surveys the quality of the rewards program by looking at the consistency of the rewards system elements across campus, the variety of rewards, rewards being linked to expectations, rewards maintaining student interest, and students being involved in identifying preferred incentives (Kincaid et al., 2010). The Reinforcement/Rewards survey consists of 38 questions (See Appendix A for a copy of the survey and see Appendix B for a breakdown of questions by subscale). The response option for each question is represented using a 5-point Likert scale (i.e., 1 = “*strongly disagree*”, 2 = “*disagree*”, 3 = “*neither agree nor disagree*”, 4 = “*agree*”, and 5 = “*strongly agree*”). The first part of the survey consists of 14 questions and is aimed at understanding the teacher’s use of the Rewards system. This scale is broken down into four subscales: Frequency of Usage, Why the Points Work, Personal Understanding of System, and Student Understanding of System. The questions from each of the subscales are randomly scattered throughout the “PBIS Rewards” scale.

The second part of the survey consists of 24 items and is aimed at understanding the teacher’s perceptions or attitudes about reinforcement and rewards in general. The “Perspectives” scale is broken down into two subscales: Positive Attitudes and Negative

Attitudes. The Positive Attitudes subscale consisted of 13 positively worded questions that aimed to capture positive perspectives of reinforcement and rewards, while the Negative Attitudes subscale consisted of 11 negatively worded questions that aimed to capture negative perspectives of reinforcement and rewards. The overall score for the “Perspectives” scale was computed by adding the responses for the Positive Attitudes subscale and reverse scoring the responses for the Negative Attitudes subscale, then summing these numbers together to get an overall score. The questions from both subscales are randomly scattered through the “Perspectives” scale.

### ***Qualitative Interviews***

Additionally, I conducted qualitative interviews using a list of five open-ended questions to further explore the perceptions of five teachers that volunteered. See Appendix C for a list of interview questions I asked each participant.

## **Procedures**

### ***Survey Coding and Teacher Completion***

I generated a random list of numbers and assigned each teacher employed at the middle school with a number from the generated list. I kept the list for later in order to be able to match survey results and Rewards points data. I labeled the surveys with the numbers and gave each survey out to the corresponding teacher to complete on the last day of school before winter break at the middle school. The principal agreed to email the teachers asking them to meet briefly before the holiday luncheon to complete the survey. I verbally explained to the teachers the purpose of the survey and how the results would

be used. The teachers completed the survey and, when completed, placed their consent form on one table and their survey on another, separating them so the surveys would remain blinded.

### ***PBIS Rewards Data Coding***

At a later time, I matched up the survey number to the corresponding teacher's points and ODR's from the PBIS Rewards reports. Once each report was coded and the attendance secretary confirmed that the information was coded correctly and completely blinded, I shredded the original copy of the master list so no identifiable information remained. I then used both the survey results and the PBIS Rewards data to test each hypothesis.

### ***Teacher Interviews***

Lastly, five teachers who volunteered were interviewed to further understand individual teachers' perceptions about the PBIS Rewards System. I asked each teacher five open-ended questions during their individual interviews via Zoom to allow for optimal understanding of the perspectives of each teacher. After each individual interview, the audio was transcribed into a word document format via Zoom. I then put each word document into the Max Qualitative Data Analysis (MAXQDA) program. This program is used to code and analyze different types of qualitative data. After each interview was transcribed and coded, I looked for recurring themes and patterns in the teacher interviews.

## **CHAPTER III: RESULTS**

### **Survey Results**

The Reinforcement/Rewards Survey consists of 38 questions that fall into six different subscales. The Frequency of Usage scale contained three items measuring how often teachers were using PBIS Rewards system in their classroom. The Why the Points Work subscale consisted of four questions that measured teacher perceptions about how/if the point system and Rewards celebration works. The Personal Understanding subscale consisted of three questions that measured how well teachers understand the Rewards system themselves. The Student Understanding subscale consisted of four questions that measured teachers' perceptions about student understanding of the Rewards system. Lastly, the Positive Attitude subscale consisted of 13 positively worded items about PBIS and reinforcement in general, and the Negative Attitudes subscale consisted of 11 negatively worded items about PBIS and reinforcement in general. The internal consistency ratings for each subscale can be found in Table 1 on the following page.

Table 1

*Internal Consistency Ratings for Subscales*

Subscale	Items	Cronbach's Alpha
Frequency of Usage	5,10,11	0.74
Why the Points Work	4,7,12,13	0.69
Personal Understanding	1,2,8	0.66
Student Understanding	3,6,9,14	0.70
Positive Attitudes	15,17,19,20,22,24,26,28,29,30,32,34,38	0.84
Negative Attitudes	16,18,21,23,25,27,31,33,35,36,37	0.85

A total of 37 teachers completed the Reinforcement/Rewards survey. The participating teachers were 7 sixth-grade teachers; 5 seventh-grade teachers; 6 eighth-grade teachers; 10 student support service teachers; five student support service aides; and four related arts teachers. A summary of the PBIS Rewards scale/subscales results can be found in Table 2. A summary of the Perspectives scale/subscales can be found in Table 3.

Table 2

*PBIS Rewards Scale Descriptive Statistics*

Scale	Average # of Points	Range of Total Possible Points	Standard Deviation	Average Percentage
<b>PBIS Rewards Scale</b>	51.76	14 - 70	7.25	73.94%
Frequency of Usage	11.33	3 - 15	2.46	75.53%
Why the Points Work	14.16	4 - 20	2.79	70.7%
Personal Understanding	12.27	3 - 15	1.79	81.8%
Student Understanding	14	4 - 20	2.88	70%

*Note.*  $N = 37$

Table 3

*Perspectives Scale Descriptive Statistics*

Scale	Average # of Points	Range of Total Possible Points	Standard Deviation	Average Percentage
<b>Perspectives Scale</b>	86.73	24 - 120	11.90	72.28%
Positive Attitudes	49.81	13 - 65	5.98	76.63%
Negative Attitudes	36.92	11 - 55	6.69	67.12%

*Note.*  $N = 37$

The survey data show that the scale with the highest average percentage of points was Personal Understanding, with the lowest rated scale being Student Understanding.

The average percentage of points was similar across four of the five scales. On the

Frequency of Usage scale, 15 teachers had a score of 10 or below (66%). The Perspectives scale was broken into two subscales: Positive and Negative Attitudes. The Negative Attitudes scale was reversed scored. This means that if a teacher rated a negatively worded question as a high score, it would be transformed into a corresponding low score. For example, if a teacher rated the question “It is not my job to teach students how they should behave” as 5 = *Strongly Agree*, it would be reversed score to a 1. Given this, higher scores on the Perspectives scale and the Positive and Negative Attitudes subscales indicate that teachers rated the negatively worded questions lower, and the positively worded questions higher. Out of all the scales and subscales, the Negative Attitudes scale was the lowest rated scale. This means that teachers, on average, showed more agreement with negatively worded questions as opposed to positively worded questions.

### **PBIS Rewards System Data Results**

A graph depicting the number of points distributed by each teacher can be found in Figure 1. The average amount of points given across the 37 teacher participants is  $\bar{x} = 1,417.51$ , with the standard error being  $\sigma_x = 397.25$ . The standard deviation is  $s = 2,416.39$ . The range statistic for the data set is  $r = 10,443$ , with the highest number of points distributed being 10,443 and the lowest number of points distributed being 0. The kurtosis statistic was 7.687 and the skewness statistic was 2.76, meaning that the data set is both heavily tailed and non-symmetrical. I ran the Shapiro-Wilk and the Kolmogorov-Smirnov tests of normality and found that the data set had  $p > .001$  on both tests, meaning



the data significantly differs from normal distribution. These data suggest there is no consistency regarding point distribution across teachers in the school.

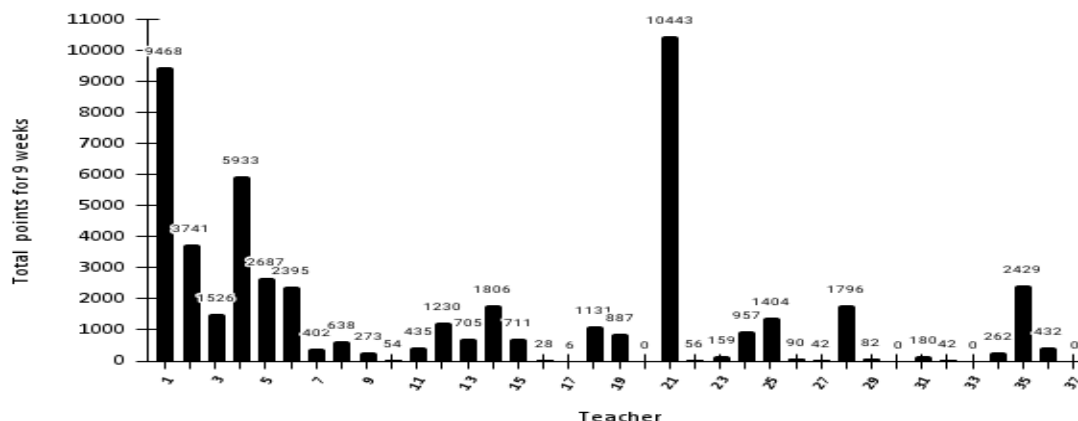


Figure 1: *Total Points Distributed by Each Teacher in First Nine Weeks*

## Interview Results

I interviewed five teachers who volunteered in order to further explore the perceptions of teachers at the school. I aimed to interview one sixth-grade teacher, one seventh-grade teacher, one eighth-grade teacher, one related arts teacher, and one student support service teacher. I asked the attendance secretary who she thought would be most likely to participate in an interview in each of these categories, and she gave me a list of people to email. No eighth-grade teachers answered my email, so I ended up interviewing two sixth-grade teachers, one seventh-grade teacher, one related arts teacher, and one math intervention teacher who agreed to participate.

### ***Positive Qualities***

Each teacher was asked, “What do you like about the PBIS Rewards system?”

Positive qualities about the Rewards system mentioned by teachers included: (a) it is a motivator for students, (b) it is easy for teachers to distribute points to students, and (c) students have something to look forward to that is positive. One teacher said that students accumulating Rewards points and having to decide whether or not they want to spend the points on something immediately or save them up for a bigger prize at the end of the quarter is teaching the students about the value of money and delayed gratification.

Another teacher reported that when she sees someone in her class partner up with someone that is usually last to get picked, or when students volunteer to work one-on-one with a special needs student in the class, the teacher likes to give out points for those sorts of behaviors. Another teacher noted that at a certain time in the year there is an issue with attendance rates in the school. During this time of year, in her classroom, this teacher distributes Rewards points to students when they arrive on time to school.

I coded six recurring themes in the teacher interviews regarding concerns about the PBIS Rewards System at their school: (a) lack of student buy-in; (b) lack of training; (c) special groups of students obtaining more points; (d) funding issues; (e) unsure of what behaviors warrant points; and (f) rewards work better for younger students.

### ***Lack of Student Buy-In***

Lack of student buy-in was discussed in 80% of the teacher interviews (i.e., 4/5 teachers mentioned the topic). Teachers noted that there isn’t as much hype around the

Rewards system as there used to be. Further, all four teachers that mentioned lack of student buy-in noted that they feel as though the Rewards system has no meaning to the students. One teacher reported, “I just feel like the importance of it is not there like it used to be. It’s not fully explained to the kids what the Rewards system is and the purpose of it.”

### ***Lack of Training***

Lack of training was also discussed in 80% of the teacher interviews. Three teachers reported that they themselves do not know the ins and outs of the system and how it should be implemented. One teacher reported that administration hasn’t taken a good look at the system or required training in years. She noted that revamping the system might help in school-wide efforts of implementation. One of the teachers reported that she moved to the school a few years ago and had no idea what the system was. She did not get any training on how to implement the Rewards system or how to distribute points whatsoever. She said, “So the first couple years I was here when it was in effect, I didn't know what it meant, and I didn't really understand it. I didn't know how to give points...so as far as teachers being educated, there wasn't a lot of education there. Then I was informed about it, but we used to just have assemblies. That's all I knew...that there was a PBIS assembly, but I didn't know why we were doing it. To me it just seemed like a fun day. Then I kind of learned a little bit more and that's when I started giving points every day.”

*Distinct Groups of Students Getting More Points than Others*

Three teachers mentioned that distinct groups of students seem to get more points than others. All three teachers reported that students in special education tend to get more points than those in the general education population—noting that special education students are getting more points in order to mitigate their behavioral issues. One of the teachers that reported this trend is a math interventionist who works with both the general education and special education populations. The teachers noted that many of the special education students have behavior intervention plans that have some form of a rewards system incorporated. Instead of using a supplemental rewards system in addition to the PBIS Rewards system, many of the special education teachers are using the PBIS Rewards system as the sole reward system for their students. One teacher noted, “We have some special education kids on a behavior tracking chart so like every week they are getting 20 points or every day they are getting 20 points and so all of a sudden we are seeing those kids with the most points.” Another teacher said, “There are teachers that are never taught how to have their own classroom management anymore, and they just use PBIS as their management system. So, it's just like, they just give points like crazy—and so students that don't behave very well, or like, let's say, especially I find students with IEPs that have behavior issues end up getting so many that I feel like it's almost like really good kids see that and think, ‘why bother?’”

### ***Funding Issues***

Eighty percent of the teachers interviewed also reported issues with funding. Some teachers have a classroom store in which students can trade in their points for small tangibles any time during the school day. A classroom store is not required—teachers choose whether or not they decide to have one in their classes. The two teachers I interviewed that did have a classroom store noted that the instant gratification for students to be able to spend their points in the classroom store is worthwhile. One teacher quoted, “Kids really thrive on an immediate reward, I guess. So, I think the things like our store when they can automatically use their points is a little more successful than like, waiting a whole nine weeks for the celebration at the end. I think when they get their points, and then they can use them right away-- just being a kid, I think the immediate gratification works well.” When teachers have a classroom store, however, they are funding it all on their own. They may ask for parents to donate things for the store, but the majority of the things that go into an individual teacher’s classroom store is bought by the teacher themselves.

Three teachers also mentioned overall school funding issues. One teacher reported that the Rewards system is good because, “we are poor and it’s a way to reward students without spending money.” Another teacher noted that administration sometimes asks teachers for gently used things so they can use those things as rewards for the PBIS day. She said, “We do get some new things, but I think funding would be a big thing. I think if you want it to be what it should be, then there should be some funding for this.” The third

teacher said that the school used to bring really fun activities to the school of the Rewards day, such as laser tag or a game bus. She noted that they would never get funding from the district, but instead had fundraisers to raise the money for whatever activity they had in mind. She said that one year the related arts teachers orchestrated a huge homecoming fundraiser to get the game bus and the kids had a blast. Since Covid-19 began, the school hasn't been able to do any fundraisers, which makes funding the PBIS Rewards day extra challenging.

### ***Unsure of What Behaviors Warrant Points***

Eighty percent of the teachers interviewed mentioned that they were unsure about what behaviors warrant distribution of points to students. All of the teachers noted an inconsistency in what behaviors teachers were giving out Rewards points for and how many points they should give out for each behavior. One teacher said, "It's like they're telling us to give PBIS points, but there are no guidelines." Another teacher reiterated that there is not a uniform system for what teachers should be giving out points for. She reported that because of this, the students don't really know what they need to do in order to earn Rewards points either. Another teacher reported that she likes to catch students going out of their way to do something good. She mentioned an example from a few weeks ago about a couple of students kicking a can down the hallway. They kept kicking it and then left the can in the middle of the hallway. A girl that was walking behind them noticed that they left it and went and picked it up herself. The teacher noted that she loves

seeing things like that, but when that happens, she is not sure how many points she should give out.

### ***Rewards Work Better for Younger Students***

Three teachers mentioned that the younger students tend to buy-in more than the older ones. One teacher reported, “Sixth graders are very highly motivated by Rewards points. When they get to seventh-grade, they still like the store and using their points, but they do complain more, saying that the teachers are not giving out enough points. Once they get to eighth-grade, they seem to be uninterested.” One teacher noted that sixth-grade teachers just seem to be more generous with the Rewards points as opposed to seventh and eighth-grade teachers. When I asked why she thinks that is, she replied, “I think it’s because sixth graders are very scared of middle school and it’s just that you’re trying to make them feel like it’s not scary. They are still so elementary, and their parents are scared for their babies. So especially at first, you’re like ‘we aren’t so scary!’ So, if you give a couple of points the students think ‘oh, she’s so nice, she gave me points! Middle school isn’t as scary as everyone says.”

### **Hypotheses Testing**

Hypothesis 1 (H1) stated that there will be a large variation in the PBIS Rewards points distributed among teachers. H1 was originally meant to be tested by calculating the mean and standard deviation of the Rewards points and then comparing an individual teacher’s mean score to the sample mean score. A significant variation from the sample mean was defined as a mean score that was one standard deviation higher or lower than

the school mean score. H1 would be supported if the majority of teacher's scores meet this criterion. However, the standard deviation assumes normality, that the Rewards point data does not have. Additionally, because there are many outliers, the mean score does not provide the most accurate measure of an average score ( $\bar{x} = 1,417.03$ ).

As an alternative way to test H1, I then decided to calculate the variance dividing the sum of square deviations by the size of the sample ( $n - 1$ ) to retrieve the unbiased sample variance. The variance calculated was  $s^2 = 5,830,863.749$ . The number is so large because the Rewards points totals are very spread out from each other and from the mean suggesting a high level of variability, and this provides support for H1.

Hypothesis 2 stated that teachers who reflect more negative attitudes about rewards and positive reinforcement, based on Perspectives scale scores, will distribute fewer points to students than teachers who reflect a more positive attitude about positive reinforcement. H2 was tested by calculating the correlation between the scores on the Perspectives scale with the total number of Rewards points distributed by each teacher. A Pearson correlation test was used to determine the relationship between Rewards points distributed by teachers and their reported Perspectives score on the Reinforcement/Rewards survey. Given the insignificant correlation ( $r = .312, n = 37, p = .06$ ), H2 is not supported.

Hypothesis 3 stated that teachers will distribute more PBIS Rewards points in the first half of the first nine weeks of the 2021-2022 school year than in the second half of the first nine weeks in the 2021-2022 school year. A paired-samples t-test was conducted



to compare the number of Rewards points given out by teachers in the first half of the nine weeks to the number of Rewards points given out by teachers in the second half of the nine weeks. There was a significant difference in the amount of Rewards points given in the first half of the nine weeks ( $\bar{x} = 517.41, s = 1,117.49$ ) than in the second half of the nine weeks ( $\bar{x} = 900.11, s = 1342.30$ );  $t(36) = -4.55, p = <.001$ . However, because the amount of Rewards points distributed by teachers in the second half of the nine weeks far surpassed the amount of Rewards points distributed by teachers in the first half of the nine weeks with a statistical significance, H3 is not supported.

Hypothesis 4 stated that there will be fewer office discipline referrals in the classrooms of teachers that give out more PBIS Rewards points to students than in teachers that give fewer PBIS Rewards points to students. H4 was tested by calculating the correlation between the total number of Rewards points distributed by each teacher and the amount of ODR's given out by each teacher. A Pearson correlation test was used to determine the relationship between Rewards points distributed by teachers and the number of ODR's given out in the first 9 weeks of school. There was a moderate, positive correlation between Rewards points distributed and number of ODR's given out by each teacher ( $r = .499, n = 37, p = .002$ ). However, because it was hypothesized that there would be a negative correlation between Rewards points distribution and ODR's per classroom, meaning those who give out more Rewards points would in turn give out less ODR's, H4 is not supported.

Hypothesis 5 stated that sixth-grade teachers will distribute more PBIS Rewards points to students than eighth-grade teachers. An independent samples t-test was used to compare the amount of Rewards points distributed by the participating sixth-grade teachers and the participating eighth-grade teachers. There was a significant difference in the distribution of Rewards points,  $t(11) = 2.332, p = .040$ , between sixth-grade teachers ( $M = 3738.57, SD = 3076.46$ ) and eighth-grade teachers ( $M = 731.17, SD = 279.08$ ), providing support for H5.

## **CHAPTER IV: DISCUSSION**

The purpose of this study was to determine whether teacher perceptions of SWPBIS and their beliefs about the use of positive reinforcement are associated with their willingness to award PBIS Rewards points to individual students in the classroom setting. It is important to understand the perspectives of teachers regarding behavioral issues in the classroom because their viewpoints likely influence their behavioral management strategies and the processes in which they implement these strategies (Tillery et al., 2010). When teachers successfully implement PBIS at the classroom level, individual student outcomes improve (Positive Behavioral Interventions and Supports, n.d). However, if teachers have less favorable views about the school-wide rewards system that is in place, they are less likely to buy-in and implement the system with fidelity (Chitoyo & Wheeler, 2009). Further, research shows the greater the fidelity of SWPBIS implementation, the more likely reduction in problem behavior will occur, as indicated by reduction of school suspensions and number of office discipline referrals (Kelm et al., 2014).

Given previous research, it is assumed that high fidelity of implementation of the PBIS Rewards System and positive perspectives about reinforcement and the Rewards system would be beneficial for the school as a whole—resulting in fewer problem behaviors and a more positive school climate (Horner & Macaya, 2018). This study assessed teacher perspectives of the PBIS Rewards System, distribution of Rewards

points under this system, and how fidelity of implementation affected the school climate in regards to office discipline referrals.

Rewards points data for the fall semester of the 2021-2022 school year showed that there was a wide range of points distributed across teachers in the same middle school. Some teachers were giving out thousands of points to students, while others were giving out zero points to students during the entire nine weeks. The inconsistency in distribution of Rewards points across teachers can result in decreased student buy-in for the Rewards system, as well as frustrations regarding inconsistencies among teachers in the school. The qualitative interviews with five volunteer teachers gave insight about how a small sample of teachers across the school are unsure for what behaviors their colleagues are awarding points. The teachers also mentioned that they feel as though the value of the Rewards system is no longer viewed as meaningful to students. Lack of student buy-in may be a result of the inconsistency of Rewards points distribution.

It is important to note that there is not a point goal for the teachers in the school set either individually or by administrators, and what warrants distribution of points is unclear among teachers. The Frequency of Usage scale was created to assess how often and how consistently teachers were awarding points to students. When looking at the Frequency of Usage scale on the survey, out of 15 total possible points, the mean of the Frequency of Usage scale across the participating teachers was 11.33, or 75.53% of total possible points. Further, 16 of the 37 participants obtained a Frequency of Usage score below the sample mean. Frequency of usage is linked to fidelity of implementation,

which is key to the success of the Rewards system and implementation of PBIS in general. It is important to have accurate implementation across the school building because the greater the fidelity of implementation, the more likely a reduction in problem behavior will occur (Kelm et al., 2014), which is one of the goals in the implementation of school-wide PBIS practices. One possibility of what happens in instances of poor fidelity is that belief in the PBIS system to deliver desired outcomes is diminished. This leads to less buy-in by school staff and reduced integrity of implementation—resulting in a cycle of poor outcomes. As noted previously, the Negative Attitudes subscale was the lowest rated scale of all, meaning that teachers most frequently endorsed the negatively worded questions. It is unclear whether the low level of frequency in implementation is a result of negative attitudes by teachers, or if negative attitudes by teachers are a result of the lack of implementation integrity.

Hypothesis 2 explored the correlation between distribution of Rewards points and ratings on the Perspectives scale on the survey. It was hypothesized that teachers who reflected more negative attitudes about rewards and positive reinforcement, based on overall Perspectives scale scores, would distribute fewer points to students than teachers who reflected more positive attitudes about rewards and positive reinforcement. The resulting correlation was not statistically significant (where  $p < .05$ ), but it did approach significance ( $p = .06$ ). This could be due to the smaller sample size ( $n = 37$ ), in which a larger sample size may reach statistical significance. However, the current results go along with previous research that has shown that teacher support for the SWPBIS system

is an influential factor in the process of implementation (Chitoyo & Wheeler, 2009; Feuerborn et al., 2016;).

Hypothesis 3 was not supported, as more points were distributed during the second half of the nine weeks than the first half. I thought that teachers would be giving out more points at the start of the school year as a way to introduce the system to the students and get buy-in. I also thought that possibly teacher motivation to participate in the Rewards system would be higher at the start of the nine weeks and then fade out over time. One potential reason that the teachers gave out more points during the second half of the nine weeks could be that they were getting the Rewards system up and going and needed time for full implementation. However, given the school has been using the Rewards system for three years now, it is assumed that the teachers are well versed in the implementation of the system and would be able to implement it almost immediately upon the start of the school year. I think a better explanation for the late semester burst in point distribution near the end of the nine weeks was because the PBIS Rewards day was closer in time, and this heightened teacher awareness that they had not been distributing points. Another possible reason could be that students wanted to participate in the PBIS Rewards day, so they tried harder to earn points, which lead to more points being distributed.

Hypothesis 4 was not supported. Given the research in the field, it would be expected that those that implement the Rewards system consistently would have fewer Office Discipline Referrals warranted in their classroom (Bradshaw et al., 2010; Kelm et

al., 2014). One study even found that as the fidelity of SWPBIS increased, office discipline referrals significantly decreased (Flannery et al., 2014). It was most surprising to see that the person who distributed the most Rewards points also gave out the most ODRs. A possible cause could be that the teachers that are implementing the Rewards system with higher fidelity are also implementing the ODR system with higher fidelity, leading to a higher number of Rewards points distribution and ODRs in their classrooms. Further, the teacher that gave out the most points and the most ODRs was a special education teacher. It is possible that the teacher is giving out Rewards points to ameliorate the behavioral issues happening in the classroom. Multiple teachers in the interviews noted that some special education students have a personal behavioral plan that includes Rewards points, so the teacher giving out the most points might be doing this as part of each student's behavioral intervention plan as well.

Hypothesis 5 was supported, as sixth-grade teachers gave out more Rewards points than eighth-grade teachers. This is supported by previous research (Horner & Goodman, 2009), as well as the qualitative interviews conducted, in which three teachers stated that the younger students are more likely to buy-in to the Rewards system than the older students. A way to remediate this could be giving different incentives to the eighth-graders as opposed to the sixth-graders, such as one free homework pass or one day of personal seating choice rather than tangibles they can get at the end of the nine weeks. One of the teachers noted that different experiences, such as having lunch in a special room with a group of friends, was something that most students seemed to buy-in to.

Fine-tuning the tangibles or experiences that the students can trade in their Rewards points for may help motivate students across grade levels.

Overall, it seems that the majority of teachers at the school have not bought in to the Rewards system. Most of them are unsure of what behaviors they should distribute points for and how many points they should distribute for each behavior. The qualitative interviews made it clear that teachers want more guidance on the system and how best to implement it. It seems that teachers think the system could be beneficial, but they have not been taught how to implement the system with fidelity. This has led to inconsistent point distribution by teachers across the school. The inconsistencies then result in reduced teacher buy-in, as well as reduced student buy-in.

Another issue with the Rewards system is funding. Classroom teachers that have their own school store like that students can turn in their points for whatever they want immediately rather than waiting for the end of the quarter assembly. However, the lack of funding with the classroom stores makes it difficult for teachers to continue to run them. Overall school funding issues were noted in the qualitative interviews as well. The participating middle school is mainly giving tangibles as options for Rewards points spending. I think it would be good to come up with different experiences that the students can trade their points in for, such as the special lunch time a teacher mentioned previously. Other things that do not cost money that students may enjoy is trading in their points to wear a hat at school for a day, or go to lunch 5 minutes early, or have a free homework pass. These things cost no money for the school, and students may have



prolonged enjoyment when trading their points in for these experiences, as opposed to trading their points in for a piece of candy or a soda.

The PBIS Rewards system is already paid for and in place at the school. The teachers I interviewed noted that the system worked well in the past and has the potential to work again, it just needs some tweaking and teachers need a better understanding of how to make the system work. Given this, I believe the school could still make the Rewards system work. Training regarding implementation fidelity of the Rewards system would be a beneficial school-wide professional development opportunity. To increase teacher buy-in, the school could implement a staff incentive for participating in the Rewards system as well.

### **Limitations and Future Directions**

One major limitation of this study is that the PBIS Rewards Data is from a period in time impacted by the Covid-19 pandemic. Students and teachers were not as consistent in school attendance, and the usage of the PBIS Rewards System might look different than it did pre-pandemic times. The PBIS Rewards data is archived at the end of every school year and unavailable for data analysis, so I was unable to see how the Rewards data trend differs over time. Another limitation is that I was only able to use one quarter of a school years' worth of data in the study. A full year's worth of PBIS Rewards data would be better in seeing trends between and within teachers over time.

It would be interesting to see what students are using their points to buy. An analysis of what the students spend their Rewards points on may be beneficial in coming

up with different ideas for rewards in the future. If teachers feel that the rewards are working better for the younger students, maybe giving a preferred incentives assessment to the eighth-graders would help in motivating the older students. Asking the students what it is they would like to work for is consistently helpful in motivating the students to do what you ask of them. Another research idea could be looking at how trends in accumulation of Rewards points by students is associated with their individual ODR portfolio. I would be interested to see the comparisons of the number of Rewards points and the number of ODRs each individual student receives. There are so many different reports you can run with the PBIS Rewards system. Given that everything on the Rewards system is data-based and changes in real time, the possibilities for future research ideas are seemingly limitless.

For future steps, it is suggested that the administrators in the school implement a school-wide PBIS Rewards training in which they set expectations for teachers regarding point distribution and what behaviors warrant Reward point distribution. Asking students what rewards they would like to see at the Rewards day or in classroom stores may help incentivize students from all grades as well.

## REFERENCES

- Akin-Little, K. A., Eckert, T. L., Lovett, B. J., & Little, S. G. (2004). Extrinsic Reinforcement in the Classroom: Bribery or Best Practice. *School Psychology Review, 33*(3), 344–362. doi: 10.1080/02796015.2004.12086253
- Barrett, S., Bradshaw, C., & Lewis-Palmer, T. (2008). Maryland statewide PBIS initiative: Systems, evaluation, and next steps. *Journal of Positive Behavior Interventions, 10*, 105–114.
- Bradshaw, C. P., Mitchell, M. M., & Leaf, P. J. (2010). Examining the effects of schoolwide positive behavioral interventions and supports on student outcomes results from a randomized controlled effectiveness trial in elementary schools. *Journal of Positive Behavior Interventions, 12*, 133–148. doi: 10.1177/1098300709334798
- Bradshaw, C. P., Pas, E. T., Goldweber, A., Rosenberg, M. S., & Leaf, P. J. (2012). Integrating school wide positive behavioral interventions and supports with tier 2 coaching to student support teams: The PBIS plus model. *Advances in School Mental Health Promotion, 5*, 177–193.
- Caldarella, P., Larsen, R., William, L., Wills, H., Kamps, D., & Wehby, J. (2018). Effects of CW-FIT on teacher's ratings of elementary students at risk for emotional and behavioral disorders. *Journal of Positive Behavior Interventions, 20*(2), 78–89. doi: 10.1177/1098300717723353

- Cameron, J., & Pierce, W. D. (1994). Reinforcement, reward, and intrinsic motivation: A meta-analysis. *Review of Educational Research*, 64(3), 363–423. doi: 10.3102/00346543064003363
- Cameron, J., Banko, M., & Pierce, W. D. (2001). Pervasive negative effects of rewards on intrinsic motivation: the myth continues. *The Behavior Analyst*, 24, 1-44.
- Chazin, K.T. & Ledford, J.R. (2016). Preference assessments. *Evidence-based instructional practices for young children with autism and other disabilities*. Retrieved from <http://ebip.vkcsites.org/preference-assessments>
- Chitiyo, M., & Wheeler, J. J. (2009). Analyzing the treatment efficacy of a technical assistance model for providing behavioral consultation to schools. *Preventing School Failure*, 53, 85-88.
- Cressey, J., Whitcomb, S., McGilvray-Rivet, S., Morrison, R., & Shander-Reynolds, K. (2014). Handling PBIS with care: Scaling up to school-wide implementation. *Professional School Counseling*, 18(1), 90-99. doi: 10.1177/2156759X0001800104
- Clarke, S., Zakszeski, B. N., & Kern, L. (2018). Trends in JPBI publications, 1999–2016. *Journal of Positive Behavior Interventions*, 1-9. doi: 10.1177/1098300717722359
- Deci, E.L, Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125(6), 627-668. doi: 10.1037/0033-2909.125.6.627

- Ennis, C. R., Blair, K-S. C., & George, H. (2016). An evaluation of group contingency interventions: The role of teacher preference. *Journal of Positive Behavior Interventions, 18*(1), 17-28. doi: 10.1177/1098300715577663
- Feuerborn, L. L., Wallace, C., & Tyre, A. D. (2016). A qualitative analysis of middle and high school teacher perceptions of schoolwide positive behavior supports. *Journal of Positive Behavior Interventions, 18*(4), 219–229. doi: 10.1177/1098300716632591
- Flannery, K. B., Fenning, P., McGrath Kato, M. M., & McIntosh, K. (2014). Effects of school-wide positive behavioral interventions and supports and fidelity of implementation on problem behavior in high schools. *School Psychology Quarterly, 29*, 111-124.
- Horner, R. H. & Goodman, S. (2009) Using rewards within school wide PBIS. Retrieved from: <https://www.pbis.org/resource/using-rewards-within-school-wide-pbis>
- Horner, R. H. & Macaya, M. M. (2018). A Framework for Building Safe and Effective School Environments: Positive Behavioral Interventions and Supports (PBIS). *Pedagogická Orientace, 28*(4), 663–685. doi:10.5817/PEDOR2018-4-663
- Horner, R. H., Sugai, G., Smolkowski, K., Eber, L., Nakasato, J., Todd, A., & Esperanza, J. (2009). A randomized, waitlist-controlled effectiveness trial assessing school-wide positive behavior support in elementary schools. *Journal of Positive Behavior Interventions, 11*, 133–144.

- Kelm, J. L., McIntosh, K., & Cooley, S. (2014). Effects of implementing school-wide positive behavioural interventions and supports on problem behaviour and academic achievement in a Canadian elementary school. *Canadian Journal of School Psychology, 29*, 195–212. doi: 10.1177/0829573514540266
- Kincaid, D., Childs, K., George, H. (2010) School-Wide Benchmarks of Quality (Revised February 19, 2021). Retrieved from <https://www.pbis.org/resource/boq>
- Kok, S. (2014). *An in-depth analysis of high school student and teacher perceptions of PBIS* (Order No. 3611817). Available from ProQuest Dissertations & Theses Global: The Humanities and Social Sciences Collection. (1504640206). Retrieved from <https://search-proquest-com.libproxy.fullerton.edu/docview/1504640206?accountid=984>
- Lohrmann, S. & Talerico, J. (2004). Anchor the boat: A classwide intervention to reduce problem behavior. *Journal of Positive Behavior Interventions, 6*(2), 113-120.
- Mathews, S., McIntosh, K., Frank, J. L., & May, S. L. (2013). Critical features predicting sustained implementation of school-wide positive behavioral interventions and supports. *Journal of Positive Behavior Interventions, 16*(3), 1-11. doi: 10.1177/1098300713484065

Mercer, S. H., McIntosh, K., & Hoselton, R. (2017). Comparability of fidelity measures for assessing Tier 1 school-wide positive behavioral interventions and supports. *Journal of Positive Behavior Interventions*, 19, 195–204.

Metzler, C. W., Biglan, A., Rusby, J. C., & Sprague, J. R. (2001). Evaluation of a comprehensive behavior management program to improve school-wide positive behavior support. *Education and Treatment of Children*, 24, 448–479.

Positive Behavioral Interventions & Supports Rewards (n.d.). About PBIS Rewards. Retrieved from <https://www.pbisrewards.com/about/>

Positive Behavioral Interventions & Supports (n.d.). Getting started. Retrieved from <https://www.pbis.org/pbis/getting-started>

Reinke, W. M., Herman, K. C., Stormont, M. (2013). Classroom-level positive behavior supports in schools implementing SW-PBIS: Identifying areas for enhancement. *Journal of Positive Behavior Interventions*, 15(1), 39-50. doi: 10.1177/1098300712459079

Roberts-Clawson, M. (2017). Teacher perceptions of using positive behavior interventions and supports as behavioral interventions in a pre-K-5 elementary school: A phenomenological study (Order No. 10757688). Retrieved from: <https://dc.etsu.edu/cgi/viewcontent.cgi?article=4763&context=etd>

- Swain-Bradway, J., Putnam, R., Freeman, J., Simonsen, B., George, H. P., Goodman, S., Yanek, K., Lane, K. L. & Sprague, J. (December 2017). PBIS technical guide on classroom data: Using data to support implementation of positive classroom behavior support practices and systems. *National Technical Assistance Center on Positive Behavior Interventions and Support*. Retrieved from <https://www.pbis.org/resource/pbis-technical-guide-on-classroom-data>
- Swain-Bradway, J., Swoszowski, N. C., Boden, L. J., & Sprague, J. R. (2013). Voices from the field: Stakeholder perspectives on PBIS implementation in alternative educational settings. *Education & Treatment of Children*, 36(3), 31-46.
- Tegano, D. W., Moran, J. D. III and Sawyers, J. K. 1991. *Creativity in early childhood classrooms*, Washington, DC: National Education Association.
- Tillery, A. D., Varjas, K., Meyers, J., & Collins, A. S. (2010). General education teachers' perceptions of behavior management and intervention strategies. *Journal of Positive Behavior Interventions*, 12(2), 86-102. doi: 10.1177/1098300708330879
- Tyre, A., Feuerborn, L., Beaudoin, K., & Bruce, J. (2020). Middle school teachers' concerns for implementing the principles of SWPBIS. *Journal of Positive Behavior Interventions*, 22(2), 93-104. doi: 10.1177/1098300719867858



## **APPENDICES**

## APPENDIX A: REINFORCEMENT/REWARDS SURVEY

### REINFORCEMENT/REWARDS SURVEY

For each of the questions below, circle the response that best characterizes how you feel about the statement, in which: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, and 5 = Strongly Agree.

	<b>PBIS Rewards</b>				
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. I understand how to implement the PBIS Rewards System.	1	2	3	4	5
2. I differentiate between "Positive Behavior" points and "Exceptional" points.	1	2	3	4	5
3. Students understand how to earn Rewards points and what behaviors will warrant earning points.	1	2	3	4	5
4. The PBIS Rewards System deters students from behaving inappropriately.	1	2	3	4	5
5. I use PBIS Rewards in my classroom daily.	1	2	3	4	5
6. Students understand the connection between the school rules and earning points through the PBIS Rewards System.	1	2	3	4	5
7. The PBIS Rewards celebration day at school is necessary for the system to work.	1	2	3	4	5
8. I am clear about my role in the PBIS Rewards System.	1	2	3	4	5
9. Students understand the difference between "Positive Behavior" points and "Exceptional" points.	1	2	3	4	5
10. I consistently use the PBIS Rewards System in my classroom.	1	2	3	4	5

*Turn to back page*

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
11. I aim to give points to all of my students in my class.	1	2	3	4	5
12. PBIS Rewards points motivate my students to behave appropriately.	1	2	3	4	5
13. Students want to earn points for incentives because the school store is varied and well stocked.	1	2	3	4	5
14. Students understand that they are earning points for future incentives when they behave appropriately.	1	2	3	4	5

**Perspectives**

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
15. The PBIS Rewards system is managed well by administrators at my school.	1	2	3	4	5
16. It is not my job to teach students how they should behave.	1	2	3	4	5
17. PBIS Rewards helps students succeed academically.	1	2	3	4	5
18. The use of rewards diminishes intrinsic motivation.	1	2	3	4	5
19. PBIS Rewards helps students succeed behaviorally.	1	2	3	4	5
20. The use of PBIS Rewards has made the school environment more positive.	1	2	3	4	5
21. It is unlikely that students will behave better to earn rewards.	1	2	3	4	5
22. Every student can benefit from positive reinforcement.	1	2	3	4	5
23. The use of rewards is time consuming and unnecessary.	1	2	3	4	5

*Turn to back page*

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
24. The PBIS Rewards system has helped make classroom discipline easier for teachers.	1	2	3	4	5
25. An immediate consequence for exhibiting negative behavior works better than using positive reinforcement to decrease negative behavior.	1	2	3	4	5
26. Using reinforcement strategies works in the classroom.	1	2	3	4	5
27. Giving a student a reward for good behavior is a bribe.	1	2	3	4	5
28. It is important to reward students for good behavior.	1	2	3	4	5
29. Reinforcing good behavior can help decrease negative behavior.	1	2	3	4	5
30. I am willing to provide a reward if this helps students perform a behavior I expect.	1	2	3	4	5
31. There is a lack of support and consistency regarding PBIS in our school.	1	2	3	4	5
32. Students should receive positive reinforcement for following classroom expectations and rules.	1	2	3	4	5
33. It is difficult dealing with oppositional behavior under a PBIS approach.	1	2	3	4	5
34. Positive reinforcement can help increase the motivation to do the right thing eventually without having to be reinforced.	1	2	3	4	5
35. Rewards work better for elementary aged children than they do for middle school children.	1	2	3	4	5
36. Positive reinforcement does not prepare students for the real world.	1	2	3	4	5
37. There is a lack of consequences for bad behavior under the PBIS framework at my school.	1	2	3	4	5
38. All students should be praised more than reprimanded.	1	2	3	4	5

**APPENDIX B: SURVEY ITEMS BY SCALE/SUBSCALE****PBIS Rewards Scale (Total = 70)****Frequency of Usage (Total = 15)**

#10. I consistently use the PBIS Rewards System in my classroom.

#5. I use PBIS Rewards in my classroom daily.

#11. I aim to give points to all of my students in my class.

**Why the Points Work (Total = 20)**

#13. Students want to earn points for incentives because the school store is varied and well stocked.

#7. The PBIS Rewards celebration day at school is necessary for the system to work.

#4. The PBIS Rewards System deters students from behaving inappropriately.

#12. PBIS Rewards points motivate my students to behave appropriately.

**Personal Understanding (Total = 15)**

#1. I understand how to implement the PBIS Rewards System.

#8. I am clear about my role in the PBIS Rewards System.

#2. I differentiate between “Positive Behavior” points and “Exceptional” points.

**Student Understanding (Total = 20)**

#14. Students understand that they are earning points for future incentives when they behave appropriately.

#9. Students understand the difference between “Positive Behavior” points and “Exceptional” points.

#3. Students understand how to earn Rewards points and what behaviors will warrant earning points.

#6. Students understand the connection between the school rules and earning points through the PBIS Rewards System.

**Perspectives Scale (Total = 120)****Positive Attitude Scale**

#15. The PBIS Rewards system is managed well by administrators at my school.

#17. PBIS Rewards helps students succeed academically.

#19. PBIS Rewards helps students succeed behaviorally.

#20. The use of PBIS Rewards has made the school environment more positive.

#22. Every student can benefit from positive reinforcement.

#24. The PBIS Rewards system has helped make classroom discipline easier for teachers.

#26. Using reinforcement strategies works in the classroom.

#28. It is important to reward students for good behavior.

#29. Reinforcing good behavior can help decrease negative behavior.

#30. I am willing to provide a reward if this helps students perform a behavior I expect.

#32. Students should receive positive reinforcement for following classroom expectations and rules.

#34. Positive reinforcement can help increase the motivation to do the right thing eventually without having to be reinforced.

#38. All students should be praised more than reprimanded.

### **Negative Attitudes Scale**

#16. It is not my job to teach students how they should behave.

#18. The use of rewards diminishes intrinsic motivation.

#21. It is unlikely that students will behave better to earn rewards.

#23. The use of rewards is time consuming and unnecessary.

#25. An immediate consequence for exhibiting negative behavior works better than using positive reinforcement to decrease negative behavior.

#27. Giving a student a reward for good behavior is a bribe.

#31. There is a lack of support and consistency regarding PBIS in our school.

#33. It is difficult dealing with oppositional behavior under a PBIS approach.

#35. Rewards work better for elementary aged children than they do for middle school children.

#36. Positive reinforcement does not prepare students for the real world.

#37. There is a lack of consequences for bad behavior under the PBIS framework at my school.



### **APPENDIX C: INTERVIEW QUESTIONS**

1. Tell me about your experience with the PBIS Rewards System
2. What do you like about the Rewards system?
3. What do you dislike about the Rewards system?
4. What works well within the Rewards system?
5. What would you change about the Rewards system?

## APPENDIX D: IRB APPROVAL

### IRB

#### INSTITUTIONAL REVIEW BOARD

Office of Research Compliance,  
010A Sam Ingram Building,  
2269 Middle Tennessee Blvd  
Murfreesboro, TN 37129  
FWA: 00005331/IRB Regn. 0003571



### IRBN001 - EXPEDITED PROTOCOL APPROVAL NOTICE

Wednesday, December 08, 2021

**Protocol Title** *Teachers' Perceptions and Utilization of the PBIS Rewards System*  
**Protocol ID** **22-2043 7vi**

**Principal Investigator** **Destiny Tidwell** (Student) **Faculty Advisor:** Monica Wallace  
**Co-Investigators** NONE  
**Investigator Email(s)** dbt2x@mtmail.mtsu.edu; monica.wallace@mtsu.edu  
**Department** Psychology  
**Funding** NONE

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU IRB through the **EXPEDITED** mechanism under 45 CFR 46.110 and 21 CFR 56.110 within the category (7) *Research on individual or group characteristics or behavior*. A summary of the IRB action is tabulated below:

<b>IRB Action</b>	<b>APPROVED for ONE YEAR</b>		
<b>Date of Expiration</b>	<b>10/31/2022</b>	<b>Date of Approval:</b> 10/20/21	<b>Recent Amendment:</b> 12/8/21
<b>Sample Size</b>	SIXTY FIVE		
<b>Participant Pool</b>	<b>Target Population:</b> Primary Classification: <b>General Adults (18 or older)</b> Specific Classification: <b>Teachers</b>		
<b>Type of Interaction</b>	<input type="checkbox"/> Non-interventional or Data Analysis <input checked="" type="checkbox"/> Virtual/Remote/Online interaction <input checked="" type="checkbox"/> <b>In person or physical interaction (paper survey only)</b>		
<b>Exceptions</b>	Voice recording is allowed during the virtual interviews		
<b>Restrictions</b>	<b>1. Mandatory ACTIVE Informed Consent.</b> <b>2. Other than the exceptions above, identifiable data/artifacts, such as, audio/video data, photographs, handwriting samples, personal address, driving records, social security number, and etc., MUST NOT be collected. Recorded identifiable information must be deidentified as described in the protocol.</b> <b>3. Mandatory Final report (refer last page).</b> <b>4. CDC guidelines and MTSU safe practice must be followed</b>		
<b>Approved Templates</b>	<b>IRB Templates:</b> In-person Informed Consent and Zoom Informed Consent <b>Non-MTSU Templates:</b> Recruitment and follow up scripts		
<b>Research Inducement</b>	NONE		
<b>Comments</b>	NONE		

### Post-approval Requirements

The PI and FA must read and abide by the post-approval conditions (Refer "Quick Links" in the bottom):

- **Reporting Adverse Events:** The PI must report research-related adversities suffered by the participants, deviations from the protocol, misconduct, and etc., within 48 hours from when they were discovered.
- **Final Report:** The FA is responsible for submitting a final report to close-out this protocol before **10/31/2022 (Refer to the Continuing Review section below); REMINDERS WILL NOT BE SENT. Failure to close-out or request for a continuing review may result in penalties** including cancellation of the data collected using this protocol and/or withholding student diploma.
- **Protocol Amendments:** An IRB approval must be obtained for all types of amendments, such as: addition/removal of subject population or investigating team; sample size increases; changes to the research sites (appropriate permission letter(s) may be needed); alternation to funding; and etc. The proposed amendments must be requested by the FA in an addendum request form. The proposed changes must be consistent with the approval category and they must comply with expedited review requirements.
- **Research Participant Compensation:** Compensation for research participation must be awarded as proposed in Chapter 6 of the Expedited protocol. The documentation of the monetary compensation must Appendix J and MUST NOT include protocol details when reporting to the MTSU Business Office.
- **COVID-19:** Regardless whether this study poses a threat to the participants or not, refer to the COVID-19 Management section for important information for the FA.

#### Continuing Review (The PI has requested early termination)

Although this protocol can be continued for up to THREE years, The PI has opted to end the study by **5/31/2022**. The PI must close-out this protocol by submitting a final report before **10/31/2022**. Failure to close-out may result in penalties that include cancellation of the data collected using this protocol and delays in graduation of the student PI.

#### Post-approval Protocol Amendments:

The current MTSU IRB policies allow the investigators to implement minor and significant amendments that would fit within this approval category. **Only TWO procedural amendments will be entertained per year** (changes like addition/removal of research personnel are not restricted by this rule).

Date	Amendment(s)	IRB Comments
12/8/21	A signature page (Part B) is added to the in-person informed consent.	IRBA2022-314

#### Other Post-approval Actions:

The following actions are done subsequent to the approval of this protocol on request by the PI/FA or on recommendation by the IRB or by both.

Date	IRB Action(s)	IRB Comments
11/08/2021	Minor corrections to the in person informed consent are made	Admin

#### COVID-19 Management:

The PI must follow social distancing guidelines and other practices to avoid viral exposure to the participants and other workers when physical contact with the subjects is made during the study.

- The study must be stopped if a participant or an investigator should test positive for COVID-19 within 14 days of the research interaction. This must be reported to the IRB as an "adverse event."
- The MTSU's "Return-to-work" questionnaire found in Pipeline must be filled by the investigators on the day of the research interaction prior to physical contact.
- PPE must be worn if the participant would be within 6 feet from the each other or with an investigator.
- Physical surfaces that will come in contact with the participants must be sanitized between use
- **FA's Responsibility:** The FA is given the administrative authority to make emergency changes to protect the wellbeing of the participants and student researchers during the COVID-19 pandemic. However, the FA must notify the IRB after such changes have been made. The IRB will audit the changes at a later date and the FA will be instructed to carryout remedial measures if needed.

#### Data Management & Storage:

All research-related records (signed consent forms, investigator training and etc.) must be retained by the PI or the faculty advisor (if the PI is a student) at the secure location mentioned in the protocol

Institutional Review Board, MTSU

FWA: 00005331

IRB Registration: 0003571

application. The data must be stored for at least three (3) years after the study is closed. Additional Tennessee State data retention requirement may apply (*refer "Quick Links" for MTSU policy 129 below*). The data may be destroyed in a manner that maintains confidentiality and anonymity of the research subjects.

**The MTSU IRB reserves the right to modify/update the approval criteria or change/cancel the terms listed in this letter without prior notice.** Be advised that IRB also reserves the right to inspect or audit your records if needed.

Sincerely,

Institutional Review Board  
Middle Tennessee State University

Quick Links:

- Post-approval Responsibilities: <http://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php>
- Expedited Procedures: <https://mtsu.edu/irb/ExpeditedProcedures.php>
- MTSU Policy 129: Records retention & Disposal: <https://www.mtsu.edu/policies/general/129.php>