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Effects of class-wide positive behavior supports on the academics of students with learning disabilities

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**THE EFFECT OF A CLASS-WIDE POSITIVE BEHAVIOR SUPPORT ON
THE ACADEMIC PERFORMANCE AND ENGAGEMENT OF
STUDENTS WITH LEARNING DISABILITIES**

by
Valerie Budd

A Thesis

Submitted to the
Department of Interdisciplinary and Inclusive Education
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at
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Thesis Chair: Amy Accardo, Ed.D.

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Dedication

I would like to dedicate this manuscript to my parents, Carol A. Budd and Gary Budd.

Acknowledgments

I would express deep thanks to Professor Amy Accardo for her assistance and guidance. Her support and knowledge pushed me to construct one of my greatest achievements. I look forward to using my new understandings in the future.

Abstract

Valerie Budd

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ACADEMIC PERFORMANCE AND ENGAGEMENT OF STUDENTS WITH
LEARNING DISABILITIES

2015-2016

Amy Accardo, Ed.D.

Master of Arts in Special Education

The purpose of this study was to explore the effects of positive behavior supports on on-task behavior as well as academics within a classroom. The focus was put on students who struggled academically and were receiving basic skills instruction. These students had high percentages of off-task behaviors throughout daily lessons. Their academics suffered and were average to below average at the start of the study.

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Chapter 1

Introduction

An actively engaged student tackles learning with a strong sense of will and confidence. They push themselves to learn more effectively and are motivated by content presented to them. Teachers who engage students in learning lead them to reach their highest potential and are more effective (Wright & McCurdy, 2012). The task of maintaining student engagement and motivation may be difficult for many teachers.

One way teachers may increase student engagement and academic focus is through the use of positive behavior supports (PBS) (Lohrmann & Bambara, 2006). In a study of general education teachers Lohrmann and Bambara found that as teachers gained experience using PBS systems, they increased confidence in managing student behaviors (2006). Most students learn self- motivation from their parents or guardians, however, some students who lack the support at home tend to struggle when it comes to self- motivation related to academic engagement (Lohrmann & Bambara, 2006). It then falls on teachers to motivate these students to engage in learning (Lohrmann & Bambara, 2006). Teachers of all grade levels can benefit from finding strategies that increase student motivation within their own classrooms (Lohrmann & Bambara, 2006).

Statement of Problem

Success in academic content requires students to be engaged in their own learning (Lohrmann & Bambara, 2006). Students who have a strong sense of responsibility in their own education tend to have more academic and social success (Lohrmann & Bambara, 2006). Successful students have been found to use strategies to monitor their

own individual learning (Meltzer, Katzir-Cohen, Miller, & Roditi, 2001). Students with learning disabilities (LD) struggle with developing such self-regulating strategies (Meltzer et al., 2001). Many students with LD do not recognize a relationship between effort or engagement and success (Meltzer et al., 2001). Melzer, Katzir-Cohen, Miller, and Roditi, conducted a study to determine the effects of a combination of effort and strategy and their link to academic performance (2001). This study analyzed groups of students with LD and general education students. Results revealed that the amount of effort or engagement students put in to a given activity was a good indicator of the outcome of academic success (Meltzer et al., 2001).

Class-wide positive behavior supports (CWPBS) are systems that are used widely within classrooms to increase proper behavior, manage students, increase engagement within daily lessons, and provide an enriching atmosphere for all students (Lohrmann & Bambara, 2006). Studies have shown that increased engagement within lessons and activities result in a greater and deeper understanding of information provided as well as more academic success (Nelson, 2010; Higgins, Williams, & McLaughlin, 2001). Upon implementation of a CWPBS, students of all levels were more likely to participate and were more engaged in their education (Nelson, 2010).

A study was conducted to analyze the effect of a token economy behavior system on off-task behaviors and academics within a classroom. Higgins, Williams, and McLaughlin conducted this study with a 10-year male student who was classified as learning disabled (2001). The study focused on three different off-task behaviors and related changes with the use of the token economy (Higgins, Williams, and McLaughlin, 2001). The results showed that the targeted behaviors were seen less frequently

throughout the duration of the support system. The student in question increased on-task behavior throughout the given time period and increased engagement (Higgins, Williams, & McLaughlin, 2001). The low-cost and easy preparation of a token system may make the CWPBS a good choice for teachers (Robichaux & Greshman, 2014).

A classroom is often made up of diverse learners with varied motivation levels and academic abilities (Robichaux & Greshman, 2014). Within my current classroom, a majority of students receive extra support of basic skills instruction within the subjects of math or language arts. These students who struggle academically may lack the ability to engage in each lesson and truly absorb from the academic content being introduced to them. This lack of engagement then leads to reduced on-task behavior. Students who are not on-task can become disruptive with other students. This can cause potential behavior problems to arise. Lastly, the lack of engagement and on-task behavior may result in low academic performance within this class (Robichaux & Greshman, 2014). These students are already below grade level. They need to be supported to reduce the academic achievement gap. A CWPBS was implemented to meet the needs of these students. This system was used to reward students for positive engagement and on-task behavior. By increasing on-task behavior, it was hypothesized that academic performance will increase.

Significance of Study

This study aimed to use CWPBS to encourage students with LD to demonstrate positive behavior within a classroom setting. The goal was for the CWPBS to lead to a significant improvement in student exhibited positive behavior, and to lead to significant improvement in student engagement and academic achievement. Many students with

learning disabilities need support both academically and socially in order to thrive in a school atmosphere (Meltzer et al., 2001). Providing an environment that supports not only strong academics, but also positive behavior may have a lasting impact on each student's life (Meltzer et al., 2001).

Purpose of Study

The purpose of this study was to investigate the impact of a CWPBS plan on the behavior and academic performance of students in a basic skills math and science classroom. Specifically, the study investigated whether the implementation of a CWPBS would increase student engagement/time on-task and decrease student attention seeking behaviors. Analyzing the results of this study demonstrated if implementing CWPBS increased student work completion and academic grades. Finally, this study investigated the satisfaction of basic skills students with the CWPBS.

My goal was to research the effects of CWPBS on the academics of students with learning disabilities. Positive behavior systems are sometimes used for students who need them or who are on individualized behavior plans. Using CWPBS may increase more than just behavior. It may increase a student's engagement, leading to increased academic success in the classroom, and increased positive attitudes toward education.

Research Questions

The following questions were addressed in this study:

1. Will implementation of a CWPBS plan increase student engagement? (increase time on-task and/or decrease attention seeking behavior)
2. Will implementation of a CWPBS plan increase student academic performance? (increase work completion and increase grades)

3. Are students satisfied with the CWPBS plan?

Key Terms

Class Wide Positive Behavior Support (CWPBS): System used to reward students for on-task behavior or engagement within their learning.

Learning Disability (LD): According to the Learning Disabilities Association of America, “A learning disability is a neurological condition that interferes with an individual’s ability to store, process, or produce information.

Learning disabilities can affect one’s ability to read, write, speak, spell, compute math, reason and also affect an individual’s attention, memory, coordination, social skills and emotional maturity (2011, p. 2).

Chapter 2

Literature Review

Students who do not thrive academically tend to participate in off-task or disruptive behaviors within the classroom (Morrison & Jones, 2006). Off-task tendencies may lead to distractions, and possibly even discipline in an attempt to correct the behavior (Morrison & Jones, 2006). All of these factors result in less time in the classroom and less time for teachers to teach and students to learn (Morrison & Jones, 2006). Positive behavior supports (PBS) are supports implemented proactively, not reactively in order to decrease undesired behavior, resulting in a more positive education experience (Gage, Sugai, Lewis, & Brzozowy, 2015). The desired effect of positive behavior supports is to decrease discipline and increase student engagement and learning (Gage et al., 2015).

Various research studies have been done to examine the effects of PBS on academics, student behavior, and overall engagement within every day lessons. This chapter reviews the literature that relates to PBS and the effects of implementing PBS within classrooms.

PBS

Over the past 30 years, PBS have become a well-respected and researched strategy (Kincaid, et al., 2015). PBS are used in a variety of ways in order to increase different aspects of life for children (Kincaid et al., 2015). PBS have been described as a “framework” to be molded and used as needed (Robichaux and Greshman, 2014). In a

discussion by Kincaid et al., it was stated that one of the main components of a successful PBS is that there is evidence supporting the research behind it (2015).

Individual PBS. A study was conducted by Voorhees, Walker, Snell, and Smith to examine the way that individualized PBS effected challenging behavior (2013).

Within this study, three preschool age children were determined to have severe behavior challenges and to need individual PBS (Voohees et al., 2013). Adults that were working with these students were provided training to ensure that the PBS were carried out effectively (Voohees et al., 2013). After careful observations of the students as well as teacher input regarding their behaviors, a team of educators met to discuss and form an action plan for each individual child. The plans targeted the individual needs of each student and how to appropriately address the problem behaviors (Voohees et al., 2013). Through the use of video recordings of the classrooms, data was collected on each student (Voohees et al., 2013). The results were analyzed and a conclusion was made that all three students had a significant increase in appropriate behavior while the interventions were in place (Voohees et al., 2013). Each child exhibited less problem behavior throughout the duration of the study. Individualized PBS are effective due to the fact that they are tailored strictly to the child in need. Expectations are clear and defined which allows the PBS to be used efficiently (Blair, Fox, & Lentini, 2010).

Class-wide PBS. Class-wide positive behavior supports (CWPBS) have an appeal that differs from individual behavior systems (Morrison & Jones, 2006). CWPBS are able to reach more students who need support. Grouping these students together is a more cost-effective way to target their needs (Morrison & Jones, 2006). CWPBS include all students within the classroom (Morrison & Jones, 2006).

One type of CWPBS that can be put into place is peer reporting (Morrison & Jones, 2006). Positive peer reporting uses time within the day to support a peer who needs to be taught appropriate behavior (Morrison & Jones, 2006). Using praise and comforting language is a way to help target students understand positive behavior and that it is noticed (Morrison & Jones, 2006). A study was conducted by Morrison and Jones to show how effective positive peer reporting can be within a 3rd grade classroom (2006). This study focused on the idea that peer reporting can actually lead to less behavior related issues within the classroom on a daily basis (Morrison & Jones, 2006). The data collected for this study was analyzed and the results showed that positive peer reporting was effective in reducing problem behaviors and increasing social interactions between students (Morrison & Jones, 2006).

A study was conducted on a popular CWPBS known as the Good Behavior Game (Wright & McCurdy, 2011). The Good Behavior Game is a CWPBS that rewards points to teams of students (Wright & McCurdy, 2011). As a student exhibits a negative behavior, the other team receives a point (Wright & McCurdy, 2011). Evidence backed up this support system and its effectiveness within classrooms. This CWPBS has been the model used with multiple variations for teachers within their classrooms (Wright & McCurdy, 2011).

The Caught Being Good Game is a class wide support system that uses random time periods to reward students who are on-task and completing their work (Wright & McCurdy, 2011). This game reversed the idea of the Good Behavior Game and focused on the positive behaviors that were viewed. The results of the study by Wright and McCurdy showed that both the Good Behavior Game, and the Caught Being Good Game

had positive results (2011). Disruptive behaviors decreased while on-task, engaged learning increased (Wright & McCurdy, 2011). The Caught Being Good Game yielded slightly higher percentages for on-task behavior and positive results (Wright & McCurdy, 2011). Both of these CWPBS would be effective within classrooms. Their emphasis on modeling and rewarding correct behavior would be beneficial for many educators and students (Wright & McCurdy, 2011).

School-wide PBS. School-wide Positive Behavior Supports (SWPBS) are effective ways to manage expectations and procedures for all students within a school (Eber, Hyde, and Suter, 2010). SWPBS use clear and defined rules and consequences to promote order and regulation within a large group of students (Eber et al., 2010). Evidence supports claims that SWPBS increase positive outcomes in the areas of social, emotional, and academics (Eber et al., 2010).

Eber, Hyde, and Suter conducted a study which examined the use of a tiered SWPBS (2011). This system used the idea of an inverted triangle diagram (Eber, Hyde, and Suter, 2010). Tier 1 was the SWPBS which all students were expected to participate in. Tier 2 contained interventions that were used periodically when needed depending on the situation. Tier 3 was in place for more severe cases where select students required a more individualized approach (Eber, Hyde, & Suter, 2010). This RtI model was able to target all students and effectively reach them to establish a more cohesive school system (Eber, Hyde, & Suter, 2010). This type of system is only beneficial, however, when teacher training and follow through are provided (Eber, Hyde, & Suter, 2010).

Implementing PBS

Interventions established early on within classrooms can positively impact the outcomes PBS can achieve (Gage et al., 2015). Children who are disruptive at a young age are likely to continue that behavior in years to come (Robichaux & Greshman, 2014). SWPBS can help issues such as bullying, school violence, and antisocial behavior (Gage et al., 2015). When these concerns are present within a school, the importance of academics is over-shadowed by the severity of the problems. Managing student behavior is an important aspect of an educator's job (Briesch, Briesch, & Chafouleas, 2014), and PBS are tools to help educators in the classroom.

CWPBS have been identified as easy for teachers to implement and are effective in terms of results (Robichaux and Greshman, 2014). These systems are understood easily and can be quick to implement within individual classrooms. These systems can also be modified depending on the population changes from year to year (Robichaux and Greshman, 2014). When compared to individual interventions, class-wide systems are less expensive and require less preparation than individual systems (Robichaux & Greshman, 2014), and lead to educators being more likely to follow through and continue with their use.

Educators are expected to use behavioral interventions in today's teaching in addition to differentiating their daily lessons (Briesch et al., 2014). In a study by Briesch, Briesch, and Chafouleas, 2014, the concept of classroom management strategies and how user-friendly they are was researched. One thousand five elementary schools within the United States rated the usability of five different classroom management techniques. The techniques included two different group contingency support systems,

self-managed response cost, response cost with home-school notes, and positive praise (Briesch et al., 2014). The results showed that all five PBS were user friendly and for the majority did not require extra support beyond the classroom teacher. The educators were able to understand and carry out the strategies with the help of vignettes provided by the researchers (Briesch et al., 2014). Many strategies need to be deeply understood by educators in order to be effective (Briesch et al., 2014). PBS are effective with proper training and with buy-in from the educators who are implementing them within their classrooms (Briesch et al., 2014).

Buy-In for Support Systems

Though many educators have witnessed firsthand students exhibiting behavior problems on a daily basis, many struggle with how to cope and correct the behavior. Many schools lack a consistent SWPBS across grade levels, and face resistance or reluctance to implementing a CWPBS from educators (Bohanon & Wu, 2014). In order to ensure success with PBS systems that are put into place, teacher buy-in, teacher training and ongoing support are essential.

Establishing an understanding with other teachers that a change is needed helps teachers become open-minded about utilizing a PBS (Bohanon & Wu, 2014). Collecting school behavior data that supports a need for change will enhance teacher buy-in (Bohanon & Wu, 2014). Proper training for educators will result in more confidence, an understanding of need, and consistent implementation of PBS (Bohanon & Wu, 2014).

Bohanon and Wu conducted a study to analyze different levels of implementation of SWPBS and how the effectiveness changed (2014). The study looked at four schools and focused on how well they assessed their needs for support as well as the leadership

that supported the use of the system (Bohanon & Wu, 2014). Results found that the schools that established the needs and analyzed data ahead of time, had a more effective buy-in rate when it came to teacher implementation of the SWPBS (Bohanon & Wu, 2014). This supports the idea that all teachers within the building have to be on the same page and have the same expectations for the SWPBS to be the most effective. This study also showed the leadership was a strong factor impacting teacher buy-in (Bohanon & Wu, 2014). Teachers need to feel support from their administrators in order to implement SWPBS consistently.

Effects on Student Engagement

Research shows that by targeting and decreasing student behavior problems, schools will have more time to commit to academics (Kraemer et al., 2012). Off-task behaviors diminish the amount of effective learning within a classroom (Kraemer et al., 2012). PBS implemented within schools or classrooms encourage appropriate behavior, including student engagement within the daily lessons that are provided (Gage et al., 2015). PBS have an indirect effect on daily instruction within each classroom (Gage et al., 2015), and can lead to deeper understanding of content for students, and more positive academic experiences.

A study conducted by Kraemer et al. found that positive behaviors strategies are effective (2012). This study involved charting off-task behaviors and how they were affected by implementation of two different behavior interventions (Kraemer et al., 2012). The first style, known as the *Get 'Em On-task* intervention, incorporated technology as a reward system. The computer system signaled the teacher randomly throughout the day. At each signal, the teacher scanned the room to see which students

were on-task and then rewarded them with points. The students later exchanged the points for rewards (Kraemer et al., 2012). The second style of intervention is known as the *Mystery Motivator*. Throughout the day the participating teacher would decide if particular students were on-task. This intervention allowed students who were on-task to select from a menu. If their selection contained a desired symbol, they were rewarded (Kraemer et al., 2012). Results of the study showed that the *Get 'Em On-task* intervention yielded slightly better results (Kraemer et al., 2012). This CWPBS intervention was rewarding the students more individually (Kraemer et al., 2012). Both styles of interventions resulted in a decrease of off-task behaviors within the classroom (Kraemer et al., 2012).

A study conducted by Carnett, Raulston, Lang, Tostanoski, Lee, Sigafos, and Machalicek, focused on the use of a PBS known as an interest-based token economy. This PBS involves rewarding desired behavior with small tokens, which can be exchanged later for a reward (Carnett et al., 2014). This study had only one participant who was a 7-year-old with autism (Carnett et al., 2014). Though this study contained multiple limitations, the results were clear. The participant's on-task behavior increased while his challenging behaviors decreased (Carnett et al., 2014). This type of PBS could be beneficial for the general education population as well as the special education population, and could help bridge the gap between these two groups of students (Carnett et al., 2014).

Goal Setting

Behavioral goal setting may be a new focus for many educators, building upon a more common focus on academic and life skill goals (Bruhn, McDaniel, Fernando, &

Troughton, 2016). Through reviews of literature and various case studies, the most commonly looked at strategy for improving behaviors is self-regulation (Bruhn, McDaniel, Fernando, & Troughton, 2016). Self-regulation is the idea that students will determine when they are behaving inappropriately and how to independently fix their negative behaviors. This complex strategy needs to be taught, modeled, and followed through when needed (Bruhn et al., 2016). In 2016, Bruhn, McDaniel, Fernando, and Troughton reviewed literature regarding goal setting and how students with behavior problems used this strategy within their education. Their findings revealed that most students who struggle with behaviors are unable to self-regulate on their own without the proper instruction (Bruhn et al., 2016).

In a study by Arguedas, Daradoumis, and Xhafa, students were studied to investigate if becoming self-aware improves student behaviors and academics (2016). This study was conducted on 24 high school students. The students answered surveys at multiple points of the study in order to determine their feelings and emotions throughout (Arguedas et al., 2016). The results showed that emotions played a pivotal role in the way that the students were engaged and motivated (Arguedas et al., 2016). Positive emotions were directly related to the ability of students to self-regulate and understand their behaviors. Happiness results in more academic achievement while anxiety proved to decrease their academic motivation (Arguedas et al., 2016). The results of this study support the idea that students need to be emotionally connected to their academics to be able to self-regulate and have success.

Effects of Behaviors on Academics

Disruptive behaviors have a negative impact on how well students perform academically. Such behaviors may lead to various interruptions within daily lessons and activities (Robichaux & Gresham, 2014). Using academic supports in addition to PBS supports may be the best way to increase both appropriate behaviors and academics (Gage et al., 2015). In addition, PBS need to be combined with other academic systems in order to benefit students academically (Gage et al., 2015; Conroy, Sutherland, Snyder, Marsh, 2008; Diperna, 2016).

In Gage, Sugai, Lewis, and Brzozowy's (2015) review of the literature, they identified a direct correlation between SWPBS and a decrease in student off-task behavior. This review compared data from 1,157 schools within the state of Connecticut (Gage et al., 2015). Control and treatment schools were examined to further assess the effect of the SWPBS on academics. The data for the academic component was based on standardized tests scores for Grades 3 through 8 and a Grade 10 standardized test (Gage et al., 2015). Though there was an increase in standardized testing scores for both groups, there was no statistical significance for the PBS (Gage et al., 2015).

CWPBS and individual support systems need to be chosen wisely in order to effectively target the student who is in need. Many schools that have established a SWPBS, require additional assistance for students who do not respond to the first level of support (Eber, Hyde, & Suter, 2010). Students who avoid academics because they are unable to complete the work may also need an academic support (Menzies & Lane, 2011). Students who avoid academics simply to not complete work that is provided may require a behavior support system (Menzies and Lane, 2011).

In addition to a PBS, self-regulation strategies are effective ways to improve academics for struggling students (Menzies & Lane, 2011). Students who self-instruct verbally talk through their problems and work out possible solutions or coping strategies (Menzies & Lane, 2011). These students may need instruction in how to problem-solve and establish strategies to work toward solutions (Menzies & Lane, 2011). Understanding problem-solving techniques is a valuable tool in all academics and subject areas. Students who are self-instructing themselves through problems are also learning to effectively problem-solve (Menzies & Lane, 2011).

Summary

PBS are used within schools, classrooms, and on an individual basis in order to provide an atmosphere that is more productive, effective, and positive for each and every student. There are numerous kinds of PBS. SWPBS, the most general, targets and requires a large group of students to be held to the same expectations. A CWPBS is a more tailored approach to working with a smaller group of students and rewarding them on a frequent basis. An individualized approach to PBS is a way to support a student through a system that targets just them. All PBS have a goal to positively affect the student both in and out of the classroom.

While most PBS target behavior first, many have a direct effect on academics as well. Guided by this review of the literature, the present study will implement a CWPBS to target both the engagement behavior and academic performance of students in a basic skills math and science classroom. This study was conducted to target increasing student on-task time and engagement leading to a deeper understanding of material that is

presented. The goal of the CWPBS was to shape student behavior and increase academic achievement with lasting impact over time.

Chapter 3

Methodology

Setting

The study was conducted in a public school in a small town in New Jersey. The nearby Delaware River can be seen from many areas of the town. The school district consists of three public schools and one charter school. The middle school is the home of the 4th through 8th graders, and the school consists of 740 students.

The classroom was a math and science fifth grade classroom. The room was spacious and conducive to a comfortable learning environment for all learners. Each student had their own desk and chair which included space to keep belongings throughout lessons. The classroom was bright and colorful with expectations, objectives, and educational charts on display. During each math and science lesson, there was a teacher as well as a one-on-one instructional aide present. The classroom was equipped with a Smart board, projector, and teacher laptop.

Participants

Participant A was a 10 year old, fifth grade, African American, female student. She was new to the district having started in September. She was a basic skills student in mathematics and receives pull out resource room instruction twice a week. Socially, she was more of an independent learner which could be seen each time she chose to work individually rather than with a partner or small group. Academically, she completed all of her work in a timely fashion and completed her homework assignments. With zero

office referrals or in class write ups, she was not a behavior problem and could be easily paired with other students during partner work.

Participant B was an 11-year-old fifth grade African American female. She had been in the district since 1st grade. She received basic skills instruction through a pullout resource room for both language arts and math. She was pulled twice a week for both subjects. Behaviorally, she had received three office referrals this year and visits the guidance counselor when needed.

Participant C was an 11 year old, fifth grade, African American, male student. He moved into the district at the age of 5. He was a basic skills student in language arts and received pull out instruction twice a week. He was a very impulsive student who had taken on the “class-clown” role. He needed to be reminded, approximately five times each class period to work quietly and not distract his peers. He had his own behavior modification put in effect by both of his fifth grade teachers. This behavior plan involved three post-its on his desk. When he called out or disrupts the entire class, he had to remove a post-it. If he removed all three post-its, he was given an appropriate consequence. This visual aide helped remind him of the expectations that had been set. He showed strength in mathematics and was able to work independently. He lacked self-confidence in any area that involved reading comprehension or writing. During these lessons, he got easily frustrated and often broke down during independent work.

Participant D was a 10-year-old fifth grade Caucasian female. She lived in the district since birth. She was a basic skills student in the areas of language arts and math. Twice a week she received pull out instruction for both subjects. She was a hard-working student who was always trying her best. She was not afraid to ask for help and listened

intently during instruction. Behaviorally, she was willing to help her teachers and her peers when possible. Within school, she had many friends and worked well with others. She did get into more behavior problems during unstructured time such as lunch and recess.

Participant E was an 11 year old, fifth grade, African American, female student. She had been in the district since kindergarten. She received basic skills instruction through a pullout resource room for both language arts and math. She was pulled twice a week for both subjects. She verbalized that she enjoyed school and wanted to earn good grades, but failed to put in the hard work for them.

Participant F was an 11-year-old fifth grade African American male. He moved into the district at the age of 5. He was a basic skills student in language arts and received pull out instruction twice a week. He was a student who worked hard and wanted to do well while in class. Though he occasionally got distracted by others around him, he tried his best to focus on the task at hand. He was not afraid to ask questions to clear up confusion and listened intently to what was being taught. He struggled in the area of reading comprehension, which was seen across all subject areas. He often needed directions to be reworded or clarified before beginning. See Table 1.

Table 1

Participant Data

Student	Age	Grade	Basic Skills	Baseline Off-task (%)	Baseline Classwork Completion (%)	Baseline Grade in Math (%)
A	10	5	Math	25	75	75
B	11	5	Math & LA	40	70	60
C	11	5	LA	53	80	80
D	10	5	Math & LA	17	70	64
E	11	5	LA	38	75	68
F	11	5	LA	23	80	78

Materials

The intervention was a CWPBS based on a token economy system. The students could earn tokens for good behavior, being on-task, or actively participating within each lesson. The tokens were small tickets that are simply placed on the student’s desk as he or she exhibited positive behavior. Tokens were also given out randomly at the end of each lesson to students who actively worked independently and stayed on task during their independent work time.

The students who participated within the study were observed as a baseline before the intervention began. A chart was used to track off task behaviors, getting out of seat behavior, and classwork completion. The chart was kept on a cart in an accessible location for the teacher to update frequently (see Figure 1). Symbols and abbreviations were used on the chart for confidentiality purposes. The data was then inputted onto a computer for later analysis.

TIME PERIOD	Student A	Student B	Student C	Student D	Student E	Student F	Student G
8:05-9:05							
1:25-2:25							
Key: * = Out of seat + = Off task (disrupting, not working, unfocused)							

Figure 1. CWPBS Data Chart

Research Design

This research was conducted as a single subject ABAB design. In phase one, baseline data was collected with the use of observations and a pre-intervention survey. During this phase, students were instructed with normal reinforcements such as praise or earned free time. After this phase was complete, the intervention was taught and demonstrated to the class. The intervention, the CWPBS token system, was carried out for a full week to ensure there was total understanding of the expectations and how the intervention would be incorporated into every day lessons. During phase 2 of the study, data was collected with the intervention in place. This data was collected through observations by the teacher. Phase 3 began with going back to the baseline study. The observations continued without the intervention being used. This phase was used in order to see the effects of the intervention being removed. All data was collected to be analyzed.

Procedures

This study was conducted over a 3-month period, from March-May. The beginning weeks of the study involved obtaining and organizing baseline data. Observations and surveys were conducted and analyzed. In the third week of the study, the intervention was taught and demonstrated for the students to understand. The fourth week of the study began the data collection involving the intervention. Throughout each day data was collected on the participating students. At the end of each day, the written data was transferred onto a computer to be analyzed. The data collection took place for 3 weeks. At conclusion of the study, unrelated statewide testing occurred. After state testing was complete, student satisfaction surveys were implemented and data analyzed.

Measurement Procedures

Data was collected for this study based on frequency. Observations were conducted to tally off-tasks behaviors that were seen throughout the day.

A survey was given at the end of the study to assess each student's satisfaction rating of the intervention that was presented. The survey contained questions relating to the intervention and instruction that was conducted during the study. The students answered each question with a number system.

Data Analysis

The data collection was organized based on 60-minute periods of the day. The data was then converted into rates of times per minute each behavior was observed. The rates were then changed into percentage for easy analysis. All data was entered into an Excel spreadsheet, and analyzed visually through the creation of graphs to compare baseline

and intervention data across phases. Finally, student survey data Likert scale numbers were averaged together and reported as mean in each category. All data will be presented in Chapter 4.

Chapter 4

Findings

In this study, the effects of a CWPBS plan were investigated within a 5th grade classroom. Six basic skills students participated in the study and were observed within a classroom setting in relation to academic performance and engagement behavior. A single subject design was used throughout this study. The research questions investigated follow:

4. Will implementation of a CWPBS plan increase student engagement (increase time on-task and/or decrease attention seeking behavior)?
5. Will implementation of a CWPBS plan increase student academic performance (increase work completion and increase grades)?
6. Are students satisfied with the CWPBS plan?

The study utilized an ABA withdrawal design. Data was collected over a 5-day span for each phase. Phase 1, was the collection of baseline data. Phase 2 implemented the intervention. Return to baseline, phase 3, was a time period where the intervention was removed. Table 2 displays student percentages at each phase of the study.

Table 2

Student Mean Data across Phases

Student	Baseline		Intervention		Return to Baseline	
	Off-Task (%)	Completion (%)	Off-Task (%)	Completion (%)	Off-Task (%)	Completion (%)
A	25	75	23	85	25	80
B	40	75	33	70	30	70
C	53	70	50	82	50	80
D	17	80	13	68	17	70
E	38	70	25	80	20	80
F	23	75	20	82	20	85

Student Engagement

Students were observed and off-task behavior was documented daily.

Observations took place within a 60 minute daily math class. Off-tasks behaviors were tallied and documents for further analysis. Figures 1-6 display engagement data for each individual student.

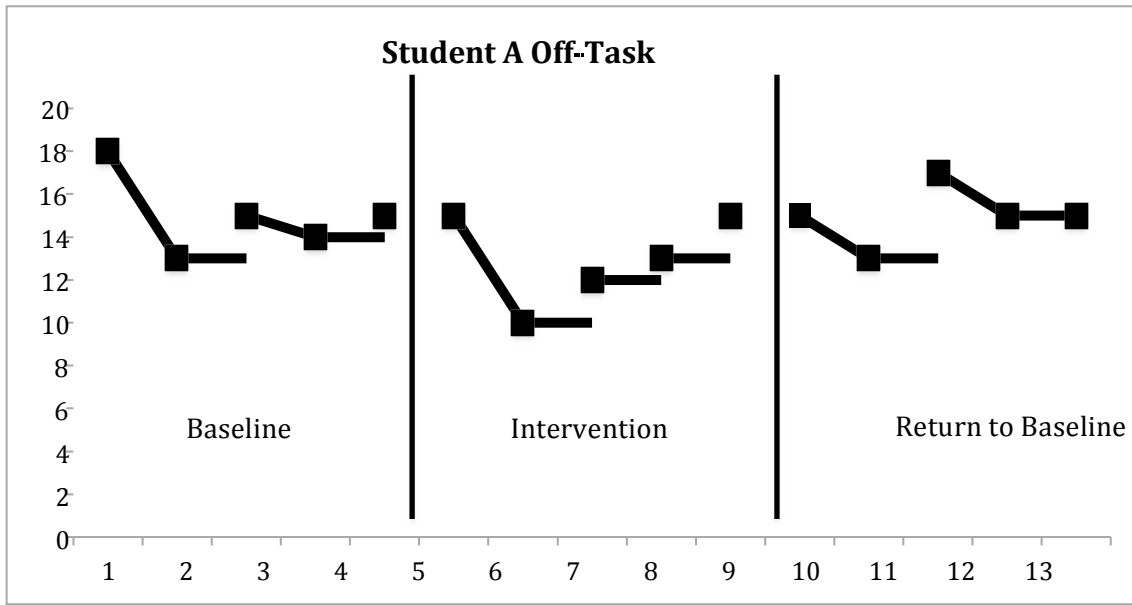


Figure 2. Student A off-task behaviors

Figure 2 shows Student A's frequency of off-task behaviors during the baseline phase. During the intervention phase, the student exhibited the least amount of off-task behaviors. The mean of off-task behaviors for Student A decreased from 25% to 23% from baseline to return to baseline.

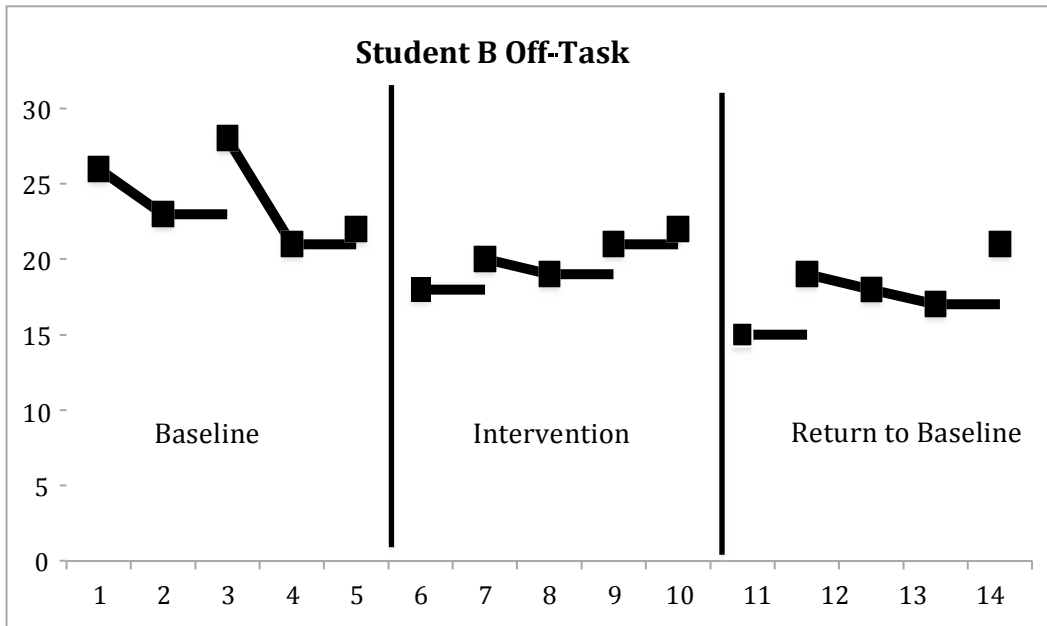


Figure 3. Student B off-task behavior

Figure 3 illustrates Student B's off-task behaviors. This student exhibited a decrease in off-task behaviors during the intervention phase and continued to show progress throughout the post-intervention phase. From the baseline to intervention phase, Student B's mean percentage of off-task behavior decreased from 40% to 33%.

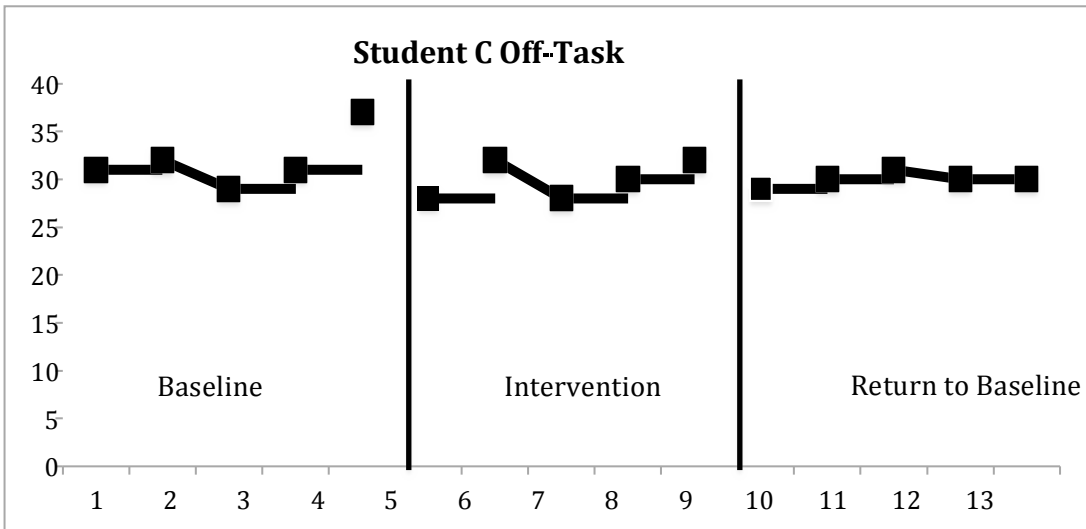


Figure 4. Student C off-task behavior

Figure 4 shows Student C's off-task behaviors. There was a slight decrease from baseline to intervention, from a baseline mean of 53%, to an intervention phase mean of 50%. Student C remained consistent in behaviors from the intervention phase to the return to baseline phase, maintaining a mean of 50%.

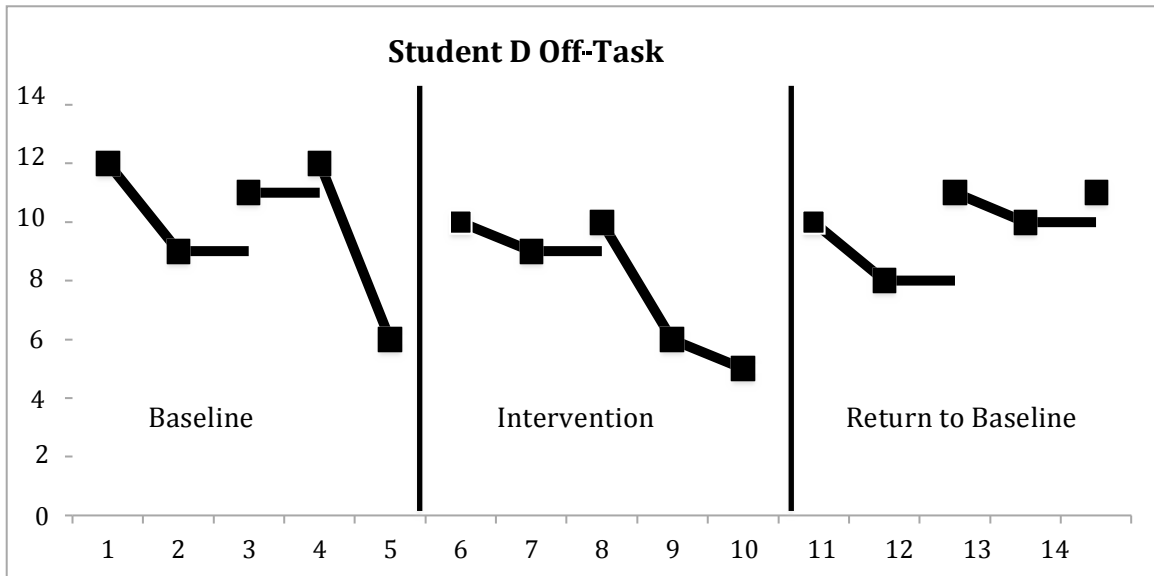


Figure 5. Student D off-task baseline data

Figure 5 shows a decrease in off-task behaviors for Student D during the intervention. Throughout the intervention phase, the student showed a trend of decreasing off-task behaviors. Student D's average percentage started at the baseline as a mean of 17% and decreased to a mean of 13% during the intervention phase.

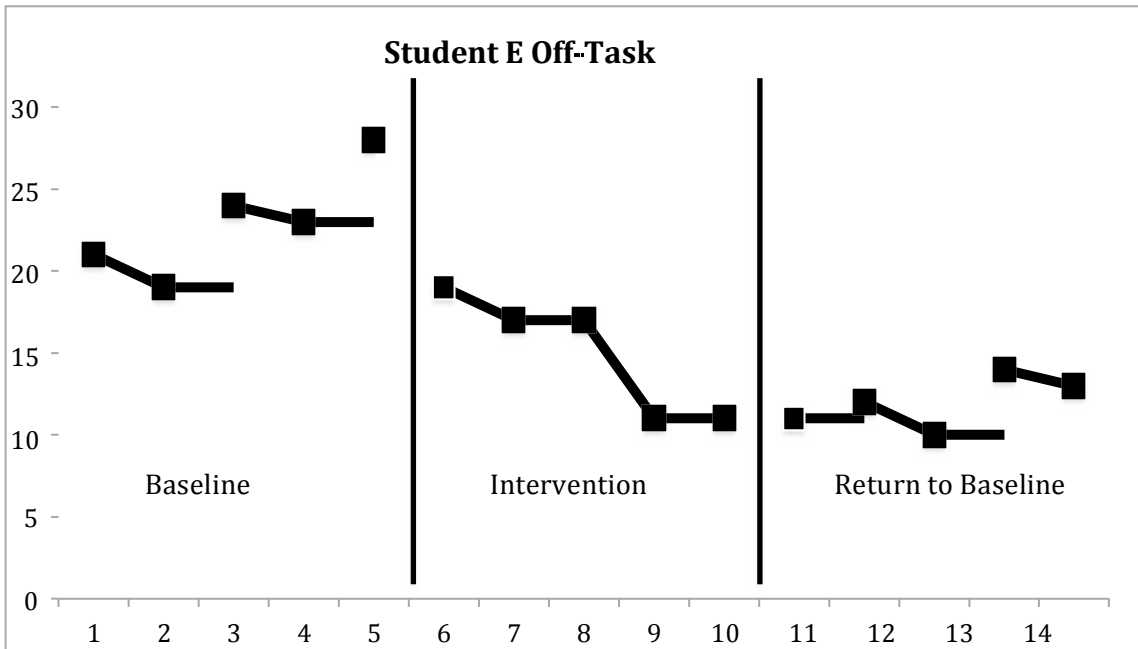


Figure 6. Student E off-task behavior

Figure 6 shows a trend of decreasing off-task behavior for Student E. The decrease in off-task behavior continued throughout the intervention stage as well as the return to baseline phase. From baseline to intervention phase, Student E's mean percentage decreased from 38% to 25%. This student exhibited the largest percentage decrease among participants.

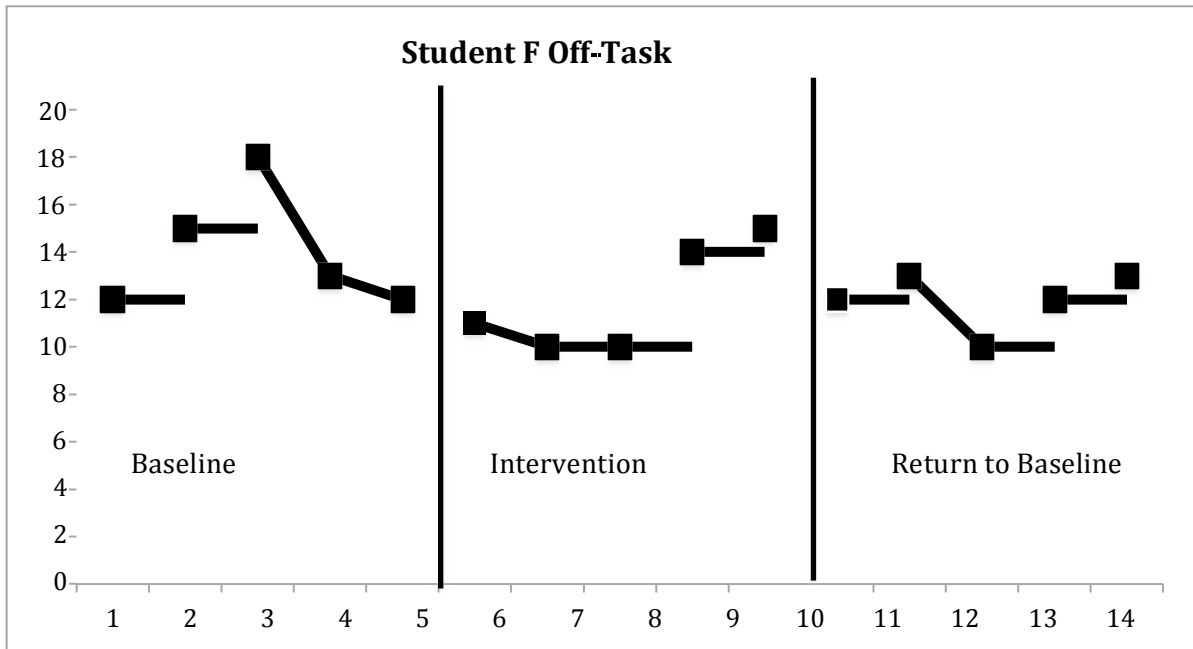


Figure 7. Student F off-task behavior

Figure 7 displays Student F’s behavior frequency. From the baseline to intervention phase, Student F’s mean decreased from 23% to 20%. From the intervention phase to the return to baseline phase, the mean remained consistent at 20%.

Academic Performance

Students were given a classwork assignment daily during the study. Each assignment was composed of 20 questions. Each day, after a math lesson, the students worked independently on the assignment and were provided help if needed. Each assignment was collected and graded for completion and correctness. The grades were converted into percentages. The data was averaged to obtain mean percentages for the baseline, intervention, and return to baseline phases. Figures 7-12 display the data for academic performance for each individual student.

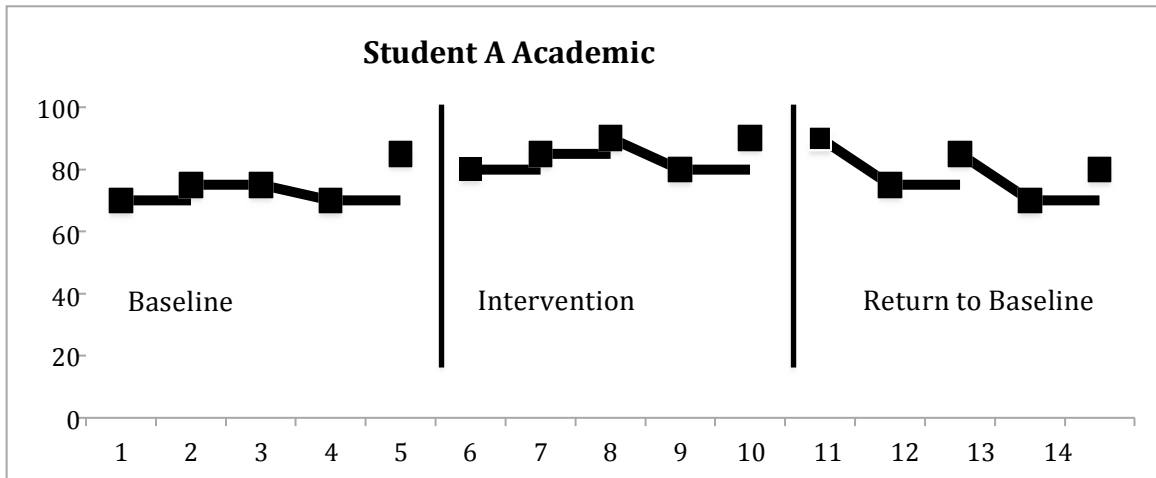


Figure 8. Student A academic performance

Figure 8 displays a general positive trend for Student A during the intervention phase. The trend begins to decrease during the return to baseline phase. The up and down trend signifies inconsistency for this particular student.

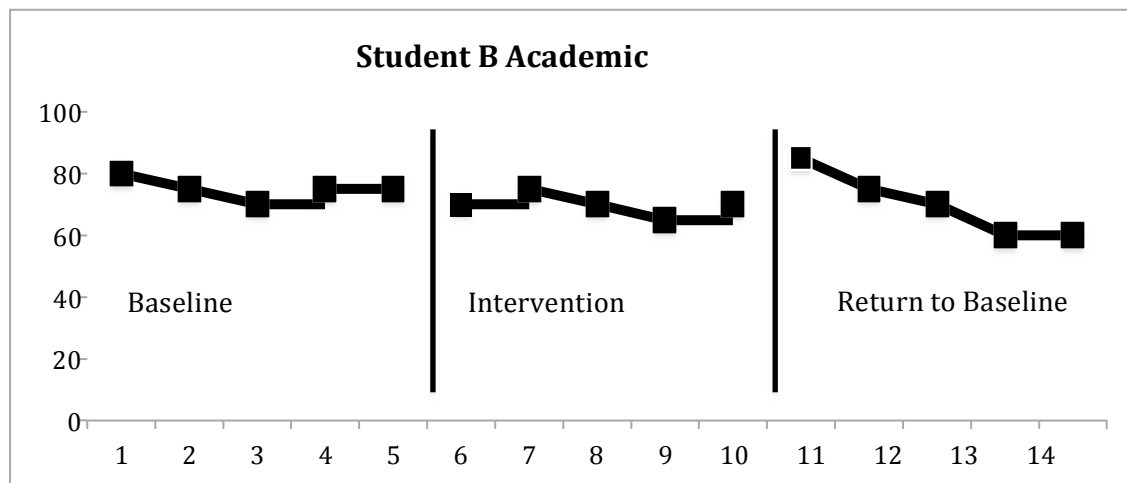


Figure 9. Student B academic performance

Figure 9 shows a very slight decrease in off-task behaviors for Student B during the intervention. Throughout the intervention phase, the student showed very little decrease of off-task behaviors. Student D's average percentage started at the baseline as a mean of 75% and decreased to a mean of 70% during the return to baseline phase.

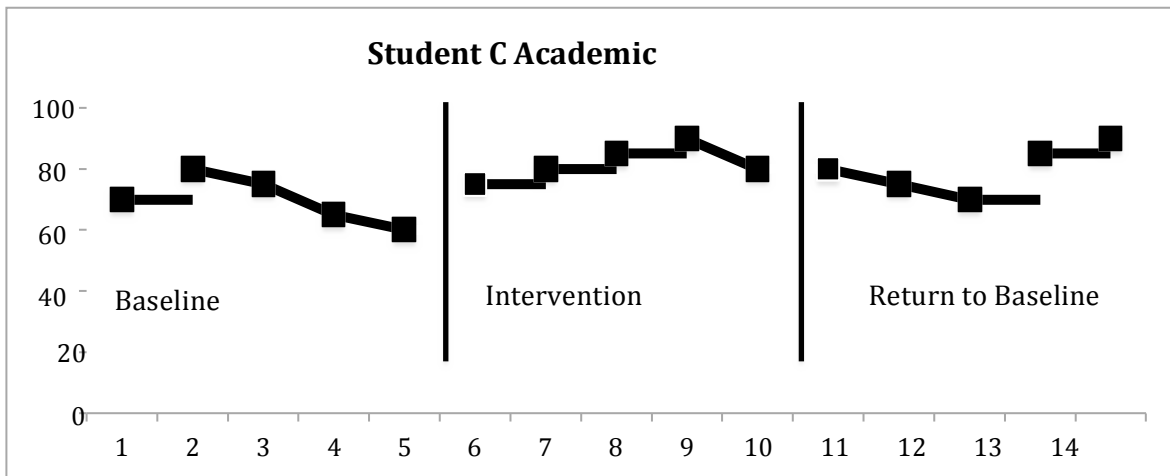


Figure 10. Student C academic performance

Figure 10 shows a great increase for Student C's academic performance during the intervention phase. As the study continued during the return to baseline phase, the mean of the overall academic performance increased to a 80%.

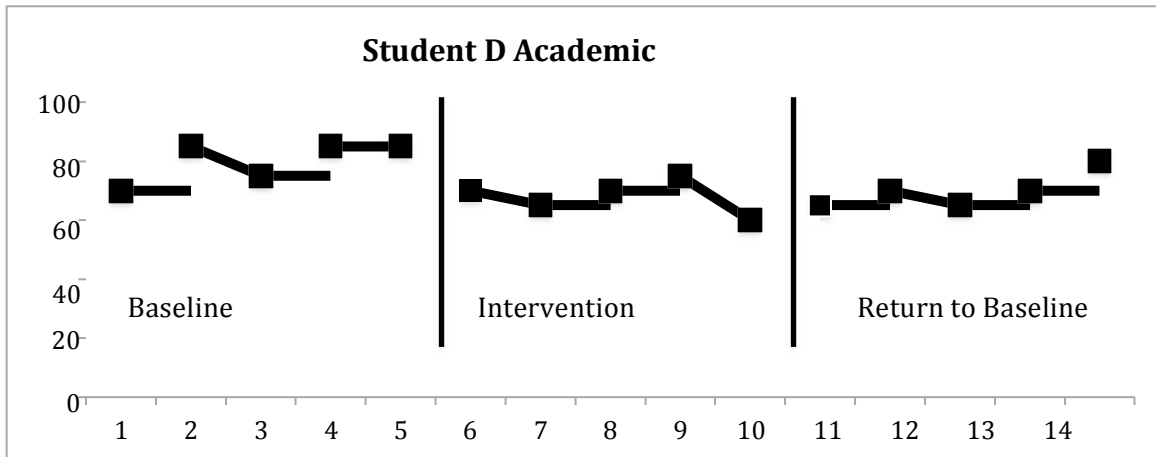


Figure 11. Student D academic performance

Figure 11 shows the academic performance of Student D. The intervention phase shows a significant decrease in grades for this student. As the return to baseline phase ends, there was an increase resulting in a mean of 70%.

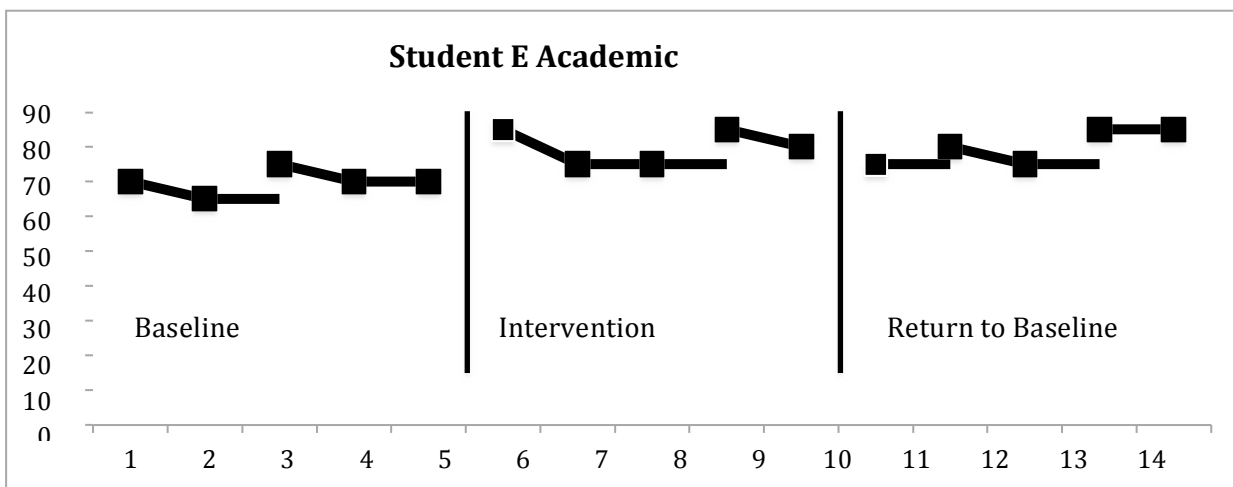


Figure 12. Student E academic performance

Figure 12 shows consistency and increase for Student E’s academics. The dips and increases across the phases were subtle. The mean during the baseline phase for this student was 70%. At the return to baseline phase, the mean was 82%. This illustrates a strong increase and positive data.

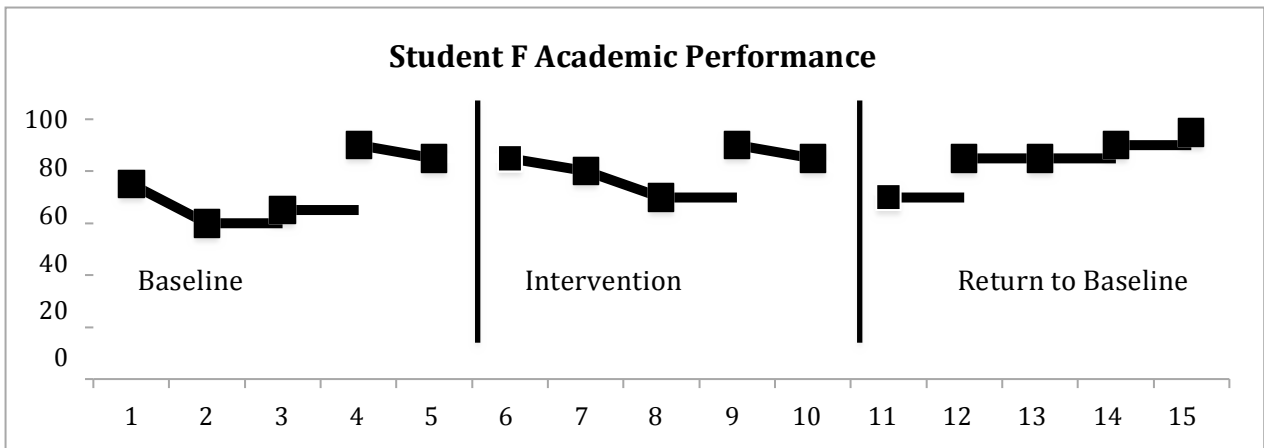


Figure 13. Student F academic performance

Figure 13 shows the positive trend of Student F’s academic performance. During the baseline phase, the mean was 75%. This student showed progress during the intervention phase with a mean of 82%. The increase continued through the return to baseline phase with a mean of 85%.

Student Satisfaction Survey

At the end of the 15-day study, students completed a survey to assess satisfaction with the CWPBS intervention. The survey contained 10 questions. The questions were answered using a Likert scale rating from 1-5, with 5 representing very satisfied, 3

representing satisfied and 1 representing not satisfied. The survey resulted in a possible score of 10-50. A score of 50 represents the highest possible rating, a score of 30 represents an average rating, and a score of 10 represents the lowest possible rating. Table 4 displays survey outcomes. Table 3 displays the individual scores from each student for the satisfaction survey as well as the overall mean of the scores.

Table 3

Student CWPBS Satisfaction Survey Results

1. How did you feel about the system that was used in math class?	50	33	17	0	0
2. How did you feel about the system that was used in science class?	0	17	50	17	17
3. How did you feel about how easy the system was to understand and use?	17	0	33	17	17
4. How did you feel after the system was not used anymore?	50	17	0	17	17
5. Do you feel that the teacher used the system as much as possible?	17	33	50	0	0
6. How well did you understand why the system was being used?	17	83	0	0	0
7. How did you feel about the rewards used?	33	33	0	17	17
8. Thoughts on the system and how it improved your academics?	33	17	33	17	0
9. Thoughts on the system and how it improved your behavior?	0	50	33	17	0
10. Thoughts on the system and how it improved the classes behavior overall?	50	17	33	0	0

Table 4

Satisfaction Survey Data by Student

Student	Survey Score
A	30
B	33
C	35
D	42
E	45
F	30
Mean	36

Note. Possible score Range = 5-50.

The students were satisfied with the PBS and how it was implemented throughout the classes. The percentages are trending toward the satisfied side. The overall means of the satisfaction survey are above average. Looking specifically at the last statement on the survey, it is clear to see the satisfaction amongst the students. The final statement, “Thoughts on the system and how it improved the classes behavior overall” resulted in clear results in favor of the CWPBS. The students all answered with equally or higher.

Chapter 5

Discussion

This study was conducted to explore the effects of a CWPBS on both student behavior and academics within a fifth grade math and science classroom. The main goal was to analyze if the CWPBS decreased off task behaviors and increased academic outcomes. The questions that were used tied directly to this research goal. Surveying the students to assess the satisfaction of the system was the final piece to analyze.

Data collected relating to the first research question focused on student engagement and on-task behaviors. In Gage, Sugai, Lewis, and Brzozowy's (2015) review of the literature, there was a relationship between PBS and a decrease in off-task behavior. The literature reviewed various studies that showed positive results for decreasing off-task behavior. In alignment with Gage et al.'s findings, four out of the six participants in the present study showed a reduction in off-task behaviors with the implementation of a CWPBS. They were able to have more on-task, engaging behaviors and less behaviors that were attention seeking. In contrast, the remaining two student participants had percentages that decreased across the intervention phase but then returned to their previous rates during the return to baseline phase. This may have been a result of other variables within the classroom such as other students or lack of interest in a particular lesson. Research conducted by Voohees et al. also suggests the idea that individual improvement plans would also be beneficial for students. This data from this study may have been more successful if students in need received individual plans (Voohees et al., 2013).

The second research question stated, “Will implementation of a CWPBS plan increase student academic performance?”. Data was collected on work completion as well as grades. The results showed that four of the six student participants demonstrated an increase in classwork completion. Percentages rose at an average of 5% from the baseline phase to the return to baseline phase. This increase was positive, however, small, and therefore potentially insignificant. The other two student participants did not show positive results for the academic portion suggesting that the implementation of a CWPBS did not increase student academics. This finding corroborates the research of Gage et al. (2015) in which the use of CWPBS alone did not increase student academic outcomes. Prior research suggests that positive support systems need to be combined with other academic systems in order to increase student academic performance (Gage et al., 2015; Conroy, Sutherland, Snyder, Marsh, 2008; Diperna, 2016). The minimal academic increase of students within this study may be explained by this finding, and the pairing of CWPBS with an academic support system is recommended for future research.

The final research question related to the satisfaction of the CWPBS plan. A study completed by Morrison & Jones contained findings that CWPBS are able to reach more students effectively within the classroom (2006). Analyzing the data of the satisfaction survey from this study showed that the mean of the survey was above average. Findings suggest that students who participated were overall pleased with the CWPBS intervention and were able to understand the details that surrounded it.

Limitations

Limitations of this study include student academic variables such as prior knowledge, understanding of the concepts taught, and overall interest in the daily lessons. It appears the activities or topics being presented could have impacted a student's behavior and academic completion for the day. Few students may have had prior knowledge of the concepts presented which may have impacted academic outcomes.

Moreover, the small number of participants in this single subject design study was a limitation. The number of students was further limited by a low return percentage of the parental consent forms. This limited the amount of data that was collected and analyzed.

The length of the study was also a limitation. Initially, the study was planned utilizing an ABAB design, however the study was cut down to an ABA design due to the end of the school year and other various time interruptions including state testing, assemblies, and events.

Implications

The implemented CWPBS impacted each student, academically, behaviorally, or both. This intervention proved to be an effective method in enhancing student's engagement throughout each instructional period. The study was also conducted to determine if CWPBS would positively affect academics. While the data showing academic gains is limited, the overall positive attitude within the classroom atmosphere increased. The students were engaged with the CWPBS and reported looked forward to using the system each day. The students displayed more confidence in their skills when working both independently and cooperatively with others. In the future, perhaps the

Future Studies

Continued research should be conducted to determine the effectiveness of CWPBS on both academics and off-task behaviors. Future studies should include various age groups as well as ability levels. In order for future studies to be successful, educators should research and receive professional development in interventions that will be used. This will increase both understanding and buy-in for staff and students. In addition, a larger sample size using a control group design should be researched to analyze the effects across a wider range of students.

Conclusion

This study investigated the effects of a CWPBS on student behavior, academics, and satisfaction. This research suggests that using a token economy promoted less off-task behaviors and an increase of academic success for the participating students. Students want to be in environments that promote success and a community feeling. CWPBS support this vision and can ultimately be a strong element for all students.

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