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The Effect of PBIS on the School Environment and Test Scores

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The Effect of PBIS on the School Environment and Test Scores

by:

Denise A. Buettner

A Dissertation submitted to the Education Faculty of Lindenwood University

in partial fulfillment of the requirements for the

degree of

Doctor of Education

School of Education

The Effect of PBIS on the School Environment and Test Scores
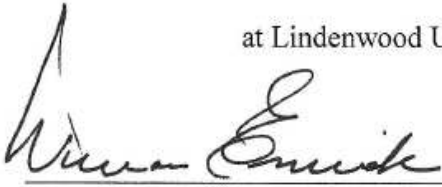
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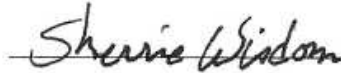
at Lindenwood University by the School of Education

_____ 9-06-13

Dr. William Emrick, Dissertation Chair   Date

_____ 9-6-13

Dr. Sherrie Wisdom, Committee Member   Date

_____ 9-6-13

Dr. Jed Deets, Committee Member   Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

Full Legal Name: Denise A. Buettner

Signature: Denise A. Buettner   Date: 9/6/13

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Abstract

Since the beginning of the Positive Behavior Interventions and Support (PBIS) program in the Study School District there has not been an evaluation of its effectiveness in reducing student discipline referrals and student suspensions and its success in promoting a positive learning environment leading to improved academic achievement.

This study determined the effectiveness of the Positive Behavior Interventions System (PBIS) in the Study School District. It focused on determining the fidelity and consistency of implementation of PBIS in the District, the effect of PBIS on reduction of office discipline referrals and student suspensions from school, teacher attitudes toward implementation of PBIS, teacher morale since inception of PBIS, and parent perceptions of the effectiveness of PBIS in promoting positive student behavior.

The results of this mixed methods study determined that there was a difference in the number of office discipline referrals during the four years since implementation of PBIS. The study also determined there was a difference in the percentage of referrals in the three major types of categories of office discipline referrals; school regulations, violent, and nonviolent. When the study analyzed the standardized test scores grades third through seventh and high school, did not evidence a measureable difference in student academic achievement based on ISAT performance during the four years following the implementation of PBIS. However, eighth grade did evidence a measureable difference in student academic achievement. Finally, the study determined there was not a measureable positive perception by staff and parents of PBIS with the exception of one statement on a Likert Scale survey.

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Chapter 1 – Introduction to the Study

Overview of the Study

This study focused on a school district of 4,200 students. The secondary schools

consist of a freshman academy, an academy for sophomores, and a high school housing

both junior and senior students. There are six elementary schools, two with kindergarten

and one with both preschool and kindergarten students. There are two schools of choice,

one housing grades kindergarten through 12 and the other kindergarten through eight;

parents can choose to send their children to either one. This is based on a lottery system.

Parents must provide transportation for students attending the kindergarten through 12

school of choice. The district also contains an academic center composed of grades 7

through 12 for students who have had trouble in coping with the regular school program

and who have been referred by teachers and principals.

In the 2007-2008 school year, the school district implemented a new districtwide

classroom discipline system called the Positive Behavior Interventions and Support

System, or PBIS. The purpose of this quantitative study was to determine the

effectiveness of PBIS in reducing the number of office discipline referrals, the severity of

misbehavior evidenced by these referrals, and suspension rates, thus creating a positive

environment for learning. The researcher also studied the effect of PBIS on student

academic performance, which was measured through standardized state tests the students

take yearly.

Background of the Problem

Classroom management issues are pervasive in schools throughout the United

States. Classroom management is important to ensure the safety of every person within a

school and to ensure academic success (Luiselli, Putnam, Handler, & Feinberg, 2005).

According to Luiselli et al. (2005), "student discipline problems decreased and academic

performance improved following a PB[I]S intervention at an urban elementary school"

(p. 192). In this urban elementary school, the staff used all components of PBIS to

improve classroom management (Luiselli et al., 2005). During this time, reading

comprehension and scores in mathematics improved by more than one percentile ranking.

During the study period, PBIS was effective in reducing disruptions to student learning

time (Luiselli et al., 2005). This research demonstrated that increased student

achievement, based on standardize tests, could be a result of effective classroom

management.

Effective classroom management can ensure the safety of everyone within a

school. Isolated events, such as school shootings, led schools to strictly enforce existing

rules, which constituted a reactive approach to discipline. "In other words, schools set

strict rules about the types of student behavior that are unacceptable and assign rather

severe consequences for students who do not abide by the rules" (Simonsen, Sugai, &

Negron, 2008, p. 32). Discipline programs or strategies based on reacting to student

behavior are often ineffective because they operate only after misbehavior has occurred.

Simonson et al. (2008) provided a process of proactive discipline designed to create a

positive and safe learning environment.

Prior to the implementation of PBIS, no formal program in the study district dealt

with discipline. Teachers filled out an office discipline referral form for students, which

might result in a trip to the principal's office, after-school detention, in-school

suspension, and eventually suspension from school. All discipline was reactive and

punitive, and decisions as to what to do were at the discretion of individual teachers and principals. District personnel recognized a need for changes in strategies, which were primarily reactive when dealing with student behavior. They decided to adopt an approach considered to be proactive and which would focus on the prevention of inappropriate student behavior. Additionally, the district realized a need for changes in discipline policies in order to promote consistency throughout the district and to adopt a proactive rather than reactive approach to dealing with student behavior. District teachers and administrators investigated a behavior management program with the title of Positive Behavior Interventions and Support System (PBIS) and decided to implement it throughout the school district.

As part of PBIS, each building chooses an internal coach and a secondary coach. Then within the district there is an external coach who oversees the coaches in the district. The internal and secondary coaches also meet once a month with an external coach. An external coach was hired within the district and trained by people outside of the district who work throughout the state with the PBIS network. It is an external coach's duty to run the program and analyze the discipline data consisting of office discipline referrals and suspensions. Coaches attend monthly professional development training within the district and periodically outside of the district with people who manage PBIS throughout the state. The coaches then deliver any important information to staff in the buildings. To determine the effectiveness of PBIS within this district, an external coach analyzes the number of office discipline referrals in each building by quarter and from year to year. Buildings with a high number of referrals are expected to develop interventions to reduce the number. An external coach also conducts a walk-

through once a year in each building. During this walkthrough, the coach looks for evidence of PBIS. For example, the behavior matrix should be posted throughout the school. The behavior matrix typically consists of the three rules: be safe, be responsible, and be respectful. Under each of these areas, the matrix lists what the behavior should look like for that particular area of the building. An external coach asks students, teachers, and support staff questions pertaining to PBIS. Coaches and staff also participate in a survey at the end of the year called the Self-Assessment Survey (SAS). The survey is used at the district and state level to determine areas of strengths and weaknesses for the following school year.

Statement of the Problem

School districts typically assess students at the beginning of a school year to determine their level of academic understanding. For example, the study school district uses the Iowa Test of Basic Skills (ITBS) test within the first couple weeks of each school year. Assessment enables teachers to discover what students do and do not understand thus establishing a focus on what to teach. Assessment at the beginning of a school year actually assists a teacher in differentiating his or her instruction. This same process of assessment can also be valuable in dealing with student classroom behavior. In the classroom, information is taught to the students. Then the students are assessed on what they learned. An effective educator will use those assessments as a guide to what he or she should reteach or with what information he or she can move forward. Desired behavior needs to be addressed in the same fashion. With PBIS, "if a young child displays inappropriate behavior, it is viewed as an error in learning; additional opportunities are provided for the child to learn the skill" (p. 4). When PBIS is

effectively implemented, lessons are created with activities for all of the desired behavior, just as in the main subject areas (Show Me How, 2001).

Research shows that addressing undesired behavior in a negative fashion can actually intensify the undesired behavior. It is important for educators to focus on the positive behaviors rather than the negative (Morrissey, Bohanon, & Frenning, 2010). In fact, "teachers who are relying too heavily on punishment in the absence of positive reinforcement may be risking a backlash from students such as behavioral outbursts, vandalism, or even assault in extreme cases" (Morrissey et al., 2010, p. 28). According to Stormont, Lewis, Beckner, and Johnson (2008), it is important to examine a student's prior understanding of both academic concepts and classroom behaviors. These must be assessed in order to provide school personnel with the components of a plan to ensure success in dealing with student behavior. Stormont et al., stated, "if we fail to alter the problem behavior we will make it worse" (p. 3). This should prompt educators to study how behavior of students in the classroom is addressed and how efforts in dealing with that behavior are assessed. Not only does punitive punishment possibly intensify the inappropriate behavior, there is also a correlation between punitive punishments and the dropout rate. The students who are at risk of dropping out are "those who exhibit academic, behavioral or attitudinal problems" (Suh, Suh, & Houston, 2007, p. 196).

Newspapers, television, and the internet regularly report incidents of violence in schools. According to Cohen, Kincaid, and Childs (2007), "school violence has been rated by the public as the top problem in the nation's educational institutions" (p. 203). In a national survey of 1,000 teachers and 1,180 students in grades 3-12, 11% of teachers

reported that they had been a victim of school violence; 22% expressed concern with the possibility of school violence (Cohen et al., 2007).

Research discloses that today's students do not seem to respond well to reactive discipline measures (Cohen et al., 2007; Sugai & Horner, 1999). In too many cases, students are spending more time in a principal's office or in-school suspension classrooms than they are in actual classrooms to which they are assigned. School personnel have expressed a serious problem with a consequent pressing need to reduce the number of office discipline referrals received by students and measures to create a positive learning experience for students and teachers. They believe that a positive learning environment will result in an increase in student academic achievement (Cohen et al., 2007; Sugai et al., 1999).

Students do not seem to respond well to reactive forms of discipline, which characterize discipline from years past. Over the years, schools typically have been addressing "challenging behavior by increasing the number and intensity of punitive disciplinary procedures" (Lassen, Steele, & Sailor, 2006, p. 701). Some educators believe that these actions have brought the rise of "zero tolerance policies, hiring of security officers, use of metal detectors, suspension and expulsion of students, and placement of students in alternative educational facilities" (Lassen et al., 2006, p. 701). The researchers (Lassen et al., 2006) stated that, "unfortunately, the effectiveness of such strategies has not been sufficiently examined, and some researchers have even suggested that reactive and punitive procedures can increase problem behavior" (p. 701). Morrissey et al. (2010) also agreed, "punitive policies are not only ineffective at changing behavior, but possibly exacerbate problems" (p. 28). In fact, "students who have been suspended

tend to repeat the same offense, and are more likely to drop out of school than their peers" (p. 28).

There are questions regarding the effects of negative versus positive discipline practices in schools. In recent years, some educators have developed a belief in the PBIS, as exerting a positive influence on minimizing the number of office discipline referrals and reducing the seriousness of those referrals. PBIS is a systems approach based on maximizing student positive behavior. It is utilized by an entire school staff and includes a team of professionals who develop plans and meet with students who are receiving multiple office discipline referrals. The researcher studied the effectiveness of PBIS in reducing the number and seriousness of office discipline referrals, and in contributing to a goal of creating and maintaining a positive learning environment. According to Cohen et al. (2007), educators need to "shift from a reactive to a proactive approach to discipline, such as school-wide positive behavior support" (p. 203).

Urban schools face unique problems. According to Netzel and Eber (2003), urban school districts, unlike suburban districts, have "unique challenges due to factors such as size, poverty rates, diverse communities, and limited resources" (p. 71). Personnel working in the urban school district of Waukegan, Illinois, realized there were trying to cope with many ineffective discipline systems. This led officials in that district to pilot PBIS. After one year of participating in the program, the district recorded a 22% decrease in school suspensions. The number of office discipline referrals also decreased (Netzel & Eber, 2003).

Importance of the Study

Student discipline has been a major issue for the study school district. Inappropriate behavior affected the education of students who were suspended and students who were behaving in a responsible manner. This unwanted behavior included, but was not limited to: fighting, disrespect to other students or adults, bullying, cursing, disrupting the learning environment, or skipping school. The PBIS system was implemented in one building during the 2006-2007 school year, and was introduced to the entire district as a disciplinary program for the 2007-2008 school year. For this study the researcher used the year prior to PBIS being fully implemented, 2007-2008, and the following four school years, 2007-2011, in which PBIS was fully implemented throughout the study district. The requirements for working with the Positive Behavior Interventions and Support system are costly due to hiring of new personnel, training of present personnel, record keeping, and student motivation awards. Therefore, the researcher is conducting this study as a formal assessment of the program based on determining returns from costs.

An important aspect to consider when determining the effectiveness of PBIS is an expected reduction in the number of school suspensions for discipline. Christle, Nelson, and Jolivette (2004) defined suspension as a "disciplinary sanction that requires a student to be excluded from a school building for a specific period of time" (p. 509). Suspension is often used in schools; however, the researchers (Christle et al., 2004) reported that the research on suspension, "despite its frequent use, shows that it is not effective in reducing the behavior problems it is intended to address" (p. 509). School administrators rely on suspension for student behaviors partially due to the requirements of No Child Left

Behind and Zero Tolerance policies adopted to deal with increasing instances of disciplinary behavior (Christle et al., 2004). There have been studies conducted on school suspension rates, which found that while suspension is designed to reduce unwanted and difficult behavior, the use of suspension is typically based on principals' philosophies (Christle et al., 2004). In fact, Mukuria (2002) found that the schools with the lowest suspension rates had principals who "had high expectations for students, and supported a structure from administrators, teachers, and students" (p. 511), while the schools with high suspension rates did not. Research demonstrates that suspension is not effectively reducing the occurrence of unwanted school-based behaviors (Christle et al., 2004). Christle et al. (2004) pointed out that, "Kentucky schools reported 68,523 suspensions during the 2000-2001 academic year; 74,054 suspension during 2001-2002, and 76,886 suspensions during the 2002-2003 school year" (p. 510). According to Skiba and Peterson (1999), "data on suspension consistently show that, as the NCES [National Center for Education Statistics] has reported, referrals for drugs, weapons, and gang-related behaviors constitute but a small minority of office referrals leading to suspension" (p. 374). Their research also found that, "fighting among students is the single most frequent reason for suspension, but the majority of school suspensions occur in response to relatively minor incidents that do not threaten school safety" (p. 374). In fact "at the middle school level, disrespect and disobedience are among the most common reasons for suspension and a significant proportion of suspensions are for tardiness and truancy" (Skiba & Peterson, 1999, p. 374).

This study is important in order to determine if PBIS is a system that can reduce office discipline referrals and the severity of the reasons for these referrals in one urban

school. Student misbehavior adversely affects the atmosphere within a school and the

academic performance of students. Typically, students with behavioral problems are

frequently on suspension from school thus missing schoolwork and evidencing poor test

scores. Christle et al. (2004) found a close relationship between behavior and academics.

Several studies showed that schools across the United States are not correctly utilizing

school suspension. According to Dupper, Theriot, and Craun (2009), "there has been a

near epidemic of suspensions for relatively minor or vaguely defined student offenses,

such as problematic interactions with peers and adults, rather than for serious behavior

that threatens the welfare of others" (p. 6). Morrissey et al. (2010) discovered that while

suspensions are used for major incidents, they could also be connected with issues judged

controversial although maybe not so serious, such as paper guns or sharing over-the-

counter medications. The researchers (Morrissey et al., 2010) also evidenced concern

over the use of suspensions for "minor incidents such as attendance problems" (p. 27-28).

They concluded that it does not make much sense to send a student home through

suspension because of a problem with attendance. This sort of discipline simply gives in

to the unacceptable behavior of the student. Many students who demonstrate undesirable

behavior would rather be at home than at school.

Purpose/Rationale of the Study

This study employed both quantitative and qualitative measures to determine the

effectiveness of the PBIS in a school in a southern Illinois school district towards

reducing the amount of office discipline referrals for behavior and the severity of these

referrals. The researcher studied the effectiveness of PBIS in promoting a positive

learning environment and increasing academic achievement in one school district.

Hypotheses and Research Questions

Null hypothesis (Ho1) – There is not a measurable difference in the number of office discipline referrals during the four years since implementation of the Positive Behavior Interventions and Support System (PBIS) and the school year preceding implementation.

Null Hypothesis (Ho2) – There is not a measurable difference in the type of office discipline referrals during the four years since implementation of the Positive Behavior Interventions and Support System (PBIS) and the school year preceding implementation.

Null Hypothesis (Ho3) – There is not a measurable difference in student academic achievement based on standardized testing during the four years since implementation of the Positive Behavior Interventions and Support System (PBIS) and the school year preceding implementation.

Null Hypothesis (Ho4) – Teachers within the study school district do not believe, as measured through a teacher survey, that implementation of the Positive Behavior Interventions and Support System (PBIS) is positively affecting school climate.

The following questions were addressed in this study:

1. How has implementation of PBIS been effective in reducing the numbers of office discipline referrals and the seriousness of behavior within these referrals?

2. How has implementation of PBIS been effective in reducing the number of student suspensions within the school district?

3.   How can faithfulness and consistency of implementation of PBIS in the district be described?

4.   How can teacher attitudes towards the implementation of the PBIS pro

gram be described?

5.   How do teachers in different grade levels perceive the effectiveness of the

PBIS program within the district?

6.   How has teacher morale been affected through implementation of the

PBIS program?

7.   How has implementation of the PBIS program affected parent perceptions

of student behavior within the school district?

8.   What do teachers and parents perceive as major successes of the PBIS

program?

9.   What do teachers and parents perceive as the major challenges associated

with the PBIS program?

The researcher studies the consistency of the PBIS program within the school

district and its effectiveness in reducing the amount of office discipline referrals and

suspensions from school. She studied the effect of PBIS on teacher attitudes and morale

in the school district and teachers' perceptions of the program's effectiveness in

promoting positive student behavior. Parents were also a component in the study, and the

researcher determined to understand their perceptions of school effectiveness in

promoting positive student behavior with PBIS. Finally, her research also focused on the

contributions of PBIS to major academic and behavioral improvements within the

district's schools and the challenges the school district faced associated with

implementation of PBIS.

Independent and Dependent Variable(s)

The independent variable for this study was the implementation of PBIS for four years. The dependent variables for this study were the number of office discipline referrals and the type of office discipline referrals. Additional dependent variables were teacher and parent perceptions of school climate, and student academic achievement as measured by standardized testing.

Limitations of the Study

1. The time frame for collection of data encompassed four years within the study school district. The researcher was unable to control for changes in the amount and make-up of students served outside normal entrance and departures due to advancement in school. Thus, the time frame for each student's involvement in PBIS differed.

2. PBIS training procedures and follow-up in schools within the district may vary based on the knowledge of the program procedures by school participants, both teaching and administrative staff. The content and procedures with staff development activities within the schools may vary widely depending on the understanding and experience of the trainers within each school. This may also affect the consistency of implementation of PBIS procedures within each school. To ensure that PBIS is successful, ongoing training must be in place. With many individual schools within a district, all of them may not provide the same quantity and quality of training.

3. Consistency of implementation of the PBIS program practices and procedures may be affected by the commitment of teachers and administrative staff in each of

the study schools. An example problem, which might occur to affect the consistency of implementation, is that not all teachers and/or administrators believe in PBIS, therefore might not be correctly implementing it.

4. Administrative support of PBIS within the district schools may vary thus affecting teacher consistency of application. Some administrators may not support the PBIS approach to discipline and therefore not enforce staff implementation.

5. Student behavior levels may vary within each district school. The study district consists of neighborhood schools. The dynamics of these neighborhoods vary which in turn creates different compositions from school to school. The behavior level of tolerance at different schools may vary based on the administrator in charge and the teachers.

6. Motivation of teachers and administration to implement the system continuously may vary. Teacher and administrator buy-in is crucial to PBIS. In order for the system to be successful, the school must work together as a team, including teachers, administrators, support staff, parents, and students.

7. Teaching styles used can influence study results. Different teaching styles can affect student behaviors both positively and negatively thus affecting the consistency of findings.

8. Teaching and administrative staff turnover in the study schools may affect understanding of and administration of the practices and procedures of PBIS.

9. Reorganization of the district, eliminating middle schools and substituting 1-8 grades, may change disciplinary reporting procedures thus affecting the number of referrals.

Definition of Terms

For the purpose of this study, the following terms were used:

Functional behavior assessment (FBA) - an "analysis of the circumstances in the environment (teachers, students, events, directions, etc.) that tends to predict a behavior and help explain why the student engages in that behavior at that particular time" (Scott, Nelson, & Liapusin, 2007, para. 4).

Office Discipline Referrals (ODR) – According to Sugai, Sprague, Horner, And Walker (2000), it is an event in which (a) a student engaged in a behavior that violated a rule/social norm in the school, (b) a problem behavior was observed by a member of the school staff, and (c) the event resulted in a consequence delivered by an administrative staff member who produced a permanent (written) product defining the whole event. (p. 96) The use of ODR's is to measure students' behaviors. Either a paper or electronic copy is kept in the students' files along with attendance, grades, test scores, and other important information (Irvin, Tobin, Sprague, Sugai, & Vincent, 2004, p. 132).

Positive Behavior Intervention and Support (PBIS) – "is a proactive systems approach to establishing the behavioral supports and social culture and needed for all students in a school to achieve social, emotional, and academic success" (Illinois PBIS Network, 2008, para. 1). According to Clonan, McDougal, Clark, and Davison (2007), PBIS "focuses on changing the environment to better meet the needs of all students through a comprehensive and proactive approach in which faculty and staff actively teach and acknowledge expected behavior" (p. 19). They also stated that PBIS "was developed by educational and behavioral professionals to assist schools in being more effective in promoting positive student behavior and decreasing antisocial behavior" (Clonan et al.,

2007, p. 19). PBIS is a "team-based, data driven model that utilizes a systematic and collaborative approach to developing, implementing, and assessing school-wide behavioral interventions" (Clonan et al., 2007, p. 19).

Response to Intervention (RTI) – According to Bender and Shores (2007), RTI is "a process of implementing high-quality, scientifically validated instructional practices based on learner needs, monitoring student progress, and adjusting instruction based on the student's response" (p. 7). RTI can also be defined as the "practice of providing high-quality instruction and interventions matched to student need, monitoring progress frequently to make decisions about changes in instruction or goals, and applying child response data to important educational decisions" (Sandomierski, Kincaid, & Algozzine, 2007, para. 2).

Secondary or Yellow Level – the goal of PBIS is to have 5-10% of the students at this level. There should be a rapid response with high efficiency. There should mostly be small group interventions, but can include some individualizing (Illinois PBIS Network, 2008). According to Bradshaw, Reinke, Brown, Bevans, and Leaf (2008), there is a second group of students (about 5-10%) who engage in problem behaviors beyond acceptable levels, even in the presence of school-wide PBIS, are provided secondary supports that include efficient group-based interventions with increased structure and contingent feedback. (para. 4)

Tertiary or Red Level – the goal of PBIS is to have 1-5% of the students at this level. At this level, students receive intensive, durable procedures. The interventions are assessment-based on individual students (Illinois PBIS Network, 2008). The tertiary level consists of   a third and even smaller number of students (1-5%) who enter

schools with significant skills deficits that do not respond to school-wide or secondary interventions, will need more intensive individualized interventions in order to succeed in school. (Bradshaw et al., 2008, para. 4)

Universal or Green Level – the goal of PBIS is to have 80-90% of the students at this level which is composed of students in all settings. At this level, it would involve all students in all settings. This is the level where educators want to be preventive and proactive (Illinois PBIS Network, 2008). Bradshaw et al. (2008) defined the universal level as the level consisting of "positive preventive support strategies that provide systematic training of expected social behaviors and reinforcement of these behaviors to all students in the school. Approximately 80% to 90% of students are projected to respond successfully" (para. 4).

Summary

The researcher conducted this study as an evaluation of the PBIS system currently used in a school district. It provided an analysis of the effectiveness of PBIS towards reducing the number and specific types of office discipline referrals and in promoting a positive learning environment for students and teachers. It also measured the impact of PBIS on student academic achievement. The study demonstrated how teachers, students, and parents perceive the PBIS system based on the effects it has on their children's learning environment and academic achievement.

The next chapter will review the literature to the study regarding, the origin, rationale, implementation of PBIS. The following chapter also contains measuring the success, the challenges, and the interventions and supports that compliment PBIS.

Chapter 2 - Review of Literature

This review of literature begins with the origin of PBIS. This section begins with the historical and popular methods of classroom management, and then ends with the discussion of how PBIS was developed. Following the origin of PBIS this review of literature discusses the rationale and implementation of PBIS. The chapter continues with how the success of PBIS are measured. It concludes with the challenges districts face when implementing PBIS and the interventions and supports that accompanies the system.

Origins of the Positive Behavior Interventions and Support System

Historical elements of classroom management practices.

Sprague and Horner (2007), Skiba and Peterson (1999), and Sugai and Horner (2002), discovered that in the past, it was common for educators to turn to a negative response when dealing with inappropriate behaviors. Sprague and Horner (2007) from the University of Oregon stated, "often when a student misbehaves, the first line of response involves increasing monitoring and supervision of the student, restating rules, and delivering sanctions" (p. 4). These responses may achieve immediate answers, but not long-term results. Sprague and Horner continued, "unfortunately, these 'get tough' responses produce immediate, short lived relief for the school but do not facilitate the process of the student who may already be disengaged from the school process" (p. 4).

The literature shows a common reactive approach by teachers and administrators towards unwanted behaviors. Popular methods of discipline have included lunch detentions, referrals to the office, out of school suspension, and/or loss of privileges. Dupper et al. (2009) determined there are two important goals for out of school suspensions. The first goal "is to remove the offending student from school and to provide temporary relief

to frustrated teachers and administrators" (Dupper et al., 2009, p. 6). The second goal is

to "get the parent to pay attention to the fact that their child's misbehavior is serious and

that parental involvement is necessary to deal with this misbehavior" (Dupper et al.,

2009, p. 6). However, Dupper et al. stated "in 1997, 3.1 million students were suspended

from school, most for nonviolent, noncriminal acts" (p. 6).

Lassen et al. (2006) found through their research that it is common for teachers

and administrators to assume a stance of primarily reacting to unwanted behaviors. The

researchers (Lassen et al., 2006) stated "traditionally, schools have addressed challenging

behavior by increasing the number and intensity of punitive disciplinary procedures.

Such strategies have increased substantially in the wake of heavily reported school shoot-

ings in the 1960s" (p. 701). These punitive strategies are evidenced through the adoption

of zero tolerance policies for misbehavior, suspensions, expulsions, hiring of security of-

ficers, and the installation of metal detectors (Lassen et al., 2006). Lassen et al. described

another strategy, which involved placing students who demonstrate challenging behaviors

in an alternative school setting. "Unfortunately, the effectiveness of such strategies has

not been sufficiently examined, and some researchers have even suggested that reactive

and punitive procedures can increase problem behavior" (p. 701). Morrissey et al. (2010)

also said:

> Punitive policies [are] not only ineffective in changing behavior, but possibly ex-
>
> acerbate problems. Teachers who are relying too heavily on punishment in the
>
> absence of positive reinforcement may be risking a backlash from students such
>
> as behavioral outbursts, vandalism, or even assault in extreme cases. (p. 28)

Muller (2002) found that "traditionally, the underlying belief among educators has been that young people should arrive at school prepared to learn and to behave appropriately" (p. 4). Therefore, "many educators have responded to problem behaviors in reactive ways rather than emphasizing the teaching and reinforcing of pro-social behavior" (p. 2). Muscott et al. (2004) found that, "reactions to misbehavior tend to be reactive, punitive, and rarely individualized" (p. 1). Each agreed with other researchers, Morissey et al. (2010) and Lassen et al. (2006), that, "the adoption of district-wide, zero-tolerance policies resulting in suspensions and expulsions from school do not improve student behavior or make a positive contribution to school safety" (Muscott et al., 2004, p. 1).

Popular classroom management programs.

In-school suspension (ISS) programs have been popular as an alternative to out of school suspension (OSS). According to Dupper et al. (2009), "poorly conceived ISS programs are little more than "holding tanks" and may function as brief stops on the way to OSS" (p. 10). ISS is simply putting students in a place where they are isolated from their peers, but are still able to complete schoolwork. In most cases, the problem behavior is not addressed while students are in ISS. "By failing to address and modify the behaviors that resulted in being assigned to ISS, students often return to their classrooms with the same, or worse, behaviors and end up in ISS on a repeated basis or get suspended out of school" (Dupper et al., 2009, p. 10). Delisio (2003) also agreed that ISS does not change the behavior, but rather students typically continue being sent to ISS or receive further discipline.

According to Dupper et al. (2009), "it has been suggested that ISS programs emphasize modifying students' misbehavior by including counseling components and con-

flict resolution strategies" (p. 10). A program called On-Campus Intervention Program (OCIP) has been developed where "counseling is provided to help the students identify issues underlying their disruptive behavior and to find alternatives" (Dupper et al., 2009, p. 10). Armstrong, Massey, and Boroughs (2003) also found that students who attended OCIP showed improved behavior after the program was completed.

Another program emerged which was termed Consistency Management and Co-operative Discipline (CMCD). "CMCD is a school wide program designed to improve school discipline in inner-city schools" (Dupper et al., 2009, p. 10). Dupper et al. (2009) stated, "a core component of CMCD is creating classrooms in which teachers and students work collaboratively to set rules for classroom management and transform teacher-centered classrooms into person-centered classrooms" (p. 10). According to Freiberg, Stein, and Huang (1995) an evaluation of CMCD has been conducted over a period of five years. Five CMCD schools primarily composed of African American and Latino students in inner city schools in Houston were compared to five similarly composed schools that did not have CMCD in place. The evaluations "found significant positive effects on standardized achievement tests, especially for students who remained in the program for six years" (Freiberg et al., 1995, p. 11).

Dupper et al. (2009), DeJong (1999), Greenberg, Kusche, and Mihalic (1998), and Olweus (1993) found three other programs, other than PBIS, that were been created to reduce inappropriate behaviors. According to Dupper et al. (2009), promising programs designed to reduce problematic student behaviors by targeting individual students as well as affecting the culture and climate of the school are Resolving Conflicts Creatively Pro-

gram (RCCP), Promoting Alternative Thinking Strategies (PATHS), and the Bullying

Preventions Program (BPP). (p. 11)

The resolving Conflicts Creatively Program (RCCP) is a program that is "widely

regarded by public health experts as one of the most promising violence prevention pro-

grams" (Dupper et al., 2009, p. 11). The primary "goal of RCCP is to create school

change so that students have a safe environment in which to explore peaceful ways of

resolving conflict" (Dupper et al., 2009, p. 11). DeJong (1999) agreed that the idea be-

hind RCCP is that the students who exhibit violent and inappropriate behavior do not

know any other way to manage conflict. According to Dupper et al. (2009) with RCCP,

the goal is "accomplished by promoting cooperative behavior among students and adults,

intercultural understanding and positive relations, and greater student academic achieve-

ment and a reduction in the absentee rates for both students and teachers" (p. 11).

The program Promoting Alternative Thinking Strategies (PATHS) is a model from

the Center for the Study and Prevention of Violence (CSPV) at the University of Colora-

do at Boulder. PATHS curricula are designed to reduce behavior problems by encourag-

ing emotional and social skills. Dupper et al. (2009) along with Greenberg, Domitrovich,

and Bumbarger (2000) stated the curricula consists of three major units: (1) the Readiness

and Self-Control Unit consisting of 12 lessons, (2) the Feelings and Relationships Unit

consisting of 56 lessons, and (3) the Interpersonal Cognitive Problem-Solving Unit con-

sisting of 33 lessons which promote building positive self-esteem and improving com-

munications. (Dupper et al., 2009, p. 11)

Dupper et al. (2009) described this as an intervention to offset frequent discipli-

nary problems and consequent suspensions due to bullying-victim situations in schools.

Consequently, a major goal within BPP is to promote understanding of the pervasiveness of bullying. The researcher (Dupper et al., 2009) stated

> BPP is to reduce victim-bullying problems among primary and secondary schools by increasing the awareness of the bullying problem, actively involving teachers and parents, developing clear rules against bullying behavior, and providing support and protection to the victims of bullying. (p. 12)

Both Dupper et al. (2009) and Olwens (1993) promoted the implementation of the goal at the building, classroom, and individual level.

Origins of PBIS.

PBIS was originally developed to deal with the behavior of students who were determined to have special needs. According to Walker, Cheney, Stage, and Blum (2005), "Positive Behavior Interventions and Support (PBIS) emerged as a significant policy and practice in public schools during the past 7 years" (p. 194). It became a system, which has been instrumental in changing the environment within school systems (Bradshaw et al., 2008). According to the Illinois PBIS Network (2008), "Positive Behavior Interventions and Supports (PBIS) is a proactive systems approach to establishing the behavioral supports and social culture needed for all students in a school to achieve social, emotional, and academic success" (para. 1). According to Muscott et al. (2004), PBIS "is the systematic organization of school environments and routines that enables educators to increase the capacity to adopt, use, and sustain effective behavioral practices and processes for all students" (p. 1). Clarke and Dunlap (2008) made the point that while various definitions of PBIS do 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 instruction and environmental redesign" (p. 1).

According to the Illinois PBIS Network (2008), PBIS can be applied to the same three-tiered model, as the Response to Intervention (RTI) model. In both models, data based decisions are made for each individual student. With RTI, interventions are put in place based on the academic performance of the student, and with PBIS, interventions are established based on the individual behaviors. There are two sides to the figure, showing academics and behavior separately, but working together to achieve success. The ultimate goal for both PBIS and RTI is to keep 80-90% of the students at the universal, or first, level. It is in this level that the expected behaviors are taught and constantly reviewed. Teachers create or are given various lessons and teach the concepts just as if they were a content area. It is expected that the students at this level will receive zero or one office discipline referral per year. The second level is the secondary level. Only 5-10% of the students within the school should be at the second, or secondary level. These students, who engage in problem behaviors beyond acceptable levels, even in the presence of school-wide PBIS, are provided secondary supports that include efficient group-based interventions with increased structured and contingent feedback (e.g., Behavior Education Program, check-in/check-out procedures). (Bradshaw et al., 2008, p. 1)

The third level is the tertiary level. The goal of this level is an even smaller number of students (1-5%) who enter schools with significant skills deficits that do not respond to school-wide or secondary interventions, and who "will need more intensive

individualized interventions in order to succeed in school (e.g., function-based behavioral supports)". (Bradshaw et al., 2008, p. 1)

According to the Illinois PBIS Network (2008), there are four critical elements to achieve these goals (para. 8). The first element is "careful acknowledgement, consideration and achievement of outcomes" (Illinois PBIS Network, 2008, para. 7). For example, this could be academic achievement or social competence. Students, family members, teachers, and employers value the outcomes. The second element is, "adoption and sustained use of research-validated practices and curricula that maximize achievement of student and teacher outcomes" (para. 7). The third critical element is to use a variety of data through all decision-making processes, whether it is with an individual student, a general or special education classroom, a whole building, or at home. The data includes academic grades, test scores, attendance, and discipline referrals. The fourth element is the "development of systems (e.g., processes, routines, working structures, administrative supports) that are needed to ensure consideration of valued outcomes; research validated practices, and data-based decision-making" (para. 7).

Figure 2 shows the four areas on which PBIS focuses: systems, data, practices, and outcomes. These areas ensure that PBIS "emphasizes the creation of systems that support the adoptions and durable implementation of evidence-based practices and procedures, and fit within ongoing school reform efforts" (Illinois PBIS Network, 2008, para. 5). All four elements are connected, however, three of them, systems, data, and practices, will hopefully lead to the fourth, outcomes. The outcomes are "academic and behavior targets that are endorsed and emphasized by students, families, and educators"

(Illinois PBIS Network, 2008, para. 5). Practices consist of the "curricula, instruction, interventions, and strategies that are evidence-based" (Illinois PBIS Network, 2008, para. 5). Data is the "information that is used to identify status, need for change, and effects of interventions" (Illinois PBIS Network, 2008, para. 5). Systems are the "supports that are needed to enable the accurate and durable implementation of the practices of PBS" (Illinois PBIS Network, 2008, para. 5).

Muller (2002) agreed with Epstein, Kutask, and Duchnowski (1998) that over the last few years there has been a great amount of attention focused on the amount of violence and crime that is continuing to grow within schools. "Due to increased attention to behavioral problems, states are taking more of an active role in addressing behavior through the development of statewide behavior initiatives" (Muller, 2002, p. 3). According to Muscott et al. (2004), "school discipline continues to be one of the greatest challenges in education as both educators and the public at large continue to identify problem behavior as one of the most persistent problems schools face" (p. 3). The Statewide Behavior Initiatives (SBIs), which were created due to the increasing concern with behavior in schools, originated from three trends within educational and science reform. Muller (2002) described the first trend as emanating from students' emotional and behavioral problems which "schools can no longer ignore the personal and interpersonal domains of students' lives" (p. 3). The second trend showed that SBIs are supported by literature, which proves that positive behavioral supports (PBIS) are effective if implemented correctly. The third trend evidenced is that, "there is increasing awareness that traditional social service delivery models are no longer able to meet the

needs of youth and families" (p. 3). Basically, the way social services had been

delivering services to children and families were not always fulfilling their needs.

      According to the Missouri Department of Elementary and Secondary Education

(MODESE, 2001a), "School districts and state Boards of Education take up 'zero toler-

ance' mantras to curb school violence and instill order in classrooms" (MODESE, 2001a,

p. 3). The idea of zero tolerance is sound, "more stringent disciplinary actions against

students who misbehave in or around school property" (MODESE, 2001a, p. 3); howev-

er, it becomes a problem with the Individuals with Disabilities Education Act of 1997

(IDEA '97). The "Individuals with Disabilities Education Act (IDEA) provides specific

rules that are designed to promote increased prosocial behaviors in children and discour-

age educators from simply removing children with disabilities from school" (MODESE,

2001b, p. 4). When it comes to IDEA '97, a zero tolerance approach has not been an ef-

fective system with either students with disabilities or students without disabilities, there-

fore needing a new approach. Positive Behavior Interventions and Support is not a sys-

tem only designed for students with disabilities. The report showed that, "of the nineteen

states that responded to the PBIS Center's follow-up survey, sixteen have addressed all

students, not just students with disabilities" (Muller, 2002, p. 4). Muller (2002) found

that it is extremely important to teach students appropriate behaviors so more effort can

be placed on academics rather than the discipline. Students cannot receive the teaching

attention they deserve if a classroom is disrupted due to disrespectful and inappropriate

student behavior. Learning suffers when teachers have to place their focus on managing

inappropriate classroom behavior rather than teaching academic content (Muller, 2002).

      Eber, Lewis-Palmer, and Pacchiano (2002) stated that:

PBIS is a process designed to create safer and more effective schools. This

systems approach is focused on building the capacity of schools to teach and

support positive behavior in all students by developing research-based school-

wide and classroom-specific discipline systems. (p. 1)

Positive Behavior Intervention and Support is a "general term that refers to the

application of positive behavioral interventions and systems to achieve socially important

behavior change" (MODESE, 2001b, p. 1). Sandomierski et al. (2007) confirmed that

PBIS is also "based on a problem-solving model and aims to prevent inappropriate

behavior through teaching and reinforcing appropriate behaviors" (p. 1). Very often

teachers and other school staff have the belief that all students know how to behave and

that all parents teach their children the same expected behaviors. This is not always the

scenario. Many teachers expect students to come to school with the knowledge to behave

exactly as they wish. The main purpose of this system is to teach the expected behaviors,

not to assume the students know what is expected. Eber et al. (2002) concluded, "PBIS is

not a prescribed program but, rather, provides systems for schools to design, implement,

and evaluate effective school-wide, classroom, and student specific discipline plans" (p.

1).

Positive Behavior Interventions and Support is also an important system because

it looks at the needs of all students, individually. Educators know that not all students

learn the same way; they should not assume that all students also behave and respond to

discipline in the same manner. According to Eber, Breen, Rose, Unizycki, and London

(2008), the PBIS wraparound process looks at individual students based on their needs

and wants. The wraparound is used for the 1% of the students with the highest need,

emotional or behavioral. Wraparound "includes specific engagement techniques to en-sure that the design of supports and interventions incorporate the voice and perspectives of the family, student, and teacher" (Eber et al., 2008, p. 16). Function-based individual-ized behavior intervention plans (BIP) have been used for special education purposes for exclusion or restrictive placements. These are similar to a student's academic plan, but are based on his or her behavior, providing goals. PBIS interventions can be implement-ed prior to these placements (Eber et al., 2008; Albin, Lucyshyn, Horner, & Flannery, 1996). According to Eber et al. (2008), PBIS wraps around individual students based on their needs and wants. Function-based individualized behavior intervention plans (BIP) have been used for special education purposes for exclusion or restrictive placements. PBIS strategies can also be implemented as interventions prior to resulting in these placements. For example, a student may be partnered with an adult within the school to check in and to check out with them to discuss his or her day with them. Students may also be put in groups with the social worker to work on certain behaviors that need to be addressed (Eber et al., 2008; Albin et al., 1996). PBIS "offers a range of interventions that are systematically applied to students based on their demonstrated level of need, and addresses the role of the environment as it applies to development and improvement of behavior problems" (Sandomierski et al., 2007, p. 1).

Another important reason it is essential to change the way schools view discipline and behavior is because of the number of teachers leaving the field of education. Fried-man (2001) defined burnout as "a work-related syndrome that stems from an individual's perception of a significant discrepancy between effort (input) and reward (output)" (p. 281). Students' behaviors will often stress a teacher, therefore causing burnout. Students

who realize their certain behaviors stress a teacher will actually continue this behavior over and over (Friedman, 2001; Cohen & Manion, 1981). According to Cregor (2008), "discipline issues also affect teacher attrition. In a 2005 national survey of teachers leaving the profession, 44% of teachers, and 39% of highly qualified teachers, cited student behavior as a reason for leaving" (p. 2). PBIS has been advanced as a way to ensure that a school's climate is improved to the point where teachers want to continue in their responsibility of educating children for their future.

Implementing PBIS is a time consuming and costly process. A district may not have the resources necessary to train staff at every school the first year of official implementation of PBIS. They may have to start by training staff at only a limited number of schools and add more over time. Another way to aid in the training of staff is to have a PBIS coach in each building. The coach can attend training or workshops and bring the information to the remaining staff. Schools can also enlist behavior consultants available to work with the PBIS coach or team to assist them in dealing with specific behavior issues. Teachers begin to rely on each other and work as a team (Stormont et al., 2008; Lewis & Newcomer, 2002). There is a text, which can assist during the early stages of PBIS implementation called the School-wide Positive Behavior Support: Implementers' Blueprint and Self-Assessment, and it "provides a user-friendly guide to enhance the efficiency and success of positive behavior support at a particular school or even at a large-scale expansion such as state- and district-wide implementation" (George & Martinez, 2007, p. 1). This guide discusses several features, which include a leadership team, coordination, funding, visibility, political support, training capacity, coaching capacity, demonstrations, and evaluation.

Rationale for the Positive Behavior Interventions and Support System

The numbers and types of office discipline referrals.

Putnam, Luiselli, Handler, and Jefferson (2003) stated that after rules, rewards, and consequences are clearly defined, office discipline referrals (ODR's) could be issued as a form of discipline. ODRs are written or filled out by the person, which can be any staff member of the school who witnessed the event. According to Luiselli et al. (2005), "a referral slip was completed for any student who did not adhere to the school rules, specifying the behavior and respective conditions (for example, inside the school, outside, or the bus)" (p. 186). Luiselli et al. (2005) stated there are six main behaviors that typically result in an ODR: fighting, threat or assault, classroom disruption, issues on the bus, defiance, and vandalism.

ODRs are used to assign students' consequences for unwanted behavior, but more importantly can be used as a valuable source of data for the schools. Irvin et al. (2006) stressed that "more specifically, school staffs can use information about office discipline referral matters to assess the status of school safety and behavioral climate and build a school wide behavior program based on the data" (p. 10). Irvin et al. (2006) also stated that, "ODR measures appear to be a valuable data source for both identifying school wide patterns of problem behaviors and for monitoring individual student interventions" (p. 10). According to these researchers (Irvin et al., 2006), there are many types and forms of ODR's used in school, however, for them to be useful depends on the information collected. Irvin et al. (2006) made the point that "many types of ODR-related information, such as student name, referring teacher, time of day, and nature/location of problem be-

havior, are potentially useful for facilitating decision making regarding school wide and/or individual student behavior" (p. 10).

Once the referrals are written and collected it is important to utilize the information appropriately and effectively. School Wide Information System (SWIS) is a "web-based computer application for entering, organizing, managing, and reporting ODR data of use in decision making by teachers, administrators, and other staff" (Irvin et al., 2006, p. 12). The ODR data from SWIS can be used in a variety of ways. One is to make discipline decisions within the school. The study school district uses this in every building. The PBIS team meets at least once a month to determine what areas need to be addressed. The PBIS team uses the data to make their recommendations. Another way the data from SWIS is used is for decision making for individual students. Once again the PBIS teams in the study district use this to determine which students need further individual interventions and for which students the interventions are being successful (Irvin et al., 2006; Nakasato, 2000; Putnam, Luiselli, & Handler, 2001; Taylor-Green & Kartub, 2000). A third way the information can be useful is to "report discipline data to the district, state, and/or federal levels; the final way is to aggregate and interpret ODR data across schools within and/or across districts and states" (p. 12). The final way, listed by Irvin et al. (2006), is to "aggregate and interpret ODR data across schools within and/or across districts and states" (p. 12). In the study school district the internal PBIS coaches meet once a month where this information is presented quarterly.

Within SWIS application, reports of the collected data are quickly generated. These reports can be either general or customized. There are five major or general reports: "(a) ODR per day per month for the whole school, (b) ODR per type of problem

behavior, (c) ODR per student, (d) ODR per location in the school, and (e) ODR per time of day" (Irvin et al., 2006, p. 12). These reports become very useful when making decisions for the school. In the study school district many of the PBIS teams will look at the data to determine where, when, and why major problems occur. The customized reports can be created where the person created the report can set the options as to what he or she wants it to contain. The team can then use data to create teachable moments, where the behavior is retaught or incentives are applied to improve that area.

The numbers and types of suspensions from schools.

Suspensions are often used as a form of consequence for problem behaviors as a last result when all other options, for example, in-school suspensions, after school detentions, lunch detentions, have been exhausted. There are two main types of suspensions: in-school suspension and out-of-school suspension.

In-school suspensions are often used as a "time out" to remove students demonstrating unacceptable behavior in the classroom. Behaviors may range from not completing homework or getting out of the seat to something more drastic, such as slapping another student. Gootman (1998) posed the question, "How can we modify traditional in-house suspension to be more active, supportive, and effective?" Gootman suggested that in-school suspension time be used as a teaching opportunity and therefore, "in the process, we can assist them in becoming more resilient to their daily pressures" (p. 39). To modify in-school suspension "a program needs to incorporate three protective factors that enhance resilience in students: a relationship with an adult who thinks they're worthwhile, sensitivity to their feelings, and a sense of power and control in their lives" (Gootman, 1998, p. 39). Gootman (1998) discovered that if in-school suspension is used

as a resource then it can serve the two main functions of immediate intervention and long-term prevention, thus more student success can occur.

In the first function, immediate intervention, to modify the behavior the mentor adult must first listen to the student. This step is important to build trust and to defuse the anger the student may bring to in-school suspension. Gootman (1998) stated, "Once the listening process defuses their anger, we can help the students feel powerful and in control of their lives" (p. 40). The next step is to use the problem-solving process. According to Gootman (1998), it is important for the students to come to the conclusion by themselves what exact behavior caused the in-school suspension. Then the student, along with the adult, can brainstorm possible solutions that he or she could have used or can use in the future. Gootman (1998) concluded the immediate intervention step of modifying in-school suspension as

> the beauty of immediate intervention is that responsibility is placed in the hands of students; they take ownership of the problem as well as of the solution. The modified in-house suspension can create hope and optimism in students who are typically discouraged. (p. 40)

The second function is long-term prevention. In this function the student has a long-term relationship with the mentor adult or supportive resource. According to Gootman (1998), the adult and student build a supportive relationship outside of in-school suspension. During this process "after students leave suspension, the supportive resource periodically touches base with them, checking to see how they're doing, encouraging them, and redirecting them if they steer off the path" (p. 40). If a new situation arises, the resource helps the student through the problem-solving process.

A second type of suspension is out-of-school suspension. According to Skiba and Sprague (2008), "suspension refers to the relatively short-term removal of students from school for a disciplinary infraction" (p. 38). Skiba and Sprague (2008) and Wald and Losen (2003) stated that zero-tolerance policies in the 1990s led to an increase in out-of-school suspensions. However, "in today's climate, principals seem to face a tough choice between keeping their school safe and ensuring that all students have continued educational opportunity" (p. 38). The big question according to Skiba and Sprague (2008) is "does the removal of troublesome students from school reduce disruption and improve school climate enough to offset the inherent risks to educational opportunity and school bonding?" (p. 38). Research cannot provide a positive answer to the question. Tobin, Sugai, and Colvin (1996) and Skiba and Sprague (2008) found that data actually show that removing students has a negative effect on student outcomes and the climate of the school. They added that, "students suspended in 6th grade are more likely to receive office referrals or suspensions by 8th grade than students who had not been suspended, prompting some researchers to conclude that suspension may act more as a reward than as a punishment for some students" (p. 39). Christle et al. (2004), Casella (2001), and Schiraldi and Ziedenberg (2001) also agreed with the research that suspending students does not foster a positive outcome.

Suspending students not only affects what occurs inside the school, but also outside. According to Dupper et al. (2009) and Ingersoll and LeBoeuf (1997), suspensions often lead to discipline problems outside of school, including dropping out of school. They further explained this is more problematic for African American and Latino students. In fact, "African American and Latino students are suspended from school at 2.3

times the rate of white students" (Dupper et al., 2009, p. 7). Skiba, Michael, and Nardo (2000) found that suspending students actually pushes them away from education and into the juvenile court system.

Student behavior in the schools.

Greene (2010), an associate professor in the Department of Psychiatry at Harvard Medical School, met with an assistant principal to discuss the abundance of office discipline referrals, detentions, and suspensions from the prior school year. Together, they wanted to develop a plan of action for the upcoming school year, as the data from the year before was unacceptable. The assistant principal was shocked to discover "that 75 percent of those disciplinary referrals, suspensions, and detentions were accounted for by only 20 students in my school" (p. 28).

When going through the problem-solving process to come up with a solution, Greene (2010) described the spectrum of misbehavior, or defined these inappropriate behaviors, as the "less objectionable end are behaviors such as whining, pouting, sulking, crying, and withdrawing" (p. 29). These behaviors could be addressed or simply ignored. Greene (2010) then described the more objectionable behaviors, which should "set the stage for a student to be referred into the school discipline program, such as screaming, swearing, hitting, spitting, biting, kicking, throwing, and destroying" (p. 29). These behaviors would receive an intervention but not necessarily suspension. The most extreme end of the spectrum would include "behaviors that are severely injurious to the student or others, such as head-banging, cutting, stabbing, and shooting" (Greene, 2010, p. 29). When determining the consequences, Greene (2010) suggested focusing on why and

when the student misbehaved rather than what the student did that was considered to be misbehavior.

According to Marzano and Marzano (2003), and Dunn and Baker (2002), 18% of students have special needs or underlying circumstances that require more intense interventions to cope with the behaviors. When looking at behaviors, Marzano and Marzano (2003) developed the following chart, which describes the categories of high-needs students and much of the behaviors demonstrated in schools, along with suggestions.

Student academic performance in the schools.

Academic performance and behaviors are often combined when it comes to success. According to Skiba and Sprague (2008), suspensions can affect dropout rates, academic quality, school climate, and standardized achievement tests. Davis and Jordan (1994), Skiba and Rausch (2006), and Skiba and Sprague (2008) found that research shows that, "schools with higher suspension and expulsion rates have lower outcomes on standardized achievement tests, regardless of economic level or student demographics" (p. 39). It is apparent through this research that it is crucial for referrals, detentions, and suspensions to be minimized in order for all students to experience success in school.

In a study conducted by Lassen et al. (2006), multiple schools in a low income, inner-city area were observed over a three-year period. During this period, PBIS was implemented. The purpose of the study was to analyze the effect of PBIS on office discipline referrals, suspensions, and academic performance. In the areas of referrals and suspensions, there was a significant reduction. The study also demonstrated that referrals and suspensions have an effect on academic performance due to the fact that scores on

standardized tests improved during this period. According to Lassen et al. (2006), "instructional strategies, student motivation, and student test-taking skills certainly all play a role in academic outcomes" (p. 710). However, over the three-year period when PBIS was put in place, standardized test scores in math increased significantly.

In a similar study, Luiselli et al. (2005), selected an urban community with an elementary school consisting of kindergarten through fifth grades with a range of 590 to 666 students. It was concluded that office discipline referrals and suspensions affect academic achievement. In this particular study, reading comprehension scores increased by 18% and math by 25%. Luiselli et al. (2005) ended by saying, "our results suggest that this intervention approach can benefit students' academic performance" (p. 192).

PBIS has also been aligned with RTI, putting each of the three tier charts side by side. According to McIntosh, Chard, Boland, and Horner (2006) and Lewis and Sugai (1999), combining behavior and academic systems together to create a three-tier model promotes a school-wide system of interventions and resources, which provides students with a foundation for success. McIntosh et al. (2006) said that combining these models has a basis of three principles: "(a) providing all students with universal interventions, (b) screening students to determine needed services, and (c) delivering a continuum of services matched to the level of support indicated by screening and assessment" (p. 147).

Implementation of the Positive Behavior Interventions and Support System

One publication, Effective Practices (2000), promoted five main steps involved in implementing PBIS in a school, which are forming a team; establishing need, priorities, and commitment; drafting a mission statement; developing working structures, and developing maintenance structures. The first step is forming a team of teachers and other

educators from within one building. It is important to have a team at each building and to have an administrator involved, or his or her support. According to Stormont et al. (2008), "ideally, the leadership team is made up of representatives of the state/district/program" (p. 19). The team also must consist of other staff members "who know and understand the team purpose and its progression. This team will operate as the gatekeeper for more intensive behavioral interventions and supports" (MODESE, 2001a, p. 1). The team must meet at least once a month, and communicate pertinent information with the rest of the staff. At this monthly meeting, the PBIS team examines the discipline data to determine what goals should be set to improve the data. They also look at the discipline data from individual students to determine who might meet the tier two or three criteria and who needs further individual interventions (Simonsen et al., 2008). Finally, the team will discuss upcoming celebrations to reward positive behavior.

The second step in implementing PBIS is to establish need, priorities, and commitment.   The PBIS team "conducts a needs assessment, analyzes the assessment data, and generates an action plan that includes any needed staff development" (MODESE, 2001a, p. 2). The PBIS team is also in charge of handling regular staff training on different strategies and sharing information with any necessary community members, specifically school board members, parents, and other interested parties. Many states offer local training. According to Simonsen et al. (2008), "typically, school teams spend a year attending training events and planning for implementation; then they implement the planned activities during the second year" (p. 35).

The third step is to develop a mission statement, which is "actually a key component to effective change" (MODESE, 2001a, p. 2). The mission statement can be

used later as a tool for refocusing the school community of the school or district's goals. In the mission statement, there should be both behavioral and academic goals. This can further be used as a tool when making decisions.

The fourth step in implementing PBIS in a school is to develop working structures. An action plan must be developed based on the data and needs assessment. "Developing an action plan involves describing staff responsibilities, securing staff commitment, and detailing activities, resources, and schedules for achieving the school's behavioral support needs" (MODESE, 2001a, p. 2). The action plan gives the direction on where the school or district is going with their decisions. Everyone within the school community must understand and agree upon the plan. Within the plan, rules must be clearly defined, and there should be no more than five rules. These rules are often called expectations and consist of be safe, be responsible, and be respectful. The publication Effective Practices (MODESE, 2001a) pointed to their finding that many "adults dislike convoluted regulations and so do young people" (p. 4). When creating the rules they should be clear, short, and focus on the positive. For example, instead of saying, "don't run in the hallway" it should say, "walk in the hallway." The three expectations should then be displayed in every setting of the school; classroom, office, hallway, library, restroom, cafeteria, etc. At each location under each expectation should be a list of specific behaviors that should be seen (Simonsen et al., 2008; Safran & Oswald, 2003).

The fifth and final step in implementing PBIS is developing maintenance structures, which will set in place a policy to help new, incoming students with PBIS. New students have to be considered when implementing PBIS. The maintenance structure should incorporate the occurrence of new students and how best to teach them when they

enter the school district. Within the PBIS plan, there needs to be a system of how students are going to be rewarded for the expected behaviors. One idea is a school that is based on a "money" system. Some schools name their "money" after the mascot or the principal. Students earn this money by showing approved behavior and can use it to shop at the school store (MODESE, 2001a). Hosting a quarterly celebration is another way to reward students who have no referrals, perfect attendance, etc. for a particular quarter. Students must be praised for remembering the rules and exhibiting the expected behaviors that were taught (Stormont et al., 2008). The team will also "monitor office referrals by grade, teacher, gender, location, student, and type of problem behavior on a monthly basis" (MODESE, 2001a, p. 4). Throughout the monitoring process, they may find that a class, a group of students, or an individual needs more attention and a review of the expected behaviors. In the end, it is an on-going process to teach the necessary skills.

Teacher attitudes and perceptions of PBIS.

Lindsey (2008) from the University of Illinois at Urbana-Champaign conducted a study using innovations diffusion to PBIS to determine whether or not PBIS is accepted and used. Lindsey (2008) and Rogers (2003) summarized innovations diffusion as a process of looking at new initiatives to see how the customers of clients view it. They stated that there are five characteristics that play an important role in this process: relative advantage, compatibility, complexity, trial-ability, and observe-ability. The first characteristic, relative advantage, "refers to the extent to which an idea is viewed as better than what is currently being used" (Lindsey, 2008, p. 5). The researchers (Lindsey, 2008; Rogers, 2003) described the next characteristic, compatibility, as to how it is viewed in relation to current norms, values, beliefs, or experiences. Complexity, the third characteristic, is the

degree of difficulty linked with a new idea. The fourth characteristic, trial ability, was

described by Lindsey (2008) who stated that it "is a term coined to refer to how easily a

new idea can be piloted on a small scale to determine whether it would be beneficial to

adopt on a larger basis" (p. 5). The final characteristic, observe-ability, refers to how ob-

vious the benefits are to the potential uses for the new initiative (Lindsey, 2008; Rogers,

2003).

Lindsey (2008) used these five characteristics in the study through the process of

innovations diffusion to determine how PBIS is perceived. Lindsey studied four elemen-

tary schools, which were implementing PBIS. The schools are identified as school A, B,

C, and D.

Table 1

School Demographics

	School A	School B	School C	School D	District
Total Enrollment	326	400	322	637	6752
White	51	57	59	63	63
African-American	48	42	40	36	36
Hispanic	<1	.01	<1	<1	<1
Asian/Pacific Islander	<1	<1	<1	<1	<1
Native American	0	<1	<1	<1	<1
Low-income	74	60	49	49	42
Limited English Proficient	<1	<1	0	0	<1
Chronic Truancy	6	2	3	3	8
Mobility	40	29	20	20	28
Attendance	93	92	94	94	91
Students that met or exceeded state learning standards	46	50	61	55	56

Source: Lindsey, B. (2008). Looking at Positive Behavior Interventions and Supports Through the Lens of Innovations Diffusion (p. 6).

Within these four schools, Lindsey (2008) interviewed 22 participants. The participants consisted of seven teachers, four principals, four social workers, four regional and state PBIS consultants, two central office administrators, and one district PBIS coordinator. The results were summarized under each of the five characteristics of innovations diffusion. Under compatibility Lindsey (2008) discovered that:

each of the 22 participants expressed agreement that the values and beliefs associated with PBIS fit well with their educational background, teaching philosophies, and vision of what schools should be. The PBIS consultant was quoted as saying "the minute I saw the information of PBIS, I was sold. It is what I think schools ought to be doing, where you focus on the positive." (p. 8)

Under the next characteristics, observe-ability, Lindsey (2008) discovered that 95% of the participants said that analyzing office discipline referral data was an effective way to determine whether or not the school was experiencing success with PBIS. The social worker from school D said, "I like being able to look at the data and see the progress that we make from year to year. When you have that data, you can really see wow, this year our referrals are down" (p. 9). Under relative advantage, 80% of the participants perceived PBIS as "an improvement over approaches they had used previously" (Lindsey, 2008, p. 9). The district administrator from Lindsey's study district stated that:

before we started PBIS, most of our schools put kids in in-school suspension or put them out of school if they behaved inappropriately. Our district has come a long way in bringing about a culture of understanding that we have to nurture children and teach them what is expected at school. (p. 10)

Complexity, the next characteristic, was evident when the researcher found that 80% of the participants believed that the behavior management concepts within PBIS were too difficult and complex to implement as a whole school. One teacher from school A noted that, "we need more consistency amongst teachers, which is a very hard thing to approach" (Lindsey, 2008, p. 10). Lindsey found that with the final characteristic, trialability, 90% of the participants believed that the universal level must be fully implemented before an attempt was made to implement the secondary level, meaning a series of steps must be taken to be successful. A PBIS consultant made the following statement:

> It is not easy to devote the time to do PBIS. You have to set up a data system and revise your office discipline referral form. You have to get everybody on the same page with definitions of behavior. You have to get someone to enter data, look at it, come up with interventions, actually go out and implement them, and then look at it again. This isn't an easy process to begin because there are many things that must be done before you even get started. (p. 12)

Lindsey (2008) concluded, "PBIS is an educational innovation that shows great promise for increasing students' socially appropriate behaviors at school" (p. 13). The researcher concluded that the process of innovation diffusion explains the strengths and weaknesses of PBIS and why some schools have experienced success and others have had difficulties.

Parent attitudes and perceptions towards PBIS.

Several researchers found four major barriers to engaging families with their schools (Muscott et al., 2008; Nogera, 1999; Esptein & Sanders, 2006). These barriers include "(a) one-side power relationships between schools and families, (b) inadequate teacher preparation regarding establishing and sustaining relationships with parents; (c)

limited time and material resources for engaging parents; and (d) pressure from under resourced national and state accountability measures" (p. 7-8). Most parents know they need to be a part of their child's education, and they want to be involved; however, they sometimes are unable either due to lack of understanding, lack of courage, or because of circumstances involving their work and personal life.

Muscott et al. (2008) identified a variety of strategies or supports for schools to help parents become engaged. The first strategy involved enhancing parents' basic skills. The second was to improve communication, both from school to home and home to school. The third strategy was to create parent volunteer opportunities. Muscott et al.'s (2008) fourth strategy was to "teach families how to support students' academic progress by exposing them to new academic and behavior content and skills" (p. 9). The fifth strategy was to have families involved in the decision making process of the school. Finally, the school must utilize resources within the community (Muscott et al., 2008).

Muscott et al. (2008) determined that a major reason for disengagement of parents from schools where their children are in attendance may be due to their own history involving an unsatisfactory school experience or their own school failure. The parent and the child may not have developed an effective working relationship, parents may be dealing with other problems within their lives, or they may have had a previously unpleasant, unsatisfying experience when becoming involved in the schools. With these families more PBIS interventions may be necessary. It may take a variety of strategies with more than one attempt. There are families who experience great success when they begin to understand PBIS and also implement it at home. For example, Muscott et al. (2008) quoted a parent saying "before getting involved with the PBIS program, I found myself

yelling, fighting and having no patience with my two daughters…one big improvement is that I am not always yelling and losing my patience and we have more bonding times together" (p. 10). Muscott et al. (2008) along with Keenan (2004) found "schools that operate with an approach that is expanded, proactive, and organized along a continuum of intensifying parent support and engagement, however, are more likely to experience mutually beneficial outcomes associated with family-school partnerships" (p. 10).

How the PBIS team process operates.

The team is an essential component of the PBIS system. Scott et al. (2007) found in their research that even though a system like PBIS is in place, and operating successfully, "some students continue to experience failure. Recognizing this, we (educators) must be prepared to address the needs of these students, through more individualized and intensive levels of behavioral support" (para. 3). It is because of these students that a team may need to be developed to focus on an individual student, which may consist of PBIS facilitator, teachers, administrators, parents, family members, community members, and the student. The team will develop a plan with individual students who receive a great amount of office discipline referrals. Kincaid and Dunlap (2007) agreed that the team is important for "those students whose behavior problems have been occurring for some time, are evident in multiple settings, and present substantial obstacles to the student's opportunities for learning, friendship, and quality of life" (para. 1).

PBIS has a level system in handling referrals. A student who receives zero to three office discipline referrals is assigned to the universal or green level. These students are obviously following all the expected behaviors. Students with three to five disciplinary office referrals are assigned to the yellow or secondary level. PBIS is implemented

at this level. Students at this secondary or yellow level are taught the necessary expected behaviors again and are open to additional interventions in order to avoid reaching the red level. The red or tertiary level is the last level. At this level students have received more than five office disciplinary referrals. Students at this level are reminded of their behavior plan and presented with individualized interventions, which are developed by the PBIS team. (Stormont et al., 2008; Horner & Sugai, 2005; Lewis, Newcomer, Turssell, & Richter, 2006; Sugai, Hormer, Lewis, & Cheney, 2002).

The first step, "initial conversations, is where families and teachers have an opportunity to share their perspectives about their role with the student, strengths of team members (including the student) and needs they want the team to address" (Eber, 2001, p. 6). The plan has to meet the needs of the students; if not, it will not be something they want to follow, and will not be successful. When a team is formed for a particular student, many people will be involved. It is ideal that the student's teacher, parents, other school staff members, and any other influential people involved in the student's life are members of the team. Creating a team is a "tool that helps create the ownership and clarity about behavior change that is needed to improve outcomes for these students, and their families and teachers" (Eber, 2001, p. 6).

Having teams in place for secondary, and/or tertiary level students will lead to an effective PBIS program. Not only will the program be successful, but the students and teachers will also be successful. With expected behaviors being taught and reinforced, there should be fewer disruptions this will lead to more learning taking place in the classroom.

How PBIS interventions are accomplished.

Todd, Campbell, Meyer, and Horner (2008) and Nelson and Carr (1996) advanced their position that one of the key parts of PBIS is to identify targeted behaviors and develop an intervention to correct that behavior. "Targeted interventions may include strategies such as social skills training, check in-check out systems, First Step to Success, peer mentors, or homework clubs" (Todd et al., 2008, p. 1). Other interventions can and do exist. The idea is that the intervention is individualized for each student based on the targeted behavior that needs to be corrected. "Targeted interventions are designed to provide efficient behavior support for students at risk of more intense problem behavior. Three elements have been identified as key to effective targeted interventions: organizational systems, interventions practices, and data use" (Todd et al., 2008, p. 1).

According to Todd et al. (2008), Chafouleas, Riley-Tillman, and McDougal (2002), and Crone, Horner, and Hawken (2003), one of the most widely used interventions is the check in-check out (CICO) approach. Each student who is identified is given an adult who checks in with him or her at the beginning of the day, and then checks out with him or her at the end of the day to help improve a particular behavior. A student's CICO adult does not necessarily have to be a teacher in the building. It is important to utilize all adults in the building for this process. The student should feel comfortable and able to talk to the adult that he or she is assigned to. Each student is given a form similar to a report card which is based on behaviors rather than academic grades. The adult then gives the student feedback on the report card throughout the day. The adult who oversees the student uses this form to lead discussions regarding areas that need to improve (Todd et al., 2008). According to Todd et al. (2008):

depending on the structure of the behavior report card, it can provide (a) structure

and prompts that students need through the day, (b) adult written feedback

through the day, (c) visual reminders of personal goals for the day, (d) data

collection, and (e) communication between adults at school and home. (p. 2)

In the state of Illinois, where this study was conducted, nearly 200 schools have

received training in a PBIS project, and 185 are currently participating. Eber et al. (2002)

noted that there are 14 schools (who) voluntarily completed school profiles from a group

of 30 schools selected by regional coordinators as schools representing a cross-section of

PBIS schools in their region. The 14 schools included nine elementary, four middle, and

one high school. Seven schools were urban, two were suburban, and four schools were

rural. Almost half (48.4%) of the schools' students received free and reduced lunches,

and about half (49.2%) of the schools' students were of minority status (p. 3).

The schools were asked to report the number and type of interventions

implemented along the continuum of support. Within the 14 schools, 49 interventions

were reported. Eighty to ninety percent of the students fell into the 33 universal

strategies within the green level. There were 5-15% in the yellow level, which had 11

targeted group strategies. The red level consisting of between 1 and 5% of the students

utilized five targeted individual strategies.

The schools were also asked to report the level of impact from the interventions.

The survey administered consisted of ratings using a six-point Likert type scale. Staff for

participation ranked 46 of the 49 interventions. Twenty-seven of the 46 evidenced

participation levels of 90-100%; 10 interventions recorded 80-90% participation; five

registered 70-80%; one showed 60-70%; and three interventions showed less than 50%

staff participation (Eber et al., 2002; Eber, Rolf, Schreiber, 1996; Sugai & Horner, 1999; Sugai, Sprague, Horner, & Walker, 2000).

The schools were also asked to report the level of impact on student behaviors from the interventions. The survey was done with a six-point Likert Scale. The results showed that 14% of the interventions were judged to have a very high impact, 20% had a high impact, 11% had a medium impact, 2% had a low impact, 0% had a very low impact, and only 1% had an impact response of none. Fifty percent of the interventions were rated very high or high in level of impact (Eber et al., 2002; Eber et al., 1996; Sugai & Horner, 1999; Sugai et al., 2000).

The number of office discipline referrals decreased from .84 to .68 per 100 students per day. The number of students assigned to in-school suspension decreased, after implementation of PBIS, from .42 to .28 per 100 students each day. Additionally, the number of students subject to out-of-school suspension decreased from .26 to .18 per 100 students each day (Eber et al., 2002; Eber et al., 1996; Sugai & Horner, 1999; Sugai et al., 2000).

The middle schools reported a 71% reduction in the number of students receiving five or more in-school suspensions, and 10 or more in-school suspensions and a 33% reduction in the number of students receiving out of school suspension. The urban elementary schools reported a reduction of 47% of out of school suspensions (Eber et al., 2002; Eber et al., 1996; Sugai & Horner, 1999; Sugai et al., 2000).

There are currently more than 7,000 schools nationwide that implement PBIS. According to Cregor (2008), schools that effectively implement PBIS see the following results:

1. reduced office referral rates of up to 50% per year;

2. improved attendance and school engagement;

3. improved academic achievement;

4. reduced dropout rates;

5. reduced delinquency in later years;

6. improved school atmosphere; and

7. reduced referrals to special education (p. 2).

Measuring the Success of PBIS

Since many schools across the country are now implementing PBIS, it is

extremely important to use a variety of methods to measure the effectiveness of the

system within those schools. If the overall consistency of implementation and the

effectiveness of PBIS is going to be accurately determined, Cohen et al. (2007)

acknowledged possible problems associated with the increasing number of schools which

are using PBIS in order to develop coherence among how calculations are completed for

discipline referral rates, suspension rates, and reports concerning staff satisfaction with

the system.

Currently, there is only one widely used tool that measures how well PBIS is

implemented in a school. This is known as the School-Wide Evaluation Tool (SET).

This tool consists of 28 items that are collected by observations and interview questions

(Cohen et al., 2007; Horner et al., 2004). The 28 items are divided into "seven subscales:

Expectations Defined, Behavioral Expectations Taught, On-Going System for Rewarding

Behavioral Expectations, System for Responding to Behavioral Violations, Monitoring

and Decision-Making, Management, and District-Level Support" (Cohen et al., 2007, p.

204). The person who conducts the SET is normally a person not in the building. In

most cases he or she is an administrator from the district's central office. He or she

requires an average of six to eight hours of training. It also takes an average of four to six

hours to score the SET for each individual building. The SET questions and observations

are conducted in the specific school and the teachers, students, administrators, and other

support staff are used (Cohen et al., 2007; Horner et al., 2004).

Schools should be able to conduct their own assessment of PBIS implementation

and should be able to conduct their own assessment of PBIS implementation and

effectiveness in order to determine strengths and needs when it becomes difficult to enlist

an outside person to conduct an on-site assessment. There are more and more schools

implementing PBIS, all needing to be assessed. This assessment is known as the School-

wide Benchmarks of Quality (BoQ). The BoQ is a self-rating scale that measures the

schools' strengths and weaknesses (Cohen et al., 2007; Horner et al., 2004). Cohen et al.

(2007) made a point for the BoQ as an on-going self-assessment tool:

> The BoQ was designed in three stages described by McKennel (1974): qualitative
>
> pilot (development of instrument content), scale development pilot (development
>
> of the scale structure), and main survey (development of a context for the
>
> instrument within a conceptual network or the reliability and validity of the
>
> instrument). (p. 204).

According to Cohen et al. (2007) and Horner et al. (2004), the BoQ is a rating

scale consisting of 53 items. The items are separated into 10 sub-scales, which include

PBIS team, faculty commitment, effective discipline procedures, data entry, expectations

and rules, reward system, lesson plans, implementation plans, crisis plans, and

evaluation. "This instrument was developed as a self-evaluation tool to allow school teams to review their progress toward implementing critical elements of PBIS that are presented during training" (Cohen et al., 2007, p. 204). Basically, the BoQ allows the individual school's PBIS team to assess its progress and identify areas that are working, and other areas that may need more work.

According to Kincaid, Childs, Blase, and Wallace (2007) and Cohen et al. (2005), there are four different items to evaluate after PBIS has been implemented for at least two years. The four items are as follows: evaluate and revised training curricula on a yearly basis; measure the fidelity of implementation with the School-Wide Evaluation Tool; gather academic and behavior outcome data from participating schools; and identify critical barriers and facilitators to implementation of PBIS at the school level.

Dealing with challenges presented by the implementation of PBIS

Mitchem and Richards (2003) and Howley (1991) found that one problem with implementing PBIS in a school is funding. Many rural schools are having difficulties enough implementing the federally mandated changes, much less PBIS. Even when the funds are not available, the need for PBIS still exists. Many school districts must develop creative ways to fund the PBIS efforts. Another problem or concern with implementation of PBIS lies with the belief that, "year after year, their (teacher) staff development has amounted to little more than a disparate set of adult learning activities with few demonstrable results other than participants' mounting frustration" (Mitchem & Richards, 2003, p. 102). The staff development is more focused on the current mandates that could and often do change within the following years. Mitchem and Richards (2003) supported the earlier findings of Guskey and Sparks (1996) that most of the staff development

activities taking place in schools were without real purpose, not based on identified

learning outcomes, and certainly not resulting from the expressed needs of teachers.

Even more dramatic was their finding that the majority of staff development offerings

were based only on addressing the perceived need of educational institutions to provide a

dramatic strategy or program, which would ensure higher achievement scores on

standardized tests.

Engagement of families is crucial to effective implementation of PBIS in schools,

which is not easily accomplished. Several researchers (Public Agenda, 1999) verified,

through a national survey of parents and public school teachers, a commonly held belief

that most parents believed their children's teachers were accessible to them and that they

cared about their children. Thus, parents were more likely to compliment than criticize

their children's teachers. However, when parents were placed in a decision-making

situation involving their children they felt very uncomfortable particularly when the

situation involved a leadership role. The survey also found that most teachers were

uncomfortable with parents being in leadership roles within their schools (Muscott et al.,

2008).

Muscott et al. (2008), Boulter (2004), Public Agenda (1999), and Sheldon (2003)

agreed that there were five major barriers preventing families from involvement in

schools. One recognizable barrier existed in the lack of comfort many parents experience

if they have a concern to voice in the school. The power then resides in the school by

default, since many parents will not come forth due to fear of being regarded as negative.

Some call this a power struggle and ask that schools and parents strive to work together

as one unit. Another important, but often unrecognized, barrier lies with the

unpreparedness of many teachers to establish and maintain relationships with the parents of their students. Muscott et al. (2008) points out that "relationship building is enhanced when schools use family-centered practices that respect the uniqueness and personal circumstances of all families, including those who have children with disabilities" (p. 9). Time and materials pose another barrier to a family-school connection since everyone is busy and scheduling mutually available meeting times can be difficult if not impossible. Another barrier arises from the emphasis in the nation on accountability. Because schools are held accountable for student performance on standardized testing the curriculum has been focused on covering what may be on these tests. Frequently, schoolteachers and administrators are singularly focused on meeting educational standards and this can interfere with taking the time to establish relationships. The researchers emphasized the importance of understanding that many teachers and administrators in the schools do not originate from the same backgrounds as the families of the children in their classrooms. Finally, Muscott et al. (2008) indicated that "teachers' and administrators' attitudes about parent engagement are often shaped by the cultural filter of white, middle-class values, assumptions, and experiences and do not align with those of some families and the neighborhood" (p. 8). When these five barriers are not successfully addressed within a school, it is unlikely that families will feel connected and therefore not support decisions that are made.

Interventions and Support System

Filter et al. (2007) and, Hawken and Horner (2003) together found that one popular secondary intervention is the Check in/Check out (CICO) program. According to Filter et al. (2007), "the CICO program… is a research-based intervention that addresses the

secondary level of support for students who do not respond to primary prevention, but do not demonstrate dangerous patterns of problem behavior" (p. 70). They describe the four goals of the CICO program as focused on prompting feedback from adults for proper behavior, increased feedback from the adults in a school about behavior, making structure a strong focus of each student's school day, and involving parents fully in understanding their children's behavior. Filter et al. (2007) and Horner, Surgai, Todd, and Lewis-Palmer (2005), described the CICO program as designed for students to individually begin their day by checking in with an adult and ending their day by checking out with that adult. The purpose for checking in and out is to assist the student and the adult to build a relationship that promotes conversation. Both should be able to discuss the days' activities at the check in; then, at the check out, discuss how the day went. The students in this program also have a checklist for either the teacher or the students to complete throughout the day, which serves as a continuous monitor for student behaviors. Along with the CICO program, Todd et al. (2008), Crone et al. (2003), and Hawken and Horner (2003) described social skills training, peer mentors, and homework clubs as interventions for those students who may need additional resources other than those at the primary level.

Summary of Research

This review of the literature intended to show that traditional methods of educating students both academically and behaviorally may not be as effective as in past years. More and more young people in schools are entering into disciplinary situations resulting in suspensions and even expulsion from school, and possibly experiencing trouble with the law. A behavior management program titled PBIS system has evolved as a different set of strategies based on focusing both educators and students on teaching expected be-

haviors which may reduce office discipline referrals and school suspension thus keeping students in class to receive the education they deserve.

The literature review constitutes an important part of this study, which was conducted to answer the questions "Does PBIS effectively reduce the number of office discipline referrals and the severity of behavior within these referrals?" and "How has PBIS been effective in promoting a positive learning environment for students and teachers and increasing scores on standardized tests?" This study was also intended to show the consistency of the implementation of PBIS, reduction of office discipline referrals and suspensions, its impact on teacher attitudes and morale, parent and teacher perceptions of the effects of PBIS, and the challenges of implementing PBIS, all of which were reviewed in Chapter 2. The methodology of this study is described in the next section, Chapter 3 - Methodology.

Chapter 3 – Methodology

Research Overview

The purpose of this study was to determine the effectiveness of the Positive

Behavior Interventions System (PBIS) in one school district. It focused on determining

the fidelity of and consistency in implementation of PBIS in the school district, the ef-

fects of PBIS in reducing the numbers and seriousness of office referrals for discipline

and suspensions from school, student academic achievement based on the results of

standardized testing, teacher attitudes toward implementation of PBIS, teacher morale

since inception of PBIS, and parent perceptions of the effectiveness of PBIS in promoting

positive student behavior.

Rationale for the Study

The rationale for this study developed when the researcher was unable to find

within her school system a formal evaluation of the effectiveness of the Positive Behavior

Interventions Support (PBIS) system in reducing the number of office discipline referrals

and the seriousness of office discipline referrals. She could not locate quantitative data

showing the numbers of office discipline referrals, the seriousness of these referrals, and

changes in student achievement measured by standardized testing. Finally, there was no

evidence of qualitative data addressing the perceptions of staff members regarding the

effects of PBIS in promoting a positive learning environment.

Research Hypotheses

Null hypothesis (Ho1) – There is not a measurable difference in the number of office discipline referrals during the four years since implementation of the Positive Behavior Interventions and Support System (PBIS) and the school year preceding implementation.

Null hypothesis (Ho2) – There is not a measurable difference in the type of office discipline referrals during the four years since implementation of the Positive Behavior Interventions and Support System (PBIS) and the school year preceding implementation.

Null hypothesis (Ho3) – There is not a measurable difference in student academic achievement based on standardized testing during the four years since implementation of the Positive Behavior Interventions and Support System (PBIS) and the school year preceding implementation.

Null hypothesis (Ho4) – Teachers within the study school district do not believe, as measured through a teacher survey, that implementation of the Positive Behavior Interventions and Support System (PBIS) is positively affecting school climate.

Research Questions

The following questions were addressed in this study:

1.   How has implementation of PBIS been effective in reducing the numbers of office discipline referrals and the seriousness of behavior within these referrals?

2.   How has implementation of PBIS been effective in reducing the number of student suspensions within the school district?

3.   How can faithfulness and consistency of implementation of PBIS in the

district be described?

4.   How can teacher attitudes towards the implementation of the PBIS pro

gram be described?

5.   How do teachers in different grade levels perceive the effectiveness of the

PBIS program within the district?

6.   How has teacher morale been affected through implementation of the

PBIS program?

7.   How has implementation of the PBIS program affected parent perceptions

of student behavior within the school district?

8.   What do teachers and parents perceive as major successes of the PBIS

program?

9.   What do teachers and parents perceive as the major challenges associated

with the PBIS program?

The study employed both quantitative and qualitative research methods to collect

research data. The quantitative research design involved tallying, recording, and compar-

ing the numbers and types of office discipline referrals and state standardized test scores

from one year to another. Qualitative data were collected through written surveys, inter-

views, and observations of participants in the study. Surveys were conducted with all

teachers and principals within the district followed by a written survey of parents from

one of the school buildings within the district. Observations were conducted within one

school building of teachers as they practiced the principles within PBIS. Those teachers

observed were also interviewed.

Participants and Setting

During the 2010-2011 school year the study school district's population reached 4,237 students within 10 schools. All schools qualified for federal Title 1 services for remedial instructions and one school was specifically designated for full federal assistance for improvement. School population was 88.4% African-American, 10.0% Caucasian, .9% Hispanic, and .6% all other races. Of the students 90.2% of them were classified as low-income and 20% of students received special education services. The district's attendance rate was 90.3% with 23.2% of the district's families with school-age children were classified as mobile, meaning they move from home to home, school to school, or district to district. The rate of chronic truancy was 7% and the high school dropout rate was 2.4%. There was a 20.1 to 1 student to teacher ratio at the elementary level and 17.3 to 1 student to teacher ratio at the secondary level. There was one administrator for every 164 students. The following table, Table 2, shows a trend of the demographics of the study district for the year prior to implementation of PBIS and years following.

Table 2

Demographics Before and After PBIS Implementation

	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Total Enrollment	4,326	4,168	4,233	4,359	4,237
White (%)	9.6	8.9	11.8	9.8	10.0
Black (%)	89.5	90.3	86.8	88.7	88.4
Hispanic (%)	0.8	0.6	0.9	0.9	0.9
Asian Pacific Islander (%)	0.1	01	0.1	0.1	0.0
Native Indian (%)	0.0	0.0	0.0	0.0	0.0
Two or More Races (%)	0.0	0.0	0.3	0.5	0.6
Low-Income (%)	86.6	79.8	82.7	89.7	90.2

Source: Illinois School Report Card

Three hundred sixty students within the same elementary school participated in the observation part of this study during the 2010-2011 school year. In this school, 83% of students qualified for free or reduced lunch. Furthermore, 87% were African-Americans, 11% were Caucasian, 1% were Hispanic, and .1% were Asian. The elementary school consisted of grades 1-8 and two special education classrooms. In addition to the students' participation, their parents were also surveyed. In this building teachers were surveyed, observed, and interviewed.

PBIS is a mandatory program in all school district buildings. It has recently been implemented at the high school level but has been fully implemented at the elementary level for four years. The program consists of one external PBIS coach located at the Board of Education building and one internal PBIS coach in each school building. The internal coaches are volunteers. The researcher has been the internal coach in her building for the last three years.

Procedures

The researcher surveyed teachers and principals in all buildings within the school district to determine their understanding of the PBIS program and their perceptions of its effectiveness in reducing the amount and seriousness of office discipline referrals. Each survey statement was followed by an open-ended question asking the respondent to provide evidence of understanding and how a particular component of PBIS was helpful to the school (see Appendices A and B). The researcher interviewed teachers within one building were also interviewed to determine their understanding of the PBIS program and their perceptions of its effectiveness (see Appendix C). The researcher observed both students and teachers for an hour in their classroom and in the cafeteria in one building as

they operated within the PBIS program (see Appendix D). The researcher also surveyed

the parents of students involved in the PBIS program within one school to determine their

understanding of the program and their perceptions of its effectiveness in improving

school climate (see Appendix E).

The researcher used data beginning with the inception of PBIS in the elementary

schools for four years and the high school for one year prior to the beginning of the study.

All disciplinary referrals were totaled, then categorized and numbered by type. Thus, the

researcher focused on discipline referral data from the 2007-2008 through the 2010-2011

school year. Office discipline referral data from the 2006-2007 school year were gath-

ered to provide a base for comparing the change in numbers and seriousness of office

discipline referrals with each year when the PBIS program was implemented. Statistical

significance of change was determined for each year since inception of PBIS with the

base year using a two-sample t-test.

Development of the Instrument

Teacher and parent surveys contained statements such as, "expected student

behaviors are taught directly" and "expected student behaviors are rewarded regularly,"

asking for the respondent to indicate their perceptions of agreement with the concept of

PBIS causing a positive school environment using a Likert scale: strongly disagree –

disagree – neither agree nor disagree – agree – strongly agree (See Appendices A and E).

Each survey statement was followed by an open-ended question asking for the teacher or

parent to explain their understanding of the statement and the reason(s) for their ranking.

Survey results were characterized as positive (strongly agree and agree) or negative

(strongly disagree and disagree) based on the Likert scale. Surveys of teachers and

principals were separated from surveys for parents. All survey results were statistically reported based on the frequencies to determine significance of the ratings relative to acceptance of the respective hypotheses. All responses to the open-ended questions contained on the teacher and parent surveys were recorded, classified, and reported by the researcher as part of the study.

Quantitative Measures

The researcher totaled number of office discipline referrals and then categorized according to seriousness of behavior described in the referral by using the district handbook. This was done first for the base year 2006-2007 before the implementation of PBIS in the elementary schools and then for each of the succeeding four years. On the high school level, the base year was 2009-2010 before the implementation of PBIS in the high school and then during the 2010-2011 school year. Prior to the implementation of the PBIS program, the study district used a computer-based Microsoft Excel program to collect and organize office discipline referral data. Since the implementation of the PBIS program the study district has employed the School-Wide Information System (SWIS) data-based system to collect office discipline referral data. Reports can be created from SWIS based on the name of the teacher, types of referrals, time of day referrals occurred, number of suspensions, and the names of individual students. The researcher used the newer system to create reports based on the number and types of office discipline referrals prior to determining statistical significance of any change. She also used the data collected to record the number of suspensions recorded in the year(s) prior to implementation of the PBIS program and the year(s) following implementation. Standardized test scores from the base year (2006-2007) were averaged and then compared with scores

from each of the years after implementation of the PBIS program to determine significance of change in the scores. In each case a simple two-sample data t-test was employed.

Table 4 shows that the number of office referrals increased from year 1 to year 2 by 57 referrals and continued to increase each year following implementation of PBIS. The researcher determined that this increase form the study schools' focus on documentation of problem behaviors within the PBIS system. The researcher also noted a dramatic increase in office referrals during year four. It was in this school year that the district was faced with restructuring for many students from a middle school to elementary school environment, kindergarten through eighth grade, with a different administrator and a much different structure. Some students found the adjustment difficult, which may have contributed to behavior problems eliciting office discipline referrals. The researcher also noted that in year 1 there was zero number of students listed as being involved in PBIS. In years 2, 3, and 5 the number of students with office referrals was less than half of the total enrollment. In year 4, which was the year of school district restructuring, there was a dramatic increase in office referrals from 359 to 1078.

Table 3

Discipline Data

	Year 1	Year 2	Year 3	Year 4	Year 5
Number of office referrals	289	346	359	1078	434
Number of students referred to the office	94	142	156	245	141
Number of teachers who wrote the referrals	NA	35	39	56	33

Total number of students involved in PBIS	0	325	320	363	365

To evaluate the second null hypothesis, which stated that there is not a measurable difference in the types of office discipline referrals during the four years since implementation of the Positive Behavior Interventions and Support System (PBIS) and the school year preceding implementation, it was necessary to use the Microsoft Excel spread sheet from the 2006-2007 school year and the SWIS data for the following four school years. In Table 4 and continued into Table 5, the researcher disaggregated the referrals by the type of referral based on specific problem behaviors.

Table 4 shows how the researcher categorized all referrals into 20 specific areas. There is consistency during the five years of the study in greater numbers of referrals for disrespect, defiance of authority, disruption, and physical aggression. The majority of referrals appears to be consistent over the five years in the areas of excessive tardies, threatening behaviors, technology violations, gang affiliation displays, and possession or use of drugs. The researcher noted that according to the listed referrals in the tables there were no fights occurring between or among students from 2006 to 2010. However, in the next year (including 2011), there were 103 referrals for fighting. An investigation disclosed that previous to 2011 student fighting was recorded as physical aggression. The researcher confirmed this change in reporting terminology by reviewing the larger numbers of referrals for physical aggression reported from 2006 to 2011.

Table 4

Number of Referrals by Problem Behavior

Year	Disre-spect/defiance/insubordination/non-compliance	Disruption	Excessive Tardies	Steal-ing/forgery/theft	Threaten-ing	Weapons	Physical Aggression	Technolo-gy Viola-tion	Ly-ing/Cheating	Property Damage/Vandalism	Harass-ment/bullying
2006-2007	113	102	1	1	1	3	68	0	0	0	0
2007-2008	155	4	0	10	0	3	100	1	4	7	18
2008-2009	150	44	0	9	0	1	95	0	2	6	11
2009-2010	492	88	0	10	0	1	220	0	8	10	39
2010-2011	158	41	0	2	0	5	11	1	7	0	16

Number of Referrals by Problem Behavior (continued)

Year (Continued)	Abusive language/Inappropriate language/profanity	Gang affiliation display	Inappropriate location/out of bounds area	Inappropriate display of affection	Use/possession of drugs	Use/possession of tobacco	Fighting	Unknown Behavior	Other behavior	Total
2006-2007	0	0	0	0	0	0	0	0	0	289
2007-2008	20	0	0	0	0	0	0	0	24	346
2008-2009	15	1	2	4	0	0	0	0	19	359
2009-2010	129	3	13	4	0	0	0	7	54	1078
2010-2011	45	0	5	1	1	2	103	0	36	434

Table 5

Number of Office Referrals – Three Major Categories

Regulations	Violent	Nonviolent		School Total
2006-2007	216	72	1	289
2007-2008	160	141	45	346
2008-2009	200	123	36	359
2009-2010	597	392	89	1078
2010-2011	209	180	45	434

Table 6

Percentages of Office Referrals – Three Major Categories

Regulations	Violent	Nonviolent		School Total
2006-2007	74.7	24.9	0.3	289
2007-2008	46.2	40.8	13.0	346
2008-2009	55.7	34.3	10.0	359
2009-2010	55.4	36.4	8.3	1078
2010-2011	48.2	41.5	10.4	434

Qualitative Measures

The primary method of data collection was a survey developed by the researcher for principals, teachers, and parents (see Appendices A, B, and E). The researcher also conducted an interview with teachers and observed teachers and students in the one school. The researcher created all survey statements, the open-ended questions following each survey statement, the interview questions, and an observation form. Surveys were administered in each school setting by the PBIS internal coaches. Parent surveys were sent home with students. The staff survey contained 10 statements asking for teachers to rate their perceptions about the effectiveness of components of the PBIS program accord-ing to a five point Likert-type scale consisting of the following ratings: "strongly disa-gree," "disagree," "neither agree nor disagree," "agree," or "strongly agree." Each state-

ment was followed with an open-ended question. According to Frankel and Wallen (2006), the Likert scale is a "commonly used attitudinal scale in educational research" (p. 127). The Likert scale provides a ranking of the respondent's attitude based on a series of statements in a survey format (Frankel & Wallen, 2006). Staff surveys consisted of statements "The number of office discipline referrals that I have written has decreased since PBIS has been in place" and "Assessments are conducted regularly to recognize students with chronic behavior problems" (see Appendix A for teacher survey). Parents responded to a six-statement survey including statements such as "A team has intervened with your child to help their behavior" and "Your child's behavior has improved at home since being a part of the PBIS program" (see Appendix E for the parent survey with open-ended questions based on the same five-point Likert-type scale).

Interviews were conducted with each of the school principals in the study district. The following seven questions were posed (Appendix B):

1. How long did you work in the district prior to the implementation of PBIS?

    How long has PBIS been an active program in this district?

    Why was PBIS instituted by the district?

2. How faithful are teachers in your building in implementing PBIS?

3. How consistent is implementation of PBIS within your school?

4. How has implementation of PBIS affected student behavior in your school?

    Are there less or more student discipline referrals?

5. How has teacher morale been affected by implementation of PBIS?

6. What, in your view, are the major successes from the PBIS program?

    What are the major challenges?

7. How would you describe the quality of training you received on the PBIS

    program?

Interviewing as a research instrument or tool enabled the interviewer to secure

clarification and expansion of answers that are particularly important or revealing

(Frankel &Wallen, 2006). Teacher participants were also observed once for an hour by

the researcher in their classrooms with an observation form based on documenting behav-

iors of both teacher and student behaviors while involved with PBIS (see Appendix D).

Results were compiled into Tables 7 and 8, which represent the information by

numbers and percentages. Staff members' replies to statement number six which states

that parents are more supportive since PBIS has been in place did not elicit a specific

amount of agreement or disagreement since 62% answered either neither agree nor

disagree.

Table 7

Staff Survey Responses

Question	Prompt Phrase	# Strongly disagree (%)	# Disagree (%)	# Neither agree nor disagree (%)	# Agree (%)	# Strongly agree (%)	Number of people answering the question
1	Expected student behaviors are taught directly.	2 (3.7)	2 (3.5)	0 (0)	17 (30.4)	35 (62.5)	56
2	Expected student behaviors are rewarded regularly.	1(1.8)	1 (1.8)	5 (8.9)	18 (32.1)	31 (55.4)	56
3	Problem behaviors and consequences are clearly defined.	1(1.9)	3 (5.6)	2 (3.7)	22 (40.7)	26 (48.1)	54
4	A team exists for behavior support planning and problem solving.	1(1.8)	3 (5.4)	5 (8.9)	12 (21.4)	35 (62.5)	56
5	The climate of the school has improved since PBIS has been in place.	2 (3.7)	2 (3.7)	13 (24.1)	16 (29.6)	21 (38.9)	54
6	Parents are more supportive since PBIS has been in place.	1 (1.9)	6 (11.3)	34 (62.2)	10 (18.9)	2 (3.7)	53

7	The number of office discipline referrals that I have written has decreased since PBIS has been in place.	3 (5.9)	7 (13.7)	15 (29.4)	11 (21.6)	15 (29.4)	51
8	The team intervening with the targeted students has helped their behavior.	1 (1.9)	3 (5.8)	16 (30.8)	21 (40.4)	11 (21.2)	52
9	Behavior is monitored and feedback is provided regularly to the team and to the staff.	2 (3.6)	2 (3.6)	2 (3.6)	22 (39.3)	28 (50.0)	56
10	Assessments are conducted regularly to recognize students with chronic behavior problems.	2 (3.7)	7 (13.0)	15 (27.8)	17 (31.5)	13 (24.1)	54

Table 8

Percent of Staff Disagreeing to Agreeing

Question	% Strongly disagree added to % disagree	% Strongly agree added to % agree	Number of people answering the question
1	7.1	92.9	56
2	3.6	87.5	56
3	7.5	88.8	54
4	7.2	83.9	56
5	7.4	68.5	54
6	13.2	22.6	53
7	19.6	51	51
8	7.7	61.5	52
9	7.2	89.3	56
10	16.7	55.6	54

The researcher also tested the hypothesis on school climate based on the views of the parents within one school of the study district. The researcher distributed a survey consisting of six statements based on the Likert scale determining whether they strongly agreed, agreed, neither agreed or disagreed, disagreed, or strongly disagreed to each of the statements. Each of the statements were also followed by an open ended question (see Appendix E). The following two tables present the information by the number and percent of the responses.

The researcher compiled the results into Tables 9 and 10. Table 9 depicts the number of parents responding to the statement using the Likert scale. Table 10 converted the responses into percentages. The majority of parent responses to statements one, two, and three were in the categories of agree to strongly agree. The last three statements which dealt with the parents' individual children were marked by agree, strongly agree, or

neither agree nor disagree. The researcher noted that the last rating of neither agree nor

disagree was due to the fact that many parents did not have children involved with

specific individual PBIS interventions.

Table 9

Number Count for Parent Survey

Question	Prompt Phrase	# Strongly disagree (%)	# Disagree (%)	# Neither agree nor disagree (%)	# Agree (%)	# Strongly agree (%)	Number of people answering the question
1	Expected student behaviors are taught directly.	6 (8.8)	5 (7.4)	9 (13.2)	27 (39.7)	21 (30.9)	68
2	Expected student behaviors are rewarded regularly.	6 (8.8)	8 (11.8)	5 (7.3)	24 (35.3)	25 (36.8)	68
3	Problem behaviors and consequences are clearly defined.	6 (9.0)	11(16.4)	6 (9.0)	25 (37.3)	19 (28.3)	67
4	The climate of the school has improved since PBIS has been in place.	2 (3.2)	6 (9.5)	22 (34.9)	22 (34.9)	11 (17.5)	63
5	A team has intervened with your child(ren) to help their behavior.	8 (12.3)	6 (9.2)	23 (35.4)	16 (24.6)	12 (18.5)	65
6	Your child(ren)'s behavior has improved at home since being a part of the PBIS program.	7 (10.9)	8 (12.5)	24 (37.5)	12 (18.8)	13 (20.3)	64

Table 10

Percent of Parents Disagreeing to Agreeing

Question			
	% Strongly disagree added to % disagree	% Strongly agree added to % agree	Number of people answering the question
1	16.2	70.6	68
2	20.6	72.1	68
3	25.4	65.6	67
4	12.7	52.4	63
5	21.5	43.1	65
6	23.4	39.1	64

Table 10 shows the percentages of parent disagreement compared to the

percentage of parent agreement with the survey statements. A majority of parents stated

their agreement with the first three survey statements; they either agreed or neither agreed

nor disagreed with the last three survey statements. This, the researcher inferred, could

be attributed to the amount of their students' involvement with intervention within the

PBIS system.

Data Analysis

Quantitative data from surveys of teacher participants, disciplinary office refer-

rals, and test scores were collected and organized using a Microsoft Excel spreadsheet.

The researcher conducted a statistical analysis of each form of the data and the results are

reported in Chapter 4. All answers to open-ended questions accompanying the survey

and the interview questions were collected, classified, and compared to determine partic-

ipants' perceptions of the effectiveness of PBIS. The surveys consisting of a Likert scale

was compared with a z-test for difference in proportions.

The study district's overall ISAT results, shown in Table 11, from 2006-2007 to

2008-2009 showed gradual gains. However, a significant drop in overall test scores was

recorded during the 2009-2010 school year. This decline in the district's ISAT scores

may be attributed to an increase in emphasis by the district on the Prairie State

Achievement Examination (PSAE) and less focus on the ISAT.

Table 11

State Test Average Overall Results

Year	All State Tests	ISAT	PSAE
2006-2007	62.4	66.0	19.3
2007-2008	62.1	66.3	15.9
2008-2009	63.1	68.3	17.9
2009-2010	60.8	65.7	19.6
2010-2011	61.8	68.9	12.3

The following tables (Table 12 through Table 18) provide the ISAT scores in

reading and math from 2006-2011 for each grade level, third through eighth. Table 12

depicts the percentage of student scores meeting or exceeding expected standards in the

third grade. Scores for reading for the five school years are consistent showing no steady

increase or decrease. Scores for the 2007-2008 school year were highest and scores for

the 2009-2010 school year were lowest. During the five years encompassing the study,

test scores were not significantly different.

Table 12

ISAT Performance: Percentages of student scores meeting or exceeding Standards
3rd Grade

Year	Reading	Math
2006-2007	65.8	91.9
2007-2008	68.5	87.0
2008-2009	67.9	87.1
2009-2010	57.9	78.5
2010-2011	62.5	84.5

Table 13 shows the percentages of student scores meeting or exceeding expected

standards on the ISAT test for fourth grade. These scores were similar to the previously

reported third grade scores. Scores in reading increased during the first three years, then

decreased during the last two years. In mathematics, scores increased during the first

year, decreased the next two, and then showed a slight increase in the final year of the

study. However, the increase registered during the first year was not attained again dur-

ing the five years. The researcher conducted the ANOVA single factor data analysis, as

shown in tables seventeen and eighteen.

Table 13

ISAT Performance: Percentages of Student Scores Meeting or Exceeding Standards
4th Grade

Year	Reading	Math
2006-2007	56.8	83.4
2007-2008	59.6	83.5
2008-2009	64.2	82.2
2009-2010	50.3	74.7
2010-2011	47.1	77.1

Table 14 provides a view of the percentages of student scores meeting or exceeding

standards on the ISAT test in reading and math for the fifth grade. The reading scores

from 2006-2007 to 2008-2009 showed an increase each school year. However, during

the 2009-2010 and 2010-2011 school year there was a decrease. Mathematics scores evidence a decrease during the first year followed by a two year increase, then a decrease during the last two years of the study.

Table 14

ISAT Performance: Percentages of Student Scores Meeting or Exceeding Standards
5th Grade

Year	Reading	Math
2006-2007	56.6	80.1
2007-2008	58.6	78.2
2008-2009	63.2	80.3
2009-2010	62.3	76.0
2010-2011	61.6	75.0

Sixth grade reading scores differ from those of the third, fourth, and fifth grades. Table 15 shows an increase each year from 2006 through 2011. Math scores, however, increased each year from 2006 to 2009 and then decreased the last two years.

Table 15

ISAT Performance: Percentages of Student Scores Meeting or Exceeding Standards
6th Grade

Year	Reading	Math
2006-2007	53.3	69.3
2007-2008	63.9	68.9
2008-2009	65.0	77.3
2009-2010	68.5	74.4
2010-2011	69.4	74.1

Table 16 evidences the percentage of student scores in the seventh grade meeting or exceeding standards on the ISAT test for reading and mathematics. The reading scores showed a significant increase for 2006-2007 to 2007-2008 and also from 2009-2010 to 2010-2011. However, from 2008-20098 to 2009-2010 there was a decrease. The re-

searcher noted an observable increase of 21.2 in reading scores from the first to the fifth

year. Mathematics scores decreased after the first year but steadily increased after that by

13.5% over the five years comprising the study.

Table 16

ISAT Performance: Percentages of Student Scores Meeting or Exceeding Standards
7th Grade

Year	Reading	Math
2006-2007	47.3	63.2
2007-2008	60.5	61.5
2008-2009	60.7	69.9
2009-2010	58.3	72.7
2010-2011	68.5	76.7

Table 17 shows the percentage of student scores in the eighth grade meeting or

exceeding standards in reading and mathematics on the ISAT for the year prior to imple-

menting PBIS and the four years after implementation. Both reading and mathematics

scores decreased form 2006-2007 to 2008-2009, although these scores increased during

the last two years of the study resulting in an overall increase in reading and mathematics

scores since implementation of PBIS.

Table 17

ISAT Performance: Percentages of Student Scores Meeting or Exceeding Standards
8th Grade

Year	Reading	Math
2006-2007	62.6	66.7
2007-2008	60.7	60.5
2008-2009	59.7	56.6
2009-2010	66.4	64.9
2010-2011	68.9	77.2

Table 18 shows the percentages of student academic achievement in high school based on the PSAE test for the year prior of implementation of PBIS, 2006-2007, and the four years following implementation. The researcher noted that there was a decrease from 2006-2007 to 2007-2008 followed by an increase during the next two academic years. However, there was a decrease in achievement (19.6 to 12.3) between 2009-2010 and 2010-2011. She potentially attributed this decrease to the fact that the schools were restructured during the 2010-2011 school year.

Table 18

PSAE Performance: Percentages of Student Scores Meeting or Exceeding Standards
High School

Year	PSAE
2006-2007	19.3
2007-2008	15.9
2008-2009	17.9
2009-2010	19.6
2010-2011	12.3

Background of the Researcher

The researcher, conducting this study of the effectiveness of PBIS in a Midwestern school district, has taught both elementary and middle school. She is currently teaching and also serves as the internal PBIS coach for her building, a position that she has held for two years. Her impetus for this study came from a perceived need to determine if implementation of the PBIS program within her school district has resulted in measurable changes in the number and types of office discipline referrals, the amount of suspensions of students from schools, and improvement in academic achievement within the schools participating in PBIS. She is also concerned with the perceptions of teachers within her school district concerning the effectiveness of the program.

Summary

The researcher endeavored to study the effectiveness of the PBIS program towards reducing the numbers and seriousness of office discipline referrals in her midwestern school district. She was also concerned with its effectiveness in improving student academic achievement. Finally, it was deemed important to determine the perceptions of those in the district working with PBIS as to its effectiveness in promoting a positive learning environment.

Much research has been conducted, on the relationship between the behavior of students and their academic achievement. This study attempted to summarize the research and to employ it in a mixed methods study to determine the effectiveness of PBIS in the researcher's school district.

Quantitative data were collected using thee study district's SWIS data base and state standardized test results. Qualitative data were assembled using the result of teacher surveys, administrator interviews conducted by the researcher, and classroom observations conducted by the researcher.

Chapter 4 – Results

Overview

This study employed both quantitative and qualitative measures to examine with detail the effectiveness of a Positive Behavior Intervention and Support (PBIS) system in reducing the number and type of office discipline referrals, promoting a positive learning environment for both students and teachers, and in positively affecting student academic achievement in the study district. Chapter 4 addresses the results obtained from the quantitative measures to test the four hypotheses and the qualitative data gathered to address the eight supporting questions.

Research Hypotheses

Null hypothesis (Ho1) – There is not a measurable difference in the number of office discipline referrals during the four years since implementation of the Positive Behavior Interventions and Support System (PBIS) and the school year preceding implementation.

Null hypothesis (Ho2) – There is not a measurable difference in the type of office discipline referrals during the four years since implementation of the Positive Behavior Interventions and Support System (PBIS) and the school year preceding implementation.

Null hypothesis (Ho3) – There is not a measurable difference in student academic achievement based on standardized testing during the four years since implementation of the Positive Behavior Interventions and Support System (PBIS) and the school year preceding implementation.

Null hypothesis (Ho4) – Teachers within the study school district do not believe, as measured through a teacher survey, that implementation of the Positive Behavior Interventions and Support System (PBIS) is positively affecting school climate.

Research Questions

The following questions were addressed in this study:

1. How has implementation of PBIS been effective in reducing the numbers of office discipline referrals and the seriousness of behavior within these referrals?

2. How has implementation of PBIS been effective in reducing the number of student suspensions within the school district?

3. How can faithfulness and consistency of implementation of PBIS in the district be described?

4. How can teacher attitudes towards the implementation of the PBIS program be described?

5. How do teachers in different grade levels perceive the effectiveness of the PBIS program within the district?

6. How has teacher morale been affected through implementation of the PBIS program?

7. How has implementation of the PBIS program affected parent perceptions of student behavior within the school district?

8. What do teachers and parents perceive as major successes of the PBIS program?

9. What do teachers and parents perceive as the major challenges associated

    with the PBIS program?

Data Analysis

Office Discipline Referrals

The null hypothesis stated that there was not a measurable difference in

the number of office discipline referrals during the four years since

implementation of the PBIS and the school year preceding implementation. The

data from year 1, 2006-2007, were collected using Microsoft Excel. During years

2 through 5 the data were collected using the School Wide Information System

(SWIS) data-based program. Five years of data collected by the researcher

included the numbers of office referrals, the types of office referrals, the number

of teachers who wrote office referrals, and the numbers of students involved in

PBIS.

According to Bluman (2008), "when an *F* test is used to test a hypothesis

concerning the means of three or more populations, the technique is called

analysis of variance (commonly abbreviated as ANOVA)" (p. 592). A *t* test

should not be done because very often when a researcher is comparing two means

at a time all others in the study tend to be ignored. The ANOVA allows all means

to be compared at the same time. A second reason to conduct the ANOVA rather

than the *t* test is because "the probability of rejecting the null hypothesis when it

is true is increased, since the more *t* tests that are conducted, the greater is the

likelihood of getting significant differences by chance alone" (Bulman, 2008, p.

592). A final reason to use the ANOVA is that when there is more than one mean

and a comparison is required, no t-test would have to be conducted (Bulman, 2008). With this information taken into consideration the researcher chose the analysis of variance (ANOVA) for all of the necessary data.

Table 19

ANOVA: Single Factor – Office Discipline Referrals

SUMMARY

Groups	Count	Sum	Average	Variance
Year 2	246	545	2.21545	14.6269
Year 3	246	695	2.8252	21.655
Year 4	246	1605	6.52439	50.2178
Year 5	246	434	1.76423	7.16867

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3481.59	3	1160.53	49.5591	7.9835	2.61399
Within Groups	22948.7	980	23.4171			
Total	26430.3	983				

After running the ANOVA: single factor data analysis the decision was to reject the null hypothesis (F-test = 49.559; F-critical = 2.613). There was, in fact, a difference in the number of office discipline referrals during the four years since implementation of PBIS.

The researcher categorized disciplinary referrals into 20 groupings, and then combined them into three major categories: school regulations, violent behavior, and non-violent behavior as depicted in Table 6. She ran an ANOVA procedure to test the variability of the numbers within the three major categories. The researcher's analysis of the two tables showing the numbers of behavior referrals over a period of five years evidenced a greater amount in the school regulations category, a smaller number in the

violent behaviors category, and the fewest number of referrals in the non-violent behavior

category. Each of the five years demonstrated the same order in numbers of referrals.

Table 20

ANOVA: Single Factor –
Types of Office Discipline Referrals

Summary

Groups	Count	Sum	Average	Variance
school regulations	5	280.230581	56.046116	127.0960
violent	5	177.765069	35.553013	44.40328
nonviolent	5	42.0043495	8.4008699	23.15651

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	5712.1261	2	2856.0630	44.01712	2.97986E-06	3.885293
Within Groups	778.62330	12	64.885275			
Total	6490.7494	14				

After running the Anova: single factor data analysis the decision was to reject the

null hypothesis (F-test = 44.017; F-critical = 3.885). There was in fact a difference in the

percentage of referrals in the three major types of categories, in the four years since

implementation.

Academic Achievement

This null hypothesis stated that there is not a measurable difference in student ac-

ademic achievement on standardized testing during the three years since implementation

of the Positive Behavior Interventions and Support System (PBIS) and the school year

preceding implementation. The researcher used the district report card for the five school

years of the study to evaluate it. The researcher looked at the state's overall test results,

along with the Illinois Standard Achievement Test (ISAT) scores for third through eighth

grades as depicted in Table 9. For each individual grade level the researcher ran an

ANOVA test to determine whether or not to reject the null hypothesis for each grade lev-

el separately.

Table 21

ANOVA: Single Factor – 3rd
Grade ISAT

SUMMARY

Groups	Count	Sum	Average	Variance
2006-2007	2	157.7	78.85	340.605
2007-2008	2	155.5	77.75	171.125
2008-2009	2	155	77.5	184.32
2009-2010	2	136.4	68.2	212.18
2010-2011	2	147	73.5	242

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	153.994	4	38.4985	0.167351312	0.946046441	5.192167773
Within Groups	1150.23	5	230.046			
Total	1304.224	9				

Table 21 show the results from administering the single factor ANOVA test to

compare the variance between and within groups in test scores during the five years

comprising the study. After completing the ANOVA single factor data analysis the

researcher decided not to reject the null hypothesis (F-test = 0.167; F-critical = 5.192).

Third grade scores did not evidence a measureable difference in student academic

achievement based on ISAT performance during the four years following implementation

of the Positive Behavior Interventions and Support (PBIS) system.

Table 22

ANOVA: Single Factor –
4th Grade ISAT

SUMMARY

Groups	Count	Sum	Average	Variance
2006-2007	2	140.2	70.1	353.78
2007-2008	2	143.1	71.55	285.605
2008-2009	2	146.4	73.2	162
2009-2010	2	125	62.5	297.68
2010-2011	2	124.2	62.1	450

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	218.104	4	54.526	0.175996488	0.941389208	5.192167773
Within Groups	1549.065	5	309.813			
Total	1767.169	9				

Table 22 show the results of administering the single factor data analysis and

provide the researcher a basis to not reject the null hypothesis (F-test = 0.175; F-critical =

5.192) which stated there would not be a measurable difference in student academic

achievement based on ISAT performance during the four years since implementation of

the Positive Behavior Interventions and Support (PBIS) system and the school year

preceding implementation. Fourth grade scores did not evidence a measureable difference

in student academic achievement based on ISAT performance during the four years

following implementation of the Positive Behavior Interventions and Support (PBIS)

system.

Table 23

ANOVA: Single Factor – 5th
Grade ISAT

SUMMARY

Groups	Count	Sum	Average	Variance
2006-2007	2	136.7	68.35	276.125
2007-2008	2	136.8	68.4	192.08
2008-2009	2	143.5	71.75	146.205
2009-2010	2	138.3	69.15	93.845
2010-2011	2	136.6	68.3	89.78

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	17.354	4	4.3385	0.027182392	0.998060265	5.192167773
Within Groups	798.035	5	159.607			
Total	815.389	9				

Table 23 shows the results of administering the single factor data analysis and

provide the researcher a basis to not reject the null hypothesis (F-test = 0.027; F-critical =

5.192) which stated there would not be a measurable difference in student academic

achievement based on ISAT performance during the four years since implementation of

the Positive Behavior Interventions and Support (PBIS) system and the school year

preceding implementation. Fifth grade scores did not evidence a measureable difference

in student academic achievement based on ISAT performance during the four years

following implementation of the Positive Behavior Interventions and Support (PBIS)

system.

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Table 24

*ANOVA: Single Factor – 6th
Grade ISAT*

SUMMARY

Groups	Count	Sum	Average	Variance
2006-2007	2	122.6	61.3	128
2007-2008	2	132.8	66.4	12.5
2008-2009	2	142.3	71.15	75.645
2009-2010	2	142.9	71.45	17.405
2010-2011	2	143.5	71.75	11.045

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	164.994	4	41.2485	0.843199984	0.553109164	5.192167773
Within Groups	244.595	5	48.919			
Total	409.589	9				

Table 24 shows the results of administering the ANOVA: single-factor data

analysis and provide the researcher basis not to reject the null hypothesis (F-test = 0.843;

F-critical = 5.192). For the sixth grade the null hypothesis stated there was not a

measurable difference in student academic achievement based on ISAT performance

during the four years since implementation of the Positive Behavior Interventions and

Support (PBIS) system and the school year preceding implementation. Sixth grade scores

did not evidence a measureable difference in student academic achievement based on

ISAT performance during the four years following implementation of the Positive

Behavior Interventions and Support (PBIS) system.

Table 25

ANOVA: Single Factor – 7th
Grade ISAT

SUMMARY

Groups	Count	Sum	Average	Variance
2006-2007	2	110.5	55.25	126.405
2007-2008	2	122	61	0.5
2008-2009	2	130.6	65.3	42.32
2009-2010	2	131	65.5	103.68
2010-2011	2	145.2	72.6	33.62

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	326.876	4	81.719	1.332990784	0.373107625	5.192167773
Within Groups	306.525	5	61.305			
Total	633.401	9				

Table 25 shows the results of administration of the ANOVA: single-factor data analysis and the decision on the part of the researcher to not reject the null hypothesis (F-test = 1.332; F-critical = 5.192) which stated that there was not a measurable difference in the student academic achievement based on ISAT performance during the four years since implementation of the Positive Interventions and Support (PBIS) system and the school year preceding implementation. Seventh grade scores did not evidence a measureable difference in student academic achievement based on ISAT performance during the four years following implementation of the Positive Behavior Interventions and Support (PBIS) system.

Table 26

ANOVA: Single Factor -
8th Grade ISAT

SUMMARY

Groups	Count	Sum	Average	Variance
2006-2007	2	129.3	64.65	8.405
2007-2008	2	121.2	60.6	0.02
2008-2009	2	116.3	58.15	4.805
2009-2010	2	131.3	65.65	1.125
2010-2011	2	146.1	73.05	34.445

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	259.896	4	64.974	6.657172131	0.030849929	5.192167773
Within Groups	48.8	5	9.76			
Total	308.696	9				

Table 26 contains the results of the ANOVA: single factor data analysis which

prompted the researcher to reject the null hypothesis (F-test = 6.657; F-critical = 5.192)

which stated there was not a measurable difference in student academic achievement

based on ISAT performance during the four years since implementation of the Positive

Behavior Interventions and Support (PBIS) system and the school year preceding

implementation. Rejection of the null hypothesis affirmed a measureable difference in

scores of eighth graders on the ISAT following implementation of PBIS.

Table 27

High School PSAE % Passing

Year	PSAE %
2006-2007	19.3
2007-2008	15.9
2008-2009	17.9
2009-2010	19.6
2010-2011	12.3

Table 28

T-Test for Difference in Proportions Comparison of High School PSAE%: Year-to-Year

Year	2007	2008	2009	2010	2011
2007	n/a				
2008	-0.851	n/a			
2009	-0.343	0.509	n/a		
2010	0.072	0.923	0.415	n/a	
2011	-1.83	-0.986	-1.49	1.901	n/a

Note: z-critical = ±1.96

Table 27 contains the results of the percentage of High School students passing

the PSAE throughout the study period. A z-test for difference in proportion was applied

to each pairing of the years to check for a significant change in the percent of students

with passing scores. Table 28 indicates the z-test values, which compared to the z-critical

values of ±1.96 caused the researcher not to reject the null hypothesis which stated there

was not a measurable difference in student academic achievement based on PSAE

performance during the four years since implementation of the Positive Behavior

Interventions and Support (PBIS) system and the school year preceding implementation.

There was no difference in the percentage of high school students passing the PSAE when comparing year-to-year.

School Climate

The final hypothesis was based on school climate. It stated that teachers within the study school district do not perceive, as measured by a teacher survey, that the implementation of the Positive Behavior Interventions and Support System (PBIS) is positively affecting school climate. To test this hypothesis the researcher sent surveys to the PBIS coach at each building throughout the district. He or she distributed them to the staff. Each teacher was directed to return the completed survey to the researcher through the interoffice mail. The survey consisted of 10 statements, detailed on succeeding pages of this study, with an accompanying Likert scale seeking agreement or disagreement with each statement. An open-ended question followed each survey statement to request the staff member to clarify and/or provide examples of their perception of the statement (see Appendix A).

Table 29

Decimal Value of Staff Disagreeing to Agreeing

Question	Strongly disagree to disagree	Strongly agree added to agree	Number of people answering the question	z-test value
1	0.071	0.929	56	9.907
2	0.036	0.875	56	9.687
3	0.075	0.888	54	9.218
4	0.072	0.839	56	8.856
5	0.074	0.685	54	6.928
6	0.132	0.226	53	1.055
7	0.196	0.51	51	3.460
8	0.077	0.615	52	5.986

| 9 | 0.072 | 0.893 | 56 | 9.480 |
| 10 | 0.167 | 0.556 | 54 | 4.410 |

Note: Critical value = ±1.96

For this hypothesis, the researcher used a *z* test for difference in proportion because of the fact that this hypothesis involves a proportion. According to Bluman (2008), "a proportion is the same as a percentage of the population" (p. 425). In this case it was the percentage of staff members who marked the statements strongly disagree and disagree compared to the percentage of staff members who marked the statements strongly agree and agree. After determining the *z* score for each of the questions and using a critical value of ±1.96 the researcher was able to reject the null hypothesis which stated that there would not be a measurable positive perception by staff of PBIS with the exception of statement number six. The researcher, therefore, concluded that there is a difference in staff attitudes toward PBIS in the schools and there is generally positive agreement with the positive effects of PBIS in the schools.

Table 30

Decimal Value of Parents Disagreeing to Agreeing

Question	% Strongly disagree to % disagree	% Strongly agree added to % agree	Number of people answering the question	*z*-test value
1	0.162	0.706	68	6.92195
2	0.206	0.721	68	6.55295
3	0.254	0.656	67	5.07737
4	0.127	0.524	63	4.86224
5	0.215	0.431	65	2.68711

6	0.234	0.391	64	1.93805

Note: Critical value = ±1.96

The researcher also used a *z*-test for difference in proportion when measuring the survey responses to the second half of the hypothesis. Again, the researcher calculated the proportion of the percentage of parents marking the statements strongly disagree and disagree compared to strongly agree and agree. After determining the z-value for each of the statements and using the critical value of ±1.96 the researcher rejected the null hypothesis for all of the statements except for statement six, which gained neither a dominant positive or negative value. The researcher concluded that there is positive agreement with the statements except for number six. Therefore, the null hypothesis was rejected based on parent responses to statements one through five since PBIS was perceived as making a difference.

Staff Survey – Open-Ended Questions

The researcher distributed surveys to all staff members in the study school district. The researcher received 56 responses. The survey contained 10 statements, which asked respondents to mark their agreement or disagreement using a Likert-type scale. Each of the survey statements was followed by an open-ended question asking the respondent to clarify their understanding of the statement and to provide examples of it from their experience (see Appendix A).

The first question asked staff members how much time they devoted to teaching expected behavior to students. Most staff members responded that they devote five to 10 minutes daily to teaching and/or reviewing expected behaviors. One staff member specifically pointed to her focus on letting students know her daily expectations. Another

stated that she immediately explains a positive or negative behavior when it occurs. Still others said that they taught the expected behaviors frequently during the first weeks of school and then provided reminders to their students at the beginning of each day and at the end of each week for the first month of school with less frequent reminders in the following months.

Survey respondents were asked the second open-ended question based on how they reward expected student behaviors. A majority of staff responded that they employ some sort of token economy to provide tangible rewards to students since they respond to concrete rewards. Students are able to use their tokens to shop at a school store created specifically as part of a token reward system in the school. Good behavior, according to teachers' comments, is also rewarded with field trips, special assemblies, positive referrals, extra recess, candy and free time.

The next open-ended question following a survey statement asked teachers how they define problem behaviors and their appropriate consequences. Many answered that problem behaviors are defined by the PBIS school-wide behavior matrix and the T-chart. This chart, known as the PBIS school-wide behavior matrix chart, lists the three expectations for behavior, which are: be responsible, be respectful, and be safe. The top portion of the chart contains a column for each area within the school (cafeteria, classroom, gymnasium, restroom, assemblies area, field trips, and bus) with the behaviors that should be observed in students. This chart focuses on the positive rather than negative behaviors. The T-chart consists of three columns: classroom managed behaviors, minor referrals, and handled. Teachers also post expected behaviors in the classroom and throughout the school building.

Next, staff members were asked how the expected behavior support team is valuable to them. One staff member verified the importance of the members of the support team in working together to support both staff and students who follow school rules and adhere to the principles and processes of PBIS. It was clear from responses to this question that many staff members believe that the team provides support to reinforce positive behavior when the student may need more help by mentoring or providing positive feedback. It was frequently mentioned that the PBIS team is involved with analyzing and presenting data to the staff, which is used to determine the areas to be addressed if the climate of the building is to be improved.

The fifth open-ended question asked staff members to relate some specific examples which would show an improving climate in the building. It was stated multiple times that the number of referrals for physical aggression and fighting had decreased since implementation of the PBIS system. Staff members indicated that the existence of reward events was instrumental in improving the climate since students who were rewarded were observed by others who then wanted the same rewards. Some respondents were concerned with the changing population of the school, which, in their opinion, made it more difficult to attain an improvement in climate. A few believed that the climate was on a downhill slope since the year of school restructuring which eliminated the middle school and created an enlarged elementary school.

The next question dealt with the support received from parents. Many teachers responded that communication, or lack of it, with parents has not changed since implementation of PBIS. Parents are not any more supportive or involved than before imple-

mentation of PBIS although there were responses indicating that parents are signing weekly notes and that more parents are visible at the school than previously.

Question 7 dealt with determining if and why the teacher's office referrals had decreased. Many responded affirmatively and indicated that they were excited that something was actually working in the management of student behavior. They gave credit to the existence of a rewards system as a major component in reducing the numbers of office referrals.

Question 8 asked for some specific ways team interventions with individual students has helped. Teachers regarded the Check-in Check-out (CICO) program as a specific intervention that is very helpful to students and therefore successful. Some pointed to CICO as a program allowing students to become more responsible and aware of their behaviors. CICO was regarded as an instance of the team placing students in settings where they have a better chance of being successful.

The ninth open-ended question focused on how student behavior is monitored and how feedback is provided. A popular answer was that staff meetings served as a forum for monitoring data showing the number of referrals, the time of day referrals are written, and location from which referrals originate. Staff members said that CICO data should be spelled out as to the number of students who are being successful; this should be made known at staff meetings.

The final open-ended question dealt with how the assessments were conducted. This was not known to any respondents, however many were aware of a secondary team in place to review data in order to ascertain who students were that demonstrated what could be termed as chronic behavior problems. They also indicated understanding that

the data from office discipline referrals are used to determine which students are placed in the CICO system.

Parent Survey – Open-Ended Questions

The researcher distributed surveys to parents of students in one of the buildings. The survey consisted of six statements followed by ratings according to Likert-type scale. Each statement was followed by an open-ended question asking the parents to clarify their understanding of the question and to possibly provide an example illustrating the statement (see Appendix E).

The first open-ended question determined to find out from parents how they knew the expected student behaviors are taught. A majority of parents responding indicated that they were not sure about what is being taught about behavior in the school, although they did have limited information based on what their children told them when they came home from school. The researcher noted that at least one parent observed her students exhibiting some of the behaviors associated with PBIS at home.

The next question focused on how the children's expected behavior is rewarded. Many of the parents answered by providing knowledge of specific rewards received by their children. These included field trips to the zoo, treats, paw bucks, stickers, positive referrals, celebrations, school dances, and fun Fridays. Parents verified the importance of a reward system in the school as a major influence in promoting expected student behaviors.

Question 3 asked parents to explain how they know that the problem behaviors are defined along with the appropriate consequences. Parents responded that they must read the school handbook to obtain a definition of the problem behaviors and conse-

quences. They indicated that there was not a formal training session to inform them of the behaviors and consequences, rather they secured most of their information from phone calls placed to them by teachers and principals regarding their children, or when their children were actively involved in a PBIS intervention.

The fourth question sought specific information from the parents as to how they thought the school climate had improved. There were very few responses to this question. The responses received focused on the improvement of relationships between children and their teacher(s) and improved grades.

Many parents did not respond to the fifth question which asked for some specific ways the team interventions had assisted their child. The researcher determined that many parents did not have a child receiving services from a PBIS team. The parents who had children involved with PBIS interventions noted that this was positive, particularly the opportunity for the child to speak with a social worker.

The final open-ended question from the parent survey asked for some specific examples how the child's behavior had improved at home since involvement with the PBIS program. Of course, responses were limited to parents with children who were receiving interventions through the PBIS program. These responses focused on the child's increased reading, studying, and responsibility at home. One parent noted that their child was now helping out with his younger sister, controlling his anger, and displaying an overall pleasant attitude at home. Another parent was not impressed with PBIS and made the point that her child's behavior was not the problem at home, that she had things under control, and the school should always make sure to do its job.

Principal Questions

The researcher distributed a questionnaire to seven principals within the study school district. The questionnaire consisted of seven questions; some of the questions had multiple parts (see Appendix B).

There were three parts to the first question. Part one asked the length of time the principal had worked in the district prior to implementation of PBIS. The range in years served was from one to 25 years. Part two asked for the amount of time PBIS had been an active system in the district. Answers were similar and in the range of four to five years. Finally, principals were asked to provide their understanding as to why PBIS was instituted in the district. Even though one principal did not know the answer to this question, another said that it was mandated by the state, and the remaining respondents clearly stated that PBIS was instituted to improve student behavior and reduce suspensions from school. All of the principals believed that PBIS was a necessary system to incorporate if the district was to change the focus of attention from negative and inappropriate behaviors to positive behaviors.

Question 2 asked principals to respond as to how faithful their teachers were in implementing PBIS. The seven principals were in almost complete agreement that 90-95% of their teachers were faithful in implementing the system since it provided them with the ability to devote more time to actual teaching rather than continuous classroom management which they indicated had often interfered with their freedom to teach.

The next question dealt with consistency of implementation in each building. Responses to this question were almost identical to the previous one. Consistency was praised by the principals as important to the success of PBIS and they indicated strongly

that the program was a major focus of every faculty meeting. Principals recognized that to ensure consistency the principles of PBIS must be kept in focus throughout the school year and teachers must have a platform to discuss the program and to receive feedback from their peers.

The fourth question consisted of two parts. Part one asked how implementation of PBIS had affected student behavior in the school. Answers were based on its positive effects with student behavior, increased attendance, and reduction of inappropriate behavior. Principals confirmed that it has reduced the amount of behavior referrals; most students were responding well to the program and were meeting expectations of the school. There was some difficulty with equating the school's expectations with the home's recommendations. This made it necessary, according to principals, to carefully educate parents about the PBIS program expectations. Part two specifically asked about the number of referrals for student discipline since implementation of PBIS. Most of the principals verified a reduction in office referrals for discipline, although one said that referrals vary by each attendance quarter. Agreement seemed to be general that disciplinary referrals for major infractions were much lower and students were more apt to be referred for minor infractions resulting in lunch and after school detentions. Fewer students were being suspended.

Question 5 addressed how PBIS has affected teacher morale in the school since its implementation. Principals generally saw little difference but stated that PBIS has served to keep the morale at a high level with many teachers motivated to go beyond the school's expectations for teacher involvement and effort. The researcher believes that the

principals were perpetually optimistic about their teachers' morale and that the existence of no specific program would affect a great change.

Question 6 consisted of two parts. Part one asked about the major successes of the PBIS program. Principals were consistent in their responses that PBIS was directly responsible for increasing instructional time, helping the school to focus on positive student behavior, decreasing student suspensions from school, and increasing student motivation. The Check-in Check-out (CICO) system was lauded as outstanding by principals since it provided a positive system of behavior interventions designed to address specific individual student behaviors. Part two dealt with what principals regarded to be the major challenges faces by schools employing the PBIS system. A unanimous reply centered on securing the necessary funding to ensure continuous implementation. Principals also voiced a concern with keeping high school students interested and involved with the program and ensuring that high school staff members would be as enthusiastic as elementary staff with buying into PBIS.

The last question asked how principals perceived the quality of training they and their teachers had received in the PBIS program. Responses ranged from satisfactory, need more ongoing discussion of the program, to very good and excellent. Four of the principals had participated in conferences and workshops on PBIS.

Observations

The researcher conducted 12 observations, 10 in classrooms, one each in the cafeteria and gymnasium. Classroom observations were made in the restructured elementary school building (which had previously been separated into an elementary and middle school). Two first grade, second grade, and special education classes were observed.

One third, fourth, seventh, and eighth grade classroom was observed. One of the cafeteria observations occurred during breakfast when all eight grades were present, and the other was during lunch hour when grades fourth, eighth, and special education classes were present. The researcher used a self-created observation form for each of the observations. It consisted of six items to be viewed at each location (see Appendix D).

Item 1 on the observation form addressed whether or not the PBIS classroom expectations for behavior were posted. Specifically sought was the posting of either the PBIS behavior matrix or the three expectations: be respectful, be responsible, and be safe. All 12 locations had the expectations posted. In one classroom the three expectations were on separate posters with students' ideas about what each meant written in the space around each one.

The second observation form item focused on whether the teacher or staff member reinforced positive behavior. In 11 of 12 locations staff members were observed to be reinforcing positive behavior. In many classrooms teachers and staff members were continually praising students and thanking them for doing the right thing. In one case both teacher and students in a classroom were talking about working together like a family. In one location the researcher observed that student behavior was redirected and not specifically praised.

Item 3 dealt with observing the teacher or staff member using any monetary items in the PBIS system. Six locations exhibited monetary rewards provided by teacher or staff member to students. Six locations did not evidence the use of a token system of monetary rewards for appropriate behavior. Students earned points for soda drinks on Fridays, received positive referrals, and earned links on a chain of compliments which

when it reached floor length entitled the entire class to some sort of reward such as stickers and cookies. Students in one classroom also qualified daily to be picked to play BINGO for prizes on Fridays.

Item 4 on the observation sheet concerned evidence of teacher redirection of student behavior from negative to positive. This occurred in 11 of the 12 locations and was generally done by teachers in a nonthreatening and soft-voice manner.

The fifth item concerned whether the teacher or staff member was reteaching the expectations. Nine of the 12 locations observed evidenced this occurring. Specifically, one teacher directed a group, which had wandered off-task, to view a group of students who were doing what was asked to model appropriate behaviors. In another location the teacher reminded the students how to behave when writing, to stay in their seats, and how to wait for someone to pass out papers. In another classroom location the teacher retaught expectations and stated what behaviors she liked when the students seemed excited when searching for the answer. For example, the teacher described the proper way for sitting in the classroom.

The final observation item simply asked the observer to check if any student received an office discipline referral during the observation time. This occurred in three of 12 locations. In one case a student ignored several redirects and then chose to go to the office rather than change behavior. In another situation involving the cafeteria, a student stood and knocked a box from a shelf in anger. He was sent to the office.

Teacher Interviews

When the observations were concluded, the researcher began the process of interviewing

the 10 teachers who participated (see Appendix C). These questions were similar to those asked of the principals.

The first interview question consisted of three parts. Part one asked for longevity of employment in the district; answers ranged from one to 14 years. Part two dealt with how long PBIS had been active in the district. Four to five years was the consensus. The last part of question 1 concerned why the district had instituted the program. Some teachers incorrectly thought it was a state mandate. Most of the teachers believed that it was necessary to place the focus on a positive learning environment and to improve the academic performance within the schools.

Interview question 2 asked how implementation of PBIS had affected school behavior. Most of the teachers and staff agreed that PBIS had been instrumental with improving student behavior. One teacher indicated that problem students finally were presented with an intervention program, CICO, to assist them in improving their behavior. It also gave them the attention they apparently craved but in a supportive and positive manner. Some teachers also stated that PBIS provided students who were behaving appropriately with the time and space to learn without fear of interruption from those who were misbehaving. Other teachers noted that PBIS provided the monetary incentives some children need to think about their own behavior.

The influence on the climate of the school was the basis for the next interview question. Teachers believed that the consistency of the PBIS system allows students to know what is expected no matter where they are in the school and because of that consistency of implementation negative behaviors were diminished both inside and outside of classrooms. Others stated that the climate is more relaxed and positive; there are fewer

referrals. Students want to behave because everyone knows exactly the rules and how they will be implemented. Only one teacher stated that there was no change in the school.

Amount and quality of training formed the basis for the last interview question for teachers. Presentations and workshops on the PBIS system were praised as helpful. One teacher also recommended that everyone serve as a PBIS coach sometime during their teaching career.

Summary

The objective of this research study was to determine the effectiveness of the Positive Behavior Interventions and Support (PBIS) system in the study school towards reducing the amount of office discipline referrals for behavior and the severity of these referrals. It also focused on determining the fidelity and consistency of implementation of PBIS, along with the effectiveness in promoting a positive learning environment and increasing academic achievement. The researcher used office discipline referral data, surveys, interviews, observations, and state standardized test data to achieve the results. Chapter four was framed by the hypothesizes posted from this research. Each hypothesis was rejected or not rejected based on the data collected by either surveys or referrals. ANOVA tests and z-test were conducted.

In Chapter 5, the results of the study will be reviewed and conclusions will be presented. It also includes a review of the study design and recommendations for future research studies.

Chapter 5 – Summary and Discussion

This study intended to determine the effectiveness of the Positive Behavior Interventions and Support system (PBIS) in reducing the amount of discipline referrals, the severity of misbehavior evidenced in these referrals, suspension rates after implementation of PBIS, and an increase in a positive learning environment in one Illinois School. The researcher also measured the effects of PBIS on student academic performance by comparing student academic performance on state standardized tests from one year prior to the beginning of the program to one year after its operation in the school. An on-line data base system termed School-Wide Information System (SWIS) was used to measure the amount and type of referrals and the number of suspensions from school. The researcher employed surveys, interviews, and observations in this study to determine the effects of PBIS on the climate existing within the school.

Three research questions guided the design of this study. They were, "How has PBIS been effective in reducing the number and severity of office discipline referrals for student behavior?", "How has implementation of PBIS promoted a positive learning environment in this school for students and teachers?", and "How has the employment of the PBIS affected student achievement scores?"

Hypotheses were developed from each of the research questions. Each of the four hypotheses was tested and a decision was reached to accept or reject each of them. In the area of office discipline referrals, the null hypothesis stated that there was not a measurable difference in the number of office discipline referrals during the four years since implementation of the Positive Behavior Interventions and Support System (PBIS) and the school year preceding implementation. An Analysis of Variance (ANOVA) was used to

test the data collected dealing with the amount of discipline referrals. The first test was conducted and the number of office discipline referrals from the year prior to implementation and the four years after. The results of administering the ANOVA: Single Factor Data Analysis prompted the decision to reject the null hypothesis that there is not a measurable difference in the number of office discipline referrals during the four years since implementation of the PBIS and the preceding school year.

The second null hypothesis stated that there is not a measurable difference in the type of behavior reflected in office discipline referrals during the four years since implementation of the PBIS and the preceding school year. The researcher categorized the types of referrals and administered an ANOVA: Single Factor Data Analysis to reject the null hypothesis.

The researcher again used an ANOVA: Single Factor Data Analysis to test the third hypothesis, which focused on student achievement. The null hypothesis stated that there is not a measurable difference in student achievement, based on standardized tests scores, during the four years since implementation of PBIS and the school year preceding implementation. Standardized tests scores for students grades three through eight were used to test the hypothesis. For third through seventh grade the decision was made to not reject the null hypothesis since there was not a measurable difference in test scores on standardized tests. However, scores for the eighth grade standardized testing shows a measurable difference and the null hypothesis was rejected.

The fourth and final null hypothesis stated that teachers within the study school do not believe, as indicated by the results of a teacher survey that implementation of the PBIS has positively affected school climate. A survey was also distributed to parents of

students in the school. A z-test for proportion was employed to test this hypothesis. The results of the staff and parent survey enabled the researcher to conclude that there is evidence from staff members and parents that the PBIS has positively affected school climate. Thus, the null hypothesis was rejected. Open-ended questions were included with both the staff and parent surveys. These questions asked respondents to explain their ratings and to provide an example illustrating their understanding of the subject of the survey statement. The researcher's summary of responses to these open-ended questions concluded that the PBIS was positively affecting the climate of the schools in the district.

In conclusion, there is no significant measurable difference in the number and types of office discipline referrals since implementation of PBIS. There is not a measurable difference in academic achievement for 3rd through 7th grade since implementation of PBIS. And, the study's limitations which address training, consistency of implementation, turnover of personnel, and district reorganization of schools may have contributed to an absence of significant measurable differences in referrals, types of referrals, and student achievement.

Implications

The researcher believes that major implications evidenced through the study are focused on the positive outcome(s) that the use of a proactive and preventive system for behavior management can have on student discipline, student achievement, and school climate. PBIS is not a reactive discipline system containing only rules and consequences for breaking rules. Instead, this system was developed and implemented based on the personal involvement of all staff members with students in identifying, monitoring, and rewarding behaviors that are acceptable within the school environment. PBIS provided a

support system that contains the necessary follow-through to assist students in displaying the proper school-wide behaviors.

The researcher has served as a classroom teacher prior to and during the implementation of PBIS. She believes that focusing on such an organized system that is based on providing positive behavior alternatives for students and the support to continue with these behaviors will provide school staff with an organized and collaborative mission to influence student behavior, student achievement, and overall school climate.

Recommendation for Further Study

The researcher focused her study on one elementary school within the study school district. Even though a survey was administered to all principals and teachers in the district, all classroom observations, staff interviews, and parent surveys were limited to one school. The researcher believes that the results obtained from the participants in the study school were significant; however she recommends that the procedures used during the current study be used to widen it to the entire school district. She also believes that studies be conducted to ascertain the quantity and quality of training provided to staff members within a PBIS designated school. This study should also measure the amount and quality of follow-through and support provided to staff members who are involved with PBIS training.

An additional recommendation for further study lies with comparing the effects of implementation of PBIS between schools in the same district and between schools in other districts. The researcher believes that much can be learned by comparing the effects of PBIS between schools. Finally, the researcher has experienced another educational initiative within her school district, Professional Learning Communities (PLC), which fo-

cuses on teacher collaboration in working with student academic needs during the learning process rather than after the administration of summative testing. PBIS and the PLC have similar methods of operation and could be compared to determine how each is similar and different and how each contributes to the effectiveness of the other.

Discussion

During the course of this study (2010-2012), the study district was confronted with financial instability within the state resulting in a major restructuring of schools. The original alignment of schools, which clearly contained a separation between elementary, middle, and high schools, was altered. During the first year of the study the district was composed of one grades 6 through 8 middle school, one high school, an early childhood center, a school of choice composed of kindergarten through 12th grade, six elementary schools, and an academic center. Alignment due to financial concerns resulted in elimination of the middle school and expansion of each grade school to kindergarten through eighth grade. The dispersal of middle school students throughout the six elementary schools had a negative effect on the amount and type of office discipline referrals, student achievement, and school climate.

Nevertheless, the study showed that implementation of the PBIS had a positive effect even through the structural changes, which occurred during the study. The researcher believes that the existence and support of the PBIS assisted schools with restructuring since staff members were clear about their responsibilities in dealing with discipline according to the system.

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Staff PBIS Survey

Dear School Colleague:

I am studying the effects of the PBIS system on school behavior and climate in our school. Will you please complete the attached survey and also answer the open-ended question which follows each statement? This information will greatly assist me in completing my dissertation requirement for the Doctor of Education degree.

Please take a few minutes to complete the following survey.
Circle one of the following:
1 – strongly disagree
2 – disagree
3 – neither agree or disagree
4 – agree
5 – strongly agree

Expected student behaviors
are taught directly.   1   2   3   4   5

How much time do you devote to teaching expected student behaviors?

Expected student behaviors
are rewarded regularly.   1   2   3   4   5

How do you reward expected student behaviors?

Problem behaviors and consequences
are clearly defined.   1   2   3   4   5

How do you define problem behaviors and their appropriate consequences?

A team exists for behavior support
planning & problem solving.   1   2   3   4   5

How is the expected behavior support team valuable to you?

The climate of the school has improved
since PBIS has been in place.   1   2   3   4   5

What are some specific indications that the school climate has improved?

Parents are more supportive since
PBIS has been in place.   1   2   3   4   4

How are parents more supportive?

The number of office discipline referrals
that I have written has decreased
since PBIS has been in place.   1   2   3   4   5

Why have your office referrals decreased?

The team intervening with the
targeted students has helped
their behavior.   1   2   3   4   5

What are some specific ways the team intervening with specific students has helped?

Behavior is monitored & feedback
is provided regularly to the team
& to the staff.   1   2   3   4   5

How is behavior monitored and feedback provided?

Assessments are conducted regularly
to recognize students with chronic
behavior problems.   1   2   3   4   5

How are the assessments conducted?

PBIS Questions

Principals

Date _____

Dear Administrator:

I am studying the effects of the PBIS system on school behavior and climate in our school. Will you please complete the attached questions? This information will greatly assist me in completing my dissertation requirement for the Doctor of Education degree.

1. How long did you work in the district prior to the implementation of PBIS?

    How long has PBIS been an active program in this district?

    Why was PBIS instituted by the district?

2. How faithful are teachers in your building in implementing PBIS?

3. How consistent is implementation of PBIS within your school?

4.How has implementation of PBIS affected student behavior in your school?

Are there less or more student discipline referrals?

5. How has teacher morale been affected by implementation of PBIS?

6. What, in your view, are the major successes from the PBIS program?

What are the major challenges?

7. How would you describe the quality of training you received on the PBIS program?

Appendix C
PBIS Interview Questions

Date _____
Time _____
Grade Level of Teacher _____

1. How long did you work in the district prior to the implementation of PBIS?

    How long has PBIS been an active program in this district?

    Why was PBIS instituted by the district?

2. How has implementation of PBIS affected school behavior?

3. How has the implementation of PBIS affected school climate?

4. Describe the quantity and quality of the training you received on the PBIS system.

PBIS Observation Sheet

Location _____ Grade Level _____
Date _____
Time _____

Expectations are posted?   yes   or   no
Comments:

Teachers/staff member reinforces positive behavior
Verbally?   yes   or   no
Comments:

Monetary?   yes   or   no
Comments:

Students are redirected for negative behavior?   yes   or   no
Comments:

Expectations are retaught?   yes   or   no
Comments:

Students received an office discipline referral? yes   or   no
Comments:

Additional comments and observations:

Parent PBIS Survey

Dear Parent(s):

I am studying the effects of the PBIS system on school behavior and climate in our school. Will you please complete the attached survey and also answer the open-ended question, which follows each statement? This information will greatly assist me in completing my dissertation requirement for the Doctor of Education degree.

Please take a few minutes to complete the following survey.
Circle one of the following:
 1 – strongly disagree
2 – disagree
3 – neither agree or disagree
4 – agree
5 – strongly agree

1. Expected student behaviors
     are taught directly.   1   2   3   4   5

       *How do you know the expected student behaviors are taught?

2. Expected student behaviors

    are rewarded regularly.   1   2   3   4   5

   How are your child(ren)'s expected behaviors rewarded?

3. Problem behaviors and consequences

    are clearly defined.   1   2   3   4   5

    *How do you know the problem behaviors are defined along with the appropriate consequences?

4. The climate of the school has improved

    since PBIS has been in place.   1   2   3   4   5

    What are some specific indications that the school climate has improved?

5. A team has intervened with your

    child(ren) to help
    their behavior.   1   2   3   4   5

    What are some specific ways the team intervening with your child(ren) helped?

6. Your child(ren)'s behavior has

    improved at home since being
    apart of the PBIS program.   1   2   3   4   5

    What are some specific ways your child(ren) have improved at home?