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Positive Behavior Interventions and Supports Effectiveness in Southeastern Ohio

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This dissertation, directed and approved by the candidate's committee, has been accepted by the College of Graduate and Professional Studies of Abilene Christian University in partial fulfillment of the requirements for the degree

Doctor of Education in Organizational Leadership

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by

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Dedication

This study is dedicated to my wife and children. Their guidance, love, and support continue to amaze me.

Acknowledgments

I would like to thank and acknowledge the following individuals who have supported me through this journey. First, I would like to thank my chair, Dr. Timothy B. Jones, for your time and unparalleled knowledge of educational leadership subjects. You helped guide my study and allowed me to use my own voice to come to conclusions. Your accessibility and grit are something that I will forever be grateful for. Secondly, I would like to thank the faculty members at Abilene Christian University who contributed to my study. Dr. Timothy B. Jones, Dr. Andrew Lumpe, Dr. Bruce Scott, and Dr. Dana McMichael were instrumental in helping me to achieve my educational goals. Their knowledge, patience, and guidance helped me focus my study. Their expertise allowed me to acknowledge my mistakes, grow my own theories, and set attainable timelines. I could not ask for a more dedicated group of educators to help me with my study.

Abstract

The purpose of this study was to determine how leadership implemented the positive behavioral interventions and supports (PBIS) framework and what conclusions could be ascertained from implementing it. Leadership in southeastern Ohio districts was examined to understand how they used PBIS and if PBIS made significant differences before and after implementation. The comparison included demographically diverse areas (urban, suburban, rural) in southeastern Ohio. PBIS implementation was measured with the School-wide Evaluation Tool (SET) administered to district administrators. The resulting data from the SET and Ohio assessment scores showed no significant difference in PBIS implementation and fourth-grade reading scores of students. The data also demonstrated that the SET results did not always match the responses obtained from interviews. The data analysis results were reported and discussed. The findings were summarized, and recommendations for further research were made.

Keywords: positive behavior interventions and supports, school-wide evaluation tool survey, Ohio improvement process, SET survey, Ohio Department of Education, leadership, staff training, Tier I intervention

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Chapter 1: Introduction

The positive behavioral interventions and supports (PBIS) framework has been a key component of educational practices over the last decade (Goodman-Scott & Grothaus, 2017). PBIS programming aims to focus on students' positive behaviors and reward them accordingly. This contrasts with discipline methods that focus on the students' negative behavior and punishes them accordingly. PBIS is a preemptive methodology used to establish behavioral reinforcements and social culture needed for all students in a school to achieve social, emotional, and academic success (Armstrong et al., 2003). PBIS is a multitiered system of supports designed to promote positive school environments where educators can provide instruction and students can learn (Armstrong et al., 2003).

PBIS is one of the most studied research-based practices in education (Barrett et al., 2010). According to the Center for PBIS (n.d.-a, 2015), research abounds regarding implementing the tiered intervention system in PBIS as a school-wide–evidence-based practice. PBIS is associated with positive outcomes such as reductions in problem behaviors and increased educational efforts (Bradshaw et al., 2010). PBIS benefits students and staff members. According to a 2012 study across 40 elementary schools, school-wide implementation of PBIS was associated with lower levels of teacher burnout (Bliese, 2013).

The PBIS framework provides three tiers of interventions based on student needs. Tier I interventions are used with all students, Tier II interventions are for some students, and Tier III interventions are used with students who need the most intensive level of support. At Tier I, considered the key component of tiered instruction, all students receive instruction in an evidence-based, scientifically researched core program. Usually, the Tier I instructional program coincides with the core reading and math curriculum that aligns with state standards. The

expectation is that Tier I teachers are highly skilled in their craft and that 75%–80% of students should be expected to reach successful competency levels through Tier I delivery (Cohen et al., 2007).

Tier II consists of students who fall below the expected benchmark levels and are at risk for academic failure but are still above levels considered to indicate a high risk of failure. The needs of these students are identified through an assessment process, and the instructional programs are tailored to fit the student's individual needs. Student instruction is provided in smaller groups than Tier I and focuses on the specific needs of the individual or small group of students (Cohen et al., 2007).

Tier III interventions consist of students who are considered at high risk for failure and, if not responsive, are considered candidates for identification and special education needs. Tier III is usually considered special education; however, in many models, it is viewed as the tier that includes students who are not identified as needing special education but whose needs are at the intensive level. The tiers move from large groups of students to individual students. PBIS is stated to improve students' social, emotional, and academic outcomes, including students with disabilities and students from underrepresented groups (Cohen et al., 2007).

Response to intervention (RTI) is an academic tiered intervention model that often goes together with PBIS (Bradshaw et al., 2010). RTI is the framework introduced by the Individuals with Disabilities Education Improvement Act (IDEA) of 2004 and is the model many states use to meet IDEA's reading instruction requirements. RTI is a research-based method for allowing every student the opportunity to be successful through additional support and time to learn (Crane, 1999).

RTI is a tool used with struggling learners so that the learning gaps are reduced and students have an increased chance for success (Bradshaw et al., 2010). The main objective is to help all students master essential skills to succeed academically. RTI focuses on the subject of reading and mathematics for students. The goal of RTI programs is to identify and provide interventions for students who are reading one or two grades below grade level or who have failed universal screeners and standardized tests. Many RTI programs focus specifically on providing interventions that increase reading proficiency. The RTI model is embedded inside the PBIS model. Crane (1999) believed many schools fail with this intervention model because the instructional interventions are not research-based and have inefficient leadership, the districts fail to monitor progress, and the intervention groups are too large.

Federal regulations promote the implementation of the PBIS framework as it is a multitiered system of intervention supports for students (Drath, 2001). Drath (2001) concluded that every district must provide "a comprehensive continuum of evidence-based, systemic practices to support a rapid response to students' needs, with regular observation to facilitate data-based instructional decision-making" (p. 1). Additionally, the Elementary and Secondary Education Act (ESEA) of 1965 requires all districts to institute a positive behavioral system so that all students can meet the challenging state academic standards (as cited in Gandossy & Effron, 2003).

ESEA brought education to the forefront of the national assault on poverty and represented a landmark commitment to equal access to quality education (Gietz & McIntosh, 2014). ESEA funds primary and secondary education, emphasizing accountability and high standards for all students. The act was signed into law on April 9, 1965, and its appropriations were to be carried out for 5 fiscal years. The federal government has reauthorized the act every 5

years since its enactment. These reauthorizations have allowed for various revisions and amendments to the initial law.

In 2001, President George W. Bush reauthorized ESEA in what is known as the No Child Left Behind (NCLB) Act. This reauthorization increased the accountability for both students and teachers by using yearly standardized tests. These tests measured how schools were performing against the achievement bars set by Title I. School districts were tasked with publishing annual report cards on students' achievements and demographic data. Districts and schools were held accountable not only by punitive measures that would be taken if the schools failed to meet adequate yearly progress (AYP), but also corrective actions were taken if states did not have an assessment system approved by Title I. Under NCLB, districts were also required to plan for restructuring if they failed to make AYP for 3 years after being identified for improvement.

ESEA was reauthorized on December 10, 2015, as the Every Student Succeeds Act (ESSA) under President Barack Obama. The law offered flexibility to states from some of the law's most cumbersome provisions. States had to demonstrate that they adopted college and career-readiness standards and assessments, implemented school accountability systems that focused on the lowest-performing schools and those with the largest achievement gaps, and ensured that districts implemented teacher and principal evaluation and support systems (Gietz & McIntosh, 2014).

School districts had generally focused on the academic factors that came into play throughout their students' careers and did little in the way of formalized emotional and behavioral supports before PBIS implementation (Eckert et al., 2017). Eckert et al. (2017) found that students were coming to school with more significant mental health needs than their peers from previous decades, and educators were not trained to deal with some of these student issues.

Many teachers were trained to deal with unruly students with a negative punishment method (Kershner & McQuillan, 2016). Teachers were not familiar with many of the positive behavioral modifications that PBIS emphasizes (Eckert et al., 2017). When students became behavior problems, educators would often send them out of their classes, give them detention, or even put them into isolation to eliminate the unwanted behavior from their classrooms (Eckert et al., 2017).

School leaders frequently used tactics to address challenging behaviors, including removal from the classroom and in-school or out-of-school suspension (Christle et al., 2004). Research findings showed that these disciplinary measures were ineffective at dealing with the misbehaviors and actually exacerbated them (Kimball et al., 2017). When a school setting is positive, clear, and predictable, all students feel more secure, experience higher academic and test results, and make healthier behavioral choices (Christle et al., 2004).

Behavior problems were not associated with only one area of the country but were prevalent throughout the United States. Urban, rural, and suburban school settings were dealing with many of the same issues when it came to disciplining students (Goodman-Scott & Grothaus, 2017). The punishment methods were ineffective at improving behavior (McDaniel et al., 2018). Districts were investigating what might improve student behaviors and allow teachers to spend more time teaching rather than disciplining students.

In Ohio, the legislature asked public school districts to implement PBIS in their schools during the early 2000s. School districts would be required, by Ohio legislation, to monitor how many times students were sent to the office, how many detentions were given out, and how often students were suspended. Districts were asked to look at the data before and after PBIS implementation. The state provided training for PBIS programming but asked that each district

decide how to use PBIS to improve student behaviors. These training were implemented by state support teams (SSTs) and held in their area offices. SST leaders also came to school districts to conduct PBIS training in person. Districts were asked to use some of their designated general fund money to implement PBIS. This money was set aside for PBIS purposes. The Ohio Department of Education (DOE) concluded that students would have a greater opportunity to learn the content and schools could provide safer environments if disciplinary actions subsided (Childs et al., 2010).

The Ohio DOE and Ohio's 16 SSTs provide districts with training on PBIS (Kimball et al., 2017). SST trainers perform professional development at their SST offices and school districts around the state of Ohio. However, the Ohio DOE identified inconsistent PBIS implementation due to varied interpretations of the law. The training varied according to the different SSTs' understanding of what PBIS training should be for the participants. Gietz and McIntosh (2014) identified six factors that contributed to PBIS effectiveness: knowledge, staff support, duration, coherence, active learning, and timing. Cohen et al. (2007) collected information using survey data from staff members who attended PBIS training. The effectiveness of the training was found to be significantly related to the incorporation of active learning, the level of coherence between activities at the training and structures in place at the participants' schools, increases in knowledge, and the date of training (Gietz & McIntosh, 2014). There was a need to examine whether and how long PBIS strategies were used after training, if there was a decrease in use over time, and, if so, why this occurs (Bliese, 2013).

Cohen et al. (2007) also stated that additional research was needed regarding school administrative support. Many of Ohio's administrators did not have any background in PBIS. Therefore, they were learning along with all of their staff members at the same level. Increased

support was related to training effectiveness, but the research did not determine what types of support were effective in producing change (Kimball et al., 2017). Kane (2006) found that job-embedded professional development was effective but did not examine PBIS professional development specifically. There is a lack of research on how much coaching and training is needed for full PBIS implementation in a school setting. Districts are the main providers of professional development opportunities, and more research needs to be done regarding how districts are involved and keeping up with new practices used in classrooms (Khatri et al., 2001). Kincaid et al. (2007) also noted a lack of research on PBIS over time.

Statement of the Problem

The Ohio DOE has implemented PBIS and how staff members could be trained using this model. In addressing this study's problem, I looked at how other organizations have used PBIS and to what extent they have been successful with PBIS. The problem is how public school district leaders could minimize negative student behaviors using PBIS and whether PBIS impacted academic achievement. PBIS was the program that school districts were asked to implement. What has not been studied is how PBIS has impacted school leadership and districts.

Ohio's school funding system is based on property values. There has always been a correlation between higher wealth districts and higher achievement scores. The Ohio achievement assessments showed that if a student lives in a wealthier school district, the student's test scores tended to be higher. The Ohio Education Association was behind PBIS implementation because the association wanted to provide positive programming for the most vulnerable students in Ohio. The association desired programming that would limit the number of office referrals and disciplinary issues with their members and students. PBIS was also

implemented to see if lower wealth districts could use PBIS to improve student behavior and assessment scores.

For this study, I attempted to understand how school leaders implemented PBIS and what conclusions could be drawn from their implementation. The Ohio DOE gave no real framework for PBIS and allowed districts to choose how they implemented the program, with a goal to provide a more positive response to student behaviors (Fernandez et al., 2015). The efficacy of PBIS as a tool to reduce suspensions, improve academic performance, and meet legislative requirements associated with ESSA was unknown (Fernandez et al., 2015).

Prior research has been conducted on the types of programming that made the most significant impact on improving student behaviors. What has not been studied is the relationship, if any, between behavioral programming such as PBIS and academic achievement over the years. Payne and Eckert (2010) studied the discipline practices of PBIS to see if student achievement increased. Prior researchers have viewed PBIS as a tool that districts could use to improve behavior, but they did not look at the academic aspect of PBIS's effectiveness (Goodman-Scott & Grothaus, 2017).

Purpose of the Study

This study's purpose was to examine how leadership implemented PBIS and what conclusions could be ascertained from PBIS implementation. The study focused on leadership in southeastern Ohio districts to ascertain how they use PBIS and if there were significant differences before and after PBIS implementation. The comparison included high-wealth districts that implement PBIS and low-wealth districts. PBIS implementation was measured through surveys from district administration using the SET survey tool.

Research Questions

Leadership, PBIS implementation, and the correlation to PBIS in southeastern Ohio public schools are all topics that need to be studied. The following research questions guided my study:

RQ1: Using the SET survey, what is the level of PBIS implementation, according to principals, in public school buildings in southeastern Ohio?

RQ2: Are there different levels of PBIS implementation across school types?

RQ3: Is there a correlation between the implementation of PBIS and fourth-grade reading scores?

Significance of the Study

The study focused on how education leaders felt about PBIS, how their individual implementation of PBIS affected their schools, and how these effects contributed to academic achievement when looking at state-mandated reading scores on the Ohio achievement tests for fourth-grade students. Interviews were conducted to understand how principals felt about PBIS and their ability to implement the program.

The Ohio DOE measures districts' achievement with an end-of-the-year test. The primary indicator of a school district's performance is its academic achievement. Districts can have the state of Ohio withhold funding, or, in the most extreme cases, the state can take over the daily operations of a district. Putnam et al. (2003) stated that schools implementing PBIS have typically increased instruction time compared to the time lost previously from overcorrections and classroom disruptions from students. For PBIS to be used with fidelity, all stakeholders, including teachers, staff, and administrators, must have significant buy-in, with at least 80% of

the school supporting the program (Ross, 2010). If teachers have not fully implemented the PBIS strategies, the program's effectiveness suffers (Ross, 2010).

This study will add to the body of knowledge regarding PBIS implementation and how PBIS affects student achievement in a public school setting. The results of this study may offer insights to school leaders and educators to support, train, and implement PBIS.

Definition of Key Terms

Terms used in education and educational research may have different meanings based on context or region. Key terms specific to this study were defined as follows.

Area for improvement. Steps for identifying levels of disproportionality, analyzing data to determine solutions, and monitoring the effectiveness of action plans in addressing disproportionality (Northouse, 2016).

Classified staff. School employees who do not need certification or licensure to be qualified for the job.

Comprehensive Continuous Improvement Plan. The Ohio DOE's electronic monitoring and reporting system for public school districts.

Discipline. Students conduct themselves not to interfere with the teaching or learning processes of others. Classroom expectations are aligned with school standards and clearly communicated to students and their parents (Northouse, 2016).

Diversity. Understanding and valuing the range and variety of characteristics and beliefs of individuals (including those who provide services to exceptional children, youth, and adults) who demonstrate a wide range of characteristics. Diversity includes ethnic and racial backgrounds, language, age, physical and cognitive abilities, family status, gender, sexual

orientation, socioeconomic status, religious and spiritual values, geographic location, and country of origin (McDonald, 2009).

Elementary school. A school in which the highest grade is no higher than the fifth grade.

General education teacher. A teacher who obtains and maintains a valid teaching license and is employed by a school district.

Inclusion. Inclusion is an educational practice in which students with disabilities are educated in the same classroom environment as their nondisabled peers and provided with the support and individualized attention needed to be successful (Morse, 2004).

Individualized education plan. An individualized education plan (IEP) is a written strategy or program developed, reviewed, and revised for each student with a disability to ensure that a specific student with a disability identified under IDEA and attending an elementary or secondary educational institution receives specialized instruction and related services (Marzano, 2003).

Positive behavior interventions and supports (PBIS). PBIS is a school-wide system of reinforcement that includes proactive strategies for defining, teaching, and supporting appropriate student behaviors to create constructive school environments (McDaniel et al., 2018).

Positive behavior supports. Positive behavior supports, or PBS, was an acronym used before PBIS to describe the same thing. Positive behavior supports was changed to PBIS to avoid confusion with the Public Broadcasting System (Lassen et al., 2006).

Principal. A site administrator who obtains and maintains a valid administrator's license, is employed by a school district, and who has professional responsibility for overseeing all staff in the school.

Program fidelity. Contextual and implementation strategies used in concordance as suggested and intended to accomplish optimum outcomes for its school and parental stakeholders (Northouse, 2016).

Response to intervention (RTI). RTI is a multitiered method for early recognition and support of students with learning and behavioral needs (Skiba & Peterson, 2000).

School climate. The quality and character of school life based on a pattern of student, parent, and staff experiences reflecting norms, goals, values, interpersonal relationships, social competence, and organizational structures (Thompson & Vecchio, 2009).

Self-efficacy. An individual's belief in their capacity to execute behaviors necessary to produce specific performance attainments. The concept reflects confidence in the ability to exert control over one's motivation, behavior, and social environment (Schwartz, 2005).

Special education teacher. A teacher requiring advanced certifications or degrees who obtains and maintains a valid teaching license to teach children with special needs and who is employed by a school district.

State support team (SST). In Ohio, these teams are the conduit between the local school district and the Ohio DOE that focus on professional development and compliance.

Chapter Summary

The study results will help public school leaders understand if PBIS is making a difference in fourth-grade students' state assessment scores. Also measured were principals' feelings (using the SET measurement tool) toward PBIS implementation and whether they believed PBIS was fully implemented in their specific districts. The districts will also be able to ascertain whether the implementation of PBIS can be correlated to these students' academic achievement. The venue of the study was a variety of districts in southeastern Ohio. The districts

are financially similar but have a wide range of demographics. The urban district has over 25% of the student population that would be classified as a minority. Both the rural and suburban districts have less than 10% of their student populations classified as minority students.

In this chapter, I provided an overview of the study, the background information relating to PBIS, the research questions, the definition of key terms, and how PBIS can impact principal leadership and student achievement. The next chapter is a comprehensive presentation and synthesis of the existing relevant literature.

Chapter 2: Literature Review

For this study, I wanted to understand how districts were using data obtained from the SET survey tool administered to school leaders (principals) to ascertain the fidelity of PBIS implementation and the effect on student achievement. The specific focus was on how districts performed before and after PBIS implementation. Many states have adopted the PBIS framework, and some districts have used PBIS on a small scale, whereas others have promoted it district-wide. The main focus of programming is to improve school culture and add some measure of mental health services for all students and families.

PBIS was initially developed to alter the behavior of special education students but has since evolved into a system that has been instrumental in changing the environment within school systems (Bradshaw et al., 2009). PBIS is the systemic organization of school environments and routines that enable educators to increase the capacity to adopt, use, and sustain effective behavioral practices and processes for all students (Muscott et al., 2008). While various definitions of PBIS exist, they are all consistent with the following list of features: data-based accountability, an emphasis on broad outcomes reflecting lifestyle improvements, ecological and social validity, a collaborative approach to planning and implementation, and an emphasis on proactive interventions focusing on instructions and environmental redesign (Sugai & Simonsen, 2012). According to Sugai and Simonsen (2012), the PBIS wraparound process looks at individual students based on their needs and wants.

Research on the implementation of PBIS has shown it to be successful in elementary and middle schools (Putnam et al., 2003). There continues to be a gap between research conducted on PBIS and its impact on student academic achievement and social behaviors (Bliese, 2013). All schools face challenges: climate, unique cultures, and characteristics (Gladwell, 2000). PBIS

relies heavily on using proactive strategies and interventions to increase desired student behaviors (Childs et al., 2010). School administrators are also working to provide an atmosphere where teachers can provide high-quality instruction and students can master mandated academic standards with little to no disruption (Uhl-Bien, 2006). Few research studies have focused on student academic achievement that has been a result of PBIS.

For this study, I wanted to understand how leadership and achievement have been affected by PBIS. The systemic approach and model of PBIS requires educators to possess an in-depth understanding of systems outcomes, practices, data, and change to implement effectively (Kouzes & Posner, 2002). Using PBIS to teach students social and behavioral skills allows educators the opportunity to place more emphasis on teaching academic skills and students' learning (Lawrence, 2017).

Community involvement with PBIS programming is a new phenomenon that has caught on with many districts. Ali (2017) found that the more active the community was in PBIS implementation, the greater the chance for the program to have a lasting impact on the school district. To fund PBIS, many school districts and individual building budgets allow for some monies to be spent on training and tangible items needed to implement the program. School-level analysis can identify the degree of implementation fidelity, the effectiveness of prevention, and whether these interventions improve academic and behavioral outcomes (Bodin et al., 2016). The ultimate goal of PBIS is to improve behavioral outcomes and improve students' academic performance.

The specific problem proposed for my study was to determine how different public school districts in southeastern Ohio performed before and after PBIS implementation. District leaders can spend time and money on implementing PBIS, and it will be valuable to see if their

efforts are worth the results. By using various school settings in southeastern Ohio, I ascertained whether demographics contributed to PBIS implementation and academic achievement. Peer-reviewed articles and seminal literature located through multiple explorations were reviewed. Searches were limited to literature produced in the most recent 5 years. Extant sources from 2000 and earlier were gathered for seminal literature related to the conceptual framework and the historical nature of the topic.

The articles I selected to review were in journals published from 1984 to 2018. I chose this timeframe because of the influx of PBIS into the public school setting during these years. There is little research that clearly defines PBIS prior to 2000. I used search engines, online databases, and physical journal articles to help form this literature review. Articles that focused on PBIS in public schools were the main focus of these searches. However, I also wanted to find out how PBIS could be used in other settings (other countries, juvenile detention facilities, and private institutions) to compare implementation strategies.

Conceptual Framework

PBIS is a structured approach to creating a social culture and the behavioral aids needed for all students to attain social, emotional, and academic success (Cohen et al., 2007). PBIS is not a curriculum but is instead a methodological foundation that proposes more positive disciplinary interactions that will lead to a more positive school environment and, therefore, lead to more time spent on academic matters and higher educational achievement. The PBIS process provides a comprehensive framework that any school can implement to develop a system of behavioral supports for all students regardless of ability (Christle et al., 2004). As an interactive approach to discipline, behavior, and academics, the PBIS model consists of opportunities for schools to correct and improve according to students' needs (Childs et al., 2010). The PBIS

process emphasizes (a) prevention of problematic behaviors through proactive instruction of desired behaviors, (b) continuous collection and application of data for effective decision-making, and (c) the application of intense and individualized support for students according to their needs (Childs et al., 2010).

As a framework, PBIS emphasizes a process approach rather than focusing on curriculum, intervention, or practice. Cohen et al. (2007) defined PBIS as a "noncurricular universal prevention model that draws upon behavioral, social learning, and organizational principles, targeting staff behavior to promote positive change in students" (p. 209). Horner et al. (2004) defined PBIS as a "systems approach to establish the social culture and the behavioral supports needed for all children in a school to achieve both social and academic success" (p. 3). The Office of Special Education Programs (2013), and the Center on PBIS (n.d.-c) defined PBIS as an "implementation framework for maximizing the selection and use of evidence-based prevention and intervention practices along a multi-tiered continuum that supports the academic, social, emotional, and behavioral competence of all students" (Center on PBIS, n.d.-c, para. 1).

PBIS aims to improve school climate by focusing on students' positive behaviors to help minimize negative behaviors. Schools implementing PBIS aim to create atmospheres conducive to teaching and mastering academic and social standards necessary for success (Horner et al., 2004). The implementation of PBIS provides schools with an alternative to the traditional, exclusionary, reactive, and punitive approaches to problematic behavior (Horner et al., 2004). The literature used to support this study included areas of academic success, cultural relevance, and a historical overview of PBIS in a variety of settings. Few researchers have looked at the results of student academic achievement before and after PBIS implementation.

Theoretical Framework

According to Kane (2006), the goal of a theoretical framework is formed by identifying the purpose of a proposed study and what theories and ideas exist concerning the topic of research being investigated. Furthermore, "By presenting this information, you 'frame' your research and show that you are knowledgeable about key concepts, theories, and models that relate to your topic" (Kane, 2006, p. 25). A theoretical framework provides direction for research and justification for an investigation so that the research "is not just coming 'out of the blue'" (Horner et al., 2004, p. 7) and is based on scientific theory.

Horner et al. (2009) stated that the guiding framework of PBIS was based on behavior theory, applied behavior science, and PBIS values based on contextual and cultural influences. As Horner et al. (2009) reported, B. F. Skinner was a famous Harvard University psychologist who became popular with his practice of behaviorism. Skinner's reinforcement theory of motivation was created and developed to indicate that an individual's behavior is a function of its consequences (as cited in Horner et al., 2009). Skinner's theory focuses on what happens to an individual when a specific action takes place. According to Skinner, the external environment of an organization must be designed effectively and positively to motivate an individual. Skinner's theory is a valuable tool for analyzing the controlling mechanism for an individual's behavior.

Urie Bronfenbrenner's 1917 biological systems theory addresses how children's environments influence their growth and development (as cited in McDonald, 2009). Biological systems theory posits the importance of children's biology and environment as the main factors influencing their growth. Bronfenbrenner believed that an individual's development is affected by almost everything in their environment. According to McDonald (2009), "Elements within this system can be either external, such as the timing of a parent's death, or internal, such as the

physiological changes that occur with the aging of a child" (McDonald, 2009, p. 345). As children age, they tend to react differently to environmental changes and may be better able to determine how a change will influence their responses to their environment (McDonald, 2009).

Historical Overview

PBIS is a marriage of behavioral theory, behavior analysis, positive behavior supports, and prevention and implementation science that was developed to improve how schools select, organize, implement, and evaluate behavioral practices to meet all students' needs (Sugai & Simonsen, 2012). Sugai and Simonsen (2012) concluded that attention should be directed to preventing negative behaviors and that organizations should use data-based decisions and team implementation to improve student outcomes. The reauthorization of the IDEA of 1997 provided grants for technical assistance to schools on evidence-based practices for helping students with behavior disorders. Sixteen thousand school teams have been trained on the PBIS implementation framework (Putnam et al., 2003). Three states have more than 60% of schools involved with PBIS implementation. According to Putnam et al. (2003), there were nine states with more than 40% implementation and 16 states with more than 30% implementation. The U.S. Congress allocated federal funds for school districts to use functional assessments, consider PBIS, and offer professional development on PBIS (Horner et al., 2009). Districts following ESSA and districts that accept federal funds must institute PBIS and other interventions for all students.

Four core elements are used as the basis of decisions in the PBIS framework (Childs et al., 2010). The first element is data and how districts make decisions in the organization. The second element is focusing on students' specific needs to ensure academic and behavioral success (outcomes). The third core element is proper PBIS implementation. This element calls

for investigating the experiences that support student learning and growth in the areas of academic excellence. Systems are the fourth component of decisions in PBIS. Instead of the student experience, this is the experience of the educator. This component calls for analyzing what the educator's experience has been to support practices for both behavioral and academic success that are evidence based and supported by research. Examples include coaching, leadership teams, professional development, and countless others (Bradshaw et al., 2010).

Districts that choose to use the PBIS model must follow six essential components for the program to be successful:

a. Acquire administration commitment and support.

b. Establish a PBIS school leadership team.

c. Establish positive school-wide expectations.

d. Teach expectations.

e. Establish a recognition system for positive behaviors.

f. Collect and analyze data. (Horner et al., 2009)

Horner et al. (2009) conducted a quasi-experimental study to examine the statistical relationship between PBIS and students' outcomes on the Maryland state assessment for mathematics. The results of Horner et al.'s (2009) study indicated that although there was a slight increase in students' assessment scores, there was not enough to demonstrate a statistically significant relationship between the math scores and PBIS. Bliese (2013) compared a district's math and reading scores after implementing PBIS over 4 years. His research showed that the reading scores improved after PBIS implementation, but the math scores did not improve. The qualitative portion of the study, a climate survey of staff members, supported the relationship between PBIS and academic achievement (Bliese, 2013).

PBIS is not a therapy or treatment but is instead a framework for teachers, administrators, and parents and is often used with students regardless of whether they receive special education services (Putnam et al., 2003). As a result of moving away from punitive and reactive discipline practices, the role of the teacher and administrator has expanded to include teaching and modeling acceptable positive behaviors, a moral compass, and instructional leadership (Cohen et al., 2007). Research on zero tolerance practices (Cohen et al., 2007) indicated that overreliance on punitive practices ineffectively addresses problematic student behaviors and has a coercive effect.

PBIS is a model that equips educators with effective strategies and interventions necessary to address students' needs and build positive relationships with students (Sugai & Simonsen, 2012). Different schools use the PBIS framework to develop their own programs reflective of their student bodies (Fuglei, 2017). Each program should work to give students a framework of specific behaviors to create a positive atmosphere because PBIS is a framework rather than a curriculum, and it can be adapted to fit individual schools or school districts (Bradshaw et al., 2010). Fuglei's (2017) report showed that districts implementing PBIS had lower suspension rates and those districts that fully implemented PBIS often had students achieve higher academic grades. Empirical evidence indicates that PBIS is one approach to reducing student misbehaviors and is an effective model for increasing students' academic achievement (Fuglei, 2017).

In Eckert et al.'s (2017) article, children's reading deficits were associated with a lack of parental engagement in reading activities, poverty, and a lack of parental education. Eckert et al. (2017) found that students from less educated homes were more likely to face reading and

behavioral challenges than students from more educated homes. In general, PBIS was enacted to help all students improve behavior and academic achievement (Eckert et al., 2017).

Fernandez et al. (2015) developed the PBIS champion model system. This PBIS system was designed to be implemented in stages: (a) the bronze level (Tier I interventions), (b) the silver level (Tier II interventions), and (c) the gold level (Tier III interventions). Fernandez et al. (2015) stated that one of the first steps in implementing their designed PBIS model would be to establish and operate an effective PBIS team. The administrator is an active member of the PBIS team. The overall success of PBIS programming is to have a PBIS leadership team dedicated to doing the work involved in PBIS. Having an active administrative leader is key to the overall success of PBIS programming in a building or district (Fernandez et al., 2015).

PBIS, unlike zero-tolerance policies, focuses on teaching and reinforcing prosocial behavior rather than on consequences. Much of the research is fairly recent, with mixed results regarding PBIS having a positive cultural impact on all students and staff members. Promotion of a healthy school climate occurs at PBIS schools not through a prescribed set of interventions but through applying a framework with three core elements: prevention, evidence-based practice, and systems implementation (Sugai & Simonsen, 2012).

PBIS in Ohio

The Ohio PBIS Network began in the fall of 2012 under the direction of the Ohio Department of Education and the Office for Exceptional Children (Ohio Department of Education [DOE], n.d.-b). By the fall of 2013, the Ohio PBIS Network had developed its basic structure with established workgroups and quarterly meetings. Ohio's PBIS Network was developed so that districts across the state could connect and compare best practices and implementation strategies. Districts in the network share resources to identify best practices

throughout the state. The Ohio PBIS Network's vision statement is summarized by stating that all learning environments in Ohio will implement PBIS as an effective and proactive framework for improving safety, social competence, and academic achievement for all students.

House Bill 318, signed in August 2018, brought additional assistance and challenges to the PBIS efforts in Ohio. House Bill 318 expanded school safety efforts in Ohio, affirmed PBIS requirements for all districts, mandated PBIS training for specific teachers, and created new PBIS and social-emotional learning requirements for university preservice teacher training programs. The Ohio PBIS was greatly expanded upon by a U.S. DOE School Climate Transformation Grant award, which was used to expand PBIS and mental health supports in Ohio schools. A PBIS innovation initiative supported by the School Climate Transformation Grant uses the PBIS framework and processes to provide a multitiered system of motivation and engagement for all students. The data, systems, and practices of PBIS were expanded into a system supporting student and staff self-improvement. The motivation and engagement materials provided through PBIS allowed new resources for schools wishing to improve student motivation and reduce the negative effects associated with student disengagement.

The Ohio PBIS Network strives to meet many educational goals in Ohio. One aspiration is to increase the acceptance and use of PBIS fidelity tools and the PBIS app. Another is to expand further the PBIS recognition system for each state region. Other goals are to:

- Expand the PBIS coaching network at all the local, regional, and state levels.
- Develop and expand PBIS resources for families in Ohio.
- Partner with local and state mental health agencies to provide support for all students and their families.

Ohio's source for PBIS training is through each region's state support team (SST). The SSTs train teachers and other staff members to be in-house trainers for their districts. The SST's main goal is to allow districts to have self-sustaining SST teams that can operate without the support of SSTs. State educational service centers (ESCs) also operate as training centers for the districts connected with specific ESCs. The ESCs provide guidance and leadership for district leadership wanting to further their knowledge of PBIS.

The OSEP issued a letter of significant guidance regarding PBIS implementation that reminded states and districts of the responsibility for ensuring a free and appropriate public education (FAPE) to students with disabilities, including the IEP team addressing the implications of a child's behavioral needs (Ohio Department of Education, n.d.-b, n.d.-d). The OSEP also clarified that a failure to consider and provide for needed behavioral supports through the IEP might result in a student not receiving a meaningful educational benefit. The letter also provided IDEA requirements for PBIS and resources that support the planning and implementation of services (Ohio Department of Education, n.d.-b, n.d.-d).

Ohio's adopted strategic plan for education, Each Child, Our Future, explicitly recognizes the need for a positive climate in every school to support student well-being, academic achievement, and future success. Ohio recently enacted the Supporting Alternatives for Fair Education (SAFE) Act, House Bill 318. This bill is one of the strongest state laws that address multitiered behavioral supports to reduce disciplinary referrals. This bill strengthens the existing PBIS plan for all Ohio public school districts.

Student Academic Performance

Administrators, teachers, specialists, students, and assistants take on leadership roles when implementing PBIS to ensure that appropriate and effective positive interventions and

supports are provided to address problematic behaviors and student achievement (Horner et al., 2009). Problematic behaviors cause disruptions during instructional time and hinder normal classroom day-to-day operations. When administrators and teachers spend vast amounts of time addressing student misbehaviors, it costs instructional time, money, and resources (Horner et al., 2009). Horner et al. (2009) stated that student misbehaviors affect the academic achievement of those misbehaving and the learning opportunities of all students in the classroom. Implementing PBIS in schools has shown some promise in the increased instructional time raising student academic achievement (Horner et al., 2009). Cohen et al. (2007) found that students who had problematic behaviors also showed increased academic failures in content areas when compared with their better-behaved peers.

Research on the implementation of PBIS has indicated that increased academic achievement is possible by using preventative and proactive academic behavioral practices (Cohen et al., 2007; Horner et al., 2009). Schools experience academic success when PBIS is implemented with fidelity and when there is a long-term commitment and continuous progress monitoring (Sugai & Simonsen, 2012). PBIS enables schools to manage behaviors efficiently. In turn, teachers regain valuable instructional time (Horner et al., 2009).

A common misconception is that academics or behaviors can exist successfully without an efficient system of support and intervention such as PBIS (Arnold, 2012; Horner et al., 2009). Positive behavior is vital to students' levels of academic achievement and can influence their ability to learn (Sugai & Simonsen, 2012). Traditional punishment and exclusionary strategies are not proven effective practices for improving problematic student behaviors or academics (Sugai & Simonsen, 2012). The implementation of PBIS helps school officials create learning

environments that are less reactive, aversive, dangerous, and exclusionary and that promote engagement, responsiveness, positivity, and production (Fuglei, 2017).

According to Sugai and Simonsen (2012), suspensions can affect dropout rates, academic quality, school climate, and standardized achievement scores. Schools with higher discipline referrals and higher dropout rates have lower outcomes on standardized achievement tests (Sugai & Simonsen, 2012). Lassen et al. (2006) studied multiple schools in a low-income inner-city area over 3 years. The researchers analyzed PBIS programming and if PBIS affected discipline referrals and academic performance. The study's results indicated that after 3 years of PBIS implementation, achievement scores in math increased significantly for all students.

Luiselli et al. (2005) studied an urban elementary school and concluded that suspensions and office referrals affected academic achievement. After implementing PBIS, the school achieved an increase of 18% in student reading scores and 25% in math scores. The results suggested that the PBIS intervention approach could benefit students' academic performance (Luiselli et al., 2005).

PBIS helps establish clearly defined outcomes related to academic and social behavior that systemically support school officials' efforts in using practices that render student success (Bliese, 2013). Inappropriate behaviors in a school environment create a negative climate that is often linked to the loss of instruction and poor academic achievement (Bliese, 2013). Implementing PBIS decreases maladaptive behaviors; therefore, researchers and educators can examine the potential correlations or the effects that PBIS has on academic improvement (Horner et al., 2009).

PBIS and academics can be viewed as a classic model where students understand that the teacher will remove them from the classroom if they are disruptive (Horner et al., 2009). This

situation triggers a rippling effect, and loss of instructional time occurs, leading to the loss of learning time, poor academic performance, and the possibility of failure (Horner et al., 2009). Educators agree that academic achievement is a vital part of a student's education and future (Christle et al., 2004).

Fidelity and PBIS Implementation

PBIS has primarily been implemented at the school level, but many educators are trying to find similar proactive, systemic, and preventative behavioral support systems, like PBIS (Arnold, 2012). PBIS requires administrators and teachers to reexamine and reform their organizational policies, routines, procedures, and resources to develop sustainable and successful management (Horner et al., 2009). PBIS does not emphasize a single intervention or model but instead uses best practices that school districts could choose from to best fit their unique challenges and needs.

PBIS implementation in schools involves a team approach to data-driven decision-making and consists of key elements, principles, and multitiered strategies developed through years of empirical research and application (Horner et al., 2009). PBIS requires the establishment of clearly defined school-wide expectations and procedures that encourage the appropriate student behaviors (Sugai & Simonsen, 2012). Teachers who use PBIS teach and develop behavioral expectations of their individual classes. An expanded infrastructure of PBIS practices strengthens district and statewide levels of support (Garbacz et al., 2018).

Districts and schools implementing PBIS also often use the SET to measure implementation fidelity objectively. The SET is a research-validated instrument designed to evaluate the critical features of school-wide PBIS for 1 academic year (Horner et al., 2004). A trained PBIS and SET evaluator conducts and completes the SET and collects and analyzes the

data. The SET contains 28 questions that focus on (a) defined and taught behavioral expectations, (b) procedures for recognition and redirection of behaviors, (c) progress monitoring, and (d) evaluation of systemic support (Horner et al., 2004). To ensure appropriate and effective utilization of behavior interventions and supports, school officials evaluate PBIS implementation to establish effective intervention and support (Horner et al., 2004).

Some of the previously mentioned studies provided evidence to support the hypothesis that the use of PBIS was associated with improved academic and behavioral outcomes; however, the small scale of each limits the ability to generalize their findings of the PBIS model in diverse settings. The common problem is that much of the development and assessment of evidence-based practices took place in highly controlled environments that may not translate to real-world settings. Luiselli et al. (2005) and Lassen et al. (2006) used school settings, but the researchers provided consultation and support. Only one school was analyzed in each study, and neither included demographically diverse comparison schools.

The OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports suggested the following guiding principles for the successful PBIS implementation. The first guiding principle is that members of the school system and organization in every setting in the school system should have a foundation of social, behavioral, and academic support for the Tier I specifications (Horner et al., 2004). The second guiding principle is that PBIS must be implemented throughout the entire school setting. Staff members must implement PBIS in every setting, both inside and outside the classroom, including hallways and lunchrooms (Horner et al., 2004). When PBIS is implemented across the entire school setting, the chance of success improves greatly (Horner et al., 2004).

The next guiding principle is prevention. Prevention should be taught explicitly and directly to students and staff members. Reteaching occurs for students who use inappropriate behaviors in the school setting (Horner et al., 2004). The interventions should be evidence-based best practices that clearly align with the needs identified by the stakeholders to address the problem (Horner et al., 2004).

Cohen et al. (2007) stated that a leadership team comprising district-level decision-makers and building-level staff is primarily responsible for developing and coordinating PBIS implementation. The team needs to do the following activities to implement PBIS fully: complete a self-assessment, create an action plan (3–5 years), establish regularly scheduled meetings, secure stable funding for programming, and develop a coaching network to help facilitate PBIS programming for years to come. Cohen et al. (2007) suggested the following as general key factors for sustainable PBIS implementation: (a) having a high priority for PBIS, (b) analyzing intervention effectiveness, (c) regularly assessing student outcomes to maintain a high exit rate, (d) relying on the efficient use of staff and resources to implement interventions, and (e) adapting and responding to changing student needs.

A few researchers have examined PBIS implementation on a district- or state-wide scale and found that implementation fidelity may significantly impact outcomes. McIntosh et al. (2016) investigated implementation fidelity as shown in academic and behavior outcomes among students in one urban Canadian school district that implemented PBIS for 5 years. Schools in which PBIS implementation reflected high fidelity (at least 80% of total criteria) tended to have higher academic achievement scores and lower disciplinary rates among students.

PBIS and Culture

Numerous studies support the existence of a relationship between behavior, school culture, and academic performance. Cohen et al. (2007) found that students who were bullied had lower academic scores on assessments. In a review of existing research, Algozzine et al. (2010) found a relationship between behavioral and academic outcomes among elementary students. One of the many studies on PBIS's effects on school culture showed that in 23 schools and 3,207 students, PBIS positively impacted how the students viewed their school settings (Bodin et al., 2016). The school district Bodin et al. (2016) studied used tangible rewards to improve school culture. The researchers also compared the effects of specific subsets of students with the number of years their teachers had been in the profession. Although the study was conducted in a similar demographic area, the district's funding did not provide an abundance of resources to help implement PBIS programming. The district used its teachers to support the program, and the small amount of funding helped train these teachers (Bodin et al., 2016).

Boneshefski and Runge (2014) investigated how a PBIS program impacted minority students. The key focuses were on students reported as misbehaving and how PBIS interventions modified their behaviors. Boneshefski and Runge (2014) identified the students' specific negative behaviors, and then teachers were put into teams that worked on PBIS solutions to the behavior problems. Many students were from economically depressed school districts with little to no PBIS training funding. Teacher leaders were sent to PBIS training and were then asked to train the other teachers in their school buildings. Boneshefski and Runge (2014) focused on a small group of diverse learners to understand if PBIS programming altered negative behaviors.

Hunter et al. (2017) studied the effects of PBIS on students who were at risk for academic and social failure. PBIS leaders were trained to promote a positive school culture at the

beginning of the school year. Teachers were instructed to use PBIS in setting up their classrooms and in helping with classroom management (Hunter et al., 2017). Routines and procedures were used throughout the classrooms in this study, and all teachers were required to handle many aspects of PBIS programming. Both veteran and novice teachers were asked to implement PBIS and monitor behavioral changes in these students (Hunter et al., 2017). The students were in both an inclusion setting and self-contained classrooms. The teachers used specific PBIS strategies when a negative behavior would occur. Hunter et al. (2017) found that students had more academic and behavioral success in the school setting.

McIntosh et al. (2016) explored how principals' leadership can be changed when fully implementing PBIS. Ten school administrators, who were initially against implementing PBIS, were surveyed on why they were against the program and what happened after they were told to implement the program (McIntosh et al., 2016). This study used the Enhanced Critical Incident Technique as a qualitative measure. McIntosh et al. (2016) categorized experiences in a change of support and early experiences with the PBIS program.

The study's purpose was to understand if the personal opinion of the administrators had a positive or negative impact on implementing PBIS. McIntosh et al. (2016) concluded that if the school leaders felt that PBIS was forced upon their buildings, they were less likely to monitor progress, but if the leaders had some say in what was happening in their buildings, regardless of the program, they were more likely to implement the program fully and have a greater probability of success. McIntosh et al. (2016) stated that leadership was likely to follow if there was buy-in from staff and students. The program's funding came from the state, and leaders were told that they must implement the program.

Lawrence (2017) studied whether PBIS could be an effective deterrent to negative behavior and improve the culture in the secondary school setting. Outside PBIS trainers came in and taught the entire staff and students about PBIS. Study results indicated that when an administrative staff consistently used PBIS, bullying behavior was reduced (Lawrence, 2017). Lawrence (2017) found that PBIS not only reduced bullying incidents but also corrected some other problem behaviors. Public taxpayer-based funding was used for the initial training of staff and students.

In another secondary school setting, PBIS was implemented because of the belief that there was a lack of leadership and that the school's culture was negative because of this (Ali, 2017). This study included 367 secondary schools that were government-run in Pakistan. Ali (2017) noted a negative correlation between academic achievement and the perceived negative school culture. With little funding, some of the PBIS programs were implemented in these schools. Staff and building leadership were surveyed to see what types of changes needed to be made to improve school culture. Schools were given the freedom to make changes as they saw fit for their buildings (Ali, 2017). Ali (2017) noted that these schools in Pakistan had a history of low achievement and poor culture. Schools improved school culture, and there was a slight improvement in academic scores (Ali, 2017).

McDaniel et al. (2018) stated that PBIS had been used for more than 20 years in middle- to high-income districts but that low-income districts did not use PBIS as often because of the high cost of starting the program. The research team administered surveys to 161 individuals, including administrators, teachers, and school staff members, to see if PBIS made a real difference in their school systems. The study results indicated that when administrators and staff members felt a part of the PBIS training and process, there was a greater likelihood of

sustainability for PBIS (McDaniel et al., 2018). McDaniel et al. (2018) found that funding also played a huge factor in whether the program succeeded. When proper funding and time were given to PBIS, districts tended to have higher assessment scores and a more positive outlook on their school cultures (McDaniel et al., 2018).

Kimball et al. (2017) studied PBIS programming in a juvenile detention setting that mirrored the age group of a public school. Kimball et al. (2017) wanted to determine if using PBIS tools would benefit the behavior of incarcerated youths. The main difference between this study and other studies on PBIS was that the PBIS program could be implemented on a 24/7 model, whereas the other studies were only completed on a normal school day. The juvenile detention facility used PBIS for 2 years, and surveys were sent to all agency-level decision-makers to see if PBIS had a positive effect (Kimball et al., 2017). The other main difference between this study and other public school-based studies was the vast amount of money that was spent on the training and implementation of the PBIS program. The results showed that the juvenile detention culture was more positive when the PBIS program was implemented with fidelity. The PBIS program made a positive difference with many of the students in the facility (Kimball et al., 2017).

At a juvenile detention facility in Georgia, PBIS was used to see if it could positively alter the behavior of the most difficult students (Fernandez et al., 2015). The researchers studied 27 secure facilities where detained students were being held. All of the staff members were trained in the PBIS model, and implementation of the program was mandatory. The data gathered from the study were used to make improvements within the juvenile detention facilities. Fernandez et al. (2015) also looked at the specific PBIS actions used in two of the facilities to understand better how the culture changed. The state of Georgia allocated funds to be used for

PBIS programming to understand what was and what was not working in their juvenile detention settings. Georgia chose the PBIS program because of the positive results they saw in the public-school setting.

The previous studies show some connection between the implementation of PBIS and the improvement of school culture. The studies also show some connection between the implementation of PBIS and student academic scores. My study investigated whether PBIS made these same types of gains in southeastern Ohio by examining various demographically diverse public school districts.

PBIS Implementation and Academic and Behavioral Outcomes

PBIS has been used, to varying degrees, to impact student behaviors positively. Researchers have focused on understanding PBIS's the impact that PBIS has on behavior and academic achievement. While there has been substantial research on PBIS's effects on behavior and academics, little to no research has been conducted in southeastern Ohio. Lassen et al. (2006) assessed the relationship between PBIS implementation and student behaviors and academic performance. The researchers examined suspension rates of two urban districts and compared their findings with data showing how the students performed on their state assessments. The results showed a slight gain in the students' mathematics scores but no significant gain in reading scores (Lassen et al., 2006). The study results also showed that the research could predict the academic achievement of an individual student depending on how and when they were disciplined. PBIS implementation was found to reduce suspensions and expulsions slightly, and that contributed to the minor rise in academic achievement (Lassen et al., 2006).

Quality implementation of interventions is dependent on a number of variables, including support from administration and staff, an infrastructure for providing consultation and training, and the development of internal mechanisms of support and evaluation (McDougal et al., 2000). For PBIS to truly be an effective tool for helping students with behavioral difficulties, the implementation must come from the top of an organization. With administration on board, there is a greater likelihood that PBIS will be implemented in the manner intended. When PBIS implementation fails, it is often because the organization cannot support the program (Bradshaw et al., 2010).

Some research has indicated that when PBIS training comes from internal facilitators, PBIS will have a greater chance of success, and the problem will positively impact more students. McIntosh et al. (2016) found that schools implementing PBIS with moderate to high fidelity had higher percentages of students who met or exceeded standards in the areas of reading and math. These moderate- to high-fidelity schools had higher assessment scores even though the students came from low-income families (McIntosh et al., 2016).

PBIS and Mental Health

Mental health is a major issue in education today (Eckert et al., 2017). Secondary school students have more mental health services than elementary-age students. Funding is a barrier that keeps many school districts from having the necessary mental health services. Individual teachers are asked to perform some of the duties of a social worker by helping students not just with academics but also with social and emotional challenges. PBIS provides a platform for staff members to influence students' lives positively (Eckert et al., 2017). Starting and maintaining mental health programs is particularly difficult in diverse communities. Eckert et al. (2017) addressed how schools can gain mental health services at minimum cost. By partnering with a

local nonprofit mental health organization, the school district provided a more positive school culture and included mental health professionals in the PBIS training.

Weist et al. (2018) explored how PBIS could be connected with school mental health and a multitiered system of support. The program under study used an interconnected framework to help students with mental health issues. Weist et al. (2018) suggested that this new model of interventional support is key for students in the 21st century. Further, Weist et al. (2018) asserted that students with internalized disorders are not easily visible, and by including all of these programs, improved mental health should occur. Since this multitiered approach is fairly new, few studies have shown if PBIS is a key element in helping with mental health for all students. Weist et al. (2018) found that the PBIS program displayed positive student results and improved school culture. The funding for the program was an upfront cost, and no other funding was used to implement the program.

PBIS and Community Involvement

Garbacz et al. (2018) examined how PBIS could lead to family engagement and community involvement. The researchers defined community involvement as bringing positive and measurable change to the communities in which individuals lived and stated that community involvement is needed to support the local public school system and provide a positive influence on the students in the immediate community. Garbacz et al. (2018) suggested that evaluating outcomes of community involvement could help build relationships between the community and the school district, provide greater opportunities for all students, and create more community involvement in the school setting.

Garbacz et al. (2018) studied PBIS leadership teams from 302 schools in three states to understand what these teams did to connect with their communities. PBIS leaders went outside

the school setting and trained families on specific PBIS tools they could use at home. These connections led to businesses wanting to get involved in the program and financially support what was happening in the schools. Garbacz et al. (2018) found that community connections were key to keeping the program going and allowing PBIS to grow. Parents had a greater say in what was happening in their schools and felt more involved because of their input. Allowing the PBIS leaders to go into the community and teach the program was the most beneficial aspect of the study because greater school volunteerism grew from that action. The program was viewed as sustainable because of the resources provided by local community members and businesses (Garbacz et al., 2018).

Noltemeyer et al. (2018) studied how successful PBIS implementation and achievement were recognized at the state level. Exemplary PBIS schools were shown as models for other school systems, and the awards encouraged schools with PBIS in place to continue. The authors also investigated Ohio's PBIS recognition system and their PBIS showcase event (Noltemeyer et al., 2018).

Noltemeyer et al. (2018) recommended ways to continue the program and what novice districts should do to start their own PBIS programming. Noltemeyer et al. (2018) found that those schools with the longest PBIS implementation had more positive school cultures than those that did not use PBIS. Noltemeyer et al. (2018) contended that recognition was the driving factor in continuing or starting the program. The only funding that came from the state was funding for the recognition program. Individual school districts had to fund the professional development and implementation of PBIS programming (Noltemeyer et al., 2018).

PBIS and Staff Training

Implementing PBIS can be a costly and time-consuming process. PBIS training may only begin for a few staff members at a time before it reaches the entire staff. Some school districts have employed PBIS coaches to provide professional development to staff members. Using a coach is a cost-effective way to train one individual to bring PBIS to the entire school setting.

Goodman-Scott and Grothaus (2017) examined the RAMP (Recognized ASCA [American School Counselor Association] Model Program) and PBIS programs to determine if they could be merged into one program that could be shared with public school staff members. School counselors were charged with teaching their staff about the programs and how to implement them into their daily classroom activities. The focus of the study was to see whether merging the two programs would make a lasting impact on student performance, attitude, and discipline referrals (Goodman-Scott & Grothaus, 2017).

Staff members were trained in both methods and had quarterly progress meetings to discuss implementing RAMP and PBIS (Goodman-Scott & Grothaus, 2017). Counselors gave student and staff surveys at the beginning and end of the school year to see if RAMP and PBIS positively influenced school culture. Goodman-Scott and Grothaus (2017) concluded that combining RAMP and PBIS made a significant difference in positive school culture when both programs were implemented with fidelity. The study data also showed that sustained implementation of both RAMP and PBIS would lead to a greater degree of positive school culture and academic achievement for students regardless of ethnic or economic situations.

PBIS and School Discipline Reduction

Many have viewed the overreliance on suspensions as a tool that administrators use to discipline students as problematic and ineffective. Eckert et al. (2017) stated that suspensions

used to deter future misbehaviors actually exacerbated suspension rates. North Carolina developed PBIS because of the rising rate of suspensions and the disproportionate number of minority students who were sent home with suspensions (Irwin & Algozzine, 2008). Garbacz et al. (2018) found that students on free or reduced lunch plans had higher suspension rates than their typical peers. Hemphill et al. (2010) found a positive correlation between poverty and discipline in Australian public school systems with risk factors similar to students in the United States.

Malone et al. (2016) used a sampling of 39,036 students to see if student mentors could make a positive difference in younger students by using some of the tools from the PBIS model. Seventh- and eighth-grade students in stand-alone middle schools were found to have more discipline problems than when they were included in K–8 buildings (Malone et al., 2016). Middle school students were trained in how to mentor younger students and then sent to their classrooms to help and read with these students. Malone et al. (2016) posited that student achievement would increase by building a community of learners and a positive school culture. Study results showed a decrease in the number of discipline referrals among the middle school students who were using the PBIS model to help motivate younger students. Both groups benefited from the mentor-mentee relationship.

Marini (2017) conducted a study in Jakarta, Indonesia, with a sample of 63 elementary school principals to examine how their implementation of some of the PBIS tools impacted their students. Many of the positive attributes of PBIS, like honesty, discipline, tolerance, and health, were already in the culture of the studied school buildings (Marini, 2017). The concerning factor with this study is that the principals were asked to fill out their questionnaires and may have had ulterior motives to make their buildings look more positive than they were. The PBIS tools may

have had little to no effect on the school culture because of the arbitrary nature of the principals answering the survey questions (Marini, 2017). There may have also been no effect on the PBIS practices because the students came to the school with many of the qualities that PBIS focuses on. When comparing Jakarta's society with American society, a researcher could ascertain that cultural and societal expectations are so different that the researcher may be unable to compare both cultures using the same measurement tool accurately (Marini, 2017).

Chapter Summary

A review of the literature for this study showed discrepancies in how PBIS is used. Some states and institutions fully implement the program, whereas others have partial or little implementation. The literature also revealed that organizations that fully implemented PBIS had a more positive culture and often increased assessment scores. Student diversity is another issue with PBIS. Most of the research focused on middle- to high-income schools when implementing the program. Some research showed that no matter what program was implemented, students would succeed in these higher-achieving schools (McDaniel et al., 2018).

What has not been studied is how demographically diverse public school students have academically scored before and after PBIS implementation. At the time of my study, formal PBIS implementation had been in Ohio public schools for about 5 years with mixed results. Per Eckert et al.'s (2017) study, there is some evidence of improved academic performance using PBIS, but limitations in the research prevent firm conclusions from being drawn. In this study, I will examine student achievement on state assessments before and after PBIS implementation.

This chapter discussed PBIS's history and implementation and its impact on individuals and schools. The next chapter presents the research methods used to compare different demographic areas of southeastern Ohio where PBIS has been implemented. The chapter

includes details on the study design, the research questions, study instrumentation, the study population, study procedures, and how the data were analyzed.

Chapter 3: Research Method

This study's purpose was to address how leaders in Ohio public schools have implemented PBIS and the results of their implementation. The study focused on leadership in southeastern Ohio school districts to ascertain how they use PBIS and if there was evidence of a significant difference in student achievement scores after implementation of PBIS compared to achievement scores before implementation. Of high interest were the results from high-wealth districts that implement PBIS compared with low-wealth districts that implement PBIS.

Once the districts were selected, student test data were obtained before and after implementing PBIS. Specifically, my sample examined how fourth-grade students performed before and after PBIS implementation and the influence of the principals' leadership style on PBIS implementation. Also of interest was each district's budget before and after PBIS implementation to understand how and why the financial data could have impacted students' scores. By analyzing the state-mandated 5-year forecast, I ascertained differences in each district's budget and which funding source was used for implementation. This was similar to the methodology used in the research conducted by McIntosh et al. (2016).

Using mostly archival data, I examined whether a correlation existed between PBIS implementation and the Ohio state reading assessment scores of fourth-grade students in three districts. While other areas of the country have studied PBIS implementation, studies in southeastern Ohio have not investigated how principal implementation impacts PBIS or the effects of PBIS on fourth-grade reading achievement scores.

State standardized test scores from three districts were examined before and after PBIS implementation. Additionally, I administered a survey to 32 principals to identify their level of PBIS implementation in their buildings and grade levels. I defined *implementation quality* as the

degree to which an intervention is delivered as planned. Together, the intervention and its support system comprised two layers that directly impacted the quality of implementation and the outcomes obtained. Prior evidence to support a relationship between PBIS implementation and improved academic outcomes was mixed, but some studies have revealed improvement in reading and math achievement in schools implementing PBIS.

I used the School-wide Evaluation Tool (SET) survey for my study. The SET assessment has been vetted by the Center on PBIS (n.d.-a) and funded by the U.S. DOE's Office of Special Education Programs (Office of Special Education Programs [OSEP], 2013). The SET is a research-validated instrument designed to assess and evaluate the critical features of school-wide positive behavioral interventions and supports across an academic school year. The SET is used to determine the extent to which schools are using PBIS, evaluate the fidelity of implementation, and assess potential changes in the school culture and safety of the school building. The SET consists of 28 questions that inquire into the following areas: (a) expectations defined, (b) behavioral expectations taught, (c) acknowledgment procedures, (d) correction procedures, (e) monitoring and evaluation, (f) management, and (f) district-level support.

After the SET survey was administered, I gathered the data and assigned a numerical representation of implementing PBIS according to how the principals' answers aligned with student scores and how each district's demographics influenced student scores and PBIS implementation. The SET produces a summary score and a score for each of the seven PBIS areas. The summary SET score provides a general index of school implementation. Each of the seven feature scores provided a specific index of the level of implementation for that feature. Schools scoring 80% or above on the general index and 80% or above on the specific index for teaching behavioral expectations were considered to implement PBIS at a universal level. The

survey focuses on the information needed to understand whether, how, and why PBIS implementation makes an academic difference for students. The budgetary data helped to understand if there was a connection between the districts' demographics in implementing PBIS and if these districts showed improved results on student state assessment scores.

The SET survey concluded with open-ended questions that principals answered verbally. The coding process is an important part of analyzing data. With the help of the Transcription Puppy program, I used verbatim transcription to capture each principal's answers to questions that expanded upon the SET survey. I systemically categorized excerpts to find themes and patterns and used in vivo coding to reflect the participant's own spoken language and to stay as close to the intent and meaning as possible. In vivo coding allowed me to summarize passages into single words or phrases from the interviews. From this information, I found common themes and data trends to ascertain PBIS implementation.

The rationale for this study developed when I was unable to determine if PBIS made a positive or negative difference in students' academic scores in my district. I could not locate data that showed when PBIS implementation began, how PBIS was implemented, and what the students' state academic scores were before and after PBIS implementation in southeastern Ohio. The SET survey demonstrated the principals' implementation levels of PBIS programming.

The Ohio DOE mandated PBIS, and districts must submit narrative reports in their Comprehensive Continuous Improvement Plans (CCIP) that show how PBIS is being used. In the context of PBIS implementation in Ohio, the state's initiative identified PBIS as a means of promoting improved academic and behavioral outcomes (Irwin & Algozzine, 2008). The CCIP is a clearinghouse where all student and district data are placed and where district funding formulas are calculated. Schools that do not report how they are using PBIS might lose funding or be on

the Ohio DOE's watch list. The watch list could include remedies that include the Ohio DOE implementing interventions in the district that can cause the community to lose local control over the school district. The Ohio DOE takes over the school system (Ohio Department of Education, n.d.-b).

In this study, I examine whether improved academic success could be attributed to implementing PBIS. Examining outcomes based on building and district demographics (urban, rural, and suburban) provided information on PBIS's effect on academic achievement. At the school level, factors included structure, culture, and characteristics of schools, including school size, economic status, and setting.

Research Questions

Best practices for implementing PBIS and the mandate of the Every Student Succeeds Act (ESSA) emerged as a novel conception (Lawrence, 2017). Malone et al. (2016) called for further research to determine whether PBIS was a useful tool to improve academic performance and meet legislative requirements. Studies have demonstrated evidence of reductions in discipline rates using PBIS, which resulted in fewer lost hours of instruction lost by students and teachers (Lassen et al., 2006; Muscott et al., 2008). Yet, many studies that examined PBIS outcomes reported limitations, including small sample sizes and failure to employ tests of significance (Luiselli et al., 2005; Muscott et al., 2008). The following research questions guided this study:

RQ1: Using the School-Wide Evaluation Tool (SET) survey, what is the level of PBIS implementation, according to principals, in public school buildings in southeastern Ohio?

RQ2: Are there different levels of PBIS implementation across school types?

RQ3: Is there a correlation between the implementation of PBIS and fourth-grade reading scores?

Research Design

A correlational design study was most suitable for this study as the objective was to ascertain the relationship between PBIS students' state achievement scores in Ohio. The correlational design evaluates whether fourth-grade reading scores increase when PBIS implementation increases. Correlational research is a nonexperimental method in which a researcher measures two variables to determine the statistical relationship between variables with no influence from extraneous variables. A quantitative study centers on the numeric analysis of data to determine a specific population's mannerisms, tendencies, or beliefs to extract deductions and construct generalities about that population. Unlike a quantitative study, a qualitative study is founded on the proposed study of contexts to express the significance of human conduct and incidents affiliated with those conditions (Malone et al., 2016). While useful, that was not the focus of my study. Comparative and descriptive techniques were also reported in the data analysis.

The SET scoring guide was used to calculate the responses to the 28 SET questions. The scoring guide is organized by feature area and formatted to provide the evaluation question and the criteria for scoring each question. Using the established criteria, the SET evaluator determines a 0-, 1-, or 2-point score for each question. The responses needed for scoring the SET evaluation questions guide the process of preparing and conducting the SET. The SET was sent to principals in 32 districts (eight urban, 11 rural, and 13 suburban) to gather data on their PBIS. The survey asked about their own PBIS implementation, how much training they had received, and their opinions on whether PBIS programming affected their students.

A Pearson product-moment correlation was used to analyze the results of Research Question 3. I used a Pearson *r* to understand if the fourth-grade reading scores improved with the implementation of PBIS in their respective buildings. I found the *p*-value from a Pearson *r* calculator (within the SPSS software suite) to conclude if there was a significant difference in reading scores and PBIS implementation.

Population and Setting

The setting for this study consisted of 32 districts in southeastern Ohio. All districts and buildings qualified for federal Title I services for remedial instruction. The urban school districts consisted of 5,264 students (72% White, 25% African American, and 3% Asian American). Fifty-five percent of the students identified as low income, and 31% received special education services (Ohio Department of Education, n.d.-b).

The suburban school districts consisted of 2,093 students (85% White, 13% African American, and 2% designated as other). Thirty-three percent of the students identified as low income, and 15% received special education services. The rural districts consisted of 781 students (95% White and 5% African American). Thirty-seven percent of the students identified as low income, and 12% received special education services (Ohio Department of Education, n.d.-b).

In total, I recruited principals from eight urban, 11 rural, and 13 suburban school districts in southeastern Ohio and explained the purpose of the study (see Appendix A). Although some prior research on PBIS had been completed, no studies had been conducted in southeastern Ohio. District demographic information was gleaned from the Ohio DOE website. A principal survey instrument, the SET, helped to ascertain the principals' perspectives on whether they saw a difference after implementing PBIS programming (see Appendix B). The survey results were

then compared with state assessment scores of fourth-grade students to ascertain if PBIS implementation led to the change.

My study focused on several factors concerning PBIS implementation. Findings revealed that a variety of districts in southeastern Ohio have fully implemented PBIS. Ohio public school districts must report their PBIS implementation levels in their CCIPs in an online form submitted to the Ohio DOE. The CCIP is a checkpoint where all school district data are submitted, and district funding comes from those reports. The SET survey identified those PBIS districts and their rigor of implementation. The urban school districts consisted of 5,264 students, the suburban district consisted of 2,093 students, and the rural district consisted of 781 students.

A total of 32 principals and schools in urban, suburban, and rural districts participated in the study. Ohio achievement assessment scores in reading for fourth-grade students from the 2018–2019 school year were compared with the level of implementation information gleaned from the SET survey. The 2018–2019 school year provided the last year of valid assessment results for students in Ohio. Table 1 shows the demographic information for the schools used in this study. The study focused on southeastern Ohio schools in urban, suburban, and rural settings. The table also includes minority, low-income, and special education data for the studied districts. With the exception of population, all data are presented as percentages in this table.

Table 1

Southeastern Ohio Public School District Demographics

School setting	Population	Caucasian (%)	African American (%)	Low income (%)	Special education (%)
Urban	5,264	72	25	55	31
Suburban	2,093	85	13	33	15
Rural	781	95	5	37	12

All districts received a C on the 2018–2019 Ohio state report card. A grade of C on the state report card indicates that the school district or building appropriately educates its students. The C rating allows districts or buildings to continue doing what they have been doing with no interference from the Ohio DOE.

All the districts began full PBIS implementation in 2015. At that time, the urban and suburban districts scored a D on the state report card on an A–F scale. The rural school districts scored a C. PBIS coaches can be found in both urban and rural school districts. The suburban districts had a teacher-leader who trained other staff members in PBIS procedures. The urban district has 244 fourth-grade students with eight principals. The suburban district has 385 fourth-grade students with 13 principals. The rural district has 123 fourth-grade students with 11 principals. I gave principals the SET to clarify their experiences when they started PBIS implementation and how fully implemented PBIS is in their school buildings.

Instruments, Data Collection Procedures, and Analysis Procedures

Archival data readily available to the public were used in this study. Each district's state assessment score information is accessible from the Ohio DOE website and can be viewed in an Excel spreadsheet. The website is a public domain that any individual can access. Raw data from the site were reviewed and then converted into information useful for my decision-making. Data points of the studied districts were compared to obtain a baseline of state achievement scores and then compared to the most recent state achievement scores. Using the archival data information was not human research.

The survey used in this study involved human research. Before I began the study, I obtained permission from the Abilene Christian University's Institutional Review Board (see Appendix C). I recruited participants through email notification via an invitation letter (see

Appendix A), and the staff participants were sent the survey in electronic form (see Appendix B). This risk was no greater than any other that might be encountered on a typical day. The postintervention survey was chosen as the data collection tool because anonymous surveys allow me to collect data from participants in a short amount of time (Marzano, 2003). The postintervention survey had multiple questions that helped me better understand PBIS implementation and how the principals felt about PBIS. The questions were structured so that participants could provide a variety of responses, and some of the questions allowed for other comments, permitting the principals to respond openly. These open-ended questions were then compared with the SET's numerical results.

The survey tool used for this study was the SET (Horner et al., 2004). This survey assesses the features currently in place in the classroom. Assessment results are then used to determine the goals for effective school-wide behavioral support, evaluate the ongoing efforts toward school-wide behavior support, design and revise procedures as needed, and compare efforts toward school-wide effective behavior support from year to year.

The SET uses multiple sources, including the review of permanent products, observations, and staff surveys. In general and for this study, once the data collection process was established, reviewing the data and scoring the SET averaged 2–3 hr (see Appendices D and E). The SET results provide schools with a measure of the proportional features that are (a) not targeted or started, (b) in the planning phase, and (c) in the implementation or maintenance phases of development toward a systems approach to school-wide effective behavior support. The SET is designed to provide trend lines of improvement and sustainability over time.

Pearson product-moment correlation was used to determine the correlation, if any, between fourth-grade reading scores and PBIS. I used Pearson *r* to analyze and calculate the

strength of the correlation. SPSS was used to calculate related statistics. An analysis of variance (ANOVA) test was used to determine if the survey results were significant.

Transcription Puppy's transcript service was used to transcribe the principals' survey question responses. The principals' responses were recorded in a digital format and then sent to Transcription Puppy. Using Transcription Puppy provided accurate answers that could then be formatted into the rubric for the SET survey. Transcription Puppy finished the transcripts in a matter of days and then digitally shredded the surveys after the study was completed.

Horner et al. (2004) examined the SET's psychometric properties by gathering SET data from 45 schools. The instrument's internal consistency reliability was reported at an overall alpha of .96, the test–retest reliability level at 97.3%, and the average interobserver agreement across 17 schools was 99% (range 98.4%–100%; Horner et al., 2004). Scores were compared to data from the Effective Behavior Support Self-Assessment Survey collected from 31 of the schools (Horner et al., 2004) to examine the construct validity of the SET. Construct validity of the SET positively correlated to the Effective Behavior Support Self-Assessment Survey with a Pearson $r = .75$ ($p \leq .01$; Horner et al., 2004). The SET subscales were also examined and found to be intercorrelated at a moderate to a moderately high level (range of $r = .44$ to $r = .81$; Horner et al., 2004). Finally, Horner et al. (2004) found that the SET was sensitive to change beyond chance, with a significance of $t = 7.63$, $df = 12$, $p \leq .001$ for pre- to post-SET means. These psychometric properties of the SET meet and exceed the criteria for measurement tools used in the research (Horner et al., 2004).

Assumptions, Limitations, and Delimitations

The independent variable for this study was PBIS implementation for more than 6 years. The dependent variable was the number of students who took the Ohio achievement assessment during the 2018–2019 school year and the results of the SET survey for principals in the study.

It was assumed that Ohio student achievement test data were correct and that all demographic information provided from state reporting was also accurate. I also assumed that the participants were honest about their perceptions of PBIS implementation and their history of either working or not working with the foundational model of PBIS.

The timeframe for collecting data encompassed 6 years of studying the school districts. I was unable to control the number of students entering and exiting the district. The timeframe for each student's emersion in PBIS programming varied. Students entering and leaving a district influenced the study, and this was a possible limitation. Another study limitation was the financial inequity between the surveyed urban, rural, and suburban districts. Ohio's school funding plan was found to be unconstitutional in the early 1990s and continues to be labeled as unconstitutional because of the state of Ohio's reliance on property taxes. Wealthier districts continue to have higher funding rates than districts with lower property values.

The consistency of PBIS implementation was also a limitation in this study. Changes in the leadership of the specific buildings could emphasize or deemphasize PBIS. Individual district goals varied as a result of superintendent changes. Some administrators did not support the PBIS approach and, therefore, staff was not asked to enforce the implementation. Staff turnover also affected PBIS procedures and practices.

Chapter Summary

In this chapter, the research methodology was outlined and discussed. Included in the discussion were the sample population and the study setting. Instrumentation, procedures, and data analysis were also explored. In the next chapter, the data gathered for this study are presented.

Chapter 4: Presentation of the Data

The findings and interpretations of the statistical measures used to determine the effectiveness of positive behavioral interventions and supports (PBIS) in southeastern Ohio public schools are presented in this chapter. The study's purpose was to see if PBIS implementation, and the level of implementation, influenced elementary school students' behavioral and academic performances. The study's purpose was to use the School-wide Evaluation Tool (SET; Horner et al., 2004) to quantify whether PBIS implementation affected student outcomes. The SET was used to identify how schools were using PBIS and if school principals saw changes in student performance after PBIS implementation. The SET is also a measure used to assess the degree to which schools are implementing PBIS with fidelity (Horner et al., 2004). The SET was designed to be used in conjunction with other measures to establish multiple implementation perspectives.

The SET survey was developed to assess a school's fidelity in implementing school-wide positive behavior supports. The SET's intended audience includes school district leaders, state-level administrators, and research evaluators in the area of school-wide positive behavioral supports. The SET is a research-validated instrument designed to assess and evaluate the critical features of school-wide PBIS across an academic year (Horner et al., 2004). The SET was designed to determine the extent to which schools are already using PBIS, determine if training and technical assistance efforts result in implementation fidelity, and understand if PBIS procedures are related to the valued change in safety, social culture, and violent behavior in schools (Horner et al., 2004).

By answering each evaluation question in the seven feature areas, the information gathered from the SET can be used to (a) assess features that are in place, (b) determine annual

goals, (c) evaluate ongoing efforts, (d) design and revise procedures, and (e) compare year-to-year efforts in the area of school-wide PBIS. The SET is one means of evaluating a school's fidelity of PBIS implementation. The SET evaluates a total of 28 questions across seven feature areas: (a) expectations defined, (b) behavioral expectations taught, (c) acknowledgment procedures, (d) correction procedures, (e) monitoring and evaluation, (f) management, and (g) district-level support. SET scores are calculated on the responses to the 28 questions, are organized by feature area, and are formatted to provide the evaluation question and the criteria for scoring each question. The SET evaluator determines a 0-, 1-, or 2-point score for each evaluation question using the established criteria. Percentages are then calculated for each subscale and the total SET score. Scores of 80% on the behavioral expectations taught scale and 80% on the total SET score indicate universal implementation of school-wide PBIS (Horner et al., 2004).

Turning a formal research measure into an informal activity without risking the integrity and validity of an instrument can pose a difficult task. The SET is a research tool that validates the results of the school-wide section of the self-assessment survey. The SET measures the percentage of implementation in the seven feature areas of school-wide PBIS.

The SET survey was used to determine PBIS implementation levels in 32 public schools in southeastern Ohio. The survey focuses on assessing and evaluating the critical features of school-wide behavior supports across an academic school year. The Ohio DOE in the mid-2000s mandated PBIS, and the SET survey was used to highlight the results of buildings using PBIS. SET survey results help to provide public schools in Ohio with a measure of the proportion of features that are (a) not targeted or started, (b) in the planning phase, and (c) in the implementation or maintenance phases of development toward a systems approach to school-

wide effective behavior supports. The SET is designed to provide trend lines of improvement and sustainability over time (Horner et al., 2004).

I also spoke to each of the 32 principals to understand their personal opinions of PBIS, if they felt they understood the programming, and if there was proper PBIS implementation in their individual buildings. In vivo coding was used to organize and classify the data by summarizing the passages into single words or phrases extracted from the interviews (see Appendix D). Of the 32 principals interviewed, 27 stated that their schools had proof of implementation (visual accounts, discipline records, teacher incident reports) to report yearly to the Ohio DOE through the Comprehensive Continuous Improvement Plan (CCIP). All 32 principals reported that their buildings had received some training for PBIS. The district completed training through one of the Ohio SSTs or the local education service center in their immediate area.

The principals also reported that at least one staff member was considered an expert in their buildings and could provide support for other staff members and the principal. One participant, David, stated that he "felt the right person needs to be the trainer for PBIS. Not just anyone can do that job." Twenty-five principals felt that this expert PBIS staff member could provide proper training for the other staff members. Of these principals, seven did not feel they had an effective staff member who could train other staff members in PBIS, and all seven stated that the expert in their building needed more training or greater buy-in on the PBIS method from other staff members. Another participant, Alice, said that her PBIS leader "was trained appropriately but lacked the vision to carry out the PBIS processes." All principals in the study felt that PBIS training should be embedded in their building leadership team training and district leadership team training. Participant George stated, "When the training is based on a daily routine, the entire PBIS system works better."

Rebecca specifically pointed to her focus on letting students know the school's daily expectations. Christopher noted that he immediately explains a positive or negative behavior when it occurs. Most principals said they focused their conversations with students on behavioral expectations at the beginning of the year to emphasize, as Mary said, the "importance of following the rules in both large and small group settings." Mary also stated that as the year progresses, these "PBIS conversations become less frequent for large groups and more individual."

Statements varied when principals were asked about consequences for actions. Kelly said that his building uses a "token system to provide tangible rewards for students since they respond better to physical items." Erin stated that she tries not to use physical items and focuses her rewards on "positive comments and public recognition." All principals had some manner of reward field trips, assemblies, extra physical activity, and reward ceremonies.

With negative behaviors, most principals stated that they used different punishments depending on the severity of the infraction and the individual student. A student's history can also play a part in how and why the student is disciplined. Rebecca said, "PBIS has changed the way I discipline a student. Instead of focusing on negative behaviors, I focus most of my time on rewarding students." Rebecca also said that has led to greater staff morale, more time for academics, and higher state test scores. Timothy stated that although he has implemented PBIS, his building's "negative behaviors have actually increased over the last 2 years." He did not know if this had to do with his district's hybrid learning model. In his building, students were physically in class 4 days a week and remote learning 1 day a week. All principals noted that COVID-19 hindered their ability to evaluate their PBIS practices over the last 2 years.

SET Data

I distributed the SET survey to 35 principals in southeastern Ohio via email. Thirty-two responses were received for a 91.43% return rate. The survey contained 28 questions that asked principals to rate their answers on a 0-, 1-, or 2-point scale. The SET survey has four PBIS features: expectations defined, behavioral expectations taught, an ongoing system for rewarding behavioral expectations, and a system for responding to behavioral violations. The seven subscale categories defined the principal's perceptions of how well they implemented PBIS and what strengths and weaknesses they could glean in their buildings (see Table 2). Table 2 summarizes the scores for the 32 principals who completed the SET survey. Means, ranges, and standard deviations were computed.

Table 2

School-Wide Evaluation Tool Survey Results

Subscale	Survey question	*M*	Range	*SD*
A (Expectations Defined)		2.56	0–4	1.34
	1	1.64	0–2	0.74
	2	0.91	0–2	0.82
B (Expectations Taught)		6.62	0–10	3.74
	3	1.42	0–2	0.78
	4	1.40	0–2	0.84
	5	1.40	0–2	0.86
	6	1.16	0–2	0.98
	7	1.24	0–2	0.86
C (Reward System)		4.78	0–6	1.70
	8	1.60	0–2	0.82
	9	1.73	0–2	0.58
	10	1.44	0–2	0.76
D (Violation System)		5.69	0–8	1.79
	11	1.62	0–2	0.65
	12	1.76	0–2	0.53
	13	0.76	0–2	0.77
	14	1.56	0–2	0.69
E (Monitoring and Evaluation)		6.20	0–8	2.26
	15	1.69	0–2	0.51
	16	1.73	0–2	0.45
	17	1.49	0–2	0.82
	18	1.29	0–2	0.92
F (Management)		12.98	0–16	4.62
	19	1.73	0–2	0.65
	20	1.58	0–2	0.81
	21	1.78	0–2	0.64
	22	1.56	0–2	0.81
	23	1.60	0–2	0.72
	24	1.69	0–2	0.67
	25	1.62	0–2	0.72
	26	1.42	0–2	0.92
G (District Support)		3.24	0–4	1.30
	27	1.73	0–2	0.69
	28	1.51	0–2	0.87
Total		42.07	0–56	14.54

Research Question 1

The first SET question asked the principals if there was documentation that their staff agreed to five or fewer positively stated school rules or behavioral expectations. Most principals responded that their staff members agreed to these rules or expectations. On a 2-point scale, the mean was 1.64, and the standard deviation was 0.74.

The next question asked if the principal had the rules and expectations posted in eight of 10 locations throughout the school building. The mean for this measure was 0.91, suggesting that although the rules and expectations may be posted throughout the building, they were not posted in eight of 10 locations. The 10 locations were identified by the building principal and could vary depending on the building structure. In the expectations defined section, with a possibility of 4 points, the mean was 2.56.

The next section asked if there was a documented system for teaching behavioral expectations to students on an annual basis. With the 2-point range, the mean was 1.42. A score of 1 stated that teaching would occur, while a score of 2 stated there was an actual system for teaching students. Two of the principals stated that there was no documented system for teaching the behavioral expectations to their students.

This section also asked the principals if 90% of the teaching staff taught the building behavioral expectations for the year. The principals surveyed had a mean score of 1.40 on the 2-point scale. The next survey question asked if the school staff taught or reviewed the school rules to the students annually. Again, the mean was 1.40 on a 2-point scale. The next question asked the principals if 70% of 15 or more students could state 67% of the school rules. This mean came in lower at 1.16 on a 2-point scale. Lastly, in the behavioral expectations taught section, the principals were asked if 90% of the staff members could list 67% of the school rules. This result

had a mean of 1.24 on a 2-point scale. Overall, the behavioral expectations taught sections had a mean of 6.62 on a 10-point scale.

The next section queried if there were ongoing systems for rewarding behavioral expectations. The first question in the section asked if there was a documented system for rewarding student behavior. On a 2-point scale, the mean was 1.60. Most of the building principals said this was a trait they developed with their staff members with some student input. The next question asked if 50% or more of the students received a reward. The mean for this question was 1.73. The section's last question asked if 90% of the staff have delivered at least one reward. This mean came in lower than the rest at 1.44. For this section, the mean was 4.78 on a 6-point scale.

The fourth section asked principals if they had a system for responding to behavioral violations. The first question asked if there was a documented system for dealing with and reporting specific behavioral violations. On a 2-point scale, the mean for this question was 1.62. The next question asked whether 90% of the staff members agreed with principals on what problems were office-managed and what problems were classroom-managed. The mean was higher on this question, 1.76. The next question asked if there was a documented crisis plan in the school for responding to extremely dangerous situations readily available in six of seven locations. This response was low, with a mean score of 0.76 on a 2-point scale. The last survey question asked if 90% of the staff agreed with the principal on the procedure for handling extreme emergencies. The mean for this question was 1.56. Overall, the mean for this section was 5.69 on an 8-point scale.

The fifth survey section focused on monitoring and decision-making. The first question asked about the discipline referral form and if the form listed the following: (a) student or grade,

(b) date, (c) time, (d) referring staff, (e) problem behavior, (f) location, (g) persons involved, (h) probable motivation, and (i) administrative decision. The mean for this answer was 1.69 on a 2-point scale. The next question asked whether the principal could clearly define a system for collecting and summarizing discipline referrals. This mean was higher at 1.73. The third question asked if the principal supplied the staff with summary reports covering discipline at least three times per year. This mean was 1.49. The last question asked if 90% of the staff reported that discipline data were used for decision-making when revising school-wide effective behavior support efforts. This was the lowest mean in this section at 1.29. Overall, the mean for this section was 6.20 on an 8-point scale.

The largest section of the SET survey focused on management. The first question asked if the school improvement plan listed improving student behavior as one of the top three improvement plan goals. The principals reported a mean of 1.73 on a 2-point scale. The next question asked if there was a school-wide team established to address behavior support systems in the school. The mean was 1.58. The third question asked if this support team included representation of all staff members. The mean was 1.78. The fourth question asked if staff members could identify the behavioral team leader. The mean was 1.56. The fifth question asked if the principal was a member of the school-wide behavior support team. The mean was 1.60. The next question asked if these behavioral team meetings happened at least monthly. The mean was 1.69. The seventh question asked if the behavior team reports progress to the entire staff at least four times per year. The mean was 1.62. Lastly, the principal survey question asked if there was an action plan with specific goals less than 1 year old. This was the lowest mean at 1.42. Out of a possible 16 points in the management section, the mean was 12.98.

The last survey section focused on district-level support. The first question asked the principal if the school budget contained an allocated amount of money for building and maintaining school-wide behavioral supports. On a 2-point scale, the mean for this question was 1.73. The last survey question in this section asked if the principal could name and identify an out-of-school liaison in the district or state. The mean was 1.51. On a 4-point scale, the mean for this section was 3.24. Out of 56 possible survey points, the mean for the 32 principals surveyed was 42.07. See *Principal Interview: SET Questions* for additional principal interview data and insights.

Research Question 2

Ohio has legislation stating that districts will implement PBIS on a system-wide basis. Per Ohio House Bill 318, district implementation of PBIS became a nongraded reported measure on the 2019 report card. District implementation of PBIS is notated on the Ohio state report cards as *yes* or *no*. The district report card measure is based on the schools' self-report of one of the following six-letter codes for PBIS implementation:

a. Work on implementing PBIS has not yet begun.
b. **Exploration and adoption:** researching PBIS, exploring readiness, and securing staff and administration agreements to implement PBIS.
c. **Installation:** creating the PBIS team, completing PBIS team training, and establishing initial systems, data decisions, policies, and practices required to implement PBIS.
d. **Initial implementation:** rolling out and implementing PBIS school-wide with a focus on Title I supports.

e. **Full implementation:** implementing PBIS with all systemic components and a range of interventions (Tier I, II, and III supports).

f. **Innovation and sustainability:** routinely checking fidelity and outcomes of implementation using national assessments and revising and updating practices and systems needed (Boneshefski & Runge, 2014).

On the 2019 Ohio state report card, a school received a *yes* for implementing PBIS if the school reported any code b through f. Schools that reported code a received a *no* for PBIS implementation. There is a staggered progression for these schools to receive a *yes* for PBIS implementation moving forward. A district received a *yes* for district-wide implementation of PBIS if all schools received a *yes*. A district received a *no* for district-wide PBIS implementation if any school received a *no*. According to the Ohio DOE website, of the 32 buildings surveyed, 29 had a *yes* to PBIS implementation for their building.

I also used the SET survey to investigate the level of PBIS implementation from the principal's perspective in each public school district. Each SET survey question could have a numbered score of 0, 1, or 2. A score under 1 would indicate that the characteristic was not being implemented or started in the building. A score between 1 and 1.5 would indicate that the characteristic had been implemented and measured, whereas a score of over 1.5 would indicate that the characteristic had been implemented and there was a progression of progress with that specific characteristic.

Table 3 shows the SET survey PBIS implementation results using an analysis of variance (ANOVA) test. ANOVA is an analysis tool used in statistics that splits an observed aggregate variability found inside a data set into two parts: systemic factors and random factors (Horner et al., 2009). ANOVA is used to determine the influence that independent variables have on the

dependent variable in a regression study. Table 3 shows the number of demographically diverse elementary school buildings and the data on whether there was a significant difference in levels of PBIS implementation.

Table 3

Overall School-Wide Evaluation Tool Results

School setting	*n*	*M*	*SD*	*SE*	95% CI for mean	
					Lower bound	Upper bound
Rural	11	41.2727	2.14900	.64795	39.8290	42.7164
Urban	8	41.1250	2.58775	.91491	38.9616	43.2884
Suburban	13	41.0769	2.49872	.69302	39.5670	42.5869
Total	32	41.1563	2.32947	.41180	40.3164	41.9961

The mean score was 41.15, and there were no significant differences in the implementation of PBIS. The ANOVA's *F* ratio was 1.17, and the conclusion is that no true variance existed between the groups. The degree of freedom was 31. The data showed no significant level of PBIS implementation across the three types of schools surveyed. Principals surveyed using the SET survey instrument generally had the same answers when interviewed about their individual PBIS implementation.

The mean scores indicated that the 32 principals surveyed had not implemented two areas. The lowest mean score identified a characteristic concern that principals did not have a crisis plan for responding to extremely dangerous situations readily available in six of seven locations, with a mean score of 0.76. This score is the opposite of what the principals stated during the open-ended portion of their interviews. The next lowest mean score (0.91) identified

that rules and expectations were not publicly posted in eight of 10 locations. This score contradicted what the principals said during their interviews.

Research Question 3

Ohio's State Board of Education adopted Ohio's Learning Standards in English Language Arts in 2010 as part of a multistate effort (Ohio Department of Education, n.d.-b). Ohio's Learning Standards for English Language Arts describe the educational targets for students in each subject area. Ohio's state tests are designed to measure student progress toward achieving Ohio's learning standards. Ohio's state tests are a series of fixed-form assessments intended for online administration. However, because some schools were not ready to transition to the online testing environment, the assessments were offered in both online and paper formats.

As of 2019, there were 1,660,354 public school students in Ohio. There were 127,649 fourth graders in the state (Ohio Department of Education, n.d.-b). According to the Ohio Department of Education (n.d.-a, n.d.-b, n.d.-c), 36% of Ohio's fourth-grade students were proficient on the national exam. Fourth graders, on a national level, scored 35% proficient. Reading proficiency among Ohio's fourth-grade students declined on the National Assessment of Educational Progress from 2015 to 2019. Their 2015 average score was 225, and in 2019, their average reading score was 222 (Ohio Department of Education, n.d.-a, n.d.-b, n.d.-c). When comparing the national rank of Ohio's fourth graders, these students scored 18th out of 50 states in reading proficiency during the 2015 academic. In 2019, this score rose to 16th out of the 50 states (Ohio Department of Education, n.d.-a, n.d.-b, n.d.-c).

Of the 32 schools evaluated in this study, the fourth-grade proficiency score on the national exam was 31% in 2019, up from 27% in 2015. According to the data supplied from the Ohio DOE website, there were 8,138 fourth-grade students for this study from southeastern

Ohio. Ohio's fourth-grade achievement assessment sets a benchmark for buildings to have at least a 75% passage rate for reading. In 2015, the average passage rate for the 32 buildings surveyed was 71.3%. The 2019 average pass rate was 74.6%. All the schools surveyed indicated that they implemented PBIS between 2011 and 2015.

A Pearson product-moment correlation was performed to determine if a correlation existed between fourth-grade reading scores and PBIS implementation. There was no correlation between the two. Specifically, the Pearson r was .733, but the result was not significant at $p < .05$. The conclusion is that no correlation can be claimed between reading scores and PBIS implementation.

Principal Interview: SET Questions

Principals were asked a variety of interview questions about their individual PBIS implementation. The interview guide had 21 questions with three sections: discipline systems in the school buildings, school rules or mottos, and if the building had a team to address school-wide discipline. Some of the questions addressed more specific PBIS information for the principal's building (see Appendix E). I used in vivo coding to identify the most common words and phrases that the principals used when discussing their PBIS implementation. The following summarizes the answers, using in vivo coding, to the 21 interview questions from the 32 principals.

Do Principals Collect and Summarize Office Discipline Referral Information? All principals indicated that they collect and summarize office discipline referral information. The main reason principals collect and summarize this information was that it is a requirement from the Ohio DOE to be reported in the Education Management Information System (EMIS). Sally said she used this information to specifically see how often a teacher sends a student to the office

and what trend data she could glean. From that data, Sally added the information to that teacher's evaluation.

What System Do Principals Use for Collecting and Summarizing Office Discipline Referrals? The principals all said they used some EMIS data collection tools for collecting and summarizing discipline referrals. However, a few principals felt that the EMIS system was outdated and did not collect the data they wanted to collect. David stated that he used a Google shared spreadsheet so that staff members had up-to-date information on discipline in his building. He felt this was more user-friendly than the Ohio DOE's requirements and facilitated better conversations with staff members on student discipline. David also felt that the Google document allowed staff to look for patterns and trends of student behaviors and said, "We now know that some students misbehave right before school breaks because they do not want to go home and leave the safe setting of our school building. Teachers are more prepared to stop discipline issues before they begin."

What Do Principals Do With the Office Discipline Referral Information? Thirty of the 32 principals stated that they shared the information with staff. The two who did not share information felt that some of the information was private and did not want to share specific discipline information about students because of some staff members' perceptions toward those students. Gabriel felt that there would be a "preconceived notion" about students with a history of discipline issues. Christopher felt that some private student information should never be shared with staff for fear of losing his license. Over half of the interviewed principals felt that their PBIS committees used the information to plan positive trips, assemblies, and rewards to help promote the positive behaviors in their buildings.

What Types of Problems Do Principals Expect Teachers to Refer to the Office?

Twenty-eight of the 32 principals stated that fighting, teacher disrespect, and "the inability of students to control themselves" were common reasons that principals felt teachers would send students to their office. Less common reasons were vandalism, vaping, cussing, and bullying behavior. Erin said that she has one veteran teacher who "will send a student to the office for almost any infraction." Erin also indicated that the veteran teacher did not participate in any extra PBIS activities and looked for "reasons to punish a student."

What Is the Procedure for Handling Extreme Emergencies in the Building? The principals all said they had crisis response teams trained to deal with extreme emergencies. Three principals said their local law enforcement agencies trained and worked specifically with their crisis teams. The other 29 principals stated that they used a combination of their local sheriff's training and safety services provided by the Ohio DOE from their office of safety or their SSTs. Two principals also said they have hired outside companies to train staff members.

Each public school building in Ohio received a communication tool that connects directly with the local authorities. Called the *Big Orange Button*, it is located in the building offices. When the button is pushed, the local authorities are tasked with immediately coming to the building. When they arrive, the crisis team's job is to communicate with local law enforcement and apprise them of the situation. Five of the principals said they had armed staff at the school to help with any extreme situations. The local law enforcement agencies are aware of these individuals, and these individuals must pass the Ohio Peace Officer Training Academy assessments before being licensed to carry a firearm on school premises.

All the principals said they had specific drills that all students go through when an extreme emergency occurs. Samuel stated, "Although we do not know when a dangerous

situation occurs, I feel that my students are either ready to shelter in place or run out of the building, whichever the situation calls for. We train both ways." This drill information is also reported to the Ohio DOE, and principals could be individually fined if they do not provide the drills for students and staff members. Mary said that her "graduate work in the principalship prepared her for knowing what to do in emergency situations because of the emphasis on safety."

Do Principals Have School Rules or Mottos? All the principals stated that they had school rules posted in different places throughout their buildings, on their websites, and on their social media pages. Along with general school rules, Michael said, "Grade levels develop their own rules that are specific for their grade level. Students are expected to follow the general school rules, but the grade-level rules are important, if not more so, to the students of those grades."

Twenty-five principals said they had a motto they used to help the students remember the school rules and that these mottos are often used for marketing purposes (pamphlets, school shirts, posters). Three principals stated that the school motto was passed down to them when they were named principals of their individual school buildings. Eleven principals said they used student input to develop their school rules and motto. Mary said, "Giving the students a say in how to manage the building has made all the difference in lowering behavioral infractions."

How Many Rules Are There? Twenty-nine principals said they had five or fewer general school rules. The other three principals said they limited their school rules to 10. Robert stated,

> Having too many school rules can look like teachers and principals are looking for students to do something wrong. Using the PBIS methods has led to fewer disciplinary

referrals and a focus on what the student is doing right instead of what they are doing wrong.

Ben said that he had more rules stated, and it was hard for him to "lower the number of rules because teachers have found importance in all of them."

What Are the Rules or Motto? All principals indicated that they used the rules or motto to help remind students of what was expected. Sally said that her overarching school rule is "to be nice to your neighbor." She said that with the upheaval in society today, the staff and students positively react to this general rule. David said his rules consist of "compassion, caring, and communication." He felt that this motto helped guide instructional methods and gave students and staff a common idea to build around. Ethan stated that although he felt he might have "too many rules," his building's main theme is kindness.

What Are They Called? Twenty-seven principals said they had a name for their rules, and many of these names developed after they were trained in PBIS. Some of the names were the 5 B's, the Big Ten, Three for Everyone, South's Solid Citizen's Goals, the Power of a Positive Panther, and Kindness Rules. The principals who did not have a specific name for their rules stated it was something they would like to develop because, as Samuel said, "It does make it easier for students to understand and embed the rules on an everyday basis."

Do Principals Acknowledge Students Doing Well Socially, and What Are the Acknowledgements? All the principals said they do a quarterly or yearly behavioral reward for students. Twenty-five principals did quarterly rewards. These 25 principals stated that they have not been able to do large group award assemblies or behavioral field trips because of the COVID-19 pandemic. Rebecca said that these "quarterly rewards had made a drastic difference in the behavior issues in my building. We have veteran teachers who have bought into the PBIS

philosophy and enjoy rewarding students who have demonstrated positive behaviors." One principal said that he had an agreement with the local sheriff's office, and they present positive certificates and awards at the end of the year. This program has been beneficial to both parties because the local media outlets positively report on the school building and law enforcement. Students are recognized in both print and social media.

Has the Team Taught or Reviewed the School-Wide Program With Staff This Year? All the principals stated that they did not formally review their PBIS programming because of the COVID-19 pandemic in 2021. Over half of the principals said that they had no professional development of any kind in 2021. The other half did have some Zoom professional development sessions, but they did not center on behavioral expectations or PBIS data.

All the principals indicated that they did some form of remote learning, and a normal 5-day-a-week in-person school session was not possible. Jeff said that since there was a "hybrid format this year, there was not as much emphasis on behavioral expectations in classes." Tyler said that the major focus was on cleanliness and safety in his school building instead of the specific behavioral expectations they were used to. However, Sally said, "Although we did not formally go over the behavioral expectations this year, we did have a new set of behavioral expectations that evolved from the pandemic that students and staff had to follow."

Is the School-Wide Team Representative Part of the School Staff? Thirty of the 32 principals stated that they only used teachers and administrators on their PBIS committees. Two of the principals included aides, cafeteria staff, and bus drivers. John said, "It made all the difference in the world to include all the different staff members. We all speak the same language, and any positive or negative consequences are consistent across the building." Ben

said he would "like to include parents and community members as part of [his] team because that common language could be used wherever students go."

Are Principals on the Team? Every principal said they were on the PBIS team in their building. Over half of the principals said they were the head of the team, and the other half used teacher team leaders to run the meetings and organize activities. Matt said it was "important to have the PBIS team leader be a teacher because the other teachers felt more comfortable speaking to a peer about disciplinary issues." Three principals stated they were charged with leading their PBIS teams because their superintendent told them they had to lead them.

How Often Does the Team Meet? Before the pandemic hit, all principals said that their PBIS teams met monthly or quarterly. Since the pandemic, the PBIS teams were not at the forefront of any principal's agenda. All principals planned on continuing their PBIS meetings for the 2021–2022 school year as regularly scheduled. Kelly said he "plans on starting the year with weekly PBIS meetings to make sure students are clear on expectations since they have been partially away from the regular schedule for over a year."

Do Principals Attend the Team Meetings Consistently? All of the principals said they consistently attended their PBIS team meetings. However, there were few to no meetings about PBIS during the periods addressed in this study because of the pandemic. Every principal stated that next year would be a more normal year and allow for professional development and meetings to occur regularly.

Who Is the Team Leader or Facilitator? Sixteen principals said they were the team leader of their PBIS teams, and the other 16 used teacher leaders to run their PBIS teams.

Does the Team Provide Updates to Faculty on Activities and Data Summaries? Every PBIS team provided an update to the faculty on activities and gave a variety of data

summaries to the staff. One principal used a yearly PBIS reward calendar so that staff and students knew exactly what the rewards were and when they occurred. Betty said she "gives quarterly discipline results to teachers, so they know who to include or exclude from class rewards." Kelly used a large monthly calendar displayed in the cafeteria so everyone understood what to expect when they achieved a reward.

Do Principals Have an Out-of-School Liaison in the State or District to Support PBIS? According to all the surveyed principals, each school district and school building was assigned an SST representative who helped with PBIS. Each principal stated that this person was knowledgeable about PBIS. Over half of the districts had the same SST representative, and David said there was a "common language among buildings and districts with regards to PBIS."

What Are the Top Three School Improvement Goals? This question had the most wide-ranging answers from the surveyed principals. A common theme was to decrease the number of office referrals. Sixteen building principals stated that their main focus this year was to ensure that all students were wearing their masks, social distancing, and washing their hands for an appropriate amount of time. These principals concluded that these goals only came about because of the pandemic. The other 16 principals mentioned pandemic cleaning goals that they wanted their students and staff to have "as normal a year as possible," so they emphasized their normal behavioral goals.

Dan stated that his building's goal was to "help at least one person every day." He felt that this goal went along well with staff members. Stan said that his PBIS implementation revamped his school's goal for the year and made it two words: "Be kind." Samantha stated that her building used the goals that her students came up with. Those goals were to "work hard, be

nice, and be safe." She felt that these goals were more meaningful than in years past because the goals were student-initiated.

Does the School Budget Contain an Allocated Amount of Money for PBIS Initiatives? All the principals said that some of their building budgets were earmarked for PBIS initiatives. However, 30 principals said that the money allocated for PBIS was not enough. One principal said he wanted to provide more tangible items for students, but the budget did not allow it. Dan stated that even if his PBIS budget were doubled, he would not have enough money for what he wanted to do in the building. Sally said she "wanted to take students on PBIS field trips, but the pandemic and the budget would not allow it to happen." Timothy said they had enough money for PBIS initiatives but was quick to point out that "there is always room to do more with PBIS money."

Chapter Summary

The objective of this study was to determine the effects of fully implementing PBIS on fourth-grade reading achievement scores in southeastern Ohio. The study focused on determining the fidelity and consistency of implementation of PBIS along with the effectiveness in promoting positive learning environments and increasing academic achievement. I used the SET survey, open-ended survey questions, and standardized reading test data from 2015 and 2019 to answer the research questions that guided this study. Chapter 4 was framed by the hypotheses posited from this research. Each hypothesis was rejected or not rejected based on information collected from the SET survey, open-ended questions, and the assessment data.

The study results are reviewed in Chapter 5, and conclusions are presented. The chapter also includes a review of the study design and recommendations for future research.

Chapter 5: Discussion, Conclusions, and Recommendations

The implementation and effectiveness of PBIS in various southeastern Ohio school settings were the focus of this study. I also measured the effects of PBIS on student academic performance by comparing Ohio reading state assessment scores of fourth-grade students and the implementation programming by the principals in their respective buildings. This study's purpose was to examine PBIS's effects on fourth-grade students' achievement on the Ohio state standardized reading assessment and how southeastern Ohio school principals viewed PBIS implementation. I used surveys, interviews, and observations to determine the level of PBIS implementation in the studied school buildings. In addition to shedding some light on the research topic, the study findings were as follows:

- For RQ1, *using the SET survey, what is the level of PBIS implementation, according to principals, in public school buildings in southeastern Ohio*?, there was no measurable difference in PBIS implementation found across the different schools.
- For RQ2, *are there different levels of PBIS implementation across school types*?, there were no measurable differences in implementation between urban, rural, or suburban school districts. An ANOVA verified no significance in any of the findings.
- For RQ3, *is there a correlation between the implementation of PBIS and fourth-grade reading scores*?, no measurable difference in student achievement was found during the time PBIS initiatives were implemented in southeastern Ohio. National reading score data and Ohio reading assessment data for fourth-grade students were used to answer this question. A Pearson product-moment correlation was calculated to determine if there was a correlation. There was no measurable difference in test scores. Specifically, the Pearson *r* was .733, but the

result was not significant at $p < .05$. Hence, the data indicated that no correlation existed between reading scores and PBIS implementation.

In conclusion, there was no significant difference in PBIS implementation and fourth-grade standardized reading test scores. There was also no significant difference in PBIS implementation across various building settings (urban, suburban, rural) in southeastern Ohio. The study's limitations, which addressed training, consistency of implementation, student movement, and changing state mandates, may have contributed to the absence of significant measurable differences in PBIS implementation and fourth-grade reading assessment scores.

Discussion

Most research on PBIS's effects had been conducted in elementary and middle school settings (Arnold, 2012). Research on PBIS's effects on subpopulations (southeastern Ohio) has been limited or nonexistent. This study was undertaken to gain insights into PBIS implementation in southeastern Ohio and the academic achievement of fourth-grade students on Ohio's state assessment. Conducting this study helped address the knowledge gap in the research by expanding the empirically based knowledge about PBIS implementation and impact in rural, suburban, and urban settings in southeastern Ohio.

The results of this study were marginally in alignment with those of Bradshaw et al. (2010). Bradshaw et al. (2010) found no statistically significant differences between the Measurements of Academic Progress (MAP) math and reading scores of ninth-grade students in the study's control group who were not exposed to PBIS and those exposed to PBIS in the experimental group; therefore, Bradshaw et al. (2010) retained the null hypothesis in this study. Based on the results, PBIS did not significantly affect students' academic achievement.

Horner et al. (2004) examined PBIS's effects on academic achievement in Alabama. Thirty-two schools participated in this study. Sixteen schools were exposed to PBIS, and 16 other schools were not exposed to PBIS implementation. The Alabama statewide reading and math scores were analyzed. The results showed that fourth-grade students attending 13 of the 16 schools exposed to PBIS scored higher on the reading portion of the Alabama reading and math test. In 12 of the 16 schools exposed to PBIS, the students scored higher in math than fourth-grade students not exposed to PBIS. Horner et al. (2004) found a correlation between students' academic performance and PBIS implementation. The results of this study did not align with Hurston, although the studies were conducted at different educational levels.

Cohen et al. (2007) conducted a quasi-experimental study to examine how PBIS can improve student academic achievement and behavior. The study consisted of students from an alternative high school setting exposed to PBIS and students from a traditional high school setting who were unexposed to PBIS practices. The study findings showed no significant relationship between PBIS and academic achievement, but there was evidence of improvement in student behaviors, instructional time on task, and school climate. The findings of this study mirrored Cohen et al.'s (2007), although Cohen et al. only focused on student behavior with a few SET survey questions to principals.

Findings from a quasi-experimental study conducted by Noltemeyer et al. (2018) indicated that seventh-grade students exposed to PBIS experienced an increase in their MAP reading scores and mathematics assessments. McIntosh et al. (2016) conducted a similar study that supported Noltemeyer et al.'s (2018) study. Findings in McIntosh et al.'s (2016) study indicated a correlation or connection between students' academic achievement and decreased discipline problems. Kimball et al. (2017) conducted a quasi-experimental study to examine the

statistical relationship between PBIS and students' performance outcomes in mathematics in a middle school setting. Kimball et al. (2017) used the Maryland state assessment for mathematics to measure student academic achievement. They found that although there was some increase in student test results, there was no statistically significant relationship between PBIS and students' math achievement. The findings of this study somewhat align with these studies, although the studies were conducted at varying education levels.

The purpose of the study was to examine the effects of PBIS implementation and academic achievement on fourth-grade students in southeastern Ohio public schools. Based on the study results, some of the implications are relative to the study's theoretical framework. In addition, some practical implications based on the findings may be meaningful to educators, and future implications may be meaningful to researchers.

The theoretical implications for this study include interpreting data in terms of the research questions and examining findings in the literature framework. In relation to the literature review, findings from the study expanded the knowledge about PBIS's effects and the academic performance of fourth-grade students. The data analysis indicated no significant difference in the academic performance between students in the fourth grade exposed to PBIS at varying levels and students not exposed to PBIS. Therefore, the study's findings did not support the hypothesis that PBIS implementation would significantly impact the academic assessment scores of fourth-grade students in southeastern Ohio. Also, the study findings did not support research showing that PBIS implementation increased students' learning (Childs et al., 2010).

Watson's (1997) theory of behaviorism and Skinner's (1967) theory of operant conditioning suggest that a learner responds positively or negatively to environmental stimuli and reinforcers. If students are exposed to environments conducive to their academic and social

learning needs, they will be positively stimulated and modify their behavior. The results of this study as they pertain to PBIS's impact on student academic achievement did not concur with Watson's theory of behaviorism or Skinner's theory of operant conditioning, which is grounded in the theory of behaviorism.

School-wide PBIS implementation should create positive school environments where opportunities for teaching positive social skills and self-discipline occur. A study by Cohen et al. (2007) reflected the theoretical foundations of behavior modification and operant conditioning. Cohen et al.'s (2007) findings indicated that students who were exposed to an environment where PBIS was implemented demonstrated some positive academic stimulation. PBIS implementation impacted their academic performance in math and language arts, but the impact was not significant. Study findings also showed positive results in decreasing problematic behaviors as a result of PBIS. My study, however, did not coincide with a study conducted by Bliese (2013), where the theoretical foundations of behavior modification and operant conditioning were applied. Bliese's (2013) results indicated a significant difference in students' academic achievement and behavior as a result of school-wide PBIS implementation. Students' reading and math assessment scores increased, and office discipline referrals significantly decreased (Bliese, 2013).

Recommendations for Policy and Practical Applications

PBIS offers educators and students an alternative to traditional, reactive, and punitive practices to address problematic student behaviors and, in turn, increase students' academic achievement levels (Bradshaw et al., 2010). PBIS is systemic and proactive in reducing and eliminating students' problematic behaviors (Bradshaw et al., 2010). The results indicated no

significant difference in the reading scores of fourth-grade students exposed to PBIS at any implementation level.

Conducting this study and examining the results also expanded the limited research base on PBIS implementation and impact in southeastern Ohio. Such research was necessary for addressing the gap in the existing literature and expanding research and evidence-based literature on PBIS's effects on the academic achievement of fourth-grade students. The study findings also generated empirical data and provided usable research evidence on PBIS's effects on academic performance in southeastern Ohio fourth-grade classrooms. The findings provided numerical evidence that a significant difference did not exist between the academic performance of fourth-grade students who were exposed at any level to PBIS compared with students not exposed to PBIS.

The practical implications of this study lie in the results from student reading scores and the SET survey results. With the increased accountability of meeting state-mandated standards and annual yearly progress, PBIS's effects on students' academic achievement and building PBIS implementation are areas that warrant research and investigation. As school districts and school administrators continue their efforts to increase academic achievement and create positive school cultures, continued PBIS implementation is essential. The study's outcomes did not support the effect that PBIS has had on Ohio state assessment scores for fourth-grade students. This finding suggests the need for ongoing research to determine the support of PBIS needed to address the climate and academic achievement of schools in southeastern Ohio.

The following recommendations are based on what I identified as the most important aspects of my study and reflect what should happen with PBIS programming.

1. The Ohio state legislature should modify how PBIS is implemented. If the legislature wants to continue PBIS programming, legislators need to make specific recommendations to school districts instead of leaving it up to the individual districts. Each district has its own set of parameters that defines what PBIS is in that district. There is no common bond between statewide PBIS implementation, and the legislature could fix this issue.
2. The Ohio state legislature could eliminate PBIS programming. PBIS has had little to no effect on students' behavioral and academic performance. Districts have spent countless hours and large amounts of money on PBIS implementation. There is little evidence to support that PBIS has had the desired effect for the time and money involved.
3. The Ohio DOE could be a more inclusive conduit between the Ohio state legislature and how PBIS implementation is developed in the schools. The Ohio DOE has been haphazard in developing and implementing PBIS. Having a specific Ohio DOE liaison who was more involved in each specific school would be a start in proper PBIS implementation. If PBIS were to continue, this would be how it could be most beneficial for school districts.

Previous research has shown relationships between school settings and academic achievement. Noltemeyer et al. (2018) found that the lowest rates of academic achievement were in large, high-poverty schools in urban settings. Research has also shown a relationship between context and PBIS implementation. Noltemeyer et al. (2018) found a relationship between academic achievement and classroom implementation of PBIS. The findings of this study point to a continued need for research in this area. Specifically, the findings indicated that higher-

quality implementation might be associated with significant differences in academic achievement in schools in urban or suburban settings.

Recommendations for Further Research

The Ohio state legislature mandated PBIS to reduce the amount of time that students were out of class for disciplinary issues. This time reduction was to be accomplished by offering techniques and processes that would keep students in class and thus increase or maintain their time on task. The belief was that by leaving students in class, more instructional time would result. Whether this occurs was not explored in this study. A future study on this topic would be informative.

The findings of this study could help to inform future investigations into the effects of PBIS-related academic achievement and PBIS implementation in public school settings in southeastern Ohio. Based on the study's limitations due to ethical considerations, a future investigation could employ a mixed methods approach to include student and teacher perceptions of PBIS's effectiveness related to culture and students' academic achievement. A future investigation should include the examination of student assessment scores with a large random sample of students. Researchers may consider using student assessment scores in different subject areas and grade levels as a result of the impact of PBIS implementation.

Based on this study's limitations, future investigations should replicate the current investigation, targeting student populations with various disabilities or gender as a differentiating factor. A future investigation should use more than one area of Ohio and represent varying demographic areas. The participating school districts should look at successful PBIS models and evidence-based research on the effective implementation and practices of PBIS.

Analysis of the results of this study identified some strengths. First, the study methodology was a research method and a correlational research design. This approach was consistent with prior research conducted on PBIS's effects on students' academic achievement (Sugai & Simonsen, 2012). Using this approach allowed me to collect and statistically analyze data to establish a cause-effect relationship between the study's dependent and independent variables. The second strength of this study was using a variety of populations in southeastern Ohio. The compared groups were large, and the 32 principals who completed the SET survey and interview questions provided a foundation for future research to build on.

I also identified some study weaknesses. The first was that only a quantitative research method was employed to gather and analyze data. The data gathered and analyzed from sufficient sampling were all numerical; however, a weakness was demonstrated due to inferences made from the data without using qualitative responses to support the numerical findings. The use of the qualitative research approach with the employment of the quantitative approach could have provided further insights into PBIS's effects on the academic achievement of the fourth-grade students. A qualitative approach would have given the study participants the opportunity to indicate their perceptions of the effects of PBIS beyond the bounds of the SET survey.

Another potential weakness and identified limitation to this study was using only the Ohio state assessment scores for fourth-grade students in reading to measure students' academic achievement. Few studies have been conducted on the effect of Ohio's achievement scores related to PBIS implementation. Fewer studies were available on using Ohio's achievement assessments to measure academic achievement when determining PBIS's effects on student academics in elementary school settings. Therefore, the findings may or may not be widely accepted as empirical examples for PBIS implementation in elementary school settings. As a

result of using Ohio's achievement assessment as the only measure of academic achievement, school leaders may or may not find this study useful to represent PBIS's possible impact in elementary school settings.

Fidelity of implementation may be necessary but not sufficient for a school that fully implements PBIS. It is possible that real differences in outcomes are not obtained until schools are actively engaged in data-based decision-making (Center on PBIS, n.d.-b). For instance, schools that have actively engaged in data-based decision-making may have had more effective administration or structures in place that allowed them to achieve a higher level of fidelity and higher academic achievement (Center on PBIS, n.d.-b). Further research is needed to investigate the extent to which higher fidelity and a focus on data are causally linked to higher reading achievement levels.

This study provided insights into PBIS's effects and its effect on the academic achievement of fourth-grade students in Ohio. The answers found to the research questions expanded existing knowledge in the literature. The study findings and implications may prompt future research for more expansion or the addition of new information for the goal of overall school improvement. Therefore, continuous research and PBIS implementation in public school districts indicate educators' commitment to academic and social success. The findings of this study provided implications that add to existing knowledge and potentially advance understanding of PBIS's impact on the academic achievement of Ohio's public school students.

There were several limitations to the study that reflected possible interactions between contextual variables and the quality of PBIS implementation. While research questions that incorporated both setting and economic status in southeastern Ohio would have provided a complete picture of the effects of school context, there were not enough schools to create groups

divided by PBIS level, economic status, and setting with sufficient numbers of schools in each group. The exploratory analysis, which included three setting groups (urban, suburban, rural), identified possible future research avenues, but the groupings were somewhat artificial and may have ignored real differences that existed between characteristics of schools in cities and suburbs or towns and rural settings. Finally, a number of additional variables may interact with the quality of intervention implementation and may benefit from exploration in future studies.

Another possible limitation was self-selection bias among the principals who chose to participate in the SET survey. However, this did not appear to impact the survey results, given that the invited experts were recruited based on PBIS implementation in their buildings. Many of the SET survey results were different, or even opposite, of what the principals stated during their interviews.

Future research could also focus on including other stakeholders in implementing and continuing PBIS. Parents could be one group of stakeholders with a vested interest in PBIS and how it may affect student actions. These parents could be questioned about PBIS's effectiveness and if they have seen a difference in behavior and academic performance. Another group of stakeholders could be the teachers in the buildings implementing PBIS. Teachers are at the forefront of what is happening at the building level. Teachers could evaluate and determine if PBIS is a program that needs to be continued or expanded. Understanding how parents and teachers feel about PBIS could guide the direction of buildings and districts.

Finally, the Ohio legislature mandated PBIS to reduce the time students were out of class on disciplinary matters and theoretically increase the time they would be on task and actually learning. I did not evaluate whether either had occurred with PBIS implementation, which provides another recommendation for further research.

Conclusions

The following conclusions are based on the information gleaned from this study and the written and verbal interviews conducted with principals in southeastern Ohio public schools.

1. Although PBIS research reflects improvements in academic and behavioral actions of students, findings from the study showed no discernable connection between academic and behavioral achievement.

2. The differences between the data and the principals' responses were a surprise. The interview answers did not align with the principals' answers on the SET survey. When speaking with the principals, they stated that they had fully implemented PBIS, but they did not indicate full implementation on the SET survey. The principals also verbally stated that PBIS was something they would continue to implement, whereas the survey indicated that many principals would only do the bare minimum to meet the Ohio DOE requirements.

3. While the consensus was that PBIS was good for students, it may not be worth the effort it takes to build foundational PBIS skills and maintain a professional development program for staff members.

4. If PBIS is not embedded in practice, it is just another "check box" for the administrator to say they "did it" for the Ohio DOE reporting. Many of the administrators that participated in the study were only touching the surface of PBIS implementation and felt that this program was forced upon them. Since the PBIS program did not originate with school leaders or staff members, and there was no true oversight, administrators did not put their heart and soul into the program.

Chapter Summary

The outcomes of this study provided recommendations for educational leaders to use in making data-driven, evidence-based, and research-based decisions regarding systems such as PBIS and their impact on the students' overall academic and social success. The effects of PBIS implementation on the academic achievement of fourth-grade students in southeastern Ohio were examined in this study. The analysis of these findings for this study was based on past and current literature reviews as they related to PBIS.

Based on the study results, it was evident that PBIS yielded few significant positive results. The following recommendations for future research were made based on the analysis conducted for this study and the review of related literature. Longitudinal studies should be conducted to investigate schools with similar demographics across the various school districts that have implemented PBIS. Results of such a comparison could improve PBIS's validity and reliability. Case studies should be conducted with principals in the same demographic area and who have implemented PBIS for 3 or more years. Future studies should be conducted using a similar research design as this present study but emphasizing special education students to determine PBIS's impact on the special education population.

Results from the exploratory analysis conducted in the study suggest that continued research into possible interaction effects of PBIS quality and contextual variables is needed. Though the sample size was small, differences were seen between schools grouped by PBIS level and setting. Additional research with a larger number of schools is needed to provide more information and increase the likelihood of identifying significant relationships between PBIS quality, contextual variables, and academic outcomes.

The study recommendations were based on its design, strengths, weaknesses, and findings for future research and practices. The findings did not indicate any significant effect of PBIS on fourth-grade students' assessment scores in Ohio. Implementing PBIS in a school setting is recommended, but PBIS's effectiveness in these settings requires continuing the focused implementation of PBIS programming.

This study was conducted in various public schools in southeastern Ohio. Results showed no statistically significant difference between PBIS implementation and fourth-grade state reading assessment scores. Based on the results, PBIS implementation did not significantly affect students' academic achievement. The following practice recommendations are made for future study based on an analysis of the data collected and a literature review. More school administrators should use PBIS's implementation practices as a preventative and proactive system to support students who exhibit social, emotional, and behavioral challenges. This practice would benefit classroom instruction and academic performance. The PBIS process should be implemented district-wide to allow common, consistent, and effective practices that can lead to more positive school cultures, higher assessment scores, and lower discipline incidents. Schools implementing PBIS should focus on one variable at a time. The SET survey caused many principals who participated in the study to feel overwhelmed by PBIS implementation. Focusing on one standard at a time will allow more principals to show growth and move on to the next item on the SET survey.

School reform and improvement calls for educators to establish positive systems, such as PBIS, to address student achievement and behavior. Research exploring each variable (level of training, fidelity, and data-based decision-making) may help identify whether a given variable is more closely related to improved outcomes than other variables. This study contributed to the

growing body of research and literature on using PBIS practices in elementary school settings. Implementing PBIS in all elementary school settings with consistency could create a cultural shift and challenge. Implementing PBIS in more public school settings with fidelity could lead to sustained positive instruction and climate change.

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Appendix A: Subject Invitation Letter

February 4, 2021

Dear Sir/Madam,

My name is Kacey Cottrill, and I am a doctoral student in the organizational leadership program at Abilene Christian University. I am writing to invite you to participate in my research study about how public-school principals implemented Positive Behavioral Interventions and Supports (PBIS) and what conclusions could be gleaned from PBIS implementation. The proposed study will examine leadership in southeastern Ohio districts to attempt to ascertain how they are using PBIS and if PBIS has made a significant difference before and after PBIS implementation. The comparison will include high-wealth districts that implement PBIS with low-wealth districts. Positive Behavioral Interventions and Supports implementation will be measured through interviews or surveys from principals using the School-wide Evaluation Tool (SET) survey. You are eligible to be in this study because you are a public school principal in southeastern Ohio. I obtained your contact information from the Ohio Department of Education website.

If you decide to participate in this study, you will be interviewed or surveyed using the School-wide Evaluation Tool (SET) instrument that has been vetted by the Center of Positive Behavioral Interventions and Supports, as sponsored by the United States Department of Education's Office of Special Education Programs. The SET is a research-validated instrument that is designed to assess and evaluate the critical features of school-wide positive behavioral interventions and supports across an academic school year. The SET was designed to determine the extent to which schools are already using PBIS, understand the fidelity of implementation of PBIS, and determine if PBIS changed the school culture and safety of the school building. The SET evaluates 28 research questions across seven feature areas. These areas include expectations defined, behavioral expectations taught, acknowledgment procedures, correction procedures, monitoring and evaluation, management, and district-level support.

Remember, this is entirely voluntary. You can choose to be in the study or not. If you'd like to participate or have any questions about the study, please email me at xxxxx@acu.edu.

Thank you very much.

Sincerely,

Mr. Kacey Cottrill

Appendix B: Self-Assessment Survey (PBIS)

Assessing and Planning Behavior Support in Schools

Name of School _____ Date _____

District _____ State _____

Person completing the survey:

· Administrator	· Special Educator	· Parent or Family Member
· General Educator	· Counselor	· School Psychologist
· Educational or Teacher Assistant	· Community Member	· Other _____

1. Complete the survey independently.

2. Schedule 20–30 minutes to complete the survey.

3. Base your rating on your individual experiences in the school. If you do not work in classrooms, answer questions that are applicable to you.

To assess behavior support, first evaluate the status of each system feature (i.e., *in place, partially in place, not in place*; left-hand side of the survey). Next, examine each feature:

   a. "What is the current status of this feature (i.e., *in place, partially in place, not in place*)?"

   b. For those features rated as partially in place or not in place, "What is the priority for improvement for this feature (i.e., *high, medium, low*)?"

4. Return your completed survey to _____ by _____

School-Wide Systems

Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	**School-wide** is defined as involving all students, staff, and settings.	High	Med	Low
			1. A small number (e.g., three to five) of positively and clearly stated student expectations or rules are defined.			
			2. Expected student behaviors are taught directly.			
			3. Expected student behaviors are rewarded regularly.			
			4. Problem behaviors (failure to meet expected student behaviors) are defined clearly.			
			5. Consequences for problem behaviors are defined clearly.			
			6. Distinctions between the office versus classroom-managed problem behaviors are clear.			
			7. Options exist to allow classroom instruction to continue when problem behavior occurs.			
			8. Procedures are in place to address emergency or dangerous situations.			
			9. A team exists for behavior support planning and problem-solving.			
			10. School administrator is an active participant on the behavior support team.			
			11. Data on problem behavior patterns are collected and summarized within an ongoing system.			

Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	**School-wide** is defined as involving all students, staff, and settings.	High	Med	Low
			12. Patterns of student problem behaviors are reported to teams and faculty for active decision-making on a regular basis (e.g., monthly).			
			13. School has formal strategies for informing families about expected student behaviors.			
			14. Booster training activities for students are developed, modified, and conducted based on school data.			
			15. The school-wide behavior support team has a budget for (a) teaching students, (b) ongoing rewards, and (c) annual staff planning.			
			16. All staff are involved directly or indirectly in school-wide interventions.			

School-wide Evaluation Tool (SET) Overview

Purpose of the SET

The School-wide Evaluation Tool (SET) is designed to assess and evaluate the critical features of school-wide effective behavior support across each academic school year. The SET results are used to:

1. assess features that are in place,
2. determine annual goals for school-wide effective behavior support,
3. evaluate ongoing efforts toward school-wide behavior support,
4. design and revise procedures as needed, and
5. compare efforts toward school-wide effective behavior support from year to year.

Information necessary for this assessment tool is gathered through multiple sources, including review of permanent products, observations, and staff (minimum of 10) and student (minimum of 15) interviews or surveys. There are multiple steps for gathering all the necessary information. The first step is to identify someone at the school as the contact person. This person will be

asked to collect each of the available products listed below and identify a time for the SET data collector to preview the products and set up observations and interview or survey opportunities. Once the process for collecting the necessary data is established, reviewing the data and scoring the SET averages takes two to three hours.

Products to Collect

1. _____ Discipline handbook
2. _____ School improvement plan goals
3. _____ Annual Action Plan for meeting school-wide behavior support goals
4. _____ Social skills instructional materials and implementation timeline
5. _____ Behavioral incident summaries or reports (e.g., office referrals, suspensions)
6. _____ Office discipline referral form(s)
7. _____ Other related information

Using SET Results

The results of the SET will provide schools with a measure of the proportion of features that are (a) not targeted or started, (b) in the planning phase, and (c) in the implementation or maintenance phases of development toward a systems approach to school-wide effective behavior support. The SET is designed to provide trend lines of improvement and sustainability over time.

Appendix C: IRB Approval

ABILENE CHRISTIAN UNIVERSITY
Educating Students for Christian Service and Leadership Throughout the World

Office of Research and Sponsored Programs
320 Hardin Administration Building, ACU Box 29103, Abilene, Texas 79699-9103
325-674-2885

February 10, 2021

Mr. Kacey Cottrill
Department of Educational Leadership
Abilene Christian University

Dear Kacey,

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled "PBIS Effectiveness in Southeastern Ohio",

(IRB# 21-013)is exempt from review under Federal Policy for the Protection of Human Subjects.

If at any time the details of this project change, please resubmit to the IRB so the committee can determine whether or not the exempt status is still applicable.

I wish you well with your work.

Sincerely,

Megan Roth

Megan Roth, Ph.D.
Director of Research and Sponsored Programs

Appendix D: Summarizing the Results From the SET

The results from the SET are used to (a) determine the status of PBIS in a school and (b) guide the development of an action plan for improving PBIS. The resulting action plan can be developed to focus on any one or combination of the four PBIS system areas.

Three basic phases are involved: (a) summarize the results, (b) analyze and prioritize the results, and (c) develop the action plan.

Phase 1: Summarize the Results

The objective of this phase is to produce a display that summarizes the overall response of school staff for each system on (a) the status of PBIS features and (b) improvement priorities.

Step 1a. Summarize survey results on a blank survey by tallying all individual responses for each of the possible six choices as illustrated in example 1a.

Example 1a.

Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	**School-wide** is defined as involving all students, staff, and settings.	High	Med	Low
√√√√ √√√√ √ 9	√√√√ √√√ 7	√√√√ 4	1. A small number (e.g., three to five) of positively and clearly stated student expectations or rules are defined.	√√√√ 4	√√√√ 4	√√√ 3
√√ 2	√√√√ √√ 6	√√√√ √√√√ √√√√ 12	2. Expected student behaviors are taught directly.	√√√√ √√√√ √√ 10	√√√√ 4	√√√√√ √ 6

Scoring Example

Step 1b. Total the number of responses by all staff for each of the six possible choices, as illustrated in example 1b.

Example 1b.

Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	**School-wide** is defined as involving all students, staff, and settings.	High	Med	Low
√√√√ √√√√ √ 9	√√√√ √√√ 7	√√√√ 4	1. A small number (e.g., three to five) of positively and clearly stated student expectations or rules are defined.	√√√√ 4	√√√√ 4	√√√ 3
√√ 2	√√√√ √√ 6	√√√√ √√√√ √√√√ 12	2. Expected student behaviors are taught directly.	√√√√ √√√√ √√ 10	√√√√ 4	√√√√√ √ 6
√√√√ √√√ 7	√√√√ √√√√ √ 9	√√√ 3	3. Expected student behaviors are rewarded regularly.	√√√√ √√ 6	√√√√ √√ 6	
√√√√ √√√ 7	√√√√ √√√√ √√√ 11	√√√ 3	4. Problem behaviors (failure to meet expected student behaviors) are defined clearly.	√√√√ √√ 6	√√√√ 4	√√√√ 4
	√√√√ √√√√ 8	√√√√ √√√√ √ 9	5. Consequences for problem behaviors are defined clearly.	√√√√ √√√√ √√√ 11	√√√ 3	√√√ 3

Step 1c. For each system area, calculate a total summary by counting the total number of responses for a column (e.g., In place: 9 + 2 + …) and dividing that number by the total number of responses for the row (e.g., In place + Partial + Not in place) as illustrated in example 1c.

Example 1c.

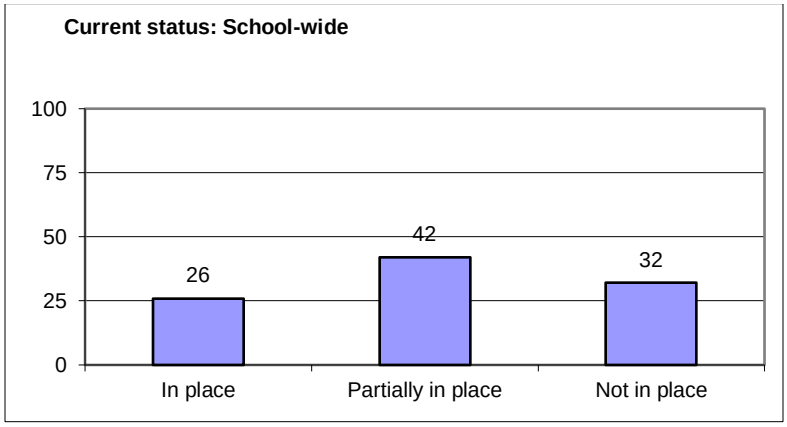
Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	**School-wide** is defined as involving all students, staff, and settings.	High	Med	Low
√√√√ √√√√ √ 9	√√√√ √√√ 7	√√√√ 4	1. A small number (e.g., three to five) of positively and clearly stated student expectations or rules are defined.	√√√√ 4	√√√√ 4	√√√ 3
√√ 2	√√√√ √√ 6	√√√√ √√√√ √√√√ 12	2. Expected student behaviors are taught directly.	√√√√ √√√√ √√ 10	√√√√ 4	√√√√√ 6
√√√√ √√√ 7	√√√√ √√√√ √ 9	√√√ 3	3. Expected student behaviors are rewarded regularly.	√√√√ √√ 6	√√√√ √√ 6	
√√√√ √√√ 7	√√√√ √√√√ √√√ 11	√√√ 3	4. Problem behaviors (failure to meet expected student behaviors) are defined clearly.	√√√√ √√ 6	√√√ 4	√√√√ 4
	√√√√ √√√√ 8	√√√√ √√√√ √ 9	5. Consequences for problem behaviors are defined clearly.	√√√√ √√√√ √√√ 11	√√√ 3	√√√ 3

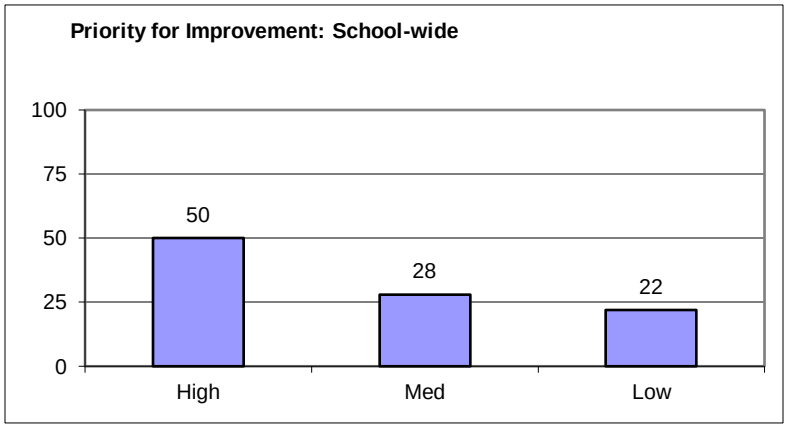
Totals

25 + 41 + 31 = 97 37 + 21 +1 6 = 74

Step 1d. Create a bar graph showing total item summary percentages for each of the six choices (take the total responses for each of the six choices and divide by the total number of responses) as illustrated in example 1d, using results from example 1c. Complete the SAS Summary by graphing the current status and priority for improvement for each of the four system areas. Example 1d illustrates the created graph for the example data presented and summarized in example 1c.

Example 1d.





Completing Phase 1 provides a general summary of the current status and priority for improvement ratings for each of the four system areas. For further summary and analysis, follow Phase 2 and Phase 3 activities.

Appendix E: Analyzing and Prioritizing the Results

The objective of this phase is for teams to narrow the focus of Action Plan activities. Teams also may want to include other data or information (e.g., office discipline referrals, behavior incident reports, attendance) to refine their decisions. Use the SAS Summary to guide and document your analysis. In general, the following guidelines should be considered:

Step 1. Using the SAS summary graph results, rate the overall perspective of PBIS implementation by circling High, Med, or Low for each of the four system areas.

Step 2. Using the SAS tally pages, list the three major strengths in each of the four system areas.

Step 3. Using the SAS tally pages, list the three major areas in need of development.

Step 4. For each system, circle one priority area for focusing development activities.

Step 5. Circle or define the activities for this or next year's focus to support the area selected for development

Step 6. Specify system(s) to sustain (S) and develop (D).

The objective of this phase is to develop an action plan for meeting the school improvement goal in the area of school safety. Multiple data sources will be integrated when developing the action plan. The SAS Summary page summarizes the SAS information and will be a useful tool when developing the PBIS Annual Action Plan. The PBIS Annual Action Plan process can be obtained by contacting the first author of this document.