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A Comparative Study on the Impact of PBIS on Student Academic Achievement and Behavior

Kristin Nicole Pitts

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A Comparative Study on the Impact of PBIS on Student Academic Achievement and Behavior

By
Kristin N. Pitts

A Dissertation Submitted to the
Gardner-Webb School of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

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2017
Approval Page

This dissertation was submitted by Kristin N. Pitts under the direction of the persons listed below. It was submitted to the Gardner-Webb University School of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Gardner-Webb University.

David Shellman, Ed.D.  
Committee Chair  
Date

Stephen Laws, Ed.D.  
Committee Member  
Date

Phil Rapp, Ed.D.  
Committee Member  
Date

Jeffrey Rogers, Ph.D.  
Dean of the Gayle Bolt Price School of Graduate Studies  
Date
Acknowledgments

I would like to thank God, without him I am nothing. I would also like to thank my friends and family who have supported me and encouraged me throughout this process. I want to use this experience to encourage my daughter to never waiver from what she really wants regardless of how difficult it may seem; hard work and dedication always pay off. I want to give a special thanks to my mother. She has been my rock and saving grace through this process and really throughout my entire life. Without her sacrifices and persistence (nagging hahaha), none of this would be possible. Last, to Logan, my partner in crime, for putting up with me during this. I am grateful for your love and support. I am dedicating this to my mother and my loved ones who are no longer with me.

A special thank you, Dr. Shellman, my committee chair, for all of your motivation, guidance, and support throughout this process. Without your knowledge and endless readings, my dissertation would not have been possible.
Abstract


Positive Behavioral Interventions and Supports (PBIS) were initiated to address behavior problems for students with disabilities in the school system but became a proactive discipline approach for all students. The purpose of this study was to investigate the impact of PBIS on all student behavior and to examine possible connections to academic achievement. Student behavior can be impacted by many things including teacher attitude, academic struggles, and climate of a school. The focus of this study was to determine if PBIS reduces office discipline referrals (ODR) and if there are any impacts on student standardized achievement scores from PBIS.

This study found no significant impact or residual effects from PBIS on students leaving the middle school and transitioning to the high school; however, it was discovered that there were significant relationships among students with high numbers of office referrals and academic deficits, according to their scores on the Math 1 exam. It was determined that the behavior system had little impact on students with PBIS exposure.

The interview data with staff members were utilized, analyzed, and summarized in order to gain insight as to the perception of teachers on student behaviors, discipline programs, academic deficits, and administrative support. It was found that teachers perceive discipline issues differently, react differently, and have varying opinions on office support as well as student academics.
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Chapter 1: Introduction

Introduction

Student behavior can be a frustrating topic for many educators and parents. With the incidents over the last several years that have taken place in schools, public concern about how to keep our kids safe and how to address school behavior issues have started to grow (Sorcinelli, 1994). Many different approaches exist as to how to handle these types of issues, and the Positive Behavioral Interventions and Supports (PBIS) system is one of those used throughout the United States. Often, the strategies and discipline actions that are used to address behaviors in schools only occur after the actual behavior has already happened (Simonsen, Sugai, & Negron, 2008). The PBIS system offers ways to approach and address these behaviors in many cases before they become out of control.

“School-wide Positive Behavioral Interventions and Supports (PBIS) is a framework for delivering both the whole-school social culture and additional tiers of behavior support intensity needed to improve educational and social outcomes for all students” (Horner & Sugai, 2015, p. 80). PBIS is a program that schools can effectively use to provide proactive support for students, faculty, and staff. The PBIS system is based on making data-driven decisions with clear goals and outcomes for the individual student and the school as a whole (Simonsen et al., 2008). Not only does PBIS examine behaviors, it also examines school climate and how these two factors affect the academic success of students. “School climate has been shown to influence grade-point average (GPA), standardized test scores, reading levels, academic writing, and school adjustment” (Caldarella, Shatzer, Gray, Young, & Young, 2011, p. 1).

Schools utilizing PBIS have been able to reduce discipline referrals, reclaim lost instruction time, increase scores, and improve their school climate (Simonsen et al.,
Implementation is a key component in establishing and utilizing the PBIS system. Teams are created that share procedures, data, and goals with the staff. The whole staff should be included in reviewing data and decisions that are made by the PBIS committee. This review and having the majority of staff participate are vital to the program’s success (Simonsen et al., 2008).

**Statement of the Problem**

The problem in this study was to determine if PBIS has residual effects on behavior after students leave middle school. The researcher sought to determine if the behavior intervention program or lack of behavior intervention program impacted student behaviors once they reached School A or if there were no lasting effects of the PBIS program. In addition, this study also examined the relationship among students with multiple office referrals and their academic achievement which was measured by their test scores. According to Putnam et al. (2013), there is a direct link between academic performance and problem behaviors. Putnam et al. noted that students who fall behind as early as kindergarten tend to have higher behavior referrals. The schools that served as the focus of this study are referred to as School A, a non-PBIS high school, and its three feeder middle schools which range in PBIS experiences from exemplary PBIS schools to non-PBIS schools.

“Reactionary discipline approaches, particularly suspensions and expulsions, result in removal of students most in need of instructional minutes, especially children of minority backgrounds and those with academic problems” (Morrissey, Bohanon, & Fenning, 2010, p. 27). These behaviors are typically a result of trying to escape tasks which are above student academic levels. This phenomenon has been measured in middle schools and high schools, and the relationship between the two are similar
(Putnam et al., 2013). In research by Tobin and Sugai (1999), it was found that there were correlations between grade point averages (GPAs) and specific office referral behaviors such as fighting and harassing. Putnam et al. (2013) pointed out that the behaviors progressively got worse as the students got older.

PBIS is a framework that is designed to enhance social and academic behavior for students by using data to make decisions about implementation of behavioral practices (Sugai & Simonsen, 2012). In 1997, the Individuals with Disabilities Education Act (IDEA) aided in growing the awareness of PBIS to help students with behavioral disorders; however, it was not until the 2000s that the shift in focus went to all students in the school, not just those with disabilities. PBIS is built on evidence-based behaviors that are organized within a multi-tiered system of support called response to intervention (Sugai & Simonsen, 2012). According to Sugai and Simonsen (2012), there are 16,000 school teams that have been trained on PBIS, three states with more than 60% of their schools involved, nine with more than 40%, and 16 with more than 30%. In schools that are effective, more than 80% of the students and staff indicate the necessary PBIS behavior, according to the PBIS tiers (Sugai & Simonsen, 2012). Sugai and Simonsen stated that there are four common misconceptions. These four misconceptions include

1. PBIS is an intervention or practice but it is really more of a framework or approach that helps to organize the interventions.

2. PBIS emphasizes the use of tangible rewards, which can negatively affect the development of intrinsic motivation, when in fact its focus is on feedback.

3. PBIS is something new that was designed for students with disabilities. PBIS was first coined for IDEA, however the practices, principles, and systems that characterize PBIS have been around since the early 1960s.
4. PBIS is for behavior, and RTI (Response to Intervention) is for academics. PBIS is the framework in which the applications of the RTI principles are for the improvement of social behavior. (Sugai & Simonsen, 2012, p. 4)

“While problem behavior does not solely lead to poor literacy, poor literacy alone does not lead to problem behavior. Multiple studies have documented that students with problem behaviors are more likely to have academic deficits” (Putnam et al., 2013, para. 16).

**Context of the Problem**

This study took place at a large piedmont North Carolina high school (School A) in a rural setting with a student population of 1,768 students and 109 teachers. Of these students, approximately 1,415 (80.03%) are Caucasian; the remaining students are a combination of African-Americans, Asian, Hispanic, and mixed races. With 109 teachers in this building, the student-teacher ratio is 16:1. Free and reduced lunch data are the only socioeconomic data available. The data indicate that 35% of its students receive free or reduced lunch. Academically, School A has a graduation rate of approximately 87%. Table 1 shows school and state mean scores for Math I, Biology, and English II for academic years 2012-2013 through 2015-2016. Students attending early college are not included in these results.
Table 1

*State Mean Scores*

<table>
<thead>
<tr>
<th>Year</th>
<th>Math I School A</th>
<th>Biology School A</th>
<th>English II School A</th>
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<tbody>
<tr>
<td>2012-2013</td>
<td>47.3</td>
<td>53.3</td>
<td>60.6</td>
</tr>
<tr>
<td>2013-2014</td>
<td>58.4</td>
<td>54.3</td>
<td>62.1</td>
</tr>
<tr>
<td>2014-2015</td>
<td>50.3</td>
<td>53.4</td>
<td>59.3</td>
</tr>
<tr>
<td>2015-2016</td>
<td>62.8</td>
<td>65.5</td>
<td>60.7</td>
</tr>
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Reporting academic data is only one of the requirements that schools must adhere to when complying to state standards. School A, just like every other public high school in the state, must adhere to the guidelines of the state. In its report, it must include academic scores and recorded behaviors. According to the state discipline data reporting procedures, there are nine offenses that are considered dangerous and must be reported within 5 school days. Those incidents include homicide, assault resulting in serious bodily injury, assault involving use of a weapon, rape, sexual offense, sexual assault, kidnapping, robbery with a dangerous weapon, and taking indecent liberties with a minor.

If there are high rates of these dangerous acts committed over a 2-year period, this can lead to a school becoming designated as “persistently dangerous.” This system continues to be monitored, adjusted, and changed at regular intervals. Dangerous discipline behaviors are taken seriously, and the data by state and federal statutes must be reported. Any discipline acts that result in suspension, expulsion, and reassignment to an alternative school and the use of corporal punishment must be reported. North Carolina has a reporting system that categorizes a number of different offenses. Schools are required to use the system to report incidences that involve weapons, sexual assault, and harassment. The state has codes that must be used by all schools to identify certain
behaviors in their systems. In addition to reporting to the state, schools are required by law to report these crimes to legal authorities.

Powerschool, the school data system, allows the state to aggregate individual student data by student, teacher, school, and district and is the source for the state report card. Every school is responsible for having a coordinator who will report and record its disciplinary acts as well as crosscheck data for accuracy and completeness. According to the North Carolina Department of Public Instruction (n.d.), the discipline reporting procedure guidelines for the state are updated often; they describe every facet of discipline from how to code, what to code, where to report the different levels of offenses, and even definitions of each crime. School discipline data are presented in Table 2.

Table 2

<table>
<thead>
<tr>
<th>School A’s Discipline Totals by Year</th>
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<tr>
<td>School A</td>
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<tr>
<td>2012-2013</td>
</tr>
<tr>
<td>2013-2014</td>
</tr>
<tr>
<td>2014-2015</td>
</tr>
<tr>
<td>2015-2016</td>
</tr>
</tbody>
</table>

The table shows data that may support or not support a need to investigate discipline and how it is being addressed or prevented in the building. Due to research supporting a connection to discipline and academic achievement, the researcher also investigated the academic scores of School A for the state end-of-course (EOC) exams to determine if there was a connection between academic scores and discipline referrals.

Purpose Statement

The purpose of this study was to determine if students’ middle school exposure to
the PBIS program had lasting effects once they reach the high school level. It sought to examine the effects of PBIS on the academic achievements of students at School A. The researcher examined this achievement by using standardized state Math 1 scores. The researcher investigated the trends and relationships between discipline issues at School A and their connections to PBIS and non-PBIS schools within that district.

**Research Questions**

The researcher used the following research questions as the foundation of the inquiry into student discipline behavior and academic achievement at a large rural high school in piedmont North Carolina.

1. What difference in academic achievement exists between students who have been exposed to PBIS and those who have not been exposed to PBIS?
2. What is the difference in office referrals from students who have had PBIS exposure and those who have not?
3. How has the behavior management plan helped affect student behavior?

**Significance of the Study**

Many studies exist on PBIS and its impact in schools in which it is currently being implemented throughout the United States. A study conducted in Georgia schools found that PBIS was a structured system that provided consistency and had high student involvement in the school incentives (Martin, 2013). In addition, studies have also been completed that investigate how it impacts academic achievement and school culture in those schools; however, there is limited research on the impact it has beyond the immediate school environment once the program is no longer available and the students go on to the next level of their education such as high school.

With initiatives like Race to the Top and No Child Left Behind which offer grant
incentives, many school districts have reached out beyond their buildings to look for programs to increase academic achievement and have discovered that there may be direct correlations between increased academic success and positive behavior.

**Theoretical Framework**

The following theoretical framework serves as the basis for the literature review that encompasses the major topics of academic achievement and student behavior using PBIS. These concepts include teacher perception, student discipline, the PBIS implementation and program, academic achievement, student behavior, and school climate.

![Figure 1. PBIS Concept Map.](image)

**Operational Definitions**

These data were collected using office referrals, PBIS data, and standardized state math and reading scores. For the purpose of this study, the following terms have been defined.

**PBIS.** A framework that enhances the adoption and implementation of continual evidence-based interventions that helps to achieve important outcomes for students
academically and behaviorally (Sugai & Simonsen, 2012).

**Academic achievement.** An educational goal that is achieved over a certain period of time. It can be measured by informal and formal assessments and may differ among individuals.

**Interventions.** A situation or circumstance where someone or something becomes involved so that it or they may address particular issues or problems and attempt to influence the outcomes.

**Student growth.** A measurement of a student or students from a beginning point to an end point or set goal that can be measured using data or informal assessments to determine if there was or was not growth.

**School culture.** The beliefs, values, and actions of the various people in a school.

**Check-In/Check-Out.** The Check-In/Check-Out system is a data collection tool that monitors specific behaviors and/or goals of a student, which can be implemented using various data collection methods such as a Likert scale.

**Teacher implementation.** The process of putting a designated plan into effect; in this study, the implementation refers to the PBIS plan or model.

**Office discipline referrals (ODR).** An event in which a student or students engaged in a behavior that violated the school rules. This behavior was observed by a staff member and results in some type of consequence based on its severity and the number of times that it has been committed by that particular student. The referring staff is required to make written documentation of the event and either a paper or electronic copy will be kept in the student’s files.

**Summary**

The goal of PBIS is to affect a positive and sustainable change in schools where
problem behavior occurs. Relying on reactive and crisis management interventions reminds one of the popular definition of insanity, which is to continue to do the same thing repeatedly but expect different results. (Backman, 2015, p. 11).

This study will help add to the current body of research about PBIS and its effects on student achievement and its correlation to student behavior beyond the PBIS program.

With the ongoing issues of student behavior and its possible links to academic achievement, this study sought to investigate those possible connections to try and determine if there was or will be a need for PBIS at School A as well as examine how educators perceive discipline and what impact that can have on the school’s environment.

This study sought to determine if there are differences among PBIS exposed students and students who have had no exposure to the program by looking at office discipline data as well as discipline’s link to academic achievement using state standardized test scores.

Chapter 2 presents a review of literature to the study regarding the development of PBIS, achievement, discipline, and the school culture. It looks at how success is measured and discipline is addressed.
Chapter 2: Literature Review

The purpose of this study was to examine the effects of PBIS on the academic achievements of students at School A. The researcher examined this achievement by using standardized state reading and math scores. The researcher investigated the trends and relationships between discipline issues at School A and their connections to PBIS and non-PBIS schools within that district. Over the course of several decades, there has been an increasing trend in schools to initiate discipline systems (Reinke, Herman, & Stormont, 2013). Approximately 14,000 schools in the United States are currently using some form of PBIS (Reinke et al., 2013); however, the implementation quality is important since those programs with higher quality produced the desired effect more often (Molloy, Moore, Trail, Van Epps, & Hopfer, 2013). “Teachers’ knowledge and perceptions play an important role in obtaining teacher buy-in to increase the success if PBIS implementation with fidelity” (Bhakri, 2017, p. 24). When there were insufficient facilitators or lack of support from the administration, the program outcomes were reduced by a third or even half of what they could have been otherwise (Molloy et al., 2013).

School Climate and Culture

“Every school possesses a unique culture” (Ross, 2010, p. 2). Most school culture is already in place and implementing change does not happen overnight (Ross, 2010). School culture must be embedded with initiatives, and staff must be receptive to reform (Ross, 2010). Ross (2010) stated that changing or altering a school culture involves undoing organizational and logistical structures, which can be very challenging. School climate is related to everything else at the school: pedagogical practice, achievement goals, curriculum, and teacher development (Jones & Shindler, 2016).
Research suggests that when school cultures are healthy, it increases student achievement, motivation, and teacher productivity (Stolp, 1994). When students have a sense of wanting to learn, their attitude about school allows them to feel good (Thornton, 2012). When students feel as though they are part of the school, their connections with others in the school become stronger (Thornton, 2012). “School culture is not a static entity. It is constantly being constructed and shaped through interactions with others and through reflections on life and the world in general” (Hinde, 2004, p. 2). It serves as the guide for student behavior and is shaped by the interactions by people who are acting on their values, beliefs, and traditions (Hinde, 2004, p. 2). One of the most effective changes in school culture happens when it is modeled to students by staff and administration (Stolp, 1994). Culture, although it is overlooked too often, is one of the most influential features of any educational enterprise (Peterson & Deal, 1998). Peterson and Deal (1998) said that culture is an underground stream of norms, values, beliefs, traditions, and rituals that build up over time through problem solving and addressing challenges. It is these informal challenges that influence how people think, feel, and act in schools around the nation (Peterson & Deal, 1998). “Clearly, school climate is multi-dimensional and influences many individuals, including students, parents, school personnel, and the community…Additionally, school climate can significantly impact educational environments” (Marshall, 2003 p. 1). It is based on teacher and student experience patterns that will reveal things such as values, instructional practices, and interpersonal relationships (Gage, Larson, & Sugai, 2016).

“Culture influences everything that goes on in schools: how staff dress, what they talk about, their willingness to change, the practice of instruction, and the emphasis given to student and faculty learning” (Peterson & Deal, 1998, p. 28). School climate can
affect several areas within school environments. McEvoy and Welker (2000) suggested that cognitive deficits and attention problems are commonly related to academic performance and delinquency and that programs and interventions that improve academic performance reduce delinquency.

Effective schools share common characteristics, including student perceptions of high expectations for achievement, effective administrative leadership, a shared mission among teachers and staff, a commitment to appropriate assessments, students’ sense of efficacy with respect for learning, and student perceptions of a safe environment in which to learn. (McEvoy & Welker, 2000, p. 135)

It has also been shown that when parents have a positive perception of the school’s climate, there is increased parental involvement and higher academic achievement (Grace & Harrington, 2015).

Links have been shown between positive school climate and academic achievement and positive social and behavioral outcomes and increased attendance (Gage et al., 2016). “Adolescents who perceived their schools to have positive school climate were less likely to engage in deviant behaviors and report depressive symptoms” (Gage et al., 2016, p. 494). Schools that have positive culture share common themes such as staff have a sense of purpose, underlying norms of collegiality, and hard work; traditions and rituals celebrate student accomplishment; parental commitment; and success, joy, and humor abound (Peterson & Deal, 1998). “Creating a positive and engaging classroom atmosphere is one of the most powerful tools teachers can use to encourage children’s learning and prevent problem behaviors from occurring” (Conroy, Sutherland, Snyder, Al-Hendawi, & Vo, 2009, p. 18). There are many factors that contribute to the atmosphere such as classroom management and teacher response to student behavior.
(Conroy et al., 2009). It can be challenging to engage in positive interactions when children have emotional and behavioral disorders which can come with negative interaction patterns that may significantly impact the atmosphere of the classroom (Conroy et al., 2009). Theories and assessments of social settings such as classroom climate are increasingly becoming more and more important for positive classroom environments (Barber, Sweetwood, & King, 2015).

“School climate has been shown to be determined by the quality of relationships between individuals at a school, the teaching and learning that takes place, collaboration between teachers and administrative staff, and the support present in a particular school” (Collie, Shapka, & Perry, 2012, p. 1189). It influences not only teachers but everyone in the school community (Collie et al., 2012). Perceptions of teachers on student behavior and motivation are one of the most significant influences of school culture (Lacks, 2016).

School-wide PBIS is a framework that helps to create prevention-oriented environments that reflect healthy school climates (Cressey, 2015). PBIS provides the framework that addresses environmental arrangements as well as reinforces appropriate behaviors and extinguishes inappropriate behaviors (Ficcarra & Quinn, 2014).

**Behavior**

“Student behavior directly affects the culture and attitude of a school environment” (Koumas, 2015, p. 21). Student behavior can be a challenge and concern for teachers and administrators (McKellar, 2017). Student personal perceptions of the school environment may have an impact on their perceptions (Gage et al., 2016). Challenging student behaviors is not a simple task due to the many factors that must be taken into account such as community and school (Ashley, 2015). Students may display anger, frustration, and hurt in ways that feel like defiance and disrespect to teachers
(Ashley, 2015). How teachers react is based on several factors: principal expectations, discipline codes, relationships between students and educators, and pressures with testing and timely delivered content (Ashley, 2015). Teachers report high frequency, low intensity disruptive and off-task behaviors as problematic, not only disrupting teaching but increasing teacher stress and burnout (Busacca, Anderson, & Moore, 2015).

Teachers continually rank off-task and disruptive behaviors as one of their biggest concerns in the classroom and report feeling inadequately trained to address these behaviors. Educators report that students engaging in disruptive behaviors consume an inordinate amount of instructional time and that they account for the majority of office referrals that require administrative attention. Off-task and disruptive behaviors not only interfere with the learning of the students who exhibit them, but they also impact their classmates’ ability to learn and their teachers’ level of stress and ability to teach effectively. (Collins et al., 2016, p. 204)

Negative classroom behaviors can be a way of avoiding and escaping academic work (Collins et al., 2016). Since teaching is based on relationships, sometimes the best approach to a behavior might be to let it go until emotionally we are calm, so we may identify our emotional triggers and those of our students. This will allow us to optimize instructional time and reduce power struggles (Ashley, 2015). Research has shown that teaching students self-management skills allows them to bring about change to their own behaviors (Busacca et al., 2015). By doing this, students are in control of their own self-monitoring and they can monitor and target their own behavior triggers (Busacca et al., 2015).

Research also indicates that classrooms in which behavior is poorly managed
result in less instruction and are more likely to have long-term negative behavioral and academic outcomes (Reinke et al., 2013). The typical response to students with behavioral problems is to apply aversive consequences which often increase negative behaviors (Reinke et al., 2013). “When teachers revert to making harsh or critical comments, students may actually increase disruptive behaviors in their classrooms” (Reinke et al., 2013, p. 41).

“Over the past decade, there has been an increasing trend for schools to implement school-wide discipline systems” (Reinke et al., 2013, p. 39). According to Hawken, Vincent, and Schumann (2008), positive behavior support (PBS) experts recommend a three-tier system to intervene and support problem behaviors. Many schools collect discipline data with ODRs to determine student behavioral needs and school culture; these have been shown to be widely reliable and valid (Hawken et al., 2008). It is encouraged by behavioral specialists for schools to develop leadership teams that will be able to track behaviors and patterns; this will allow them to make changes in the school environment to reduce those behaviors (Ashley, 2015). School-wide PBIS teaches students three to five behavioral expectations and gives them key examples of how these behaviors should be displayed (Cressey, 2015). These behaviors are set by the PBIS committee at the school and can range from showing respect for themselves as well academics and levels of effort. Studies have shown that when behavior expectations are taught and introduced to the environment, discipline problems will be reduced (Cressey, 2015).

**Teacher Efficacy**

When teachers believe what they do is important, it can have one of the most powerful impacts on students (Mehdinezhad & Mansouri, 2016). Teachers who have
firm beliefs in their effectiveness are likely to make continuous efforts in the face of obstacles (Mehdinezhad & Mansouri, 2016). Teachers need tools to address student behaviors during the learning process (Carr, 2012). “Research suggests that increased teacher self-efficacy in classroom management is positively correlated with increased confidence, greater positive affect, and fewer discipline referrals” (Carr, 2012, p. 12). Our beliefs influence behavior patterns, emotional responses, and how we act or react (Carr, 2012). Teacher efficacy is significantly related to student achievement and shapes student attitudes toward school and the teacher (Tschannen-Moran, Hoy, & Hoy, 1998).

Bandura (1994) noted there are four sources of input that form our self-efficacy. These beliefs will determine how we feel, act, and motivate ourselves (Bandura, 1994). The first of the four is known as the sources of self-efficacy; this discusses people’s beliefs developed through mastery experiences in which failures can undermine any success if they occur before self-efficacy is developed (Bandura, 1994). He noted that when people’s successes come fast and easy, when faced with a failure, they too will become easily discouraged. Bandura said that when people have self-efficacy modeled, they are more likely to believe that they too can perform on that level. Too often, people relate stress and vulnerability to poor performance, which will affect their sense of efficacy (Bandura, 1994). The second source is called efficacy-activated processes; this is all about human functioning. It discusses how their beliefs and sense of efficacy play a role in their level of motivation, their coping capabilities, and how well they can exercise control over their day-to-day encounters (Bandura, 1994).

Bandura’s (1994) third source is about having optimistic self-beliefs. Without this, when faced with obstacles, they are more likely to accept failure and project this to others around them. Many of the challenges they face will be group challenges; so not
only is self-efficacy important, but collective efficacy is as well (Bandura, 1994). The fourth source is the development of efficacy over a lifespan. This will help people develop a sense of self-efficacy that will last throughout their lives and really should begin as a child. It is the school that serves as the primary setting for this cultivation that will help them function in society (Bandura, 1994). “The task of creating learning environments conducive to development of cognitive skills rests heavily on the talents and self-efficacy of teachers” (Bandura, 1994, p. 81).

Teachers who attribute their failures to outside factors react in a more helpful way. It allows them to have higher levels of self-efficacy then those who attribute classroom situations as a reflection of their own personal flaws (Warren, 2010). “Teacher efficacy appears to have the capacity for momentous impact on student outcome, however, strategies for developing and maintaining these beliefs have largely been ignored” (Warren, 2010, p. 4). Findings suggest that efficacy affects managing classroom behaviors, keeping students engaged, and the implementation of teaching strategies and interventions (Warren, 2010). Further investigations have shown that student achievement and teacher efficacy have a direct positive correlation; and when teacher efficacy is high, that achievement will increase and students show higher success (Warren, 2010). However, when teachers have low efficacy they struggle with motivating students and are less likely to be able to manage classroom behaviors (Warren, 2010).

History of PBIS

**Applied behavior analysis (ABA).** According to Carr (2012), there are three major sources from which PBS emerged: ABA, normalization movement, and person-centered values. In many of the traditional behavior programs, aversive stimuli are used
as a way of decreasing certain behaviors; aversive referring to when stimuli are followed by an avoidance of responses (Horner & Sugai, 2015). Carr (2012) noted that

Applied behavior analysis (ABA) is the systematic extension of the principles of operant psychology to problems and issues of social importance. Were it not for the past 35 years of research in applied behavior analysis, PBS could not have come into existence. (p. 3)

ABA has contributed to PBS in two major ways: the first being that it provided the framework that has been relevant to behavior changes; and second, it provided strategies for interventions and assessments (Carr, 2012). It is also noted by Carr (2012), that ABA has given PBS the three-term contingency of stimulus-response-reinforcing consequence concept. This is the idea of setting events, establishing operations, and stimulus control (Carr, 2012). Not only that, but ABA was at the forefront of originating the idea of determining the purpose of a behavior and designing an intervention to change the behavior in a more desired direction (Carr, 2012). It was through the controversies of the use of aversive consequences concerning people with developmental disabilities that PBS truly rose to the surface, bringing with it the ideas of increased positive behavior and lifestyle improvements (Johnston, Foxx, Jacobson, Green, & Mulick, 2006); however, no formal trainings in ABA are required for PBS training (Johnston et al., 2006).

Normalization movement. "Philosophically, PBS subscribes to the principle and ideal of normalization, namely that people with disabilities should live in the same settings as others and have access to the same types of opportunities as others" (Carr, 2012, p. 4). The idea rests on social acceptance and allowing people who struggle in that to assume valued roles socially over time. This idea of inclusion has spread to the educational level in which students with disabilities are mainstreamed with their peers
(Carr, 2012).

**Person-centered values.** PBS uses the person-centered values idea in relation to humanistic values and empiricism; and even though science may tell us how to change things, the values decide what is worth changing, according to Carr (2012). Even though PBS is a mixture of values and technology, the values are not merely judged with efficacy but with their ability to enhance opportunities for choice (Carr, 2012). It is through looking at these values that programs like IDEA began to make changes to their existing acts.

**Revamping IDEA.** According to PBIS (n.d.), IDEA was amended in 1997 due to a decision that Congress made to recognize the potential of PBIS to help improve education and prevent students from being excluded. Congress recognized that schools needed to be using evidence-based practices to address the behavioral needs of students, so they explicitly chose PBIS. Although Congress recognized the need for PBIS, they were careful in choosing what requirements they would need to maintain a proper balance; the IDEA requires

1. The IEP team to consider the use of PBIS for any student whose behavior impedes his or her learning or the learning of others.

2. A functional behavioral assessment when a child who does not have a behavior intervention plan is removed from their current placement for more than 10 school days (e.g. suspension) for behavior that turns out to be a manifestation of the child’s disability.

3. A functional behavioral assessment, when appropriate, to address any behavior that results in a long-term removal (PBIS, n.d., para. 5).

PBIS (n.d.) states that in order for an Individualized Education Plan (IEP) team to
recommend or utilize PBIS, it would have to have knowledge of how to properly use it, which is why Congress provided grant funds to help provide training and to develop models of PBIS.

It was also during this time that one of those grants was used to establish the National Center on Positive Behavioral Interventions and Supports, which would help provide support and assistance to schools using evidence-based practices to help students with behavioral disorders (Sugai & Simonsen, 2012); however, as schools across the nation realized the need for these interventions, the program began to be applied to all students, not just those with behavioral disorders (Cunningham, 2012).

**Unveiling PBIS.** Traditionally, the schools’ response to student behaviors was to increase aversive consequences; however, in many cases, it only emphasized and increased the behavior which ultimately was the opposite of the desired effect (Reinke et al., 2013). “Due to the lack of effectiveness of the positive-school approach toward challenging behaviors, public schools have searched for an innovative approach to better serve students who are at risk for academic failure and dropout/expulsion” (Ryoo & Hong, 2011, p. 1). PBIS is appealing to schools because it is not the “one size fits all” model and is more focused around meeting each school’s different needs (Molloy et al., 2013). Its emphasis on using data to make decisions and taking a positive approach with student specific plans makes it desirable, in addition to its positive effects on school safety and academics (Molloy et al., 2013). In fact, a large number of schools like its approach of prevention rather than disciplinary action (Ryoo & Hong, 2011).

One of the most common uses of collecting data is using ODRs, which are forms that are filled out each time a student is referred to the office for a behavior or violation of school policy (Molloy et al., 2013). These are practical data sources that widely
follow standard formats and have been linked to poor outcomes for students (Molloy et al., 2013). According to Molloy et al. (2013), there are three categories of these referrals: aggression/violence, substance use, and defiance. “Disruptive and violent behavior in schools is detrimental to students, schools, and communities” (Barrett, Bradshaw, & Lewis-Palmer, 2008, p. 105). There is an increasing rise of students with these disruptive behaviors and, as a result special education services, are being required more and more (Barrett et al., 2008). Studies have shown correlations between academic performance and discipline issues across the grade levels using ODRs to monitor and assess these issues (Putnam et al., 2013). These behaviors have been documented showing increasing academic deficits and problem behaviors in multiple studies (Putnam et al., 2013). It has also been shown that there are large academic deficits especially on standardized testing with these students who receive high referrals, and those who have none to low amounts of referrals tend to have higher G.P.A. scores (Putnam et al., 2013). It has been “estimated that when a student receives an ODR he/she loses 20 minutes of instructional time and when a student is given a suspension he/she loses 1 day of instructional time” (Putnam et al., 2013, p. 1).
Figure 2. PBIS Tiers (PBIS, n.d.).
<table>
<thead>
<tr>
<th>Prevention Tier</th>
<th>Core Elements</th>
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| **Primary**     | Behavioral Expectations Defined  
|                  | Behavioral Expectations Taught  
|                  | Reward system for appropriate behavior  
|                  | Continuum of consequences for problem behavior  
|                  | Continuous collection and use of data for decision-making  |
| **Secondary**   | Universal screening  
|                  | Progress monitoring for at risk students  
|                  | System for increasing structure and predictability  
|                  | System for increasing contingent adult feedback  
|                  | System for linking academic and behavioral performance  
|                  | System for increasing home/school communication  
|                  | Collection and use of data for decision making  |
| **Tertiary**    | Functional Behavioral Assessment  
|                  | Team-based comprehensive assessment  
|                  | Linking of academic and behavior supports  
|                  | Individualized intervention based on assessment information focusing on  
|                  | (a) prevention of problem contexts, (b) instruction on functionally  
|                  | equivalent skills, and instruction on desired performance skills, (c)  
|                  | strategies for placing problem behavior on extinction, (d) strategies  
|                  | for enhancing contingence reward of desired behavior, and (e) use  
|                  | of negative or safety consequences if needed.  
|                  | Collection and use of data for decision-making  |

*Figure 3. PBIS Core Elements (PBIS, n.d.)*

Implementation of PBIS involves teachers being able to embed the teaching and supervising of social skills into the curriculum (Yeung et al., 2016). There are three levels of prevention of the PBIS continuum: primary, secondary, and tertiary (Barrett et al., 2008). The primary tier is to support all students and focuses on reinforcing students
who are following those expectations (Farkas et al., 2012). These are the school-wide interventions that apply to discipline, classroom management styles and approaches, and help prevent behavior that would be considered unsocial (Barrett et al., 2008). Even though the first stage will only reach 80-90% of students who do not suffer from major behavioral problems, the purpose is to maximize achievement and to increase the relationships among peers and with adults (Muscott, Mann, & LeBrun, 2008).

The second tier is known as the secondary or targeted intervention stage and addresses students who are at risk for social and academic failures (Barrett et al., 2008). This stage targets approximately 5-10% of students who are considered at risk (Muscott et al., 2008). According to Muscott et al. (2008),

These students enter school with significant risk factors and are usually unresponsive to universal prevention strategies alone. The goals of secondary prevention are to (a) decrease opportunities in which high risk behaviors might be fostered and (b) establish effective and efficient prosocial repertoires that would increase student responsiveness to universal interventions. (p. 191)

These interventions may take on the form of Check-In/Check-Out or some other type of behavior program such as Big Brother and Big Sister (Farkas et al., 2012).

Check-In/Check-Out was created to help decrease problem behavior by having student behaviors rated based on their performance (McIntosh, Campbell, Carter, & Dickey, 2009). It was designed to create structure, give regular feedback, and create a chance for students to have an adult mentor in their school setting (McIntosh et al., 2009). According to McIntosh et al. (2009), it has been shown to be very effective in increasing student engagement academically and reducing the negative behaviors. It starts with a 5-minute meeting with their mentor before school and during each period of the day instant
feedback from the teacher/teachers and ends with a debriefing period at the end of the day to discuss what transpired throughout the day (McIntosh et al., 2009). “This is intended to provide feedback to students to help prevent future problem behavior” (Yeung et al., 2016, p. 147). Any adult in the building can supervise Check-In/Check-Out, not just teachers (Ennis & Swoszowski, 2011). Its intentions are to provide students with positive interactions and encouragement to earn points. These points allow the student to share success with their parents and teachers, and these points will earn them rewards as simple as social privileges or small prizes (McIntosh et al., 2009). These points are predetermined, set for that day, and individualized based on each student in the program (Myers, Briere, & Simenson, 2010). The student carries this sheet with them daily, and it can be used for any student who requires extra help not just those in tier two (Myers et al., 2010). Eventually, students who are in the Check-In/Check-Out program can graduate from this program when they are told they no longer need it (Myers et al., 2010).
Figure 4. Check-In/Check-Out Card.

Tier three is known as the specialized or tertiary interventions stage and is used for specific behaviors that support student behavioral and emotional challenges and for their families if needed (Barrett et al., 2008). According to Muscott et al. (2008), this tier only effects 1-5% of students, and the goals are to reduce the intensity and frequency of their behavior patterns and offer suitable and effective alternative behaviors. “Tier 3 interventions support individual students who display high-frequency or high-intensity problem behavior and include (a) positive, individualized function-based behavior intervention plans, (b) intensive and coordinated supports facilitated by a wraparound process, or (c) both types of support” (Farkas et al., 2012, p. 276).
Proactive Discipline Approach

“Public education is in transition. Pressure is mounting to establish and maintain safe and effective schools-schools that produce positive educational outcomes for all students” (Lewis & Sugai, 1999, p. 5). Classroom discipline falls into two categories: reactive and proactive. Proactive strategies focus on trying to reduce the likelihood of students demonstrating undesired behaviors (Boulden, 2010). School-wide discipline approaches are suggested as alternatives to traditional behavioral policies. Rather than isolating the problem or the student, these programs treat the whole school (Martin & Nuzzi, 2013).

Discipline can have many different meanings depending on the pragmatics of the situation or simply in the way that best suits our needs (Swick, 1985). For instance, a principal might view discipline when a teacher keeps his/her room quiet, or a student may see it as control that adults have over his/her fun and life. Parents might view it as their child staying out of trouble, a teacher might view it as students showing self-control, or a theorist as of sign of student maturity (Swick, 1985). Proactive approaches prepare and anticipate situations so teachers learn how to be productive members in the classroom environment (Swick, 1985). The ideal situation would be to have a system of discipline that is workable and constructive. Swick (1985) suggested that teacher views of discipline will influence their classroom management and that effective teachers continually refine their concept of what that looks like. In this plan, the approach should be one that actively pursues a positive view of behavior and maximum control of anticipated situations to be possible (Swick, 1985). This positive view will serve as a reference point for designing educational programs where learning is self-directed. One example of this is an approach known as the school-community program. In this
program, a disruptive behavior inventory is taken; this examines causes, effects, and possible solutions to student behavior (Swick, 1985). Through this process, three factors have been identified that effect proactive discipline programs: provisions for better teacher-student ratios, a better parent-community education program that focuses on positive discipline, and in-service programs to help teachers and administrators with discipline and classroom management (Swick, 1985); however, these approaches relate to all factors that will influence such programs like students, parents, teachers, and how all of those function together.

The interactions of school staff will reflect their views of students as well as the environment of the school which can be anything from climate to physical settings (Swick, 1985). Other factors to consider are curriculum opportunities, parental involvement, and patterns in current student behavior. Proactive management requires planning for elements such as transitions, group activities, and even seating arrangements. Discipline and management are interconnected and should be integrated into the everyday classroom processes and activities. Swick (1985) stated that students need to be able to function effectively, independently, and in a group setting and that often, behavioral issues occur when either the student or the teacher fails to recognize the value in the other. Swick went on to note that teachers should design their framework in ways that see potential in all students by gaining a clearer understanding of student strengths and weaknesses and that challenge students based on levels that will maximize their own potential. “Productive teacher behavior is a major part of any successful discipline program” (Swick, 1985, p. 25). Teachers should have a clear expectation of expected student behaviors, parental involvement, problem-solving processes to resolve student behaviors, and be willing to continually revise those policies (Swick, 1985).
The Behavior Intervention Support Team (BIST) program is a proactive school-wide behavior management plan for the student which focuses on the partnering of students and parents through high expectations (Boulden, 2010). It provides proactive strategies to address disruptive student behaviors in hopes to create healthy learning environments (Boulden, 2010). The focus of this program is to prevent the development of inappropriate behaviors, reduce patterns of undesired behaviors, and equip students with skills that will lead to academic achievement (Boulden, 2010). Teachers have perceived the BIST model as an effective practice for students in a wide range of ages, as evidenced in a study by Edwards at the University of Missouri-Kansas City (Martin & Nuzzi, 2013). The program narrowed down the behaviors of students to three basic reasons: they do not know any better, they have needs to test limits, or they do not have skills to manage their feelings (Martin & Nuzzi, 2013).

The BIST program provides a multi-tier proactive model that establishes clear and consistent rules, teaches all students expectations, enhances problem-solving skills, and clarifies the expectations for staff (Boulden, 2010). It is through this program that students are given daily chances to practice expectations. It is also through early intervention that teachers are more likely to show students the proper ways to react to situations while still allowing their feelings to be evaluated. Through early intervention, the program anticipates less academic time will be lost (Boulden, 2010). In these tiers, students are given time to accept and evaluate their feelings, separate themselves in a recovery room, and participate in a protective plan that can involve things such as checking in and out with an adult. This program is grounded in behavioral theories that focus on environmental manipulations; building relationships; setting high expectations; and providing a framework in which parents, teachers, and students are actively involved.
This model provides a caring and structured environment that is consistent but encourages students to be accountable for their actions and feelings. Research indicates that the key component in this behavioral program or any successful proactive program is the relationship between the student and the teacher; it is this relationship that allows students to feel respected and as active participants in their learning. It creates a way for students to separate their feelings from their behaviors and gives them time to address these feelings before the behavior can occur (Boulden, 2010).

In this program, students with behaviors are treated as collective staff issues not an individual staff issue (Martin & Nuzzi, 2013).

“Methods of disciplining children have changed drastically over time. At the middle school level, most changes in disciplinary procedure came from the research, which stated that discipline must reflect the unique needs of the adolescent” (Martin & Nuzzi, 2013). Traditional discipline procedures of suspensions, retentions, and punishment have been shown to possibly create more problems for students, not less. Discipline issues often take students who need to be there the most out of the classroom, creating short-term not long-term changes in behaviors (Martin & Nuzzi, 2013). The ultimate goal of discipline should be for students to show and learn self-discipline while including student input and making sure all staff is committed (Martin & Nuzzi, 2013).

Early interventions and prevention is the best hope to creating safe schools (Lewis & Sugai, 1999). Schools need to host environments that teach and encourage appropriate behaviors, monitor how effective their practices are, and discourage negative behavior (Lewis & Sugai, 1999). According to Lewis and Sugai (1999), there are six components to implementing a school-wide positive discipline system: (a) statement of purpose, (b) clearly defined expected behavior, (c) procedures for teaching expected behavior, (d)
procedures for encouraging expected behavior, (e) procedures for discouraging problem behavior, and (f) procedures for record keeping and decision making.

The statement of purpose is the objective for providing and establishing pro-social behaviors; it creates an environment where teachers and students learn how to be consistent across the school (Lewis & Sugai, 1999). This purpose should be stated positively and in a way that focuses on all staff and students and the desired academic and social behaviors (Lewis & Sugai, 1999). By defining the expectations, the rules and desired behaviors are stated in a positive way that are minimized to five or less and use common language so that everyone can understand. These rules should include all staff and students, account for all settings in the building, and have examples so students fully understand the expectations and what they look like in action (Lewis & Sugai, 1999). These behaviors should be taught, thus providing common language and a foundation for all students especially for those with problem behaviors. Each of the behaviors being taught should have examples, student activities, and practice opportunities. By having examples, it emphasizes the possible settings and behaviors that could occur; these examples could be in the form of role playing, modeling, or class discussions (Lewis & Sugai, 1999).

Teaching the behaviors is only part of promoting positive behavior environments; maintaining the use of positive and appropriate behaviors is equally important. Essentially, students learn to manage their own behaviors by taking ownership of their actions and applying them in multiple settings around the school (Lewis & Sugai, 1999). In the beginning of the program, it is important to reward students for demonstrating the desired behaviors; however, token praise should begin to shift to verbal praise, staff to student praise should shift to self-praise, daily feedback to monthly feedback, and
constant predictable reinforcement to unpredictable and occasional reinforcement (Lewis & Sugai, 1999). It is also important to know when and how to respond to problem behaviors, knowing which behaviors can be addressed in the classroom and which need assistance beyond the classroom. All problem behaviors should be designed and classified, and staff should be given procedures on how to address these issues. Record keeping is essential to a positive school-wide discipline system; these records allow decisions to be made from current issues to past issues and whether or not interventions are working (Lewis & Sugai, 1999). These data need to be readily available, and a set of identifying questions should be established so measurable outcomes can be collected and patterns might be identified. There should be steps to not only show how the data are collected but also how they are used.

**Reactive Discipline Approach**

**Suspensions and expulsions.** Schools have emphasized reactive strategies such as increased security, like metal detectors and security guards, and aversive consequences in hopes of suppressing violent and antisocial behaviors (Mayer, 2001). Schools are using punitive measures like suspensions and expulsions to get rid of the negative behavioral issues; however, those students are only gone for a period of time and often fall further behind which can possibly lead to student dropout (Mayer, 2001). “School is a scary place. Each year thousands of students and teachers are assaulted in school…many schools have installed metal detectors and hired security guards in an attempt to ensure a safe school environment” (Hamby, 1995, p. 2). Hamby (1995) went on to say that not all at-risk students are violent, but those who have histories of discipline issues are at risk.

Many institutions have moved to in-school suspension (ISS) as an alternative to
out-of-school suspension (OSS); ISS has been accepted as meeting an effective discipline action to many educators and parents (Whitfield & Bulach, 1996). Research in many schools around the country has shown that ISS is effective in meeting the needs of disruptive students and reduced the number of discipline problems and expulsions (Whitfield & Bulach, 1996). The attraction to this form of discipline is that students are able to stay on campus in an academic environment, even if it is not in their regular classroom setting; however, by students serving ISS instead of trying to modify the actions of the students, they often return to their classrooms with the same mindset and behaviors (Buettner, 2013). In order for ISS to work properly, it must be supported by the administration and be available to all personnel to have access to refer students (Whitfield & Bulach, 1996). This type of discipline approach can be effective in curbing misbehavior but should be used as an intervention to help manage student behavior (Whitfield & Bulach, 1996).

Suspending students or even expelling students is still a substantial component of discipline for our nation (Skiba et al., 2014). OSS is not restricted to dangerous behaviors and is most commonly used for daily disruptions and defiance (Skiba et al., 2014). Although research has shown in the past it is most frequently used for fighting and aggression in schools, currently it is more consistent with minor to moderate infractions such as disobedience and disrespect (Skiba et al., 2014). With this form of discipline, it has been known to produce a more negative school climate, especially for students of color. ISS is also shown to have connections to lower academic achievement levels (Skiba et al., 2014). It has a greater correlation to long-term outcomes such as higher dropout rates, likelihood of juvenile justice, and failure to graduate on time (Skiba et al., 2014).
The use of suspensions and expulsions rose from the zero tolerance policies that grew from other federal policies during the 1980s, as a way of showing that certain behaviors would not be tolerated (Skiba & Losen, 2015). During this time period, schools also showed an increase in the use of security personnel and security technology, especially in the urban schools; however, in the 20-year period when these guards and cameras have been put into place, there have been very few evaluations of their true effectiveness. Nearly 3.5 million students were suspended at least once in the 2011-2012 school year across the nation, an average of 3.5 days per suspension (Skiba & Losen, 2015). Large bodies of research have found very little to support that suspensions and expulsions lead to improved school safety and behavior, and schools that have higher rates of suspensions typically have lower ratings of school climate (Skiba & Losen, 2015). Students who have been suspended show a higher risk of future suspensions. “Changing the structure of the disciplinary system can reduce the use of suspension and expulsion, and may reduce disparities in exclusionary discipline. Positive Behavioral Interventions and Supports can reduce exclusionary discipline” (Skiba & Losen, 2015, p. 7).

**Corporal punishment.** There are other forms of discipline that schools use such as corporal punishment; in fact, in 2005, there were 21 states that permitted the punishment in schools (Menard, 2012). According to Hyman (1996),

Throughout the 19th century, American educators relied heavily on corporal punishment and humiliation to foster achievement and maintain order. Teachers were often neither educators, instructors, nor trainers. They were valued as disciplinarians who specialized in the use of the rod and cow skin, the ruler and switches. (p. 9)
Oftentimes, paddles, switches, and even whipping posts were displayed to remind students and to instill some fear if discipline issues were to arise (Hyman, 1996). According to Benatar (1998), there are five reasons why and how corporal punishment should be used: (a) infrequently and should never cause injury, (b) due process so only the guilty are punished, (c) timing is important especially in young children, so there is a link between the punishment and the behavior, (d) they should be put into place so there are rules and conditions, and (e) nondiscriminatory between minority groups and gender; however, an association between increased aggression and spanking has been shown (Menard, 2012).

There are also concerns regarding the dilemma of differentiating cruel punishment and acceptable punishment and that some areas where students are disadvantaged or at risk may be subjected to higher incidences of this type of punishment than others (Menard, 2012). Results in research have shown that there are two kinds of spankers: those who use spanking as a tool for disciplining children and those who spank when they become emotional from a child’s behavior (Chenoweth & Just, 2000). Spanking in school as a form of discipline and punishment has resulted in controversy since the 1970s; and since then, over 27 states have banned it (Chenoweth & Just, 2000), many arguing that it teaches students to become more violent over time and that violence is a learned behavior (Chenoweth & Just, 2000). Those in favor of corporal punishment as a form of discipline claim that a point must be found that defines the distinction between effective and destructive (Chenoweth & Just, 2000).

**Student Achievement**

“Educators have persistently sought the most effective ways to measure student learning…legislation such as No Child Left Behind has mandated measuring student
learning through standardized student achievement test” (Sabin, 2012, p. 24). By using these tests, the data will be readily available to researchers to be analyzed in numerous ways (Sabin, 2012). Assessments are designed to measure student achievement; however, not all assessments are the same and can differ based on the purpose of the assessment (Sabin, 2012). These assessments can come in many forms such as formative, formal, and summative high-stakes testing (Sabin, 2012).

Formative assessments provide data to help improve instruction, while summative assessments focus on overall achievement and are used for longer range and larger assessments (Sabin, 2012). Summative assessments can use various methods of collecting data such as portfolios and essays; however, “the measurement of student achievement for research purposes is primarily limited to standardized achievement test” (Sabin, 2012, p. 25). These tests have been tested for validity and reliability, provide quick grading due to their formatting, and can be standards based (Sabin, 2012); however, the pressure to perform on these tests is felt by not only educators but students too. “Many researchers make the case against using standardized test scores for means of comparison due to how often the measures are changed” (Sabin, 2012, p. 26). Currently, these tests measure two things: student proficiency and growth, which show student performance over a period of time (Sabin, 2012).

Although educators may view school climate and achievement as two separate entities, they are in fact related and in many cases climate is the single most predictive factor in a school’s ability to promote student achievement (Jones & Shindler, 2016). Students who show a better sense of internal control tend to show higher levels of achievement, which has shown to be a greater predictor of achievement than intelligence or socioeconomic status (Jones & Shindler, 2016). Schools that have higher rates of
suspensions and expulsions have lower scores on standardized tests; but when behavior and academic systems are together, they promote and provide students with a framework for success (Buettner, 2013).

By using a more positive approach with students, schools have seen more growth socially, emotionally, and academically (Miller, 2016). “Focusing on the positive qualities of students will help improve their self-esteem and academic success” (Miller, 2016, p. 21). By using PBIS, students are geared towards feeling more comfortable and empowered by their teachers and therefore are willing to take more risks and perform to their highest potential (Miller, 2016). Effective school climates and culture support effective instructional outcomes that can help students reach their true potential (Miller, 2016). PBIS protects instructional time which in turn impacts student learning by limiting disruptions and using a positive and proactive approach with students (Miller, 2016).

“School-wide behavior supports decrease problem behavior, increase time spent in academic instruction, and are associated with improved academic outcome” (Putnam et al., 2013, p. 3). A study conducted by Lassen, Steele, and Sailor (2006) indicated evidence that PBIS improves standardized test scores. Tobin and Sugai (1999) found that students who had more than three or more suspensions in high school had lower GPAs and higher academic failures than that of their peers. In a study conducted by Scott and Barrett (2004), it was found that when a student receives an ODR, they lose 20 minutes of class instruction; and by using PBIS, the school was able to decrease ODRs, gaining 29 days back of lost instructional time and improving academic performance (Scott & Barrett, 2004). PBIS reduces the number of ODRs and suspensions, which increases attendance and improves academic outcomes (Putnam et al., 2013). Schools with PBIS
have been shown to have greater academic improvements compared to non-PBIS schools (Putnam et al., 2013). “If problem behavior and academics are linked, each affects the other, and if acceptable instruction is in place, then improving the behavioral climate of the school will allow that instruction to be more effective” (Putnam et al., 2013, p. 5).

According to Putnam et al. (2013),

With full implementation of school-wide positive behavior support, a behaviorally competent school would have the following conditions: a) classroom management and curriculum variables would be adapted so academic tasks become less aversive; b) reduction in ODRs would mean more minutes spent in academic instruction; c) the minutes spent in academic instruction would be more effective; d) there would be less peer support for academic failure, and; e) there would be an increase in the structured prompts, contingent feedback and support for academic behavior. We might hypothesize that with these conditions in place a school could affect the academic gains of students. (p. 6)

**Summary**

PBIS has been in place in schools all over the country. It has shown to increase positive student behaviors, academic achievement, and school attendance and build confidence in students. It has taught students how to think and then react to issues by modeling and giving feedback during possible behavior situations. It may have derived from plans designed for students with disabilities but has been shown to apply to any and all students. It is most effective when teachers and other staff members show interest and use the program as designed, acting proactive instead of reactive. With this program, schools have gained more useable classroom time and increased student chances of academic success.
Chapter 3: Methodology

Introduction

The purpose of this study was to examine the effects of PBIS on the academic achievements of students at School A. The researcher examined this achievement by using standardized state reading and math scores. The researcher investigated the trends and relationships between discipline issues at School A and their connections to PBIS and non-PBIS schools within that district. Chapter 3 addresses how the study was conducted by addressing the following topics: research design, participants, instrumentation, procedures, data collection, data analysis, and limitations to the study.

Research Design

The study used a qualitative approach to analyze teacher perceptions of discipline, student academic achievement based on standardized test scores, and the impact of PBIS on student behavior. Qualitative methods included the analysis of student office discipline data and standardized North Carolina State High School Math I scores as well as interviews of middle school principals to analyze perceptions of PBIS programs from the feeder schools and their impact on student behavior prior to students entering School A, interviews with School A’s principals, vice principals, and teachers to examine their perceptions of student behavior while attending School A, and the impact the behavior has on discipline incidents and academic achievement. This study took place during the course of the 2016-2017 academic year.

Participants

Active participants for this qualitative methods research study included current ninth grade high school students at School A, the three feeder middle school principals,
15 teachers who teach ninth grade at School A, and the principals and vice principals at School A. All participants were given an Informed Consent Form (see Appendix A).

This study took place at a large high school in a rural setting in piedmont North Carolina with a student population of 1,768 students, a teacher population of 109, and five administrators. Fifteen teachers from ninth grade at the high school were selected randomly by email to participate in teacher perception data collection. Additionally, the three middle school administrators and four high school administrators were interviewed for discipline perception data. Student discipline data were collected with the appropriate permissions from local administrators from a central depository.

**Instruments**

Central office personnel collected the student discipline and academic data from the central depository. The data were coded to protect the identity of the students and presented to the researcher in an electronic format suitable for analysis. The data included demographic fields, discipline incident fields, and academic achievement fields.

The perception data instrument was developed and validated as part of this study. The discipline and academic student data were analyzed. Interview questions were developed that assisted the researcher in two ways. First, the interview questions provided data that contributed to answering the research questions; and second, the interview question responses assisted the researcher with a better understanding of the discipline culture in School A. The interview instrument was validated by content validity utilizing two experts in the areas of behavior and academic achievement. These experts validated by agreement that the interview questions were appropriate questions to be asked to investigate perceptions of behavior and academic achievement and that the responses garnered from the questions would contribute information that would allow the
student to answer the study research questions. Results of the validation process are presented in Chapter 4.

Procedures

The study used a qualitative approach to analyze teacher perceptions and implementation of the PBIS program and student academic and behavioral growth. This approach was used to collect and analyze data which increased the strength of the overall study (Creswell, 2003). There were open and closed-ended questions, multiple forms of data, and across database interpretations (Creswell, 2003).

This study started by gathering office discipline data over the last 5 years. These data were organized and categorized by incident. They were then broken into subcategories to further analyze. Students who fell into the high referral category were linked back to their feeder middle schools to determine if they had exposure to the PBIS program. Once the data were gathered and analyzed, the researcher conducted interviews with high school teachers and principals and middle school principals to gather data about teacher perceptions of discipline and behavior. These data were analyzed to find trends and themes among participant answers. Once all data were analyzed, the researcher sought to determine if there was a need for PBIS at the high school.

Data Collection

With IRB approval, data collection for this study occurred in multiple ways. The researcher coordinated with district office personnel to retrieve student data. Quantitative data were collected from the historical data of School A’s student population discipline; and academic data were retrieved from NC Wise, the former system of collecting and monitoring student information and discipline data across the state. Current data of School A’s student population discipline and academic data were retrieved from
Powerschool, the current student information system. Once the two data sources were retrieved, the two files were merged to provide discipline and academic information along with demographic data that were used for data analysis.

The researcher collected qualitative data by conducting interviews with faculty and administrators. The interviews were conducted one on one with all the interviewees. The interviews were recorded in field notes and compiled for analysis. All data were and are secured on the researcher’s computer and backed up by using encryption on at least three backup devices for security.

**Data Analysis**

The qualitative data were analyzed using descriptive statistics to determine the measures of central tendency and variation. Presentation of data included frequency distribution, cross-tabulations, tables, and charts to display the data. Independent variables that were used to present the data included demographic data points such as grade level, ethnicity, gender, and historical participation in PBIS. SPSS was used to analyze the quantitative data.

Qualitative data from interviews were transcribed into a form that allowed for content analysis. The content analysis looked for common themes among interviewee answers to the interview questions. Once the themes were identified, the strength of the theme was determined by the number of participants who contributed to the theme of the frequency and its appearance in the data.

**Delimitations**

Research of this nature is susceptible to limitations. One such limitation is the research design that includes only three middle schools and a high school. A second limitation is that there is no guarantee that the faculty and administrators used in the
interviews would be forthcoming with answers that are truthful and comprehensive because of the nature of the topic and the fear of repercussions from administration.

This study examined only ninth-grade students who have taken Math 1 and ninth-grade teachers at the high school. It focused on this group of students because of their more recent connection to the middle schools and the programs they have or do not have pertaining to PBIS. It only interviewed the ninth-grade teachers at the high school since they are the ones who interact with those students on a regular basis.

Summary

The intent of this study was to analyze the relationship of discipline, student exposure to PBIS, and standardized EOC scores. This study sought to examine the effectiveness of PBIS and whether it reduced ODRs using a mixed-method approach of both qualitative and quantitative designs. The data were collected, and the results of the research are described in Chapter 4.
Chapter 4: Results

Introduction

The purpose of this study was to examine the impact of PBIS on students in a rural high school. This study analyzed the relationships among teacher perception, student achievement, and the residual effects of PBIS. Teacher perception was measured by teacher interview questions, student achievement was measured using standardized Math 1 scores, and the effects of PBIS were determined by student data from NC Wise and Powerschool. The following data were collected and organized to determine if PBIS had residual effects beyond the middle school setting.

Teacher Perception

This study determined teacher perception of discipline with interview questions (see Appendix B). These questions were created and validated by content validity utilizing two experts in the area of middle school-high school behavior and academic achievement. This instrument consisted of 13 open-ended questions. After all interviews were conducted, it was decided by the researcher to discard question 12 since it offered no information pertinent to the study.

Data were collected using 15 ninth-grade teachers from multiple departments including core content such as math and English and electives such as Spanish and physical education. The goal for this study was to include all high school and middle school administrators; however, during the data collection period, one feeder middle school set of administrators was unable to meet despite multiple attempts. All high school administrators and four middle school administrators were included in this data collection. The interviews in this study were conducted in person during planning
periods as well as before and after school.

**Staff interview questions.** The researcher received 15 teachers and nine administrator participant answers from a 13-question interview. The first question asked staff members how they define positive and negative student behavior and discipline. Most staff members responded that they viewed discipline as boundaries and expectations that are in place to help direct student behavior with consequences when necessary. They defined negative student behavior as disruptive behavior that impedes the learning of others and positive behavior as purposeful, engaging, and collaborative.

In the second question, the staff was asked about behaviors that should be handled directly in the classroom by the teacher and behaviors that require administrative support as well as if protocols were put into place to address behaviors in the classroom. All staff agreed that protocols were in place to handle discipline issues; however, some felt that those protocols had areas of ambiguity that were left open to interpretation. Teachers and administrators felt that most issues could and should be handled within their own classroom with the exceptions of incidents such as violence, threats, or consistent behaviors that are disruptive to learning.

The next two questions addressed if discipline issues were handled consistently across the building and in the office. Teachers and administrators alike mostly agreed that issues were handled differently in classrooms across the building due to teacher tolerance and the level at which the teacher enforces the rules. As a result, this made dealing with students from teacher to teacher with different expectations a challenge. Students were able to use this to their advantage in some cases; and in other ways, students struggled with knowing which set of boundaries and expectations to follow; however, answers varied when asked about office-related issues. Some teachers felt that
different administrators were not consistent in the consequences that were administered for comparable behaviors. They also felt discouraged and some even reported that they no longer report things when they happen because “nothing was done to the students.” All middle school administrators felt like issues were handled consistently in the office as well as high school administrators who have a matrix to help guide them through discipline issues.

Next, the staff was asked if there were plans in place for students who have several discipline issues in a short amount of time and if they felt that the school had a need for a discipline program. All agreed that protocols were in place; however, most teachers were not sure who comprised these committees that create protocols or how these protocols work exactly. Many mentioned an alternative school that students are sent to when behaviors cannot be controlled at the high school. Most, however, were unaware of how this process worked or if students were involved in this process. Administration, on the other hand, was able to describe the protocols and the committee members involved in these processes.

The second question about the discipline or behavior program varied among teachers and administrators. Middle school administrators spoke about PBIS and the positive impact it makes on the school climate and culture. The high school administration felt as though the PBIS program did not work for their age students and that students have outgrown those strategies and rewards but did agree that some type of modified PBIS program or other behavior program geared at that level might be beneficial. Teachers varied on this topic; some felt that they did not know how a program like this would work on a high school level, and others felt that it would not matter what program was put into place if the office did not support the teachers. One
teacher was adamant saying, “the fear of punishment has faded, so now we don’t really have anything to hold over them.”

Question 7 addressed the probable areas of the building in which they felt most of the discipline and behavioral issues occurred. The staff felt the areas that were most likely to have incidents were breezeways, the gymnasium, hallways, and the cafeteria. They felt that these were targeted areas due to the high student-to-teacher ratio in those areas, and these were the places where students could find blind spots from cameras and supervision.

Question 8 discussed whether or not staff believed there was a correlation among discipline issues and academic deficits. Some believed it to be a choice, while some viewed it as environmental; but the majority of the staff believed that there are correlations among students who have low achievement and a high number of discipline issues. Any time spent outside the classroom because of discipline issues is instructional time lost.

Questions 9 and 10 of the interview addressed if staff felt as though students were aware of the school expectations and rules. It also addressed if staff believed the school to be proactive or reactive in dealing with behavioral issues in the building. Everyone felt that students were aware of the expectations and that they were laid out in the student handbook which is covered at the beginning of every school year no matter the age level; however, when asked about being proactive or reactive, several teachers and administrators answered that they try to be proactive as often as possible. Some staff members felt that the way discipline is approached and handled has too many “grey areas.” Some reported that the school was reactive and that each administrator reacts differently to situations occurring throughout the building, which makes consistency
across the school difficult.

The final set of questions discussed which grade level the staff felt had more
discipline issues and any other insights they might want to contribute relative to behavior
or school academics. Most teachers felt that freshmen were the most difficult and
consistent in having repeat offenses for negative student behavior each year. They
discussed that freshmen come into the school gaining new freedoms and testing these
new sets of boundaries, whereas older classmen have a clear understanding of the rules
and are more familiar with the discipline system. One administrator commented that he
believed that as students get older, those who usually have the biggest discipline issues
drop out, reducing the number of incidents in those older grade levels.

**Discipline Data**

The discipline data were examined in various ways to determine if other factors
might be contributing to the findings. The data were analyzed in the categories of
gender, race, major and minor offense, feeder school, and Math 1 attempts and scores.

The target population of students for this study was students who have ODRs
from these specific feeder schools who are in ninth grade and have taken Math 1. In
Table 3, the data are presented by feeder school, frequency, and percent of office referrals
over a 5-year period.

**Table 3**

*Discipline Referrals by Feeder School*

<table>
<thead>
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<th>Feeder School</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
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<td>.2</td>
</tr>
<tr>
<td>3250</td>
<td>155</td>
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<tr>
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<tr>
<td>3370</td>
<td>133</td>
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<tr>
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<td>615</td>
<td>100.0</td>
</tr>
</tbody>
</table>
The data indicated that the school (3300) with the highest exposure to PBIS had the highest number of office referrals, more than the other two schools combined. The data also indicated that the school with no PBIS program (3370) had the least number of incidents over the period.

The data in Table 4 shows the frequency of incidents categorized by major offenses. The offenses considered major were ones of violence, drugs, tobacco, alcohol, sexual harassment, and skipping school. These incidents were categorized by number of office referral incidents and feeder school. In addition, the table shows incidents that occurred but were not able to be traced back to the offender’s feeder school. This may be a student who moved from a school that was out of county or state.

Table 4

<table>
<thead>
<tr>
<th>Major</th>
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<th>3250</th>
<th>3300</th>
<th>3370</th>
<th>Total</th>
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</thead>
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<td>8</td>
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</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>35</td>
<td>72</td>
<td>27</td>
<td>178</td>
</tr>
</tbody>
</table>

Table 4 indicates that School 3300 had more major offenses than the other schools. It had more than twice (41%) the number of major offenses as School 3250 at 20% which has a version of PBIS and School 3370 with no PBIS program at 15%.

The data in Table 5 shows frequency of incidents that were categorized by student minor offenses. These offenses were incidents such as inappropriate language, cell phone use, insubordination, dress code violations, disruptive classroom and bus behavior, and
skipping class.

Table 5

*Number of Minor Offense by Feeder School*

<table>
<thead>
<tr>
<th>Minor</th>
<th>Unknown</th>
<th>3250</th>
<th>3300</th>
<th>3370</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td>Total</td>
<td>100</td>
<td>141</td>
<td>203</td>
<td>126</td>
<td>570</td>
</tr>
</tbody>
</table>

Table 5 indicates the same results with minor offenses, these offenses occurred more often at School 3300, with the most active PBIS program of the three feeder schools. Some of these data could be attributed to the population that each feeder school serves in the area.

In Table 6 the data are presented by major offenses and ethnicity. These data were provided to determine if race could possibly be a factor in the data. The literature in Chapter 2 discussed student major and minor incidents and how more often, minor incidents can lead to consequences that were once reserved for only major incidents. It is because of this that student response typically results in higher negative school climates,
especially for students of color (Skiba et al., 2014).

Table 6

*Number of Major Offense by Ethnicity Table*

<table>
<thead>
<tr>
<th>Major</th>
<th>Unknown</th>
<th>Black</th>
<th>Hispanic</th>
<th>Indian</th>
<th>Mixed</th>
<th>White</th>
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<td>17</td>
<td>0</td>
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<td>135</td>
<td>178</td>
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</tbody>
</table>

The results of Table 6 indicate that 76% of the major offenders were Caucasian and that students of color only represented 24% of the total of major offenses.

In Table 7, student data are presented by minor offense according to ethnicity. The unknowns in this table represent students who had minor offenses but their ethnicity could not be determined by the data collected.
Table 7

Number of Minor Offense by Ethnicity Table

<table>
<thead>
<tr>
<th>Minor</th>
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<td>1</td>
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</tr>
<tr>
<td>16</td>
<td>1</td>
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<td>1</td>
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<tr>
<td>19</td>
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<td></td>
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<td>1</td>
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<tr>
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<td>1</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>60</td>
<td>65</td>
<td>1</td>
<td>26</td>
<td>416</td>
<td>570</td>
</tr>
</tbody>
</table>

Table 7 data indicated that 73% of the minor offenses were by Caucasian students, and students of color only comprised 27% of the minor referrals. The results of these data suggested that students of color were not the majority of offenders; however, these findings could be skewed because of the unequal distribution of race throughout the county and the schools. The high school, as indicated in Chapter 1, has a student population of 1,768 students, of whom 80% are Caucasian and 20% are minority.

Student offenses were broken down again by major and minor offenses and also by gender. The researcher wanted to investigate if there were relationships between major and minor incidents and gender as well as number of offenses per student. In Table 8 the data are presented by major offense and student gender.
Table 8

**Number of Major Offense by Gender Table**

<table>
<thead>
<tr>
<th>Major</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>48</td>
<td>77</td>
<td>125</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>21</td>
<td>26</td>
</tr>
<tr>
<td>3</td>
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<td>4</td>
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<tr>
<td>5</td>
<td>2</td>
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<td>2</td>
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<tr>
<td>6</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>118</td>
<td>178</td>
</tr>
</tbody>
</table>

Table 8 showed that male students account for 66% and female students make up 34% of the major offenses in the school. The data indicated that male students are more likely to commit a major offense than female students.

In Table 9, student data were collected by minor offense and gender. These offenses, as stated earlier, are offenses such as dress code violations, cell phone violations, inappropriate language, and other minor behaviors.
Table 9

*Number of Minor Offense by Gender Table*

<table>
<thead>
<tr>
<th>Minor</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>142</td>
<td>166</td>
<td>308</td>
</tr>
<tr>
<td>2</td>
<td>47</td>
<td>52</td>
<td>99</td>
</tr>
<tr>
<td>3</td>
<td>25</td>
<td>29</td>
<td>54</td>
</tr>
<tr>
<td>4</td>
<td>14</td>
<td>15</td>
<td>29</td>
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<tr>
<td>5</td>
<td>6</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>4</td>
<td>4</td>
<td>8</td>
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<tr>
<td>11</td>
<td>1</td>
<td>4</td>
<td>5</td>
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<tr>
<td>12</td>
<td>4</td>
<td>4</td>
<td>8</td>
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<tr>
<td>13</td>
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<td>4</td>
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<tr>
<td>14</td>
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<td>4</td>
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<td>1</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>19</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>23</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>25</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>29</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>245</strong></td>
<td><strong>325</strong></td>
<td><strong>570</strong></td>
</tr>
</tbody>
</table>

The data in Table 9 indicates that 57% of the minor offenses in School A were by males and 43% by females. It was found, as shown in Tables 8 and 9, that males had more offenses in both major and minor incident categories; however, there was no significant differences among female and male offenders, but 86% of students regardless of gender did not have more than four minor offenses.

**Student Achievement**

The final variable in this study is student academic achievement which is measured by student performance on the North Carolina Math 1 test. This study only looked at scores for students who were in ninth grade and had at least one discipline referral during that school year. Data were collected over a 5-year period to determine if
there were any residual effects from PBIS on student achievement based on those student feeder schools as indicated in Table 10.

Table 10

*Number of Math 1 Attempts and Proficiency Table*

<table>
<thead>
<tr>
<th>Math Level</th>
<th>Attempts</th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>181</td>
<td>20</td>
<td>2</td>
<td>203</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>114</td>
<td>15</td>
<td>1</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>113</td>
<td>1</td>
<td></td>
<td>114</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>90</td>
<td>1</td>
<td></td>
<td>91</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

The student achievement data in Table 10 are organized by the number of Math 1 attempts and proficiency levels. These students had at least one office referral during the year in which they attempted the Math 1 exam. The data show that over half (61.12%) of the students who attempted the Math 1 exam were unable to meet proficiency.

The student achievement data were also compared by feeder school to investigate if students who had PBIS exposure were more proficient than schools with less or no PBIS exposure. These data are reflected in Table 11.

Table 11

*Number of Math 1 Proficiency Scores by Feeder School Table*

<table>
<thead>
<tr>
<th>Feeder School</th>
<th>Proficient</th>
<th>Below Proficiency</th>
<th>Total Number of Students</th>
<th>Total Number of Incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>3250</td>
<td>65</td>
<td>89</td>
<td>154</td>
<td>333</td>
</tr>
<tr>
<td>3300</td>
<td>71</td>
<td>155</td>
<td>225</td>
<td>558</td>
</tr>
<tr>
<td>3370</td>
<td>68</td>
<td>71</td>
<td>138</td>
<td>296</td>
</tr>
</tbody>
</table>

The data indicated that students with the largest number of Math 1 below proficient scores were from the feeder school with the most PBIS exposure. It suggests that the feeder school with no PBIS exposure had the least number of students scoring
below proficiency.

Math 1 scores are displayed by the total number of offenses in Table 12. This table shows the combination of minor and major offenses together and how many of those students scored above and below proficiency level. The table indicates total offenses each student had and compares it to their Math 1 proficiency score to reflect if students who had multiple offenses were below the proficiency level requirements.

Table 12

*Number of Math 1 Proficiency Scores by Total Offense*

<table>
<thead>
<tr>
<th>Total Offense</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>9</td>
<td>11</td>
<td>1</td>
<td>5</td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>8</td>
<td>2</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td>12</td>
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<td>5</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>15</td>
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<td>6</td>
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<td>2</td>
<td>1</td>
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<td>6</td>
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<td>3</td>
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<tr>
<td>9</td>
<td>2</td>
<td>1</td>
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<td>10</td>
<td>1</td>
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<td>11</td>
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<td>15</td>
<td>3</td>
<td>1</td>
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<td></td>
<td>4</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>17</td>
<td>1</td>
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<tr>
<td>26</td>
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<tr>
<td>33</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>41</td>
<td>12</td>
<td>7</td>
<td>1</td>
<td>109</td>
</tr>
</tbody>
</table>

This researcher found that students who had more than two discipline offenses were typically unable to meet Math 1 proficiency standards and that as the number of offenses increased those students were highly unlikely to pass the test. These data are indicated in Table 12.
Summary

Chapter 4 provided the results and data of this research study by examining the variables of teacher perception, student achievement, and the residual effects of the PBIS program. The data indicated that there were relationships among students who had multiple office referrals and academic deficits, indicating that students who struggle behaviorally also struggle academically. The research on the residual effects of PBIS in this setting reflected that the behaviors and self-monitored skills that are taught in some of the feeder schools are not effective relative to students who have more than one office referral at the high school.

In Chapter 5, the results of this study and study design are reviewed and recommendations for future research studies are given.
Chapter 5: Discussion

Introduction

This study set out to determine the effectiveness of the PBIS system in reducing the number of office referrals students obtained once they reached the high school. The researcher also sought to measure the effects of PBIS on academic performance by using student Math 1 scores. Chapter 5 utilizes the data found to draw conclusions and discuss implications for further research.

Discussion

This researcher used the data from Chapter 4 to answer each of the research questions. This study sought to address these three specific research questions.

1. What difference in academic achievement exists between students who have been exposed to PBIS and those who have not been exposed to PBIS?
2. What is the difference in office referrals from students who have had PBIS exposure and those who have not?
3. How has the behavior management plan helped affect student behavior?

Data from this study provide information about the current state of teacher perception as well as the relationships among student achievement growth and student behavior through ODRs.

Teacher Perception

Although not directly addressed in the research questions, teacher perceptions were looked at because of their impact on student discipline. Teacher tolerance and interpretation of school rules could affect how student behavior in the classroom is perceived and handled, which was evident in the staff response to the second interview question. This could also have an impact on achievement since most staff felt that
academic achievement and student discipline are interconnected, implying that students who are out of class more often because of office referrals have a higher chance of performing lower than their peers.

Teacher perception was important to this study because it had a direct impact on the number of office referrals students received. It played an important role in how teachers addressed behaviors in the classroom. After the interviews were conducted, it was concluded that staff did not believe PBIS was an effective tool for a high school setting. Some staff believed a program could be of need but “it would need to be enforced from the top.” These findings are supported by research that suggested that when the staff felt administrators did not support their efforts, programs like PBIS would not change anything (Bhakri, 2017). A natural resistance to programs of any kind becomes common, and many teachers are unable to conceptualize any new program as a way for their students to have possible academic gains (Hansen, 2014).

The literature also suggested that the implementation of PBIS in tiers one and two significantly relies on teachers to manage behaviors and implement practices with fidelity; without this, success of the program is unlikely (Bhakri, 2017). It went on to say that if policymakers seek to implement strategies such as PBIS, they must consider teacher perspectives (Bhakri, 2017).

Analyzing the teacher perception interviews, it was determined that the staff and administration at School A do not believe PBIS to be a program that can make an impact in their school. It was indicated by the research in Chapter 2 that without teacher buy-in to the program, the program could not be successful.

**Student Academic Achievement**

The first research question was, “What difference in academic achievement exists
between students who have been exposed to PBIS and those who have not been exposed to PBIS?” The data in Chapter 4 showed that among the students who took Math 1 with multiple (on average two or more) discipline referrals, there was no significant difference in scoring among the students. Further examination of the data determined that the majority of students who had multiple office referrals did not pass the Math 1 exam regardless of the number of attempts or feeder school. The differences occurred in academic achievement when students had on average less than two office referrals. Students who fell into the two or less category were more likely to score proficient or higher on the Math 1 assessment regardless of their feeder school and exposure to PBIS. The literature in Chapter 2 suggested that studies have shown correlations among academic performance and discipline, tracking this through ODRs (Putnam et al., 2013). These behaviors were documented in multiple studies showing increasing academic deficits as negative behaviors increased especially on standardized testing (Putnam et al., 2013). Those who had higher scores tended to have a lower number of referrals (Putnam et al., 2013). PBIS emphasizes that it has positive approaches and effects on student academics (Molloy et al., 2013).

When the data were analyzed by feeder school and overall proficiency, it was determined that the school (3300) with the most PBIS exposure had the most students below proficiency, and the school (3370) with no PBIS exposure had the least; however, it can be determined by the data that the residual effects of PBIS or lack of PBIS do not impact academic achievement when students have multiple office referrals within a school year. It can also be concluded that students who have multiple office referrals on average do not perform proficiently on the ninth-grade Math 1 test.

School climates that are strained or negative have negative impacts on the way
students behave, how they are able to learn, and the effectiveness of instruction in the classroom (Thornton, 2012). When the climate of the school is changed for the better, student achievement increases (Thornton, 2012). When schools can maintain conducive learning and behavioral environments, student academic achievements will be influenced in a positive way (Thornton, 2012). It is also indicated that students who are in poorly implemented behavior management systems are at higher risk for lower academic performance (Hansen, 2014). Reinke et al. (2013) suggested that poorly managed classrooms have less instructional time and long-term negative academic outcomes. PBIS’s purpose is to maximize achievement (Muscott et al., 2008). Its strategies have been shown to be highly effective in increasing student achievement and decreasing negative behaviors (McIntosh et al., 2009).

The literature review for this study indicated that students show higher levels of achievement when they can show more internal control; these are bigger predictors of achievement than their economic status (Jones & Shindler, 2016). Students who had fewer referrals were found to have higher levels of achievement based on their performance on the Math 1 exam.

“Misbehaviors in the classroom interrupt valuable teaching and learning time” (McKellar, 2017, p. 15). Schools with high numbers of suspensions and expulsions perform lower on standardized tests (Buettner, 2013). In comparison to their peers, those students who have behavioral problems have lower academic achievement (McKellar, 2017). Students were found in this study to have lower academic scores compared to those of their peers with fewer discipline referrals. Based on the literature review and the research findings from this study, there are indications that higher discipline referrals and lower academic performance are related. Students who have office referrals are more
likely to have lower GPAs than students who have no office referrals (McKellar, 2017); however, at School A, those students who have a higher number of referrals are not impacted by previous exposure to PBIS in their middle school.

In the literature, it is suggested that students are more accepting of procedures, rules, and consequences when they have a positive relationship with the teacher (McKellar, 2017). This could be a factor in the results of the data because student and teacher relationships determine how students are likely to behave. It is also noted that students who have PBIS exposure feel more empowered and work to their highest potential and that it impacts student learning (Miller, 2016). It indicates that the program is associated with decreased behavior and improved academic outcomes (Putnam et al., 2013) and improves student standardized test scores (Lassen et al., 2006). Although in this particular research, the findings showed that students who had exposure to the program underperformed academically and had higher numbers of referrals.

**Office Referrals and PBIS Exposure**

The second research question was, “What is the difference in office referrals from students who have had PBIS exposure and those who have not?” The data in Chapter 4 showed that the feeder school with the highest level of PBIS exposure had the most office referrals of student offenders at the high school. In addition, it concluded that the school (3370) with no PBIS program had the least number of referrals. The research examined 5 consecutive years to see if there were differences from year to year in that finding. It was concluded that all 5 years revealed the same information. In 4 of those 5 years, students from School 3300 had over 100 office referrals in a school year.

PBIS indicates that it teaches students how to manage their own behaviors by applying what they have learned in the program in multiple settings around the building
PBIS is shown to reduce ODR numbers and improve academic outcomes (Putnam et al., 2013; Scott & Barrett, 2004). Schools with PBIS have been known to have greater academic improvements compared to non-PBIS schools (Putnam et al., 2013).

There are multiple factors that could influence these findings, because referrals are written or not written based on individual teacher tolerance to specific behaviors and/or specific students. “As the issuing of ODRs is subject to a teacher’s judgement, ODRs are not purely a reflection of student problem behavior, but also a result of teacher behavior” (Yeung et al., 2016, p. 160). This can be affected by the skills and level of supervision teachers provide, behaviors that are not observed by the teacher, as well as varying teacher criteria regarding student behavior (Yeung et al., 2016). Furthermore, teachers may be reflecting the administration and leadership attitudes towards ODRs and may even report less ODRs as to discourage administration from viewing higher referrals as a lack of control in the classroom (Yeung et al., 2016). The PBIS model is set up to recognize these biases as to the fidelity of office referrals and considers them to be variables; however, it strives in trainings to promote distinctions among major and minor incidents as well as accuracy in reporting behaviors (Yeung et al., 2016). It is suggested that feedback be provided when using the model so teachers are made aware of the fact that these types of models may differ from their own beliefs and assumptions about student learning (Yeung et al., 2016). If only modifications are made to the surface and not embedded, it is likely that classroom norms will not be established and transformed to fit the PBIS model (Yeung et al., 2016). Some teachers may think that by implementing behavior programs such as PBIS, it only increases their workloads; and they are not convinced it is worth the time spent if results are not instantly met (Yeung et al., 2016).
There are numerous variables as stated above that can affect how behaviors are perceived and how teachers explain and utilize behavior models like PBIS in their classrooms. This can impact the level of PBIS students who entered School A with and if they had PBIS exposure from their feeder middle school.

The final research question addressed in this study was, “How has the behavior management plan helped affect student behavior?” After gathering the office discipline data, it can be determined that the behavior management plan put into place at varying levels in some of the feeder middle schools is only effective to a small part of the population beyond the middle school; however, one middle school staff member believed that “it should be in every school and when you constantly teach expectations you see major differences in office referrals.” Another said, “it makes a huge difference for us.”

It is not known if students outgrow the incentives that behavior programs such as PBIS offer, but several staff who were interviewed spoke about the program not being age appropriate. One staff member said, “teacher buy in would be hard to get.” Another commented, “at the high school level it must look different to work, the actual PBIS model just doesn’t fit, the kids won’t buy in to it.”

The research indicates students, regardless of their experience or lack of experience with PBIS, can and do have multiple offenses when they reach School A. School 3300 with the largest amount of PBIS implementation had 35.9% of the total number of office referrals, and School 3370 with no PBIS program only accounted for 21.6% of the office referrals. Even School 3250, which has a version of the PBIS program, had 25.2% of the total office referrals. These data indicate that the school with no PBIS program had the least number of referrals throughout the duration of the 5 years from which this study collected data. This could be the result of several variables such as
academic struggles, new sets of boundaries and freedoms, or changes in environmental things beyond the academic setting. It can also be determined based on the data gathered that students who have on average more than two office referrals tend to struggle academically as shown in their Math 1 scores regardless of PBIS. One teacher stated, “they either care or they don’t care.”

The correlation among students with academic deficits and behavioral issues is existent, but there are many influential outside and uncontrollable variables. One staff member said, “we are all products of our environment, it starts from home.” Another stated, “failing students usually act up consistently.” Students who do not fall into the top two tiers of PBIS and are among the 80-85% of the general population may have been affected by previous exposure to PBIS in their middle school prior to entering School A; however, it is also possible that those students would meet school-wide expectations without PBIS exposure as shown by the students who attended School 3370. It should be considered that students could fail Math 1 but have no behavioral issues. What can be concluded is that students can struggle and not have behavioral issues; students can have behavioral issues and not struggle academically; students with PBIS exposure can still have behavioral problems; and students without PBIS can have behavioral issues. One teacher felt that “student behavior is a student trying to fill a need whether it be academic, physically, or emotionally.”

The literature in Chapter 2 suggests that schools that are effective share common characteristics such as student perceptions of safe environments, high student expectations for achievement, and student respect and sense of efficacy for learning (McEvoy & Welker, 2000, p. 135). Positive and engaging classroom environments have shown to be one of the most powerful tools to encourage learning and preventing
negative student behavior (Conroy et al., 2009). The literature suggested that students who saw their school as having a positive atmosphere were less likely to engage in negative behaviors (Gage et al., 2016). PBIS provides a framework in which school climates are positive and inappropriate behaviors are extinguished (Ficcarra & Quinn, 2014); however, this did not match the research findings in this study with regard to how this behavior management plan affected student behavior. Students who came from PBIS middle schools and entered School A as freshman, according to some teachers, “are the worst behaved.” Other teachers stated that students “have a sense of self entitlement” and that “kids would probably not participate.” Without the participation, not only from staff but also students, based on teacher responses, no behavior program can affect or impact the majority of student behavior.

**Limitations of the Study**

There were a few limitations to this study. “Outlining the possible limitations of a study allows consumers of research to gauge the ability to generalize results and can be useful to other potential researchers who seek to conduct a similar study” (Sabin, 2012, p. 109). First, the researcher was unable to interview one of the sets of middle school administrators. This is a limitation because staff perceptions were examined to provide details about how discipline in that school is taught and handled. This could affect how students treat discipline and school expectations when they reach the high school.

The second limitation of this study is that only ninth-grade students who took Math 1 and had office referrals were used in the data collection. This is limiting because it only looks at a small portion of the students who attended the high school and students with office referrals; however, the researcher believed it to be important to look at only those students who were in their first year of high school because of the various other
influences and factors that can contribute to student behavior once they are established and comfortable in their new setting. It is also believed that students who are in higher grades have more opportunity to not attend school on a regular basis because they are of the age to drive or to even drop out, which could change the data outcome.

The third limitation of the study is that the researcher is employed by one of the schools in the study; however, this had no effect on the data collection.

The final limitation is believed by the researcher to be one of the most influential to the results of this study. Teacher tolerance and interpretation of school and classroom rules vary from teacher to teacher. Teacher tolerance can and does affect the results of the data; they represent the variance and subjectivity that can exist on a day-to-day basis. Substitute teachers can also play a small factor in the results because at any one time, a school can have multiple substitutes in the building. Not only are teachers the limitation in this sense but administration as well. Even though the administration uses a matrix to determine behavior consequences, the staff reported that consistency was an issue in the office when consequences were being given.

**Recommendations**

The data presented in this study indicated that students from any of the feeder middle schools could become high flyers on the discipline and office referral radar. Knowing this, further study is recommended to determine if there are other factors that students who have higher discipline referrals and academic struggles may share in common and how those factors might have an impact on student performance academically and behaviorally.

Another recommendation is to have PBIS continue at the feeder middle schools in an attempt to use the success from the middle school level to possibly encourage teacher
participation and interest at the high school.

It is also recommended based on the academic deficit and frequent discipline referral connection that research on various interventions be explored to prevent those students from becoming a higher risk to drop out as they continue to fall further behind their peers academically. It might also be beneficial to research possible programs that are geared and shown to be effective for a high school setting.

Summary

This study sought to determine if students who struggle academically also struggle behaviorally, as measured by office referrals. It was determined that there is a relationship between these two variables. In addition to this relationship, this study sought to determine if exposure to PBIS was a factor in student behavior at the high school level and found that it was not. Although there were no residual effects of PBIS found, valuable insight was discovered about teacher perceptions of behavioral programs at the high school level and areas to further research regarding student discipline.
References


Cunningham, C. (2012). *Teacher perceptions of student behavior as a function of PBIS implementation on time and professional development needs*. Maryville: Northwest Missouri State University, Department of Educational Leadership.


McKellar, J. (2017). *The effects of school wide positive behavior interventions and supports on student achievement* (Doctoral dissertation). Received from Proquest (10610102)


Stolp, S. (1994). Leadership for school culture. ERIC Digest, Number 91. (ED370198)


Appendix A

Informed Consent Form
Title of Study:

________________________________________________________________________

________________________________________________________________________

Researcher: (Include name and Role/Department)

________________________________________________________________________

________________________________________________________________________

**Purpose:**

*The purpose of the research study:* *(This section should summarize your study. Please provide concise information that is easy to understand)*

________________________________________________________________________

________________________________________________________________________

**Procedure:**

*What you will do in the study:* *(Outline what will be expected of the participant. Be specific, as described in your research procedure. If the participant will be photographed, audio taped, or videotaped, include this in the description. If your study involves an interview or survey, inform participants that they can skip any question that causes discomfort and that they can stop the interview or survey at any time. If your study involves deception, please give as much information as possible without compromising your research.)*

________________________________________________________________________

________________________________________________________________________

**Time Required:**

It is anticipated that the study will require about ____ minutes/hours of your time. *If the study includes multiple sessions, describe the amount of time that is required for each task, session, experiment (as outlined in the “What you will do in the study” section above), and the total time for all sessions.*

**Voluntary Participation:**

Participation in this study is voluntary. You have the right to withdraw from the research study at any time without penalty. You also have the right to refuse to answer any question(s) for any reason without penalty. If you choose to withdraw, you may request
that any of your data which has been collected be destroyed unless it is in a de-identified state.

**Confidentiality:**
(Provide an explanation of how data will be kept private and confidential and how researcher will protect the anonymity of the subject. This should include a brief statement about 1) How you will collect data 2) How you will store data and 3) How and when data will be destroyed.)

For common scenarios concerning confidentiality, the following text can be used:

**Data linked with identifying information:**
The information that you give in the study will be handled confidentially. Your information will be assigned a *code number*. The list connecting your name to this code will be kept in a *locked file*. When the study is completed and the data have been analyzed, this list will be destroyed. Your name will not be used in any report. *If you are using audio tapes, video tapes, or photographs in the study, describe when these materials will be destroyed.*

**Anonymous data:**
The information that you give in the study will be handled confidentially. Your data will be anonymous which means that your name will not be collected or linked to the data. *If it is possible for you (the researcher) to deduce the participant’s identity, state the following:* Because of the nature of the data, it may be possible to deduce your identity; however, there will be no attempt to do so, and your data will be reported in a way that will not identify you.

**Confidentiality cannot be guaranteed:**
In some cases, it may not be possible to guarantee confidentiality (e.g., an interview of a prominent person, a focus group interview). *Please use the following text if you cannot guarantee confidentiality:* Because of the nature of the data, I cannot guarantee your data will be confidential and it may be possible that others will know what you have reported. *Please note that in some cases if confidentiality cannot be guaranteed, it may be a risk to the participant and should be explained in the “Risks” section as well.*

**Risks:**
*If there are no risks to the participant, then state:* There are no anticipated risks in this study. *If there is a potential risk to the participant, describe the risks and what you will do to minimize the risks, as described in your Application to Conduct Research. Include all possible physical, psychological, professional, or personal risks and/or hazards for the participants. Any risks listed in your Application to Conduct Research must be*
addressed in this section. However, it is important not to overstate the risks as well. If arrangements have been made for a counselor to be available in the event of participant discomfort, state the following: If, as a result of the study, you experience discomfort and would like to discuss your thoughts or feelings with a counselor, please contact the following individual for assistance… List the name and contact information of the counselor on call. If the situation is such that a specific counselor cannot be determined before the study, please list name and contact information of the researcher.

Benefits:
The study may help us to understand … provide one or two sentences about what you hope to learn from the study. The Institutional Review Board at Gardner-Webb University has determined that participation in this study poses minimal risk to participants.

Payment:
You will receive no payment for participating in the study. If an incentive is offered which involves a lottery or drawing, describe the odds of winning the incentive. If class credit to participants is involved, please use the specific term: “class participation credit.”

Right to withdraw from the study:
You have the right to withdraw from the study at any time without penalty. If you are using an audio or video tape, please state the following: If you choose to withdraw from the study, your audio (or video) tape will be destroyed.

How to withdraw from the study:
Please modify this section so it accurately describes how to withdraw from the study while it is being conducted and how to withdraw after it is completed, where appropriate (it may be impossible to withdraw if the data are anonymous).

- If you want to withdraw from the study, (explain how to withdraw from the study, such as “tell the researcher and leave the room” or “tell the interviewer to stop the interview”). There is no penalty for withdrawing.
- If you would like to withdraw after your materials have been submitted, please contact … fill in researcher contact information.
- If deception is included in the study, let the participants know that they will be debriefed if they withdraw from the study and that their data will be destroyed.

If you have questions about the study, contact: (List all researchers and contact information)
Researcher’s name
Department
Gardner-Webb University
Boiling Springs, NC 28017
Researcher telephone number:
Researcher email address
Faculty Advisor name
Department
Gardner-Webb University
Boiling Springs, NC 28017
Faculty Advisor telephone number
Faculty Advisor email address

If the research design of the study necessitates that its full scope is not explained prior to participation, it will be explained to you after completion of the study. If you have concerns about your rights or how you are being treated, or if you have questions, want more information, or have suggestions, please contact:

Dr. Jeffrey S. Rogers
IRB Institutional Administrator
Gardner-Webb University
Boiling Springs, NC 28017
Telephone: 704-406-4724
Email: jrogers3@gardner-webb.edu

Voluntary consent by Participant:
I have read the information in this consent form and fully understand the contents of this document. I have had a chance to ask any questions concerning this study and they have been answered for me.

_____ I agree to participate in the confidential survey.
_____ I do not agree to participate in the confidential survey.
_____ I agree to participate in the focus group.
_____ I do not agree to participate in the focus group.
_____ I agree to participate in the interview session(s). I understand that this interview may be indicate video/audio recorded for purposes of accuracy. The audio/video recording will be transcribed and destroyed.
_____ I do not agree to participate in the interview session(s).

________________________________________________________________________
Participant printed name
Date: __________________

________________________________________________________________________
Participant signature
Date: __________________

You will receive a copy of this form for your records
Appendix B

Discipline Interview Questions
Possible Teacher Interview Questions

1. How do you define positive student behavior? negative student behavior? discipline?

2. What types of behaviors would you consider in-class (teacher addressed) behaviors and what behaviors require further action?

   - Are there protocols/procedures for what to do with disciplinary issues?
   - Are there protocols/procedures for how behaviors in the classroom should be handled?

3. Do you think discipline issues are handled consistently across the school?

4. Do you feel that consequences for discipline are handled consistently with administration?

5. Are there plans in place to address issues with students who have several discipline issues in short amounts of time?
   - Who creates these plans if they exist?
   - Would students be involved in these plans?

6. Do you think the school has a need for some type of behavior or discipline program such as PBIS?

7. Where do you think behaviors are more likely to occur in the building and why?

8. Do you believe there is a correlation among discipline issues and academic deficits?

9. Do you think the school is proactive or reactive to discipline issues in the building?

10. Do you think that students are aware of expected classroom behavior?
    - Is this something that is discussed at the beginning of school?
    - An assumption made by the school?

11. Do you believe that there are grade levels that have more discipline issues than others?
    - Why or why not?

12. At what point with “frequent flyers” would further action be taken beyond office referrals?
    - Who would be a part of that decision?

13. Is there anything that you would like to share with me on this subject?