IMPLEMENTATION AND SUSTAINABILITY OF POSITIVE BEHAVIOR

SUPPORT IN ELEMENTARY SCHOOLS

by

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As members of the Dissertation Committee, we certify that we have read the dissertation prepared by Toni Lynn Sparks entitled: Implementation and Sustainability of Positive Behavior Support in Elementary Schools and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy

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STATEMENT BY AUTHOR

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ABSTRACT

Positive Behavior Support (PBS) is a school-wide discipline program designed to increase appropriate social behavior of students and create safe teaching and learning environments. A number of studies provide data demonstrating PBS is an evidence-based practice. It is not clear, however, why PBS is successfully implemented and sustained over time in some schools and not in others. The purpose of this study was to investigate what factors led to the successful implementation of PBS three years post training in elementary schools.

Rogers' (2003) Theory of Diffusion of Innovations was applied to view the impact of the characteristics and types of communication networks on diffusion. The components of the implementation process specifically examined were: a) levels of implementation of the features, b) school personnel's perceptions of the characteristics of PBS, and c) types of communication networks. A mixed-methods approach was used. A four-step selection process was developed to categorize 16 southwestern public elementary schools into high and low implementer groups. Two demographically similar schools were chosen from each implementation group for case-studies. Interviews, surveys, school and classroom observations, and reviews of archival records were conducted.

This study found whether or not PBS was successfully implemented and sustained was primarily a "systems" issue:

a) High implementer schools implemented each feature of PBS while low implementers sustained only some features.

b) Rogers' (2003) characteristics of an innovation included: relative advantage, compatibility, observability, trialability, and re-invention. Rogers claimed these characteristics affected rate of adoption. High implementer schools found PBS possessed these characteristics. Low implementer schools expressed conflict with these characteristics impacting the overall implementation and sustainability of PBS.

c) The types of communication networks at schools affected the overall diffusion of PBS. High implementer school personnel engaged in diverse forms of communication while low implementer personnel engaged in insular forms of communication stifling the implementation process.

Additional findings provided insight into the components needed for successful PBS development including: a) management through site-based steering mechanisms, b) considerations for initial training and continuing professional development, and c) oversight of PBS by the principal.

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CHAPTER 1

INTRODUCTION

In response to growing concerns related to excessive discipline problems and general barriers to children's development and learning, the educational community has sought alternative solutions to school-wide behavioral problems (Adelman & Taylor, 1998). A ten-year research study collected and reviewed data regarding the status of children's mental health services. This study indicated approximately 12% and 22% percent of all children were suffering from a diagnosable mental, emotional, or behavioral disorder with very few receiving help for their disorders (Hoagwood & Erwin, 1997). Further, for those schools located both in large urban settings and in poor rural locations, the numbers suggested over 50% of each school's population demonstrated learning, behavioral, and emotional problems (Adelman & Taylor, 1998).

Particularly significant were the lack of services available to address these issues in schools. A representative sampling of 482 school districts of varying sizes across 45 states indicated 55% of the school districts had school counselors, 40.5% psychologists, and 21% social workers (Davis, Fryer, White,& Igoe, 1995). Other studies indicated school psychologists and social workers should work at a ratio of 1 to 2,500 students and for school counselors a ratio of 1 to 1,000 (Carlson, Paavola, & Talley, 2005). With the rise in delinquent and violent behavior on school campuses and the lack of school personnel to bear the burden of such issues, it is essential that the educational community investigates evidence-based programs to meet student needs sufficiently.

While school discipline issues have changed in the last 50 years, the tragic school shootings in Arkansas, Tennessee, Columbine High School, and most recently Virginia

Tech Polytechnic Institute received the greatest attention through a variety of multi-media outlets fueling misperceptions that schools are disorganized and rampant with school violence (Heaviside, Rowand, Williams, Farris, Burns, & McArthur, 1998).

Since the early1990s, the concept of school violence has evolved dynamically. A University of California database drawing from five national newspapers reported only 179 listings of school violence prior to 1992. A 70% increase in these reports was shown over the following eight years. Furlong and Morrison (2000) suggested the definition of school violence has been "conceptualized as a multi-faceted construct." Hyman and Perone (1998) indicated that misperceptions about the extent of school violence had impacted the use of law enforcement as opposed to sound educational models for addressing behaviors.

<center>School and Youth Violence</center>

While school and youth violence has had an impact on crime levels in the United States, the perceptions about the type and prevalence of specific acts of violence are distorted (Hyman & Perone, 1998). The Criminal Victimization in the United States Reports (1990-1995) indicated rape, robbery, and assault are more likely to occur at home than in the schools (U.S. Department of Justice, 1990-1995). The U.S. Department of Health and Human Services reported in 1992 that 2.9 million abused or neglected children were victimized by their own family members (U.S. Department of Health and Human Services, 1992) Statistics reported by some of the more dangerous cities in the United States suggested children are safer in their schools. The aggravated assault rate in Chicago was 1,502 per 100,000 citizens as opposed to 325 per 100,000 students in the Chicago Public Schools (Chicago Public Schools, Bureau of Safety and Security, 1994).

In 1993, the Los Angeles homicide rate was nearly 30 per 100,000 citizens versus three per 100,000 students in the Los Angeles Public Unified School System (Los Angeles Public Unified Schools, Department of Security, 1994).

The student behaviors most notably on the increase are those of general incivility. These behaviors include pushing and shoving, rumor spreading, verbal intimidation and threats, bullying, and sexual harassment (Skiba and Peterson, 2000). Studies have indicated these types of behaviors lead individuals to commit more severe violent crimes (Eisenbraun, 2006; Furlong & Morrison, 2000; Skiba & Peterson, 2000). A recent study conducted by the National Center of Educational Statistics indicated schools reporting at least one serious discipline issue, 28% also reported at least one crime. These figures are in contrast to only 3% of schools with minor or no reported discipline issues reporting the presence of crime (Skiba & Peterson, 2000).

Previous Responses to Discipline

In response to these types of behaviors, schools often have relied on the punishment and exclusion of children (Jackson & Panyan, 2002). The implementation of Zero Tolerance policies has become another popular discipline practice used to ameliorate these issues (Skiba & Peterson, 2000). School administrators used suspension and expulsion or more severe security measures such as metal detectors or locker searches to reinforce these policies (Skiba & Peterson, 2000). These practices are now applied not only to drugs and weapons violations, but in some cases, for failure to return homework (McFeely, 1998), off-campus behavior (Seymour,1999) possession of nail files and for incidents of fighting (Petrillo, 1997). Some explanations for schools reverting to these harsher disciplinary policies may be due to the absence of: best

practices in the classroom, classroom and behavior management strategies, teachers

trained in the use of effective practices, a team approach to solve behavior problems,

considerations about the school environment, and assessing organizational health

(Dwyer, Osher, & Hoffman, 2000)

Jackson and Panyan (2002) stated, " To focus on changing behavior as the

primary outcome of the educational process helps legitimize the long-standing practice

of trying to 'fix' behavioral concerns by suppressing their occurrence (p. 14)". Macht

(1990) argues that no matter how undesirable behavior becomes, this behavior itself

represents the individual's expression of his or her needs. Ameliorating behavior through

traditional acts of suppression was ineffective and provides no long lasting benefits.

During the late 20th century, research provided schools with models for

"unifying" their discipline practices. Educators turned to varying fields for guidance

about new practices that would offer remedies to growing behavioral problems. Evidence

suggests the interventions derived from these fields were not used in public schools

(Skiba & Peterson, 2000). The effective use of Applied Behavioral Analysis (ABA)

concepts has been demonstrated. The application of theories regarding reinforcement and

the use of positive reinforcement to increase appropriate behavior was demonstrated by

Gottfredson, Gottfredson, and Hybl (1993) and Nelson and Rutherford (1987).

Emerging Theories and Programs

The field providing the framework for the learning principles associated with

human behavior was behaviorism. The field itself survived several evolutions. Many of

the underlying principles guiding this systematic approach were first applied as a science

in the 1920s. The earliest concepts were quickly usurped into the field of psychology and

other related fields. Mowrer (2001) described B.F. Skinner as revitalizing the field in the 1940s through his new definitions of old concepts and his development of the "Skinner Box", an empirical data gathering device to record animal learning. Skinner was able to integrate the learning principles attributed to the field and demonstrated the application of the science to experiments related to animal behavior. Many of the principles surrounding the field are used frequently in classrooms today including such concepts as reinforcement, modeling, shaping, etc.

In 1975, Hobbs posed an ecological theory related to individuals with emotional/behavioral disorders exploring the idea that behavioral disturbances do not exist exclusively within the individual, but result from the interaction of the individual and his/her environment. This approach required professionals to look beyond the individual and evaluate the system as well. Mowrer (2001) described this hybrid model as a humanistic approach to behaviorism. This more holistic view created interest in the educational community to foster school-wide programs focused on engineering the entire school environment to increase greater social competence, rather than emphasizing the reduction of inappropriate behavior of an individual.

Programs emerged in the late 1980s and early 1990s to address discipline problems at the school level. Jackson and Panyan (2002) classified these programs as possessing one of the following approaches: democratic schools, school-wide behavior management systems, caring schools, conflict resolution schools, and those using wraparound planning. The specific programs that emerged included: The PeaceBuilders Program, The Good Behavior Game, Linking Interests of Families and Teachers, Fast Track, and Positive Behavioral Support (PBS) (Flannery, Liau, Powell, Vesterdal,

Vazsonyi, Guo, Atha, & Embry 2003).   Collectively, these programs have shown

reductions in office referrals, suspensions, aggressive behavior, tobacco use, and poor

academic achievement (Flannery et. al., 2003). Movement towards the aforementioned

programs that targeted the entire student population rather than provide only targeted

interventions for a small percentage of students served as a catalyst for further use of

school-wide based approaches like PBS.

<div align="center">Positive Behavior Support</div>

Positive Behavior Support (PBS) incorporated research based strategies such as

Applied Behavioral Analysis (ABA) and other theoretical approaches to create cultures

of behavioral competence, to reduce office discipline referrals, and to create an intensive

intervention system for individuals that uncovers the relationship between problem

behavior and the individual's interaction with his/her surrounding environment (Safran &

Oswald, 2003). While PBS appeared to be a recent phenomenon, the foundation for the

program emerged from the earlier work of researchers seeking a resolution for the

behavior of individuals with severe and profound cognitive deficits.

In the late 1980s, the theoretical frameworks underlying PBS were initially used

by researchers to address the needs of developmentally disabled individuals who engaged

in repetitive acts of self-injurious behavior. This approach served as a proactive

alternative to aversive interventions for changing that type of behavior. Through

investigation, Carr and Durand (1985) determined that individuals were engaging in self-

injurious behavior as a form of communication. Uncovering the relationship between the

problem behavior and the needs of the individual became a primary focus of the

approach. PBS has now extended its focus from the individual to a school-wide systems

approach. PBS also may be referred to in the literature as Positive Behavioral

Interventions and Support (PBIS), Effective Behavior Support (EBS), or School-Wide

Positive Behavior Support (SWPBS).

Statement of the Problem

Evidence-based studies have been conducted to validate the impact of PBS

(Warren, Edmonson, Griggs, Lassen, McCart, & Turnbull, 2003). A report from the

Office of Special Education Programs (2002) indicates PBS has lead to the following

outcomes for students: improved academic achievement, enhanced social competence,

and safe learning and teaching environments. The problem confronting administrators

and school personnel who attempt to apply PBS lies in its actual implementation. Some

schools adopt the innovation and integrate its components into everyday practices,

making it a part of the system. Other schools attempt to use PBS minimally or even

discontinue its use. Whether or not PBS is implemented and maintained is a systems

issue. At this time there is minimal data-based information concerning why PBS is

successful in some schools and not in others.

Purpose of the Study

The purpose of this study was to examine the impact of the features of PBS on the

implementation and sustainability of the innovation. These features included:

(a) defining expectations, (b) teaching behavioral expectations, (c) monitoring and

acknowledging students' appropriate behaviors, (d) administering a system for

responding to behavioral violations, (e) gathering and using information about student

behavior to inform decision-making, (f) managing school-wide system through the site-

based administrator and site-based team, (g) and obtaining district-wide support.

The second phase of this study was to investigate the PBS development process using a systems approach. This study used Rogers' (2003) Theory of Diffusion of Innovations to view the characteristics of PBS and their impact on the diffusion process. In addition, the study viewed the affect of the types of communication networks on diffusion as well. No study to date has viewed the implementation and sustainability of PBS through Rogers' theoretical framework. A mixed-methods approach was used to examine the implementation and sustainability of PBS in four public elementary schools in Southern Arizona. The researcher employed the use of interview, survey, observation, and review of archival records to complete the study. In exploring these processes, the study answered questions in the domains of Rogers' Theory of the Diffusion of Innovations as it relates to the elements and characteristics of innovations, impact of the features of PBS, levels of implementation and sustainability of PBS.

Research Questions

1. To what extent were the features of PBS implemented and sustained at each school site?

2. How does Rogers' characteristics of an innovation relate to site-based personnels' perceptions of the characteristics of PBS?

3. How did the communication networks affect the overall implementation and sustainability of PBS?

4. What leads to the successful implementation and sustainability of PBS three years post training in elementary schools?

Significance of the Study

As part of the No Child Left Behind Act (NCLB) mandate, programs must undergo a rigorous type of evaluation for the purposes of identifying outcomes related to student achievement (Whitehurst, 2003). The Institute of Education Sciences (IES), under the Department of Education, is encouraging and supporting research projects designed to provide evidence-based data that demonstrate how student achievement outcomes are related to specific educational practices. Therefore, research identifying factors affecting the sustainability of an educational innovation is not only worthwhile, but necessary. Any findings that bridge the research to practice gap and increase the fidelity of the innovation would increase the global impact of Positive Behavioral Support (Dearing, 2003).

Limitations of the Study

The study was constrained by the following limitations:

1. The study utilized a small sample and the results of the study cannot be generalized to a larger sample other than the sample and the contexts studied (Seidman, 1991).

2. Most interviewees responded to questions that required reflection on the implementation of PBS over a three-year period. Therefore, responses relied heavily on the memory of the participants. The results may not reflect the depth of information possessed by the participants earlier in the process and may even be incorrect.

3. A formal request to conduct research from the school district narrowed the scope of researcher observations. The school district specifically requested that

the researcher not report student or teacher behavior during the course of the classroom observations. Therefore, these observations were less systematic and were limited in their ability to triangulate other multiple sources of data.

Definition of Terms

For the purposes of this study several terms will be used and are defined as follows in the text.

Positive Behavior Support. Programs that have been accepted by practitioners and researchers as an effective and practical method to teach social skills to students (Lewis, Sugai, & Colvin, 1998). These programs include the development of positive behavioral expectations to staff and students, proactive supervision or monitoring of behaviors, contingency management systems to reinforce and correct behavior, and methods to measure outcomes and to evaluate progress (Luiselli, Putnam, & Handler, 2001).

Diffusion. Process in which an innovation is communicated through certain channels over time among the members of a social system (Rogers, 2003).

Innovation. An idea, practice, or object that is perceived as new by an individual or other unit of adoption (Rogers, 2003).

Sustainability. The degree to which the essential features of PBS were implemented following the cessation of grant funding.

Implementation. Takes place when an individual puts an innovation into use (Rogers, 2003).

Applied Behavioral Analysis. A science established in the 1960s in which learning principles are systematically applied to produce socially important changes in behavior (Cooper, Heron, & Heward, 1987).

Social System. A set of interrelated units engaged in joint problem-solving to accomplish a common goal (Rogers, 2003).

Homophily. The degree to which a pair of individuals who communicate are similar (Rogers, 2003).

Heterophily. The degree to which a pair of individuals who communicate differ (Rogers, 2003).

School-Wide Evaluation Tool. A research instrument assessing school-wide positive behavior support (Horner, Todd, Lewis Palmer, Irvin, Sugai, & Boland, 2004).

School-Wide Information Systems. The School-Wide Information System (SWIS) is a web-based information system designed to help school personnel to use office referral data to design school-wide and individual student interventions (http://www.swis.org).

CHAPTER 2

LITERATURE REVIEW

This literature review consists of a discussion of the following: (a) theoretical framework and principles of PBS, (b) features of PBS, (c) factors affecting the implementation of PBS, (d) impact of positive behavior support, (e) diffusion of innovations, (f)) predicting successful implementation of educational innovations, (g) sustainability of innovations, (h) sustainability of school-based innovations, (i) barriers to implementation and sustainability, and (j) summary of sustainability factors and systems change.

Theoretical Framework and Principles of PBS

In the 1960s, a paradigm shift occurred creating theories about disturbed or deviant behavior that could be attributed to a disturbance within the individual's system, not as originally postulated as pathology within the individual. The field began to use a "systems" approach to uncovering relationships between the individual and his/her environment as the source of the problem (Jackson & Panyan, 2002). Bijou (1968), one of the early notable scholars, altered the focus from "blaming the child" to viewing the interactions between adults, fellow peers, and the surrounding environment. Furthermore, Wayson and Pinnell (1982) stated, "When discipline problems occur at school more often they can be traced to dysfunction in the interpersonal climate and organizational patterns of the school than to malfunctions in the individual"(p.117).

Other early models included the social discipline model (Dreikurs, 1968), the

quality school model (Glasser,1965), the ecological model (Hobbs, 1966), the behavioral

model (Skinner, 1968), the cognitive-behavioral model (Meichenbaum, 1977), the

multiple intelligences model (Gardner,1983), and the judicious discipline model

(Holdsworth, 1988). Jackson and Panyan (2002) described these early 20th century

models as incorporating each of the following guidelines: addressing behavioral issues

required the actions of the community (social discipline model), recognition of the

problem required a systematic analysis of instruction and how those with challenges are

being addressed within the system (ecological and behavioral models), recognition of

self-mediation or one's own autonomy in making decisions (cognitive-behavioral model),

and how environmental factors in response to behavior affected motivation (behavioral

model). From these models, it is clearly the field of "behaviorism" from which PBS

forms its structural framework.

B.F. Skinner (1968) developed a theory of human behavior and applied its

systematic components to behavior. Portions of this science have been used more widely

than any other approach to address learning and behavioral problems (Baer, Wolf, &

Risley, 1968). The tools employed in this science were referred to as Applied Behavioral

Analyis (ABA). Most scholars involved in the creation of ABA and PBS were trained as

behaviorists (Dunlap, 2006).

Dunlap (2006) explains, "It is well understood that PBS emerged from ABA and

is indebted to ABA for much of its conceptual, methodological, and technological

foundations" (p.12).The presence of ABA is most notable at the individual level of

intervention in the model. However, the specific use of instructional strategies,

awareness of antecedents, manipulations of consequences, use of reward and other

reinforcement techniques are all essential to the successful performance of PBS at the

school-wide level (Dunlap, 2006). These principles have guided the structural features of

PBS.

<div align="center">Features of PBS</div>

The features of PBS were derived from theoretical principles of applied

behavioral analysis (Dunlap, 2006). On-going research in the field continues to inform

the implementation of these features in the field. A review of the key features of PBS

includes: defining expectations, teaching behavioral expectations, monitoring and

acknowledging students appropriate behaviors, administering a system for responding to

behavioral violations, gathering and using information about student behavior to inform

decision-making, managing a school-wide system through the site-based team, and

obtaining district-wide support. These features have been outlined by Horner, Todd,

Palmer, Irvin, Sugai, & Boland (2004) through their creation of the School-Wide

Evaluation Tool (SET), which is an instrument for assessing school-wide PBS.

According to Horner et al (2004), the following is a description of the start-up

procedures and features necessary to implement PBS. Initially, a *site-based team*

volunteers to participate or represent their school at a training establishing the theory and

justification for PBS practices. This team should be representative of the entire staff.

Schools choosing to implement PBS begin by identifying three to five positively stated

school-wide expectations. Once these expectations have been determined, staff then

develop a teaching plan to introduce the language to students at the school site while

using examples and non-examples of target behavior. The teaching plan must include the

individuals responsible for *teaching the expectations* in specific environments. For example, teaching expectations related to the cafeteria must be demonstrated in the cafeteria. Schools have used mottos such as, The "Three B'S….Be respectful, Be responsible, and Be ready!" Each of these three B's are then taught and reinforced by the school staff through these plans incorporating the use of examples and non-examples. Students model what it looks like to "Be respectful" in the cafeteria, etc. Generally, staff also are advised to model examples of " not being respectful."

Once students are familiar with these expectations, the school staff must devise a *system to recognize students for demonstrating appropriate behavior*. For example, Netzel and Eber (2003) discovered an Illinois school had created "Gotchas" which were 4 by 5 inch pieces of paper teachers would use to write the name of a student following the behavioral expectations. This paper was later placed in a weekly school prize drawing.

Next, schools must devise a *system for responding to behavioral violations* for those students who engaged in inappropriate behavior. This process fosters communication among the school staff and creates a consistent plan regarding which types of behaviors are addressed by the teacher, and which should be referred to the administration. As part of data analysis it is recommended that schools re-tool their discipline referral form to match this new system of consequences.

Netzel and Eber (2003) found schools that *gathered and used office discipline referral data to evaluate amd make changes in their school-wide system* based on discipline data. The school was able to identify times of the year when discipline referrals began to rise and adjusted their own behavior by increasing the rate at which they gave out "boosters" (reinforcers) for appropriate behavior.

The school also pinpointed specific periods of the day where the greatest number of referrals occurred. In response, the issue was raised at a staff meeting and alternatives to prevent these behaviors were devised. Further, these referrals were generated out of the classroom and playground so the staff arranged a professional development session to address classroom and behavior management strategies. The final feature of PBS is that schools implementing PBS should arrange to receive *district-level support* for PBS in the form of policy or procedures and provision of training.   Related studies have investigated the impact of these features on the successful implementation of PBS.

Factors Affecting the Implementation of PBS

Researchers suggested schools be aware of several "practical and systemic" factors prior to implementing PBS. Handler, Rey, Connell, Their, Feinberg, and Putnam, (2007) recommended schools assess their ability to: develop and manage a leadership team, garner staff participation and involvement, require administrative support, develop competent coaching capability, and elicit district support. The practical considerations of these were developed through years of consultation with schools implementing PBS. The schools with implementation challenges revealed how these features of PBS affected a school's overall readiness for "systemic change, degree of implementation, rate of progress, and sustainability of school-wide practices" (p. 29)

Handler et al. (2007) discussed five factors that impacted the overall implementation of PBS. These five factors included: team, skills of staff, leadership, coaching/facilitator, and district factors. *Team factors* affecting overall implementation would include the establishment and maintenance of the team. To operate the team effectively, Handler et al. (2007) detailed how specific attention must be paid to the

activities of the team, potential attrition of members, and team communication with staff and administration. Their insight into the process also revealed the need for team members to dedicate time to the team process and to effectively communicate those activities to the staff.

Handler et al. (2007) noted systems that provided time to fully develop the *skills of staff* members related to SWPBS and other underlying behavioral principles were more efficient users of PBS. This strategy further ensured that staff were involved in the communication between the leadership team and administration about forthcoming changes as opposed to being "surprised." The allotment of time also allowed staff to gather as a group and discuss on-going progress or the need for changes to PBS.

The role of the administrator discussed by Handler et al. (2007) and Sugai (2005) would suggest that particular *leadership characteristics* may assist the principal in the successful implementation of PBS. These characteristics include, "redesigning school settings to change both adult and student behavior, actively and frequently monitoring and acknowledging staff and students who are meeting the expectations, establishing a small number of specific priorities, and building capacity" (p. 34). Intrinsic to the operations of a school is the assumption that leaders are equipped to develop rapport with staff members, understand systems change and PBS, participate in team activities, and visibly model the features of PBS (Handler et al., 2007).

Kincaid, Childs, Blasé, and Wallace (2007) engaged in a study to determine the barriers and facilitators in implementing PBS. The study was conducted through Florida's Positive Behavior Support Project. By gathering information on the Benchmarks of Quality, measure 26 schools across the country were assigned to either

high or low implementer status. Using a modified nominal group process researchers investigated the barriers and facilitators to the implementation process. The findings showed both groups identified regular team meetings, school level training, and using data as highly important facilitators to PBS success. In contrast, these groups identified staff buy-in as the primary barrier to successful implementation. High implementer groups also expressed concern about misperceptions of PBS, team training, and data issues as barriers. Low implementer schools identified team function, communication, and reward systems as barriers.

<div align="center">Impact of Positive Behavior Support</div>

A study conducted by Netzel and Eber (2003) analyzed the impact of PBS in an urban school district. The Illinois Positive Behavioral Interventions and Supports Network was a statewide assistance project that supported the development of proactive discipline efforts. The Waukegan School District in Northern Illinois was selected by the Illinois State Board of Education to participate in PBS training to address concerns about widespread discipline problems.

North Elementary School (NES) in Waukeegan was selected as the pilot school to undertake PBS and review results. Following one year of implementation, NES exhibited a 22% reduction in overall suspensions from the previous school year. Office discipline referrals were declining as staff members were becoming more aware of the need to remain consistent. Netzel and Eber (2003) stated, "Try to share the understanding that it takes less energy to prevent misbehavior and promote appropriate behavior than to run around 'putting out fires'"(p.78).

Netzel and Eber (2003) concluded there were four essential factors contributing to the success of PBS in the Waukegan School District. First, the buy-in of administrators was key as well as their continued support. Next, the school frequently reviewed progress during the implementation phase to adjust and meet the needs of the school. The value and philosophy of the site-based team was shared among the staff members. Lastly, to sustain the project there was continued staff acceptance, administrative site-support, and a long-term commitment from the district-level administration.

Another study conducted by Lewis, Powers, Kelk, and Newcomer (2002) investigated the impact of PBS on reducing problematic student behavior on the playground. Lewis and colleagues studied a suburban school of 450 students, grades kindergarten through sixth, and targeted the playground. The researchers used a multiple baseline measure to determine the impact of the teaching of expectations followed by the application of a group contingency. The group contingency had two major purposes: to increase staff recognition of appropriate student behavior and to reinforce the expectations. The group contingency incorporated the use of loops that monitors would provide to those children following the expectations on the playground. These loops were placed in a can in the classroom. Once the can was filled the class was able to choose a reinforcer.

Frequency counts of problem behavior were collected during 10-minute periods during each recess session. Data were collected from March through May. During recess one, baseline measures indicated a mean level of problem behaviors to be 31.3. During recess two, the mean level was 44.3. And finally, recess three showed a mean level of 13.6 problem behaviors. Following the interventions developed by the PBS planning

team, the data indicated level changes of 11.8 problem behaviors during recess one, 17.5 fewer problem behaviors for recess two, and for recess three, a mean change of 5.1 problem behaviors. This study demonstrated the interventions designed and applied through PBS by teachers and support staff were successful in reducing problem behavior on the playground (Lewis et al., 2002).

Another recent study investigating the impact of PBS was conducted in a large urban Chicago high school. Bohanon, Fenning, Carney, Minnis-Kim, Anderson-Harris, Moroz, Hicks, Kasper, Culos, Sailor, & Pigott (2006) used a qualitative case study approach to examine the implementation of PBS at a high school with 1,800 students on site. Using instruments such as the School-Wide Evaluation Tool (SET), Effective Behavior Support Survey (EBS), and Student Climate survey, the researchers documented several positive changes in the high school during a three-year period of implementation.

Referral data demonstrated a 20% decrease in office referrals from Year Two to Year Three. Specific behaviors such as "disobedience of authority" went from 1.64 per 100 students in Year Two to 0.05 per 100 students in Year Three. As part of the targeted school-wide implementation, the staff focused the students toward the goal of reducing office discipline referrals by 15%. The reduction for the targeted month yielded a 28% drop. While these results were limited to one school site, data suggested implementing the components with fidelity resulted in positive outcomes.

Another investigation of the impact of PBS at the high school level looked specifically at the responsiveness of various types of students to the program (Lane, Wehby, Robertson, & Rogers, 2007). The students were placed into three groups by their

teachers. The groups for assignment were externalizing, internalizing, comorbid, and typical behavior. Students were placed into these categories through a teacher nomination process facilitated by the Primary Investigator. These students were then compared across four outcome measures: Grade Point Average (GPA), unexcused tardies, suspensions, and office discipline referrals. The findings suggested that students in each group showed increases in GPA, decreases in unexcused tardies, and decreases in suspensions after the implementation of PBS. Students with the designation of "internalizing" experienced the greatest impact based on the outcome measures. The comorbid group responded the least to PBS (Lane et al., 2007).

Other studies have demonstrated similar results. A three year study conducted by Lassen, Steele, and Sailor (2006) showed evidence of the impact of PBS on a Midwestern urban middle school's out-of-class referrals, suspensions, and academic achievement. The outcome measures analyzed by the study were office discipline referrals (ODRs), suspensions, standardized test scores, and School-Wide Evaluation Tool (SET) data.

As hypothesized, the number of Office Discipline Referrals (ODRs) per student was reduced each year of the study. Horner and Sugai (2003) have estimated that each ODR resulted in instructional loss of 45 minutes for an individual student. Even with a more conservative estimate of 20 minutes, the school had "recovered 659 instructional hours (or eighty-two 8-hour days) per year since implementing school-wide PBS" (Lassen et al., p.709). Standardized scores in math increased significantly throughout the study period. Reading scores decreased from baseline to Year One. However, there was an increase in reading scores from Year One to Year Three. In this study, PBS resulted

in a decrease in ODRs, increased instructional time, and improved academic performance (Lassen et. al, 2006).

Finally, it is worthwhile to view the relative impact of Positive Behavioral Supports in a more restrictive setting such as a juvenile detention facility. Sheryl Feinstein (2003) conducted a study to investigate the impact of PBS on incarcerated youth's behavior. The teachers in the facility were willing participants as their purpose in adopting PBS was to change the punishment orientation of the facility.

The participants included incarcerated males ages 14 to 18 whose average stay was nine months. The juveniles' offenses ranged from drug dealing and arson to grand theft auto. Feinstein collected data for four months. During that time period enrollment of juveniles increased from 22 to 33 students. Behaviors were collected and analyzed as an entity rather than as individuals. Teachers used a rubric to determine levels of inappropriate behavior every 45 minutes for seven classes each day.

Following the planning and implementation of PBS strategies and subsequent reward system offered to students, hourly, daily, and monthly behavior scores were gathered. The behavior scores were determined by staff assigning daily point goals. These goals were multiplied by an average number of school days in a month to equal a final goal of 420 points. Students earning certain point totals were allowed access to privileges. As a comparison, researchers reviewed the rubrics filled out by teachers describing the daily behavior in the classroom.

Following the implementation of PBS, the following trends were evident in the data. Students earned an average three or higher (score from their teachers) in every class throughout the four-month period. A score of three indicated that the students were

participating and completing work. Each month the average daily goal of 21 points was

exceeded. The second month of implementation showed the highest number of students

reaching or exceeding their daily goals. Feinstein (2000) concluded problem behavior

was immediately reduced following the introduction of PBS strategies. Some additional

factors attributed to the success of PBS included the ability of the staff to re-tool their

interventions to meet the needs of the students in such a unique setting. Staff insisted

each class period began as a "fresh start" for the students, which enabled them to recover

points they may have lost from previous behavioral incidents. Staff also remarked on the

flexibility of PBS as essential to the success at the detention facility (Feinstein, 2003).

<div align="center">Diffusion of Innovations</div>

The recent increased focus on school accountability has placed greater emphasis

on educators to produce empirically based evidence that selected curriculum or

supplemental programs chosen by sites have documented benefits (Whitehurst, 2000).

Many schools begin their search for supplemental programs by choosing those which

have already demonstrated their effectiveness and were "research-based." While a

program may have proven to be effective, the gap that occurs from research to practice

carries more severe consequences for the school as a system in this educational

environment (Dearing, 2004).

Diffusion as defined by Rogers (2003) is the " process in which an innovation is

communicated though certain channels over time among members of a social system….it

is a special type of communication, in that messages are concerned with new ideas" (p.

5). Everett Rogers was well respected as a researcher in a number of fields including

diffusion theory, health communication, and entertainment-education. His seminal work was Diffusion of Innovations (Dearing, 2004).

Specific portions of his theory about the diffusion of innovations will be discussed relevant to this study. The major components of Rogers' theory include four overarching elements of diffusion. The subsequent components of this theory: innovation-decision process, attributes of innovations and their rate of adoption, and diffusion networks will be visited as well. These elements are the *innovation*, *communicated* through certain channels, over *time,* by *members of a social system* (Rogers, 2003).

The Innovation

Rogers discussed the process of innovation by beginning simply with the innovation itself. He described the impact the perceptions of the user held regarding the characteristics of the innovation and its relative impact on the rate of adoption of the innovation. Rogers clearly defined these characteristics: relative advantage, compatibility, complexity, trialability, observability, and re-invention.

Central to the theme of *relative advantage* is the individual's perception about the advantages of innovations. The greater the perceived advantages of the innovation the higher the rate of adoption. Irrelevant is the objective advantage. The perceived advantages might include economic or social benefits. It has been posited that personal satisfaction and convenience are assumed advantages as well (Rogers, 2003).

Compatibility is the degree to which the innovation matches the current beliefs, values, and/or experiences of the adoptive social system. An example of an incompatible innovation would be the introduction of the Western medical model to a band of

indigenous peoples who rely on medical treatment through a shaman. The introduction

of this new innovation would require a change in beliefs and values (Rogers, 2003).

Complexity is the perceived ability of the adopter to understand and use the

innovation. Rogers' logical conclusion was that simple ideas were easier to adopt,

therefore, increasing the rate of adoption. For example, researchers attempted to diffuse

the practice of "water-boiling" to a Peruvian village to reduce the incidence of illness

from infectious disease through consumption. One of the methods employed was to

attempt to teach the concept of germ theory to Peruvian housewives. One of the cultural

beliefs of the village was that hot water was equated with illness. So, the researchers

concluded, not only was the innovation incompatible with cultural beliefs, but it also

proved too difficult to understand given those preconceived beliefs (Rogers, 2003).

Trialability describes the adopter's ability to use the innovation on a trial basis. It

allows for an individual to learn by doing. This type of flexibility was claimed by Rogers

(2003) to increase the rate of adoption by the user. This was most notably observed in

the 1943 study conducted by Ryan and Gross. This study was the first of its kind in

diffusion research to attempt to uncover the reasons why rural Iowa farmers were

reluctant to plant obviously successful hybrid corn. The themes from the study showed

that these farmers were reluctant to make sweeping changes to their crops even though

many other farmers were making these changes due to the obvious advantages inherent in

hybrid corn planting. When presented with the ability to plant the hybrid corn on a

limited or trial basis, the farmers increased their rate of adoption (Rogers, 2003).

Observability is the extent to which adopters can view the impact of the

innovation. Rogers also claimed that this visibility can lead users to engage in discussion

about the innovation furthering one of the elements necessary for diffusion. Rogers had

observed the more rapid diffusion of solar water-heaters in clusters in California

neighborhoods. Many users were located within the same block. Rogers claimed that the

visibility of the solar collector panels displayed outside of the homes increased diffusion

(Rogers, 2003).

Re-invention did not emerge as a recognized characteristic of innovations until the

1970s. This concept described the degree to which a user may alter or change the

innovation during the implementation and adoption stages. To scholars and inventors of

innovations re-invention may be viewed as detrimental to the innovation itself by

corrupting fidelity. However, with the introduction of the concept of re-invention many

researchers began to note that minimal changes were unavoidable. While some

innovations are designed in such a manner that they are impossible to re-invent, others

existed that were relatively flexible and susceptible to numerous re-inventions.

Communication channels and networks

A communication channel is the medium in which a message is delivered from

one individual to another. Rogers stated, "The nature of the information exchanged in a

relationship between a pair of individuals determines the conditions under which a source

will or will not transmit the innovation to the receiver and the effect of such a

transfer."(p. 18). Mass media channels (radio, television, newspapers) are most efficient

in disseminating information about an innovation. However, Rogers found potential

adopters often based their subjective evaluations of an innovation on the information

relayed to them by current users of the innovation.

Rogers further discusses the types of human communication that may occur during diffusion. Homophily is "The degree to which two or more individuals who interact are similar in certain attributes, such as beliefs, education, socioeconomic status, and the like" (p. 19). Heterophily would describe the degree to which individuals who differ interact with one another.

Homophily and heterophily in *Communication Networks* proved to be both advantageous and detrimental to diffusion. The more homophilous the individuals were exchanging information, the more effective the communication. However, if homophiles limited their communication channels and networks to themselves, information is less likely to be transmitted to other members of the social system impacting diffusion.

Time

Time as an element of diffusion is described by Rogers as denoting the passage of an adopter through the innovation-decision process which includes five phases: (a) knowledge, (b) persuasion, (c), decision, (d) implementation, and (e) confirmation. Knowledge occurs when an individual becomes familiar with an innovation, understanding its basic functions. Persuasion has taken place when the user develops either a favorable or unfavorable opinion about the innovation. It is at this stage that the user actively seeks out information to confirm or disconfirm the information used to form this evaluation. Decision is marked by engaging in activities that signal the choice to adopt or reject the innovation. Implementation occurs when the innovation is used by the adopter. Confirmation includes the individual seeking validation for their decision to adopt or reject through reinforcement. The decision to adopt or reject may be reversed at this point in the process.

A Social System

A social system is defined by Rogers as "A set of interrelated units that are engaged in joint problem solving to accomplish a common goal …the members or units of a social system may be individuals, informal groups, organizations, and/or subsystems (Rogers, 23)." The structure within these social systems can have a profound impact on the diffusion of innovations. Individual units may exist within a social system and the behavior of these individual units impacts overall diffusion. Within these systems emerge norms or established behavioral patterns. These patterns become informal strata that solidify a code of tolerable behavior for members of the social system. These norms served as a guidepost to members as to what behaviors are expected. Another phenomenon discussed the role of opinion leaders and change agents in the system. Opinion leadership is the ability of an individual to influence others' opinions or attitudes to reach a desired outcome with relative success and frequency. These individuals are generally observed as the locus through which information is disseminated among communication networks in the social system (Rogers, 2003). Change agents differ from opinion leaders as their role is much more purposeful in impacting the innovation-decision process in a direction that is optimal for increasing the likely adoption of the innovation.

Predicting Successful Implementation of Educational Innovations

Bosworth and colleagues used a Bayesian model to predict the successful implementation of health and education school-centered programs (Bosworth, Gringiss, Potthoff, & Roberts-Gray, 1999). The purpose of the research was to make stronger connections between implementation research and implementation strategies. This

specific model was used to help schools evaluate their likelihood of success in implementing health education school-wide innovation. Expert panelists were selected for their experience in administration and implementation of innovations to complete three specific tasks. These panelists were to devise, in measurable terms, a definition of successful implementation, consider factors that contribute to successful implementation, and assign values to these diagnostic factors. The panelists determined eight factors that they aligned with 40 questions to predict successful implementation. Internal validity measures showed a correlation of 0.92 between the Bayesian model scores and experts' ratings of 100 hypothetical schools.

Through an extensive 10-step process, the expert panelists produced eight factors they perceived as essential to successful implementation. These factors included: facilitation process, resources, school-based leadership, implementers, external environments, compatibility of innovation, external leadership, and innovation characteristics. The panelists also derived standards to guide a process within a three-year time frame. Panelists explained that within three years individuals using an innovation should have a fidelity rate of 65% with the original design. In addition, 80 % of available implementers would be actively using the innovation. Finally, 80% of the potential recipients of the innovation would have been targeted (Bosworth, Gringiss, Pothoff, & Roberts-Gray, 1999). Based on the models' high rates of internal and external validity, the model may be used to assist sites planning to implement an innovation to guide and frequently evaluate components of implementation.

Use of this Bayesian model could have a significant impact on schools planning to implement PBS. The ability of the model to be applied at various stages of

implementation would allow facilitators or site-based team members to periodically evaluate the progress and impact of PBS. As a result, individuals facilitating the innovation would accomplish a variety of goals including assessing the user's strengths and potential barriers, allowing facilitators to shift the programmatic delivery based on site specific needs, evaluating program effectiveness, focusing on problem areas, and making subsequent ongoing changes.

<div align="center">Sustainability of Innovations</div>

A number of projects selected by districts or specific school sites for future implementation are made possible through federal grant monies, state funded grants, or private monies. Typically, when the financial support of these affiliates disappears, the innovation vanishes as well. Therefore, it is essential to consider factors that may contribute to the sustainability of an innovation. This is particularly important to consider in a time when educational funding is largely viewed as inadequate for increased attention on student academics and accountability. Rogers (2003) defined sustainability as, "The degree to which a program change is continued after the initial resources provided by the change agency are ended"(p. 376).

Adelman and Taylor (2003) discussed four logical steps that must occur to secure project sustainability. Stage One includes preparing an argument for the project's sustained valued functions. The steps suggested were presenting or defining the project's big picture and making a connection to the district's overall goals, policies, and mission statement. Stage One must include an evaluation of the district's current progress towards achieving these goals and how this project will directly impact progress. Finally,

it must be made clear what functions the district may jeopardize by not securing the sustainability of the project.

Stage Two seeks to mobilize interest, and consensus, and garner support from the primary stakeholders. This step requires the identification of individuals who represent positive role models as change agents to others in the community. These individuals were able to articulate effectively the need for change conducive to bringing others together to focus on sustainability. Finally, these stakeholders presented and won the support of policymakers such as district office administrators and school boards.

Stage Three focuses on clarifying feasibility. This stage includes the formation of a physical plan of the steps necessary to increase the facilitation and subsequent sustainability of the project. This phase included the addition of team members, department oversight, new positions directly linked to the project, the role and response of those individuals in capacity building at the site level, and a long-term plan for maintaining and phasing-out those roles with the end of project funding.

Stage Four requires implementation begin with careful consideration of building supports for increasing systemic changes. This process consisted of evaluation of readiness and structural planning for implementing these changes, perceived barriers and potential solutions, and gaining understanding from users as the process proceeds. These phases are necessary to maintain community commitment to the project.

Maintaining community commitment is an extensive process from evaluating individual tasks, supporting team facilitation, and ensuring follow-through, to developing ways to celebrate success, growing a community of experts, and finally to internally motivating others to renew interest in the project (Adelman & Taylor, 2003).

Adelman and Taylor (2003) suggested the following four temporary measures as invaluable to the sustainability process: a site-based steering mechanism, a site-based change team, a change agent who works with these teams, and mentors/coaches who model and teach the new approach. Incorporating a steering mechanism at each "jurisdictional level" (activity level) increased each group's abilities to plan, oversee, and provided support to the project. Each level should have a member who reported to one another and a governing body should be in place to coordinate the efforts of each group. The change agent or change team addressed these global issues as they related to the sites by assigning tasks, problem-solving, and continuing to facilitate the project goals. Mentors and coaches must be utilized to organize early trainings, encourage the teaching of site personnel to build capacity, serve as a troubleshooter for site or individual issues, and continue to develop stakeholders' skills. At this level of development and stratification, individuals needed to understand the nature of organizational systems, more specifically, the nature of the administrative functions of an educational system to achieve sustainability.

<div align="center">Sustainability of School-Based Innovations</div>

Previous studies have investigated potential factors affecting the sustainability of innovations. Specific studies produced information related to factors that enhanced and served as barriers to sustained use. Gersten and colleagues reviewed many of the major studies conducted recently addressing the sustainability of research-based practices in the field of education. These researchers discussed the major themes found among these larger-scale studies (Gersten, & David-Baker, 2000).

In the 1970's, the Rand study evaluated partnerships between public schools and research-based institutions and their introduction of novel instructional practices and sustainability (Berman & McLaughlin, 1976). Teachers and administrators were asked to respond to broad survey items related specifically to their perceptions of recently adopted innovations. Three significant findings emerged from their data. The researchers were surprised to find that the success of an innovation had an insignificant relationship to the amount of money provided for start-up costs. The practices linked to assisting teachers with high-risk or low-achieving students were more likely to be sustained by teachers. Finally, the scope of the innovation was directly related to the implementation and subsequent sustainability. For example, innovations with a broad scope tended to lack specific strategy development or extensive training in a particular methodology. Therefore, users would have difficulty selecting specific times or opportunities for its use. The tendency was to resort to the use of comfortable classroom practices. In contrast, those strategies focused on teaching new skills to teachers were more readily used and sustained at sites (Gersten & David-Baker, 2000). When leaders view sustainability as a process surrounded by specific contextual conditions and facilitate those contextual conditions, the probability of sustainability is increased.

A case study investigating the sustainability process observed the history and expansion of two after-school programs. Nocon (2004) peformed extensive historical case studies of the after-school programs known as the Fifth Dimension and La Clase Magica . Each program had been sustained for over ten years and both were expanded globally. Nocon (2004) suggested "sustainability is reasonably and productively viewed as a process of expanding and sustaining….it is collaborative, communicative, creative,

and continuing." In order to be collaborative, participants must be involved in initial planning and ongoing evaluation. Through this process participants remained engaged by providing input and shaping decision-making through voicing their needs and concerns. To be creative the process must be flexible and change with social, cultural, or political changes occurring within the global educational system. For an innovation to continue stakeholders must be dedicated to long-term commitment.

Benz and colleagues (2004) conducted a study to investigate factors influencing the sustainability of secondary transition programs. These researchers used broad survey methods and further evaluated Youth Transition Programs (YTP) through a multiple-case study design. Survey results revealed 78% of the sites had maintained the essential features of YTP programs. The themes that emerged as contributing to the sustainability of the program included: (a) credible, stable staff and support of at least one key administrator, (b) school and community perceived the innovation as having a positive outcome on student outcomes, and (c) the innovation had a clear role and presence in the district. These findings indicated that during the initial planning stages, staff were encouraged to adapt this innovation to meet the cultural needs of each individual site.

Lack of fidelity is usually described as disadvantageous to sustainability. However, a growing number of studies have contributed to a phenomenon known as "mutual adaptability." Mutual adaptation is a concept that described the process of modification of an innovation by its users (Benz et al., 2004). Other case study research has found that programs with an existing framework similar to the context of the school site produced positive outcomes. Hatch (2000) stated, "The greatest improvements came

from schools that did not break the mold but rather developed new continuities within their existing framework" (p. 564).

<div style="text-align:center">Barriers to Implementation and Sustainability</div>

While an institution involved in the process of implementing an innovation should proactively consider the elements that create an optimal environment for adoption, it is also prudent to review the literature regarding barriers to implementation. This section of the literature review will discuss the organization of systems, site-based management of organizations, and the importance of visual imagery in creating systems change.

Elias, Zins, Graczyk, & Weissberg (2003) used an illustrative analogy to describe the potential problems that may arise during the scaling-up process. The authors stated that even the best planned sailing voyage may be overrun with such nefarious elements as, "masses of seaweed, whirlpools, backtides, typhoons, hidden shoals, sandbars, and dead air that are not inherently fatal but can only be overcome with maximum coordinated and sustained effort" (Elias et al., p.5). Similar to the sailing analogy there exist internal and external influences in a school setting that should be addressed prior to implementation.

As discussed by Elias et al. (2003), these barriers begin with the structural features of the school system. One of the greater challenges, especially in urban settings, is teacher turnover. The attrition of teaching staff dilutes the number of individuals on site who understand and possess the skills to implement the innovation. This lack of understanding prohibits communication and diffusion of the innovation. Schools also were observed as under pressure to illustrate gains quickly. Pressure of this nature stifled the school's ability to create "management capacity", which would allow for change.

During the training process Elias et al. (2003) observed lack of fidelity with the innovation. Further noted were design flaws in the innovation package causing it not to be measured reliably. It was also essential that these innovations recognized theories of learning and action. Innovations that were not sensitive to the manner in which individuals learn posed roadblocks to implementation. The researchers specifically discussed the need for the innovation to translate learning into desired behaviors.

From a management perspective, Elias et al. (2003) discussed that resources and organizational requirements are consistently underestimated. Schools often were unprepared for change as evidenced by a lack of planning and readiness. Financial and resource management constantly shifted and were not addressed, posing problems for long-term management. Studies reviewed by these researchers, "highlighted the need to attend to existing organizational factors when embarking on significant reform" (p. 7).

Two studies assisted in the interpretation of the data from these case studies related to their site-based management or teams. Wohlstetter and Briggs (2003) reviewed the exhaustive literature related to School-Based Management (SBM) dating back to the 1960s. They determined there were eight factors that reappeared in the research impacting the overall effectiveness of SBM's. These factors included: active vision, meaningful decision-making authority, distribution of power, development and use of knowledge and skills, collecting and communicating information, rewards for progress, shared leadership, and cultivating resources.

West, Garrod, and Carletta (2003) discussed the reflexivity in teams. Reflexivity is defined as "the extent to which group members overtly reflect upon, and communicate

about the group's objectives, strategies (decision-making) and processes (communication), and adapt them to current or anticipated circumstances"(p. 296). Reflexive teams seem engaged in detailed planning and anticipated consequences that may occur over the long-term.

Non-reflexive teams illustrated little awareness of their objectives and behaved defensively in response to a perceived barrier. Based on the review of the data related to teams, in order for these teams to achieve reflexivity purposeful planning should be considered about the long-term objectives of PBS, and increased communication with stakeholders (West et al., 2003).

The work of Hudson and Ahlquist (2003) conducted in-depth case studies of four schools curriculum on the learning styles of indigenous children. A component of their work addressed the impact of the physical artifacts hung and exhibited throughout the school. In two school sites where student achievement was abysmal, the researchers found visual imagery representing Euro-centric images of Westward Ho, white pioneers with long rifles, horses and covered wagons, and Disney images of Snow White and Cinderella. In the other schools that were attempting to implement a systems change through the injection of "equity pedagogy" into the curriculum, the researchers noted a marked difference in the visual imagery presented in the school. In these schools the wall posters were hung signifying members of the indigenous communities, alphabets, poems, and proverbs were listed in English and the communities' native language. These schools were demonstrating significantly higher levels of achievement following these changes. It is plausible that as each site embarked on what many have described as a "cultural" or

"systems" change, the visual representation of those principles further reinforced or solidified for its members their acceptance of the innovation.

Summary of Sustainability Factors and Systems Change

Achieving sustainability and systems change is a dynamic evolutionary process. Adelman and Taylor (2003) described these phenomena as requiring institutions to address the following four major phases of the change process: creating readiness, initial implementation, institutionalization, and ongoing and creative renewal. This process assumes careful attention is paid to the culture and climate in which the planned innovation is to be implemented. Additionally, it is a necessity that the stakeholders involved demonstrate an understanding of the innovation and are provided supports to bolster the innovation. These changes must then be reflected in policies and practices. And finally, the stakeholders will evolve into a "community of learners"(Adelman & Taylor, p.5).

Research conducted regarding the factors that affect sustainability of innovations contained several cyclical themes. Factors could be grouped into the following categories: stakeholders and stakeholder behavior, organizational systems, scope of the innovation, and on-going evaluation.

Studies indicated the involvement of primary stakeholders was essential. In a school district these segments of the community included members of the school board, superintendent, central office administration, site principals, teachers, support staff, parents, and students. Within these groups varying power structures emerged that mobilized with the announcement of school change. Resistance or lack of support by any group as reported by these studies may be a direct cause of sustainability failure. The

Rand study (1976) suggested individuals need to make a connection with something

valuable within the teaching process to further sustain innovative practices.

The *organizational system* must provide external support to stakeholders so as to

create internal incentives to repeat the procedures outlined by the innovation. In addition,

the system must be prepared to conduct needs assessments to choose innovations that are

a "good fit" with specific school culture. Tools for measuring the progress and impact of

innovations were designed to formally *evaluate* innovations. Essential at specific

planning stages is the need to integrate into the organizational system an on-going

evaluation process affecting day to day decision-making. This evaluation process should

be pre-determined and should meet the needs of the organization. Finally, the *scope of*

the innovation must be a match to the already existing contextual frame of the school site.

This requires stakeholders to take an inventory of their own needs and the needs of the

organization. This process will determine whether the organization has a sufficient

evaluation system in place to increase collaboration and communication so that the

innovation may be continued (Adelman & Taylor, 2003).

CHAPTER 3

METHODOLOGY

Design

This mixed methods case study was designed to determine the extent to which the features of Positive Behavior Support (PBS) were implemented and sustained in four public elementary schools in Southern Arizona (Merriam, 2003; Yin, 2003). Implementation and sustainability of Positive Behavior Support programs were defined as the extent to which the essential features of PBS were continued at school sites three yeas after initial training. The PBS features examined were: defining expectations, teaching behavioral expectations, monitoring and acknowledging students' appropriate behavior, administering a system for responding to behavioral violations, gathering and using information about student behavior to inform decision-making, managing the school-wide discipline system through the site-based administrator and site-based team, and obtaining district-wide support.

These features have been outlined by Horner et al.(2004) through their creation of the School-Wide Evaluation Tool (SET) which is an instrument for assessing school-wide PBS. The entire program development process and the factors associated with the sustainability of this innovation were explored at four school sites examining the three year period of implementation (2003-2006). The selection of these features as defining sustainability was consistent with the manner in which training, on-going support, and maintenance were offered through funds made available by a large-scale federal grant. This study was guided by the Rogers' theory of diffusion on innovations (Rogers, 2003).

Site Selection Process

To determine which public elementary schools were to be selected for study, the

following procedures were implemented following Human Subjects approval. The

original 16 schools that began implementing Positive Behavior Support in 2003 through

the LINKS federal grant program were contacted to collect specific data about the status

of implementation of PBS. The purpose was to determine what data sources were

available at each site. An electronic message was sent to the site administrator requesting

general information regarding the implementation status of PBS. The principal was

asked to identify the school's team leader or facilitator for PBS (See Appendix E).

Once the leader had been identified, that individual was contacted via electronic

message requesting information concerning the PBS team, team membership, and

collection of discipline data (See Appendix F). Contact via telephone was made with

sites to confirm information.

Following the collection of data relating to the implementation of PBS at each

site, demographic data were collected relative to each individual school site for the

purpose of creating an individual school profile for study. Tables 1 and 2 display the

information collected related to the presence or absence of the features of PBS and the

components of the four-step selection process.

Table 1

Site Selection Criteria: Case-Study Sites

Case-Study School Sites	Size	Expectations Defined	Expectations Posted	Rew.	Discipline Data Collection	Team	Principal Continuity
A	371	+	+	+	+	+	+
B	301	+	+	+	+	+	+
C	331	+	+	+	Minimal	X	+
D	374	+	+	X	Minimal	X	+

+ Indicates feature as in place
X Indicates feature not in place
*   Indicates school with extensive contact with researcher in previous administrative role

Table 2

Site Selection Criteria: 2003 Original Unselected School Sites

School	Size	Expectations Defined	Expectations Posted	Rew.	Discipline Data Collection	Team	Principal Continuity
1	706	+	+	+	X	X	+
2	364	+	+	+	+	+	+
3*	753	+	+	+	+	+	X
4	401	+	+	+	+	+	+
5	684	X	X	X	X	X	X
6	752	X	X	X	X	X	X
7	772	X	X	X	X	X	X
8	415	+	+	+	+	+	+
9	491	+	+	+	+	+	+
10	857	+	+	+	+	+	+
11	549	+	+	+	+	+	+
12	467	+	+	+	X	X	X

+ Indicates feature as in place
X Indicates feature not in place
*   Indicates school with extensive contact with researcher in previous administrative role

The study employed a four-step process to select schools from the original 16 schools, which began start-up procedures for PBS in Fall 2003.

Step One was to determine the *implementation status* of PBS at each site. Each of the 16 schools in Fall of 2006 was contacted to inquire about the status of implementation of the essential features of PBS from school principals and PBS site facilitators. These individuals were asked to indicate their perceptions about the level of implementation of PBS by describing the presence or absence of the school expectations, reward system, PBS committee, discipline referral system, data entry of discipline referrals, and teaching plan.

 Step Two included using the presence or absence of these features *to categorize* these 16 schools into "low" and "high" implementation groups. For example, sites implementing each feature in Fall 2006 were placed in the high implementer group. Sites with marginal use or teaching of the expectations and those lacking a systematic reward system were placed in the low implementer group.

Step Three, *exclusionary criteria were applied* to each school. Schools were removed from consideration for this study if any one of the following existed: PBS was discontinued, lack of principal continuity, potential researcher bias (based upon previous administrative employment in the school district) or simultaneous existence of another school-wide discipline program.

 Step Four of this process included the *pairing of two schools* from each implementation group with similar demographic profiles. One school from the high implementer group was paired with a school from the low implementer group possessing

similar profiles related to school size, geographic location, academic performance, enrollment in free and reduced lunch program, and student population.

Sites remaining after exclusionary factors were applied were compared to produce two groups of implementers using the information gathered from personnel related to the current status of the essential features of PBS. One profile is of Low implementer schools and the other High implementer schools. From these distinctive groups two schools were chosen from each group for the purposes of conducting in-depth case studies. Schools A and B were high implementers and schools C and D were low implementers.

Two schools from each implementation group were paired with similar demographic profiles including: school size, geographic location, academic performance, enrollment in free and reduced lunch program, and student population. This site selection rationale was utilized to limit school's demographic profiles from becoming a potential factor affecting the overall implementation and sustainability of PBS.

<div align="center">The Research Settings</div>

Four public elementary schools in Southern Arizona were selected for study where PBS was implemented in Fall 2003. Each selected school participated in a federal grant sponsored by the U.S. Departments of Education, Health and Human Services, and Justice. This federal grant, referred to as Tucson LINKS (Linking Interventions and Services for Kids in Schools), served 55 elementary schools across five local school districts in Tucson, Arizona. Additional partners included: Pima County Attorney's office and local law enforcement, Community Partnership of Southern Arizona (CPSA), University of Arizona, medical providers, and other members of the Tucson community.

LINKS addressed safe school environments, early intervention, violence prevention, school and community mental health, and early childhood psychosocial/emotional development.

Participation in the grant provided access to training schools and communities, technical support (coaching), behavioral health services, primary medical care, financial support for training/curriculum of evidence-based programs, and supported the evaluation of the impact of these services. The expected outcomes of the grant were increased evidence of: protective factors in these communities, attendance, reductions in disruptive behavior, and academic achievement. Schools were selected for participation in the project by central office administrators in each school district. One of the programs available for selection and subsequent training was PBS. Each of the four schools selected for study participated in a two day PBS training during the summer of 2003 with the other 16 original school sites (http://www.tucsonlinks.org/about/about.cfm).

School Sites

The four school sites participating in this study were located within a large urban school district in Southern Arizona. The average district student enrollment for the past several years was nearly 60,000. The student body demographically represents the local community and consists of 54% Hispanic, 32% White/Anglo, 7 % African American, 4 % Native American, and 3% Asian American. Approximately 49 % of the student population qualified for the free lunch program and in the past three years the mobility rate (movement of students) has fluctuated from 32% to 38%. The district's high school graduation rate was 87%. The individual school demographics are displayed below see Table 3.

Table 3

Case-Study Sites' Demographics

Schools	Enrollment	Free/ Reduced Lunch	Student Demographics					Mobility
			White	Hispanic	African American	Asian	Native American	
A	352	54%	172	133	24	21	2	30%
B	317	75%	79	162	55	10	11	45%
C	333	30%	211	90	20	10	2	30%
D	382	60%	71	257	27	13	15	30%

To support this large student body, the school district employed approximately

3,700 teachers, 3,600 support staff, and 200 administrators.

Participants

There were 42 participants in this study. School A and B each had 11

participants. School C and D each had 10 participants. The participants were selected

based upon their role at the school. For example, the principal and counselor at each site

were selected to participate in the study. The office managers were selected at three of

the four schools based upon their tenure at the site prior to the implementation of PBS.

The remaining participants included general education teachers and resource support

personnel. The general education teachers were selected to be representative of both

primary and intermediate grade levels. The participants in resource support positions

included: a social worker, resource special education teacher, pre-school special education teacher, and a custodian. Specific descriptions of each participant are detailed in Tables 4-7.

<center>Quantitative Methods</center>

This study included a mixed methods case study of four school sites. This required the researcher to conduct site visits to collect specific sources of data related to the essential features of PBS. These sources included the School-Wide Evaluation Tool (SET), the Effective Behavior Support Survey (EBS), and Office Discipline Referrals (ODRs) collected at each site. The methods used to collect and analyze these multiple data sources are outlined.

School Wide Evaluation Tool (SET)

The School-Wide Evaluation Tool (SET; Sugai, Lewis-Palmer, Todd, & Horner 2001) was developed as a measure for assessing the implementation of school-wide PBS (See Appendix B). This instrument allows researchers to determine to what degree schools are using PBS, if training and supplemental supports changed the use of PBS, and if the use of PBS created a change in the safety, social culture, and behavior within a school. For the purposes of this study the SET was used to a) determine the level of implementation of PBS at the case-study sites, b) establish the reliability of the initial site selection process, and c) provide triangulation for the results from multiple data sources.

Researchers developed this tool over the course of three years with elementary and middle school teachers and administrators using PBS in their schools to create the content, format, and scoring of the instrument. Over 150 schools participated in this process. The SET contains 28 items directly related to the essential features of PBS. The

SET provides seven subscale scores indicating areas of strengths or areas of weakness in a school's implementation. When scoring the SET, researchers assign a value to items based on evidence of their presence. For example, a score of 0 = not implemented, 1 = partially implemented, and a score of 2 = fully implemented. Summary subscale scores can be computed and finally a "total summary" score as the mean of the seven subscale scores is produced (Sugai et al., 2004).

A rigorous examination of the SET was conducted to increase the instrument's reliability and validity. The reliability of the SET was investigated through correlational analyses and interobserver agreement percentages. In order to determine the internal cohesiveness of the items, a Pearson product-moment was conducted with all items as well as Cronbach's coefficient alpha. Results showed an overall alpha of .96 indicating that the correlational structure of the SET "meets and exceeds standard psychometric criteria for discriminability, internal consistency, and test-retest reliability in instrumentation used primarily for research purposes" (Sugai et al., 2004).

The SET allows researchers to gather data on the essential features of PBS. The essential features examined by the SET included: (a) site-based steering mechanism or PBS team, (b) faculty commitment, (c) effective procedures for dealing with discipline, (d) data entry and analysis plan established, (e) expectations and rules developed, (f) reward/recognition program established, (g) lesson plans for teaching expectations/rules, and (h) implementation plan see Table 4.

Table 4

Summary of SET Features

Features of PBS	Indicators
Expectations Defined	• 3-5 positively stated rules/expectations • Expectations visible and posted throughout the school
Behavioral Expectations Taught	• Staff indicate they have actively taught the expectations in each environment • Followed the teaching plan
On-Going System for Reward	• A systematic reward system is connected to the expectations • Teachers indicate using these rewards
System for Responding to Behavioral Violations	• A consistent and mutually agreed upon discipline system is established between school staff and administration.
Monitoring and Decision-Making	• Data-based decision making is used to impact the implementation of PBS • Student Office Discipline Referral form is created to monitor discipline trends • Discipline data is communicated with the staff
Management	• Site-based team governs the implementation and sustainability of PBS • Engage in activities to monitor progress of PBS • Communicate with entire staff • Troubleshoot PBS
District-Level Support	• Extent of planning and inclusion of PBS district goals and initiatives • Allocation of budget resources to maintain PBS

Effective Behavior Support Survey (EBS)

The EBS (See Appendix C) is a measure designed to indicate individual

perceptions of the level of behavioral support systems implemented across the school,

classroom, non-classroom settings, and for individual students. This survey was

completed by selected members at each school (Sugai, Horner, & Todd, 2000). The

purpose of this measure was to triangulate and gather data about the essential features of

PBS for this study. This measure also incorporated specific questions related to the

degree to which the site had systematically structured supports for students with more

severe behavioral needs (an essential feature).

Office Discipline Referral Data (ODR)

For the purposes of analyzing student discipline data, permission was acquired to

access the school's office discipline referrals. Part of the PBS implementation process

required schools to create an auditing system to monitor specific behavioral infractions.

By agreement with the school district, all student data were de-identified prior to receipt

by the researcher. Discipline data were selected (when available) for the following time

periods: (a) baseline (prior to initial implementation of PBS), (b) first year of

implementation, and (c) any subsequent years of implementation. The data were collected

and displayed, as available, using the School-Wide Information Systems (SWIS).

Quantitative Data Collection

The quantitative data collection process required gathering information for the

scoring of the School-Wide Evaluation Tool (SET), Effective Behavior Support Survey

(EBS), and for the analysis of Office Discipline Referrals (ODRs). For the purpose of

completing the SET the following activities were completed: a structured interview of the

10 participants using SET protocol, a self-guided tour, and retrieval of documentary information outlined by the SET. These activities required physical presence on-site for multiple school days. The principal interview required 30 minutes, and individual interviews 15 minutes each. All interviews were taped using a digital recording device. The use of a digital camera was employed to capture images of physical artifacts or environments around the school.

The Effective Behavior Support survey was distributed to participants following their consent. Typically, participants were offered two to four weeks to complete the survey. The researcher personally collected the survey from the participants.

The storage and collection of Office Discipline Referrals varied at each site. However, all requested student data were presented in a de-identified manner. Two of the four schools presented copies of referral spreadsheets from their School-Wide Information Systems (SWIS) database. School C was unable to produce data regarding ODRs. School D's principal stored all discipline data on her personal computer. Her computer was stolen from campus, therefore, rendering the data unavailable.

Quantitative Data Analysis

School-Wide Evaluation Tool (SET).

As designated by the SET protocol, values were assigned to every item in the SET protocol. These scores were added to produce a subscale score for specific domains of the instrument, which were related to the features of PBS. These subscale scores were compared in stages. The initial unit of analysis was the individual school site. A review of each school's subscale scores was conducted to gain perspective on the implementation status of PBS. These subscale scores were then used for comparison

among sites. These scores were compared for the purposes of identifying similarities and differences among schools. Finally, there was a comparison of the low implementer and high implementer groups. These scores were then graphically displayed on Table 6. This table was used to identify regularities and irregularities across and down columns and rows.

Effective Behavior Support(EBS).

Completing the analysis of the EBS survey by tallying all five participant's responses to each item of the survey as designated by the EBS protocol was conducted. These tallies were then calculated into percentages. These percentages were analyzed in stages. The initial unit of analysis was the individual school site. Each school's scores were reviewed to gain perspective on the personnel's perception of PBS. These subscale scores were then used for comparison among sites. These scores were compared for the purposes of identifying similarities and differences among schools. Finally, themes were investigated in the low implementer and high implementer groups.

Office Discipline Referrals(ODRs)

Due to the varying levels of organization and storage of ODRs, it proved difficult to systematically analyze these data. Two of the schools had collected data and two were unable to produce discipline data. Therefore, the actual presence or absence of discipline data was considered a component of analysis. For the schools which possessed discipline data it was impossible for the researcher to conduct a cross-case analysis as these data components varied between schools. ODR data were used particularly to triangulate the SET, EBS, Rogers interview data, and direct observations.

Qualitative Methods

The qualitative measures employed in this study included interviews and direct observations. These measures will be discussed. In addition, the collection and analysis of these data sources will be addressed.

Interviews

Interviews were conducted with approximately 50 personnel. For the purposes of completing the SET, 10 staff members were interviewed at each school site. These 10 participants always included the principal, the counselor, and general education teachers. In three of the four schools, the researcher also interviewed the office manager. Interviews consisted of primary and intermediate teachers at each school to provide a cross-section of the general education staff. This same selection process for participants was employed to request a participant to respond to the additional researcher interview questions framed by Rogers' Diffusion of Innovations (See Appendix A). For a description of each interviewee (see Tables 9-12).

The interviews were scheduled at the teachers' convenience. The interviews took place in the teacher's classroom or staff designated work area. Typical interviews required 15 minutes. Some participants required additional interview time. All interviews conducted within the study were recorded using an Olympus digital recording device.

Direct observations

Direct observations were conducted by the researcher through multiple visits to each site in order to observe the physical evidence of PBS in the specific environments designated by the site's PBS matrix. To complete the classroom observations, three

teachers at each site were asked (following the completion of their SET interview) if they would be willing to allow the researcher to make an observation of PBS in their classrooms. The researcher attempted to select teachers who had been on site since Year One of implementation of PBS to participate in these observations. However, this was not a mandatory requirement for participation in the observation. Two out of three classrooms at each site met these criteria. For a description of each participant (see Tables 9-12).

The school environments included hallways, the cafeteria, the front office, classrooms, libraries and concluded with observations of three randomly selected classrooms. These data were collected specifically for the purpose of completing and scoring the SET. The thirty-minute observations of three classrooms included the researcher seeking evidence of the features of PBS. Examples of evidence of PBS included the posting of the expectations, reference by the teacher to the expectations, display of student rewards, and evidence of consequences present for inappropriate behaviors.

During the approval process at the school district level the committee representing the school district requested that the researcher confine classroom observations to physical evidence with minimal collection of data on teacher behavior and no collection of student behavioral data.

Qualitative Analysis

Interview data.

The analysis of interview data included personal transcription of several interviews, employment of a transcriber, and a computer software packages known as

Transcriber to transcribe digitally recorded audio from interview data. During the process

of categorizing interview data, evidence of disconfirming data or data inconsistent with

the case analysis was sought. The researcher offered each participant the opportunity to

review the transcription and analysis of their responses for the purposes of completing a

member check. Bratlinger, Jimenez, Klinger, Pugach, and Richardson (2005) described

member checks as allowing participants to review and confirm the accuracy of interview

transcripts.

Reducing the data into categories and themes allows researchers to present their

interview material and then to analyze and interpret it (Wolcott, 1994). Seidman (1991)

described the process of categorizing interview data.

> Another way of presenting and analyzing interview data than
> crafting profiles is to organize excerpts from the transcripts
> into categories. The researcher than searches for connecting threads
> and patterns (p., 107).

For the purposes of this study, a variety of techniques and data management

systems were used to analyze the data. An ethnographic analysis of the interview data

conducted at each site was used to create category schemes (Merriam, 1998). The data

revealed themes among these categories. From collected interview data, category

schemes and themes that emerged were used to conduct a cross-case synthesis (Yin,

2003). This process entailed three phases of analysis: (a) inductive analysis, (b) within-

case analysis, and (c) cross-case analysis.

Inductive analysis is a qualitative analysis method with specific strategies for

conducting data analysis. It involves the reading and re-reading of interview data to

determine emerging categories and the relationship or themes among categories

(LeCompte & Preissle, 1993). This method was employed to conduct all within-case study analysis.

Within –case analysis: The units of analysis for the purposes of this study were each participant and each school. They were analyzed separately to determine categories and subsequent themes.

1. Interview data was manually transcribed, downloaded to Transcriber software, and a transcriber was employed to complete the transcriptions. These various methods were used to ensure accuracy.

2. Portions of the interview data related to Roger's theory were physically cut and pasted under the appropriate categories: relative advantages, compatibility, complexity, trialability, observability, and re-invention.

3. To establish reliability a fellow graduate student was asked to categorize 20% of these transcriptions

4. Steps one and two were repeated for the purposes of categorizing the School-Wide Evaluation Tool (SET) interview data.

5. Prior to conducting the analysis of the interview data, the researcher reviewed the research proposal to focus on the theoretical frameworks and review of related literature.

6. The digital recordings of participants' responses were frequently replayed to capture the context of their responses.

7. Hanging charts were created to record themes emerging from within the Rogers' themes. These charts were preserved for each school.

Cross-Case Analysis: Following the completion of the within-case analysis the researcher used Miles and Huberman's (1994) clustering, stacking comparable cases, and pattern clarification strategies to perform cross-case analysis. These strategies allowed the researcher to identify themes among studies and to determine the differences between cases see Figure 1. (Adapted from Guteng, 1998).

Classroom Observations.

Field notes were systematically analyzed for the presence or absence of the essential features of PBS. This process was applied in phases. Initially, each individual classroom was the unit of analysis. Second, there were attempts to uncover themes that emerged among classrooms at the same site. Third, cross-case analysis was conducted to identify similar or different features in place. Finally, these same patterns were investigated in the low implementer and high implementer schools.

Data Analysis

Phase One Analysis

Data Collection	Analysis
• **Participant Interviewing** • **Direct Observation** • **School-Wide Evaluation Tool (SET)** • **Effective Behavior Support Survey (EBS)** • **Classroom Observations** • **Office Discipline Referrals (ODRs)** • **Field Notes**	• **Data transcription** • **Highlight themes** • **Typologize** • **Compute SET subscale scores** • **Compute EBS response percentages** • **Review ODR figures** • **Report presence or absence of features through classroom observations**

Phase Two Analysis: Within Case Analysis
• **Complete data transcription** • **Organize data by cases** • **Review research proposal and questions** • **Select quotes for SET and Roger's Diffusion analysis** • **Write within-case analytic text**

Phase Three Analysis: Cross-Case Analysis
• **Compare and contrast themes and typologies** • **Create table to display subscale scores on SET** • **Create table to display respondent percentages on EBS** • **Read across rows to determine schools and participants on data sources** • **Read down columns to compare and contrast schools and participants on data sources, noting themes and patterns.**

Figure 1.
Analysis Strategies
(Adapted from Guteng, 1998)

Reliability and Validity

Internal Validity

This study employed the following methods to increase the internal validity of the study: triangulation, member checks, peer examination, and addressing researcher biases (Merriam, 1998). The quantitative measures SET and EBS were purposefully selected to offer triangulation between the researcher's perception of the presence of the eight essential features, and the perceptions of staff on site through the EBS. The EBS offered additional insight into the procedures established at the site for students with more severe behavioral problems to further support the findings on the SET.

Member checks were conducted by participants selected for the semi-structured interview following the categorization of transcribed data. Individuals were asked to determine whether they perceived the results to be plausible. Similar to the member checks a peer review was requested by those familiar with Behavior Support Systems to validate interpretations of the data.

To reduce researcher bias detailed descriptions of theoretical frameworks and other underpinnings of the study were specifically addressed in the literature review. Further, during the process of selection of sites efforts were taken to exclude those with previous extensive contact with the researcher.

At each site similar evidence was collected and no original evidence was excluded. Case study reports included citation of specific documents and actual evidence of findings. Procedures matched protocol.

In summary, this study employed a mixed-methods case study design for the purposes of answering the research questions. This study was conceptualized using

Rogers' Theory of Diffusion of Innovations (2003). The quantitative instruments used to

examine the implementation and sustainability of PBS included the School-Wide

Evaluation Tool, and Effective Behavior Support Survey. The researcher also attempted

to compare the Office Discipline Referrals of schools. The qualitative methods included

interview and direct observation. In combination these methods were used to triangulate

these multiple data sources. Analysis strategies for conducting within and cross-case

analysis were used to analyze each data source. Specific strategies for coding interview

data such as inductive reasoning, within-case, and cross-case analysis were employed.

These phases of analysis produced the results of the study. The following chapter

discusses the results of the study.

CHAPTER 4

RESULTS OF FOUR CASE STUDIES

The purpose of this study was to examine the impact of the features of PBS on the implementation and sustainability of Positive Behavior Support. These features included: (a) defining expectations, (b) teaching behavioral expectations, (c) monitoring and acknowledging students' appropriate behaviors, (d) administering a system for responding to behavioral violations, (e) gathering and using information about student behavior to inform decision-making, (f) managing a school-wide system through the site-based administrator and site-based team, (g) and obtaining district-wide support. These features were examined among four school sites: School A, School B, School C, and School D. Based upon the site selection criteria described in the methods section, School A and B were the high implementers and School C and D were low implementers.

This study used Rogers' theory of Diffusion of Innovations to view the characteristics and elements of PBS in the diffusion process. A mixed-methods approach was used to examine the implementation and sustainability of PBS in four public elementary schools in Southern Arizona. To complete these case studies, a combination of interview, survey, observation, and review of archival records was employed.

Overview of the Findings

The study examined the impact of the features of Positive Behavior Support on the implementation and sustainability of the innovation. This study also used Roger's theory of Diffusion of Innovations to view characteristics and elements of PBS in the diffusion process. Interviews, surveys, observations, and reviews of archival records were used to complete these case studies.

In response to the research question "*To what extent were the features of PBS implemented and sustained at each school site?*" the data analysis showed that the high versus low implementers varied in their implementation of the features of PBS. The high implementer schools maintained each feature of PBS. The low implementer schools neglected to implement each feature. Typically, the low implementer schools maintained the use of their school expectations and their response to behavioral violations, but neglected to reward behavior, systematically teach the expectations, or use data-based decision making.

In response to the research question *"How do Rogers' characteristics of an innovation relate to site-based personnel's perceptions of the characteristics of PBS?"* the data analysis showed that high implementer schools perceived PBS to possess characteristics that increased the rate of adoption. These sites found that PBS had relative advantages, was aligned with their belief systems, possessed observable benefits, and allowed for individual flexibility.

The low implementer sites expressed frustration at times with the theoretical principles of PBS and found the innovation to be complex. These sites further discussed resistance to the feature of rewarding students for following the behavioral expectations. Principals and teachers expressed difficulty with the concept of extrinsic versus intrinsic rewards or motivations. Some participants described PBS as "artificial."

In response to the research question "*How did the communication networks affect the overall implementation and sustainability of PBS?*"data analysis showed that the high implementer schools engaged in heterophilous communication. In contrast, low implementer schools engaged in homophilous communication, limiting the diffusion of

PBS. The presence of each feature of PBS at the high implementer sites multiplied the opportunities for individuals at the site to discuss and share information about the innovation. The high implementer's management of PBS through the site-based teams provided "networks" for individual staff members to share information with the entire faculty as opposed to the grade level isolation described by the low implementer sites.

In response to the research question "*What leads to the successful implementation and sustainability of PBS three years post training in elementary schools?"*data analysis showed high implementer schools implemented and sustained each feature of PBS. Low implementer schools neglected to implement each feature as time progressed. More specifically, high implementer schools defined and communicated the expectations both through their teaching plan and through the visual representation of the expectations (posters). These schools also maintained a commitment to systematically teach the expectations each school year. While both groups struggled with teacher attrition, the high implementer groups arranged for retreats or refreshers to readdress PBS. The presence and activity level of site-based teams at the high implementer schools increased the efficient management of PBS. These teams also served as a catalyst for communication.

In summary, the results indicated that three factors led to the successful implementation and sustainability of PBS three years post training:

   1) The data revealed high implementer schools continued to implement each feature of PBS over time. Low implementer schools neglected to implement each feature.

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2) Participants' perceptions of the characteristics of PBS impacted

implementation and sustainability. High implementer sites found PBS to possess

the characteristics attributed by Rogers to increase the rate of adoption. Low

implementer sites expressed conflict with these characteristics.

3) The communication networks established at school sites affected the overall

diffusion of PBS. Heterophilous types of communication were advantageous to

High implementer schools, allowing staff members universal access to grade level

colleagues, non-grade level colleagues, specialists, and administration. This

access was made available by administration and site-based teams through faculty

meetings, professional development sessions, retreats, and refreshers designed

specifically to address PBS.

The four schools selected for case study are referred to as School A, School B,

School C, and School D. These four schools initiated implementation of PBS during the

2003-2004 school years. School A and B were High implementers. School C and D

were Low implementers. An extensive four step process was used to determine these

designations. This process included comparing school demographics, levels of

implementation of PBS, exclusionary factors, and finally pairing schools. As a reminder,

Positive Behavior Support (PBS) was a voluntary program chosen by each school site to

address discipline issues. The PBS training and implementation was provided by the

Linking Interventions and Networks in Schools (LINKS) federal grant.

For the remainder of the chapter the data collection results are presented by

reviewing information such as school profile, activities prior to implementation, the level

of implementation of the features of PBS, and participant's responses to Rogers'

characteristics of innovations. These results include the reporting of data from several sources including the School-Wide Evaluation Tool (SET), the Effective Behavior Support Survey (EBS), additional interview questions, office discipline referral data, and classroom observations. The four schools are discussed individually with cross-case analysis to follow in Chapter five.

<div align="center">School A: Case Study Results</div>

<div align="center">School Profile</div>

School A's enrollment for the 2005-2006 school years was 352 of which 172 of students were White/Anglo,24 were African-American, 133 were Hispanic, 2 were Native American, and 21 were Asian American. Nearly 54% of students participated in the free and reduced cost lunch program. The school's mobility rate was approximately 30%. The school was built in an older neighborhood in the 1970s (See Table 3).

Upon arrival to the school building the narrow façade suggested that the building itself was quite small. However, the building stretched significantly outward. The classrooms were housed in a pod formation so that the primary and intermediate teachers worked in close proximity with their own grade levels. These primary and intermediate pods were housed on opposite sides of the buildings. Between these pods sat the school's office and two breezeways, which both grade levels were able to access. The principal's office was situated at the center of these two wings with easy access to adults and children.

<div align="center">Prelude to Implementation</div>

Prior to Year One of implementation, School A selected a new principal through the designated district-wide process. This school was a high implementer. The new

principal described a scene in which staff arrived at her office requesting to put children on a list for the "detention room." She quickly learned the detention room had housed as many as 20-30 students each day. This response to student misbehavior directly opposed her philosophy of education, and therefore, she determined an alternative strategy must be employed. She stated, "If you have to have a detention room for 20 or 30, it's not working." Together with her counselor they began to investigate programs that offered specific support for student discipline issues.

In the meantime, Principal A slowly dissolved the detention room and asked teachers to complete a form prior to referring students to the office. As the year concluded School A was invited to participate in the LINKS grant program. The principal and counselor attended grant workshops where specific programs were highlighted. PBS was selected as the desired program to address the staff's discipline concerns. At the initial training the team representing the entire staff was larger than most, and included the principal, counselor, and three or more teachers. Following the training the principal organized a summer retreat for the entire staff to learn the PBS teaching plan.

<div align="center">School-Wide Evaluation Tool</div>

The SET measure provided data indicating to what degree School A implemented and sustained PBS. The scores for each feature reflected the presence or absence of PBS activities, planning, documents, and/or physical evidence of the features of PBS see Table 8 for a summary and description of the indicators of these features. See Table 5 to preview the summary scores for School A on the SET instrument. For a comparison of the summary scores for all schools see Table 13 (See Appendix F).

Table 5

School A SET Summary Scores

Features				Response			
	Expect. Defined	Expect. Taught	Reward System	to Violations	Monitor	Manage	District
Score	4/4	8/8	4/4	6/8	5/8	3/16	4/4

Expectations Defined

During interviews all staff members were able to name and describe the school expectations. The school-wide expectations selected by the school were referred to as "the three R's": 1) I respect myself and others too, 2) I am responsible for all I do, and 3) I am ready to learn. These school expectations were referred to as the school pledge.

These rules were graphically displayed in a professional manner. The posters were laminated and hung at student's eye level in all of the environments in the school including classrooms, hallways, library, office, cafeteria, etc. School A has also created larger posters highlighting behaviors that were expected to be demonstrated in specific environments. For example, there was a poster as students entered the cafeteria which stated: "1) stand in line quietly, 2) use good manners, and 3) pick-up after yourself." Similar posters existed for the classroom, hallways, and library. A further extension included posters covering expected behaviors outside the school building for bus behavior, walking to and from school, and suggestions for transition/travel time. Visual cues specific to the environment were included in each poster.

There is also a portion of the SET, which asks these 10 staff members whether they have recognized a student for following the school expectations in the past two months. In 7/10 of these interviews staff either chuckled, or made comments such as, "I just gave one out five minutes ago," indicating the frequency of recognitions/rewards on site.

Behavioral Expectations Taught

The behavioral expectations were taught at School A systematically for the first two weeks of each school year by sending children through each environment in the school and having school personnel provide examples and non-examples of desired behavior. This process was addressed and planned by the principal and entire staff prior to the start of the new school year. A teacher remarked, "My lesson plans for the first week of school are comprised of 40 to 50 % of PBS." Subsequently, teachers took a lead role in reinforcing these expectations. When asked all staff members indicated they had been involved in teaching the school-wide expectations this year. Teachers emphasized, "they will learn it through each grade." Staff also indicated they continued to model and use the "common language" set forth by PBS to remind students of target behavior. A number of teachers mentioned students are "familiar with it everywhere they go." Each staff member also responded with ease and accuracy when asked what the school expectations were at their site.

On-Going System for Rewarding Behavioral Expectations

The reward/recognition system established at School A was diverse. Student behavior was recognized through verbal praise by staff for following the three R's. The school created a nomination system for recognizing student behavior, used by all

members of the staff using language that referred to the school mascot. These nominations were filled out by staff and read aloud on the announcements daily, and in addition nominations were sent home to parents with a pencil attached for the student. At the end of each day, the principal announced the percentage of students who made good choices for the day and remarked, "and those of you that didn't we know you will make better choices tomorrow." This percentage was also posted on the school marquis. The recognitions included community presentations of the school nominations at "town hall" meetings. All of the nominations were stored in a lottery jar which was brought out for the meeting. Names were drawn from the lottery jar by other students. The students whose names were drawn received the opportunity to select a prize from the "treasure chest".

The staff had noticed that an area in the school that still posed challenges for students was the cafeteria. In response, the cafeteria "All Stars" program was introduced. The process included adults recognizing responsible behavior in the cafeteria for which students received a sticker they wore for the duration for the day indicating they had modeled appropriate behavior in that setting. The principal commented, "The focus isn't on punishment it is on problem-solving…so were solving problems and celebrating good."

System for Responding to Behavioral Violations

The school also created a systematic response for inappropriate behavior by communicating about what behaviors were to be handled in the classroom rather than referred to the principal. This was evident in the agreement on SET as staff responded to questions regarding what type of behavior was referred to the office consistently (90-

100%) with the administration. Together the PBS team and principal established a referral system for behavioral violations as part of the start-up process. The principal indicated that this system had been revised at least three times.

Discipline issues that reached the principal's office did so through the "red folder" process. The red folder is exactly that, a red file folder that contained a copy of the school's matrix (school-wide expectations and indicators by settings) and the actual referral form. The referral form included referring adult, location, type of behavior, possible motivation, students involved, and administrative action. The principal described this process:

> We also look at possible motivation looking at the antecedent before
> that behavior happens to address that right there…we also look at other
> students involved. I am not looking at punishment when I get
> students in…we're all about problem-solving here…so if I know
> other students are involved I can sit down. It's messy sometimes and
> takes a half hour of all us talking in order to figure out what brought
> that behavior to a point that a principal has to sit down and talk about the
> situation. That rarely happens.

 However, there was also a section that asked staff to indicate possible motivations for the behavior. These possible motivations included attention from peers, attention form adults, avoid peers, avoid adults, obtain items, etc. This language was strikingly similar to the professional development School A sought regarding Functional Behavioral Assessment to address the needs of the 5-7% of students the PBS model indicated would have more intensive behavior challenges.

The principal indicated PBS allowed them to identify weaknesses in their discipline system. For example, the school staff decided to implement "Think Time" as a time-out from reinforcement strategy for students who needed a period of removal from

their current environment. The procedure entailed students leaving their setting for another classroom where they were to take time to consider their actions in a systematic fashion.

Subsequently, the school staff also re-designed their "Life Skills" language to reflect meanings they thought the students would respond to more effectively. Examples included teaching children the use of "language registers," or the difference between use of language at home versus school. The principal also revived the Second Step program to support the teaching of social skills. She required teachers to submit a teaching plan for actively addressing these skills within their lesson plans.

Monitoring and Decision-Making

School A personnel collected extensive discipline data since Year Two of implementation. The school began in the Fall of 2004 to use School-Wide Information Systems (SWIS) to record and analyze their office discipline referrals. SWIS is an on-line service schools pay approximately two-hundred dollars a year to use. The principal remarked,

> We have used the SWIS system…download the data take it to our staff…
> We keep looking at it where are the hot spots? Where do we need people?
> Do we need to have some things changed in terms of kids in patios because
> there is no adult supervision…It is a wonderful, wonderful system. It
> helps us to project what we need to do in different areas.

In 2004, the three types of behaviors most frequently referred to the office included: (a) fighting/physical aggression, (b) defiance/disrespect, and (c) abusive or inappropriate language. Of these referrals 191 were for fighting, 146 were for defiance, and 46 were for abusive language. The total number of referrals for that school year numbered 498. In Year Three of implementation, the total number of referrals decreased

to 166. The three behaviors most frequently referred the previous year experienced a significant decrease as well. Fighting/physical aggression decreased from 191 to 44, defiance/disrespect decreased from 146 to 26, and abusive language from 46 to 24.

Management

The management of PBS included the relative priority the school placed on behavioral support goals and the overall planning of the PBS team. The school improvement goals or 301 goals focused on reading, writing, math, and improving academic skills for English Language Learners. The non-content goal was to increase parental participation by 5% as measured by attendance at school activities.

The summary scores for management included responses to questions about the status and activity level of the PBS team. The SET summary score for management is zero. However, this score is misleading. Based on data from the additional interview questions the staff indicated there is no need for the team as PBS has become a part of everyday life at the site. Respondents suggested that PBS was discussed during professional development, and faculty meetings, and due to the red folder system discipline issues were triaged on a daily basis with greater efficiency. Therefore, the team was no longer necessary. The principal explained,

> We had a PBS leadership team. We met the first couple of years.
> We actually don't have one now…we probably need to get back to
> that but what we do as a staff…we bring out the expectations and
> indicators by settings. We talk about them where we need to review
> and that's why we have to get back into looking at the data and bring
> people in to talk to us. We have turnover and if we don't have a leadership
> team that reviews it and brings how to look at the antecedents before the
> consequences it's going to fall apart.

District-Level Support

Currently, there is no district-wide support provided to this school for the purposes of sustaining PBS. However, the principal has taken an active role in raising money through the school's Parent Teacher Organization (PTO) to pay for maintenance costs such as the SWIS system, posters, and reinforcers. These activities were also supported by private donations from parents.

Rogers' Diffusion of Innovations

This portion of the results section was organized to answer the research questions related to Rogers' Theory of Diffusion of Innovations. The characteristics discussed by Rogers included relative advantage, compatibility, complexity, trialability, observability, and re-invention. In addition, this study also explored the impact of Rogers' Theory regarding Communication Networks. The results are presented to reflect the responses of participants related to each component of Rogers' theories.

Relative Advantages

The principal described PBS as providing the entire staff with several advantages:

> It focused us as an entire school to look at behaviors and expectations
> rather than bad kids, good kids, punishment…we started to have to
> look at us total, what are we doing for kids to teach them the behaviors
> we want them to exhibit. To stop looking at we expect you to come to school
> with this in hand because our kids don't. PBS became part of the curriculum.
> We teach kids how to be students and how to act in different places

Participants ascribed numerous advantages to the implementation of PBS. When examined, these advantages appeared to effect change not only of student behavior but of adult behavior as well. Each of the respondents remarked that PBS reminded them: actively teach the expectations, model expected behaviors, provide examples and non-

examples of behavior, use the common language, and focus on the positive versus

punishment. A teacher stated,

> I think PBS teaches them[students] to be responsible for themselves and if we
> can teach them they are responsible for their actions, that there are consequences
> in life because these are life skills…PBS ties in well with life lessons. I think that
> we can prevent a lot of the behavior problems if we teach them what we want…if
> we never teach them how can you actually expect it?

The interviewees described these PBS activities as producing consistent responses to

student behavior, differentiated interventions with precision, clear expectations about the

rewards/consequences of student behavior. An intermediate teacher indicated, "90- 95%

of my students are benefiting from PBS overall."

Compatibility

All participants noted without hesitation that the PBS model and philosophy was

directly aligned with their beliefs about education. It is important to note 5/10

respondents made specific mention that PBS, "teaches children to be responsible for their

actions as in real life." There was a distinct recurring theme at the site that the approach

is also aligned with societal values and norms. The principal remarked, "I really believe

that if we don't celebrate it [appropriate behavior], it is going to go away…it's a different

focus…the focus isn't on punishment, it's on problem-solving." A teacher explained,

> "I think you have to believe it {PBS}…you have to buy-in to it [PBS].
> I think some of the PBS goes against traditional thought of what teachers
> do in the classroom…so I think that if you don't buy-in to it how are
> your students going to buy-in to it…so I think in the process what is
> important is to get that buy-in and at some point you have to say that this
> (PBS) does work.

Complexity

The participants each explained that learning to use PBS was "easy," or they felt "well prepared." There was frequent mention of the various types of training which had occurred over time for the staff. Staff specifically mentioned "retreats" outside the school building and "various refreshers." Along with those comments staff described being given "time," or the "ability to communicate with other staff," about the direction of PBS. A teacher expressed, "we had a retreat of sorts…a good seminar and various refreshers on PBS…so I think we were well prepared."

The principal expressed concern that the loss of grant funding and support for professional development activities there will be a loss of skills. Her view was that it is essential for teachers to be given an outlet to discuss and refresh the program as professionals. She also expressed concerns about motivating adults to change their own behavior in regard to using the principles of PBS:

> Three or four years ago I had a monitor that was not interacting
> well with kids. I heard [monitor] saying, 'those kids'…well,
> guess what, they're all our kids. In order to turn that around…cause as
> as a principal I can say, 'Don't you say that.'…and it's like they aren't
> going to say it in front of me so it doesn't really make a difference. I tried
> to begin by announcing everyday how kids were making appropriate choices
> to switch the attention onto the kids that were making good choices…
> so what I try to do by announcing everyday how kids are making appropriate
> choices is to switch the attention onto the kids that are making good choices
> The difference is in the adult language…adults say here now, 'You've got
> great kids here.'

The complex process of adult participation and fidelity to PBS was expressed during the interview of a teacher fully dedicated to the PBS process. This teacher described herself as a high implementer, sharing the opinion teachers must "buy-in" to the program in order to see the global impact.

Trialability

In analyzing the responses to this question it was noted that the staff collectively mentioned using each feature of PBS. Participants described teaching the expectations to the students by visiting the various environments of the school and providing examples and non-examples of expected behavior. One staff member indicated it is "important to teach ahead of time what students are accountable for." Another realized the importance of the teaching plan by indicating she had "worked PBS into her daily lesson plans." Primary teachers emphasized their use of "role-playing."

> I think that I used it naturally. I always told them what my expectations
> were and what they were supposed to do. I think the role-playing part
> I didn't do but to teach the kids ahead of time was just a part of me
> so it just fit in. I just incorporated some of the strategies I learned at the
> workshops. Other than that I think it went really well.

Observability

The principal described examples of her initial arrival at the school by describing a scene in which a line of students appeared outside her office door for discipline referrals. As those situations decreased over time she was able to recover time focused on her role as an instructional leader. Overall, the discipline referrals have decreased significantly. Collectively, she reports after the staff implemented PBS a problem-solving approach was used as opposed to reactionary procedures. The focus is on the positive.

Teachers reported that students were able to use the common language established by the school-wide expectations. This has created an environment where there is little need to "describe" what those specific behaviors look like as the children have an automatic reference point. Furthermore, teachers specifically commented they believed

the program "focused" the behavior of the majority of their students. Many used phrases such as, "90 % of my students respond to PBS" or "a small percentage need greater interventions." Finally, one teacher indicated PBS has allowed for more instructional time as it is no longer necessary to stop and explain why and what behaviors are expected in the classroom.

Re-invention

While all respondents commented they remained faithful to what they had learned at the PBS trainings, it was evident from the interview data that staff had made changes and adjustments to PBS. These changes did not include manipulation of the features of PBS, but were attempts to augment an already existing process which had allowed them to identify the need for those changes. For example, there were successive revisions of the office referral form. One major change included a section indicating what action had been taken by the principal in response to behaviors. An intermediate teacher remarked, "I don't tweak it, I do it the way it was described…I have worked in some Love and Logic to get the kids to better understand the rules."

Subsequently, the referral data continued to show students having increased behavioral difficulty at lunch time so the "Cafeteria All Stars" program was created. Despite this reinforcement system, infractions continued. Currently, the school is piloting the reverse lunch program. This process entails students being released for the lunch period to the playground first, and then to the cafeteria to eat. Due to the collection of the discipline data a documented decrease in lunch and recess misbehavior has been illustrated. Some teachers indicated they also had integrated concepts from Second Step or Love and Logic (social skills programs) to help the students better understand the

rules. In the primary grades, teachers have developed a non-verbal signal to remind their entire class about the expectations when they felt the behavior of the whole group required redirection. Teachers report they have integrated PBS into their individual classroom and behavior management styles.

Communication

Prior to the initiation of PBS, the principal and counselor communicated primarily with one another about PBS in anticipation of bringing the innovation to their school site. During the start-up phase, the entire staff discussed PBS while considering whether or not to implement the program. As each successive year of implementation has passed, teachers indicated they discussed PBS with their grade level partners and grant support staff, and during staff meetings or retreats the focus returns to the collective group. These grade level discussions served as independent site-based steering mechanisms in the absence of faculty meetings or retreats. A primary grade level teacher made specific reference to her students as the audience she communicated most with by stating," I think sometimes we forget that not all of the kids have the same background…they may not know what is considered to be appropriate behavior…so I think we have to teach them what is appropriate and then we have to teach them what it isn't." This teacher commented further:

> I have another teacher in the building that I go to for help when I
> am dealing with students because she and I have similar ideas on
> how to treat children…so I go to her a lot for support. I don't
> know if she uses PBS as much, but for me that support system
> looking for ideas is what I do.

Effective Behavior Support Survey (EBS)

The Effective Behavior Support (EBS) surveys were completed by five staff members who have been on-site since Year One of implementation. The survey was completed by the principal, two teachers from the primary grade level, and two from the intermediate grade level. The EBS provided information about individuals' perceptions of the status of behavioral supports at a school in the following environments: school-wide systems, non-classroom settings, classroom systems, and individual student systems.

While it is worthwhile to view the percentage of responses to each system, generalizing these results from approximately 10-15% of the teaching staff has its inherent limitations. Therefore, a presentation of the scores and reference to specific items in the survey will be discussed to triangulate the SET and interview data.

School-Wide Systems

The scores on the EBS instrument for the current status of school-wide systems were: 56% of respondents indicating school-wide features as being *in place*, 24% as *partially in place,* and 19% as *not in place*. The participants indicated the priority for improvement of these items were 28% denoting *high* priority, 44% *medium* priority, and 31% *low* priority.

Of significant interest were responses to four items within this section of the survey. First, all respondents indicated that a small number (3-5) of positively stated student expectations or rules were defined, and expected student behaviors were taught directly. Additionally, all the teachers indicated the school administrator was an active participant on the behavior support team. The teachers obviously perceived the principal

to be an active force in the support of students' behavior; however, the principal indicated on her survey that she was not an active participant on the behavior support team. All indicators from the SET and interview data illustrated the active involvement of the principal. This phenomenon might be a limitation of the instrument for schools experiencing a systems change in relation to PBS. The principal indicated that in actuality there existed no behavior support team, instead she felt the entire staff had now become the team. Therefore, her response to this item, while accurate, misrepresented what was actually taking place.

Non-Classroom Setting Systems

The scores on the instrument for the current status of non-classroom settings were: 40% of respondents indicated non-classroom features were *in place,* 31% as *partially in place,* and 28% as *not in place.* Participants indicated the priority for improvement of these items was 12% high priority, 36% medium priority, and 52 % low priority.

Specific items in this section of the survey were agreed upon by all the respondents. Each provided triangulation for the SET and additional researcher interview data. These items specifically marked the features of PBS. The items that referred to expected student behaviors as being taught in non-classroom settings and rewards existing for meeting expected student behaviors were all noted as being *in place*.

One of the items the EBS survey effectively highlighted was that the status of student behavior and management practices was *not in place.* It appeared through interview and survey data that while the school systematically collected data, these results were shared with staff inconsistently. The information was not disseminated on a

regular basis. This was unfortunate as this site in particular illustrated significant decreases over time in behavioral violations which could be powerful for staff to view as an observable measure of the impact of their efforts in implementing PBS. As the principal stated, "the teachers are PBS."

Classroom Systems

The scores on the instrument for the current status of classroom systems were: 66% of respondents indicating classroom features as *in place*, 32% as *partially in place*, and only 1% as *not in place*. Priority for improvement scores were 28% high, 47% medium, and 23% low.

There were four items in this section in which all the respondents agreed: expected student behavior was defined, problem behaviors were defined, expected student behaviors were taught, and teachers had regular opportunities for access to assistance and recommendations. These results bolstered the findings of the SET and interview data. These responses represented the features of PBS.

Individual Student Systems

The scores on the instrument for the current status of individual student systems were: 30% *in place*, 27% *partially in place*, and 42% *not in place*. Priority for improvement scores were 57% high, 23% medium, and 19% low.

One item that illustrated the distinct opinion of staff regarding supports for individual students as *not in place* was the apparent lack of local resources used to conduct functional assessment-based behavior support planning. This response echoed the sentiment expressed by staff during the interview process. Several teachers responded to questions regarding the impact of PBS as supporting the majority of

students. However, many recognized the need for additional supports and strategies for students with recurring or more challenging behavior.

Classroom Observations

Three classroom observations were conducted in a first grade, second grade, and fourth grade classrooms. In each classroom the PBS school-wide rules were posted. Also, each classroom displayed the "Language is Power" and "Life Skills" posters which were component programs that the school claimed had become extensions of PBS. These classrooms all had some type of prompt hanging in the bulletin board suggesting how a student could behave to avoid a behavioral problem and make better choices. Each classroom also had a visual prompt indicating for students what the desired "voice" level could be in the classroom. Unique to this site were the posters that gave examples of behavior expected in the classroom. Finally, all three classrooms had an area designated for posted recognitions of student wok or behavior.

Classroom One (2nd grade) posted the PBS expectations in multiple locations throughout the classroom. These expectations were on the front of the teacher's desk and were hanging by the doorway. Students were seated in cooperative groups working on research projects prior to dismissal for lunch. During this time period the teacher reinforced students while referencing the specific appropriate behaviors displayed by the students in her comments. The students were so involved in their projects the teacher had to motivate the students to "pack-up for lunch." Prior to the students exiting into the hallway the teacher reminded the students about the expected behaviors for the next setting.

Classroom Two (4th grade) was engaged in review of student created powerpoints focusing on the assessment of benchmark skills. Students were seated in cooperative groups. The entire class was responding to the questions presented in the powerpoint. However, there was an established non-verbal system for responding to questions. The teacher reminded the students during this process of these expected behaviors. She also encouraged self-mediating strategies when a student became frustrated with his answer, stating to others, "let him deal with it himself." Students were encouraged to reinforce one another through clapping. The teacher would prompt the students by saying, "Ok…what should we give that answer…a one, two, three, or four?" These numbers were clapping noise indicators.

Classroom Three (2nd grade) took a unique approach to reinforcing the PBS expectations. At the beginning of the year the teacher focused mini-lessons on the Bill of Rights and Civil Rights. The class discussed examples and non-examples of these principles. After the students understood these concepts they created their own Bill of Rights to which they all signed in agreement. An example included," I have the right to be heard in this room. This means no one will scream or make loud noises." The teacher made specific reference to appropriate behavior when reinforcing students.

<div align="center">School B: Case Study Results</div>

<div align="center">School Profile</div>

School B is located within the same large urban school district as the other schools in this study. This school was a high implementer. The year end student enrollment for the 2005-2006 school years was 317. Nearly 75 % of students participated in the free and reduced cost lunch program. The school's mobility rate was

approximately 45%. Student demographics indicated that for the 2005-2006 school

years, of the 317 students in attendance: 79 were White/Anglo, 55 were African-

American, 162 were Hispanic, 11 were Native American, and 10 were Asian American.

School B was designed as a series of patios looking onto common areas that each

served a different function for the students. The first patio was near the school's office

and was used primarily as a lunch or tutoring area during school hours. Most of the

intermediate classrooms were housed around this patio. The second patio consisted of

the first and second grade classrooms. The common area near these classrooms was

designated as an area where students applied concepts related to science and physically

planted their own garden. There was a friendly scarecrow in the middle of this

horticultural center. The final patio housed the kindergarten and pre-k programs. These

classrooms looked out onto an extensive gym area filled with developmentally

appropriate play equipment, which was accessed only by these grade levels. The school

actively housed insects, reptiles, and other animals on the campus. The site itself

possessed a series of colorful murals.

<div align="center">Prelude to Implementation</div>

Prior to the implementation of PBS School B addressed school discipline issues.

However, no cohesive system existed. Through the efforts of the site's psychologist and

social worker, the opportunity to participate in the LINKS program became available

through an area superintendent's nomination. These individuals had already invested

their time in attempting to identify a program to support these needs at the building.

Following the approval of the regional superintendent, School B began the process of

moving forward with subsequent trainings for PBS. The principal remarked that prior to

the upstart procedures, the staff responded to behavioral issues similar to,

 "grunions wildly flapping their tails on the beach, all trying to get somewhere, yet,

heading in different directions."

<div align="center">School-Wide Evaluation Tool</div>

The SET measure provided data indicating to what degree School B implemented

and sustained PBS. More specifically, the instrument examined these levels through the

features of PBS. See Table 4 for a summary and description of the indicators of these

features. For a preview of School B's summary scores on the SET instrument see Table

6.

The summary scores were directly related to the features of PBS. The scores for

each feature reflected the presence or absence of PBS activities, planning, documents,

and/or physical evidence of the features of PBS. For a comparison of the summary

scores for all schools see Table 13 The scores assigned in Table 6 indicate evidence of

the presence or absence of these features at School B.

Table 6

School B SET Summary Scores

Features

	Expect. Defined	Expect. Taught	Reward System	Response to Violations	Monitor	Manage	District
Score	4/4	8/8	4/4	7/8	6/8	13/16	2/4

Expectations Defined

While conducting the SET, the researcher found through interviews that all 10 staff members could name and describe the school expectations. The school-wide expectations selected by the school were referred to as "the ABC's": 1) Act responsibly, 2) Be respectful, and 3) Care for others. The school also has created a t-shirt that reads "Come Ready to Learn", which the principal indicated had become another extension of PBS. These rules are posted throughout the school in a professional manner. Each poster also included the graphic of a gecko, the school mascot. In addition, a noticeably larger poster with the expectations was hung at the top of one of the cafeteria walls. An original member of the PBS team largely responsible for placing posters around the building indicated "the posters have worked out great."

Behavioral Expectations Taught

School B organized their teaching of the school-wide expectations through "road shows." The "road shows" have occurred at the beginning of every school year, engaging the efforts of all staff members to model and teach examples and non-examples of PBS behavior across all environments. The PBS team, led by the counselor, has been responsible for planning the road shows. However, the entire staff participated in actively teaching the expectations. In the last two years, School B personalized these efforts by having the custodian work with students on bathroom behaviors, the playground monitors work with student's regarding recess behavior, and the food services staff focus on cafeteria behavior. Teachers continued to reinforce these behaviors throughout the year. All ten staff members demonstrated their knowledge of

the expectations on the SET measure. A majority mentioned reviewing these rules on a

daily basis.

On-going System for Rewarding Behavioral Expectations

School B offered multiple opportunities for student recognition. Each morning

students' names were announced by the principal for having exhibited ABC behavior.

The school also capitalized on using the end of their grant monies to purchase tangible

rewards that could be handed out by staff throughout the day. The staff also created the

ABC postcard. The postcard reads at the top,"At School B today, you were caught being

an ABC kid!" This banner was followed by a re-statement of the school expectations.

Finally, there was room for the nominator to provide narrative description about, "what

we saw you doing." This information was then sent through the U.S. Postal service to the

parents of the student. The principal indicated

> I read these (nominations) on the morning announcements every morning.
> They get school-wide recognition and then that postcard is sent home
> through the U.S. mail and my understanding is that those postcards are
> on people's refrigerators in lots of homes. We have not been as good
> about holding our school-wide assemblies to recognize kids because
> our multi-purpose room was under renovation. We have to get back to
> that next year…Oh-we have a monthly newsletter and we are careful that by
> the end of the year each student is recognized some time…there is a
> section that recognizes the ABC kids of the month.

Most unique, however, was the "golden trash can" that was awarded to a

classroom each day by the custodian who has been on site for 22 years. As part of

teaching and rewarding responsible student behavior, he encouraged responsible behavior

regarding the cleanliness of classrooms. At the end of the day during his cleaning rounds

he identified the classroom that exhibited the most responsible behavior in cleaning their

classroom. He then left for the classroom a trash can that was painted gold. A primary

teacher described students' activities at the end of the day preparing for the event:

> My kids love it. I actually had a girl say to me, 'I know what I can
> clean today'. She was excited…kids are excited…I had three boys down
> there scrubbing the floors working together but they are taking pride
> and that's what we hope happens.

Evidently, a long narrative was then left by the custodian emphasizing his choice through

the reading of his "ode to the classroom." The golden trash can was left in the classroom

for the students to discover the next morning. Recently, there was a tie. The staff and

students have negotiated with the custodian about the creation of a silver and bronze trash

can.

System for Responding to Behavioral Violations

The school created a systematic response to inappropriate behaviors by

communicating about what behaviors were to be handled in the classroom rather than

referred to the principal. This was evident in the agreement on the SET as staff

responded to questions regarding what type of behavior was referred to the office

consistently (90-100%) with the administration. A similar systematic approach to office

referrals was in place. The principal described:

> We have a standard office discipline referral form that we use
> and we try to streamline that so that there are lots of little checks and
> boxes to reduce writing including some of the more standard infractions.
> So that you don't have to write those out as well and then there is also
> a place for narrative and other such things whether the parent is to be
> contacted and by whom and then what the follow-up is going to be
> once that has passed through my hands…folks…we look for trends
> about when during the day infractions are taking place, what types
> of activities are taking place when those things are happening, location,
> and of course frequency of particular offenders.

Slightly different from other sites, the school's referral form began with all of the usual particulars like name and grade, but then proceeded to request that the referring staff member, 'explain the situation in detail." Then a rating system was employed asking the individual to rate the behavior as irritating, mildly disruptive, disruptive, severely disruptive, or dangerous. The form lists all the possible locations and subjects during which the behavior might have occurred. The remaining sections addressed consequences, parent contact, and follow-up. It appeared referrals could be used as a documentation system for repetitive infractions that the teacher handled without the intervention of the principal.

Monitoring and Decision-Making

At the end of Year One of implementation, staff at School B sought out specific training for SWIS. A portion of their funds was dedicated to using this on-line system for discipline data management. The school used this system for the 2004-2005 and 2005-2006 school years. However, the only data readily available for analysis by the researcher were the months of August through January 2004-2005. For the school year 2005-2006, only August through September were available. This year the school had discontinued the use of SWIS.

To paint a clear picture of the types of data the team viewed, it is important to note schools were generating profiles related to office referrals in regard to number of infractions, type of infractions, time of infractions, and location of infractions. At the bottom of these data summaries the team had manually written information about the plan to be implemented in response to the data. So, for example, in the month of September 2004 the school experienced a significant increase in referrals on the

playground. In August, there had been two compared to 14 in September. Based upon

the school's ability to view these referrals in a timely way, it was found that the majority

of these playground referrals were following lunch. The team's direct action was to

infuse peer mediation techniques to reduce the behavior. Team members felt it was

important to convene with the playground monitors to discuss problem areas and provide

strategies for intervention. One of the new strategies was a system for time-out from

reinforcement.

In speaking with staff, team members, and viewing the data it appeared

playground referrals had continued to plague the school. In recognition of this problem,

the school sought alternatives. Currently, they have been provided with research

regarding the reverse lunch process. This process called for students to be dismissed to

the playground first with lunch to follow. Research indicated this process reduced

discipline problems, increased what students consumed, and prevented the wasting of

food. A meeting of the PBS team was convened at the end of the year to develop an

intervention plan for playground behavior. The team resolved to re-train monitors about

the use of the PBS expectations, rotate grade level use of playground equipment, and

draw highly visible boundary lines for students.

Management

The management of PBS, according to the SET, investigated what priority was

given to behavior supports in the overall improvement goals of the school. Within this

particular district these were referred to as the 301 or school accountability plan goals.

The top three goals for School B were all academic. The final goal focused on increasing

attendance. In response to this attendance issue the school had created the "Good

Morning Club" to target students with chronic absenteeism. These students reported to

the counselor every morning they arrived to receive a sticker. Following three days of

consistent attendance they were allowed to visit a store to receive a prize. This same

pattern repeated for every three days attended. Faculty indicated the importance of

recognizing all the students, therefore, certificates were handed out to all students who

maintained a 95% or better attendance rate.

The school maintained its PBS team while membership has changed over time.

The team leader is the school's counselor who has been an active member since Year

One of implementation. Principal activity on the team is high as he has attended every

meeting. Another member has been designated as the secretary and minutes of each

meeting subsequently have been disseminated to all staff. While a PBS team remained,

the staff interviewed revealed that PBS is a topic of discussion at faculty meetings,

retreats, and other professional development sessions. For example, the researcher

attended a staff meeting in which the ABC postcards were an item listed on the agenda.

The principal described the activities of the committee:

> We still have a PBS committee. We meet roughly once a month and we
> bring up things or things that people bring to them that might be falling
> apart or isn't working as well and then we come up with a game plan
> about how are we going to present this….or enforce this…should we do it
> at a faculty meeting, professional develoment, or an e-mail…we take
> minutes of our meetings and anything that needs to be shared with the
> staff…one of our members has been good about disseminating that
> stuff.

District-Level Support

There was no district-wide support provided to this school for the purposes of

sustaining PBS. However, the principal specifically mentioned he had a Parent Teacher

Organization (PTO) that was very active and generous. He concluded his response to this section of the SET by remarking, "We always find a way."

<div align="center">Rogers' Diffusion of Innovations</div>

This portion of the results section is organized to answer the research questions related to Rogers' Theory of Diffusion of Innovations. The characteristics discussed by Rogers included relative advantage, compatibility, complexity, trialability, observability, and re-invention. In addition, this study also explored the impact of Rogers' theory regarding communication networks. The results are presented to reflect the responses of participants related to each component of Rogers' theories.

Relative advantages

Respondents all remarked on the ability of PBS to create a systematic plan for addressing behavior. PBS was described as, "a plan to reduce reactionary procedures to focusing on the positive." Other comments included, "PBS increased the consistency", reminding us to "use the common language," and "increase the cohesiveness" of the school. Other staff members perceived PBS to be organized, purposeful, and scientific. A specialist on site detailed,

> It is definitely proactive and I like that…it recognizes kids for doing
> what they should be doing and hopes that if we can get the majority
> of kids do what they should be doing we can focus our energy on
> the few that aren't….Kind of a mob mentality that we're doing the
> right thing…It feels like we are being more proactive than playing
> catch-up or in this negative spiral that we had been in.

General education teachers commented, "From a behavioral perspective it allowed you to target specific goals and reduce work over time." Staff also indicated that PBS impacted overall staff communication by, "increasing communication …a conduit", and allowing the school to "work together as a unit."

Other teachers referred to the advantages PBS had on their ability to effect changes in student behavior. Another teacher noticed, "PBS teaches you to give attention to the students who are doing what they should be doing and minimal attention to those that aren't…so the kids who see others getting this attention change their behavior."

Compatibility

Most participants noted without hesitation that the PBS model was directly aligned with their beliefs about education. However, two of the respondents described their experiences. The counselor replied that she needed to see PBS work before she would fully believe its impact. Her philosophy as a teacher in the past had been that students should just behave as they are expected to without external motivation. Once PBS began at the school she said she made specific observations of how the students responded to being caught doing something good. While continuing to be faithful to PBS she observed this pattern repeatedly. She stated,

> Learning it was easy but like I said I didn't really believe in it at first…I had to see it working…then it was hard for me to change emotionally, and look for the kids who are doing positive things and then give my attention.

The second teacher remarked that the "buzz words" sometimes associated with PBS such as Applied Behavioral Analysis or Behaviorism gave her a negative feeling. However, she described that she viewed PBS as flexible. The mere fact that she was allowed to differentiate her recognition and reward system within her classroom illustrated to her PBS's ability "to find something that works for you."

Complexity

The participants indicated that PBS was easy to learn and understand. Staff also mentioned the value of the trainings and the provision of time to re-visit the program.

The administrator set aside time even in the last year to hold staff retreats and refreshers that addressed PBS. Some of the barriers to applying PBS had been the obvious gap or inconsistency that occurred with the arrival of new staff. A process to provide background and rationale for the use of the program had been difficult to address in a timely manner for those individuals.

One of the teaching staff had mentioned the school-wide goal this year was for teachers across the building to recognize children from other classrooms. This had been a challenge because, as the teacher suggested, many of the teachers weren't able to quickly identify students from other classes. This process required detective work to chase down the classroom teacher and retrieve the name of the child. Also, it was mentioned how little time there was outside of the classroom to observe these non-classroom settings. A perspective shared by the principal indicated:

> I don't think people have a hard time hearing and learning about these things …it's follow-through where people can really fall apart. All of us as human beings are so easily found to fall back into old ways unless there is a reason not to do so.

His response to these barriers were:

> When new staff come on there is a re-education that takes place, and with returnees we have to go through it each year and then I think revisiting things by asking how things are going…the PBS committee helps with that…even in faculty meetings. I like to throw my feelers out and see how things are going.

A specialist on site who had been an original member of the PBS team for two years described the process:

> I think that it was easy to learn I thought and the implementation you just have to jump in and do it is what we found and then I think we would tweak…I think the hard thing was getting people together and committed for meetings.

Trialability

A summary of the SET and interview data showed staff actively engaged in using each feature of PBS. For the purposes of review these features included: defining and teaching the expectations, rewarding student behavior, using a systematic approach to deal with behavioral violations, participating on the PBS team, and using data to inform decision-making.

Observability

The responses to these questions were in two distinctive categories: observable student behavior, and observable adult behavior. One of the intermediate teachers responded emphatically to this question: "Absolutely...a very positive…everybody was using it." The data revealed a decrease in student referrals at recess. In part, respondents discussed the focus by the staff to engineer the use of playground equipment and space to prevent a discipline issue. Students were placed by grade level into quadrants on the field to avoid conflicts over turn-taking, etc. A teacher described a recent scenario in which one of the "geckos" displayed in a hallway was vandalized. The student responsible was found and instead of providing him with a punitive consequence the teacher asked him how he could resolve the problem. So, together the teacher and student recreated the poster. The teacher indicated the student had taken great pride in his work.

The principal and office staff pointed out students had become "praise mongers." For example, a 5th grader approached the principal to make his case for why he should be an ABC kid. Therefore, there was concern expressed by three interviewees that students might become conditioned to engage in appropriate behaviors with the expectation that they receive recognition.

Teacher behaviors that have been affected by PBS included the increase in praising students, engendering a positive global environment, and the initiation of a problem-solving atmosphere. A teacher stated, "PBS is constructive…we are not in this negative spiral we used to be in." Another remark indicated, "staff make a point to look for students doing the right things and then also recognizing them for it."

The counselor suggested,

> When I walk through the cafeteria, the hallways, or the playground I model behavior…the kids remember me from the road shows and immediately react…so I like to focus on those non-classroom settings

The principal also indicated, "People respond well to knowing what is acceptable and not…and that there is consistency…people also like being caught making good choices."

A global comment regarding adult behavior was, "there is a sense that the whole building is doing something as a unit as opposed to everyone off in their own corners."

Finally, a specialist indicated the impact of PBS generated the following process:

> Everything is outlined and organized …No one is second guessing the way we deal with things…Everyone knows the process. I think that is important for the teachers but it is equally important for the kids."

Re-invention

The changes made to PBS at School B have all occurred over time as part of a planning process by the staff. For example, the principal indicated several minor changes were made to the referral form to increase the efficiency of the system. The school also personalized the teaching of the expectations by the staff members that govern particular environments to illustrate to the students that their actions have a direct impact on someone else at the school. Teachers have been given the freedom to individualize reinforcers in their classroom.

One of the original team members described a change made to the teaching plan affiliated with start-up at the beginning of the school year:

One of the things we did at the beginning of the school year
is we gave the kids a tour of the building. We told them this
is the behavior we expect in this place and this place after we had done it.
For a year we decided that it made sense to have the custodian talk
about the bathroom, to have the lunch monitors talk about the lunchroom.
We tweaked it and made it better more personal.

Communication

School B's communication about PBS has changed over time. Initially, the counselor and PBS team were heavily involved in working with the principal to communicate the principles and activities necessary for implementation. Subsequently, the entire staff was given numerous opportunities to revisit and make changes to PBS by discussing the program at refreshers, retreats, professional development, and faculty meetings. It appeared at this point in time that the PBS committee focused the efforts on what has become school-wide staff communication. One of the original PBS team members described communication about PBS at the site:

Initially it was the school-wide team that got the ball rolling but then it just
blossomed from there. We sucked everyone in and soon it was just a
system-wide thing.

Another primary teacher discussed the nature of communication:

I talked to my grade level teachers…I actually talked to my friends
that are teachers at other schools as well a little bit about what we are
doing. I do not want the kids to ever feel isolated…you're part of something.

Effective Behavior Support Survey

The Effective Behavior Support surveys were completed by five staff members who have been on-site since Year One of implementation. The survey was completed by

the principal, a resource specialist (member of the PBS team for two years), office

manager (member of the original PBS team), one teacher from the intermediate grade

level, and one teacher from the primary grade level. The EBS provided information about

individuals' perceptions of the status of behavioral supports at the school in the following

environments: school-wide systems, non-classroom settings, classroom systems, and

individual student systems.

While it is worthwhile to view the percentage of responses to each system,

generalizing these results from approximately 10-15 % of the teaching staff has its

inherent limitations. Therefore, a presentation of the scores and reference to specific

items in the survey follows to triangulate the SET and interview data.

School-Wide Systems

The scores on the EBS instrument for the current status of school-wide systems

were: 63% of respondents indicating school-wide features as being *in place*, 30% as

partially in place, and 6% as *not in place*. The percentage of participants indicating the

priority for improvement of these items was 45% denoting *high* priority, 31% *medium*

priority, and 22 *% low* priority.

Of significant interest were responses to specific items within this section of the

survey. First, all respondents indicated that a small number (3-5) of positively stated

student expectations or rules were defined, and expected student behaviors were taught

directly. Subsequent items agreed upon by all of the respondents as being in place

included: problem behaviors are clearly defined, office v. classroom behaviors defined,

options allowing classroom instruction to continue, and a team existing for behavior

support planning. The agreement of respondents to these items triangulated the data

collected and recorded by the SET. The features indicated as in place by the EBS were also indicated as "implemented" through the SET measure.

Non-Classroom Setting Systems

The scores on the instrument for the current status of non-classroom settings were: 71% of respondents indicated non-classroom features were *in place,* 24% as *partially in place,* and 4% as *not in place.* The percentage of participants indicating the priority for improvement of these items respectively were 7% for high priority, 92% for medium priority, and 0 % for low priority.

Specific items in this section of the survey were agreed upon by all the respondents. Each provided triangulation for the SET and additional researcher interview data. Two items specifically referenced the features of PBS. The items included expected student behaviors taught in non-classroom settings, and rewards existed for meeting expected student behaviors were noted as being *in place*.

Unique to School B was their re-invention of the teaching of expectations. The school made the decision to have all members of the school staff directly involved in student training. The other item on the EBS noted as being in place by each respondent was that all staff were involved directly or indirectly in management of non-classroom settings. These responses affirm the interview data which described the change in the PBS teaching plan.

Classroom Systems

The scores on the instrument for the current status of classroom systems were: 63% of respondents indicating classroom features as *in place*, 32% as *partially in place*,

and only 3% as *not in place*. Priority for improvement scores were 65% high, 20% medium, and 15% low.

There were four items in this section about which a majority of respondents agreed: expected student behavior was defined, problem behaviors were defined, expected student behaviors were taught, and teachers had regular opportunities for access to assistance and recommendations. These results bolstered the findings of the SET and interview data.

Individual Student Systems

The scores on the instrument for the current status of individual student systems were: 47% *in place*, 22% *partially in place*, and 30% *not in place.* Priority for improvement scores were 4% high, 52% medium, and 42% low.

One item illustrating the distinct opinion of staff regarding supports for individual students as *not in place* was the apparent lack of local resources used to conduct functional assessment-based behavior support planning. This response echoed the sentiment expressed by staff during the interview process. Several teachers responded to questions regarding the impact of PBS as supporting the majority of students. However, each recognized the need for additional supports and strategies for students with recurring or more challenging behavior. Of particular interest were respondents' assignments of low priority to this item. This data contradicts teacher interview responses as many expressed frustration with the lack of intervention available for 5% to 7 % of students.

Classroom Observations

The classroom observations were conducted in two second grade classrooms and one fourth grade classroom. In each classroom the PBS expectations were posted. In two

of the classrooms there were behavioral prompts about trying to understand the impact of behavior on others.

In Classroom One (2nd grade) the teacher facilitated the morning lesson and allowed the children to direct their learning. The classroom is arranged into four tables where students work in teams. Each table is responsible for caring for a live reptile. The classroom is warm and inviting and the walls are filled with student work product. Students were actively engaged in decision-making in the classroom. The PBS expectations were posted in the classroom. There were also alternative behavioral prompts posted across the bulletin board. Flowers with the words "Share," "Think About Other People's Feelings," and "Think for Yourself" were decoratively displayed. Another prompt was, " I feel (blank) when you (blank) next time (blank)."
The teacher used frequent positive reinforcement to reward appropriate student behavior.

Classroom Two (2nd grade) was based upon the structure and management of a local city. The classroom teacher was the city manager and the students sat in pods or apartment complexes that they managed together. In addition to the PBS expectations the classroom had derived "city laws." The teacher prompted and previewed student expected behavior. Students were also encouraged to model appropriate behavior for one another.

Classroom Three was a fourth grade classroom in which the students sat at tables. This is a large class that appeared to be cramped into the physical space. The walls were covered with student art projects and several teachers created prompts to support instruction. There was no mention of the PBS expectations.

There was no specific reference by any of these teachers to the PBS expectations. In two of the classrooms there were non-verbal signals associated with expected classroom behavior used and displayed by teachers and students.

<div align="center">School C: Case Study Results</div>

<div align="center">School Profile</div>

School C was in the same large urban school district as the other schools in this study. School C was a low implementer. The year-end student enrollment for the 20005-2006 school year was 333. Nearly 30 % of students participated in the free and reduced cost lunch program. The school's mobility rate was approximately 30 %. Student demographics indicated that for the 2005-2006 school years, of the 333 students in attendance, 211 were White/Anglo, 20 were African-American, 90 were Hispanic, 2 were Native American, and 10 were Asian American.

School C was located in the center of an older community in the city. It was surrounded by a large development of residential homes and was across the street from a large local high school. The school office was aligned with the front entrance to the school. North of the office the primary classrooms were housed and to the south were the intermediate grade levels. The cafeteria or multi-purpose room was across the hall from the office. Outside each classroom (in the hallway) teachers had displayed student work product. People were warm and friendly on campus.

<div align="center">Prelude to Implementation</div>

School C began implementing PBS in the 2003-2004 school years with a new principal. The new principal was selected through the district approved process, which included the participation of the site-council. Following the nomination of the site by the

area superintendent to the LINKS grant project the site selected PBS to target the

school's behavioral issues as determined by their school climate.

<div align="center">School-Wide Evaluation Tool</div>

The SET measure provided data indicating to what degree School C implemented

and sustained PBS. More specifically, the instrument examined these levels through the

features of PBS. For a description of the features of PBS see Table 4. Refer to Table 13

for visual comparison of the SET summary scores. For a preview of School C's

summary scores on the SET instrument see Table 7.

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Table 7

School C SET Summary Scores

Features							
	Expect. Defined	Expect. Taught	Reward System	Response to Violations	Monitor	Manage	District
Score	4/4	3/8	2/4	6/8	2/8	0/16	0/4

Expectations Defined

While conducting the SET, it was found that all 10 staff members interviewed

could name and describe the school expectations. The school-wide expectations selected

by the school are referred to as "the four B's": 1) Be respectful, 2) Be responsible, 3) Be

caring, and 4) Be safe. These rules are displayed throughout the school in black and white

with pictures of bees buzzing around the written rules. These posters are laminated and

hung at various levels in the hallways, cafeteria, office, and classrooms. The principal

reinforced the presence of the expectations through her comments:

> We still have our school rules….We have an assembly every
> year to remind the students that we are still operating the four
> B's….Teachers should still have them up in their classrooms as
> well as around the building depending upon what the area rules
> are for…That is a school-wide focus…We really just keep
> pushing that and our kids know…They know the four B's.

Behavioral Expectations Taught

The system for teaching the behavioral expectations is emphasized most heavily from a school-wide perspective at the beginning of school. On an individual basis teachers took students through each environment in the school to model expected behaviors while presenting examples and non-examples. These activities culminated with an assembly led by the principal reinforcing the expectations. When asked, all staff indicated they had been involved in teaching the school-wide expectations this year. Uncovered through the interview process, all staff actively seemed to teach the "common language" set forth by the four B's. However, this process had been individualized by several of the teachers. In one of the 5th grade classrooms the teacher had compressed the four B's into one rule, "respect self and others." Others referred to PBS as being woven into their already existing classroom and behavior management style. Another intermediate teacher suggested, "Taking them to different environments and teaching the rules seemed artificial."

On-Going System for Rewarding Student Behavioral Expectations

During Year One of implementation School C rewarded student behavior through "Care-A-Brations" which were celebrations of student compliance with the school-wide program. In addition, the staff handed-out "Gotchas" to individual students as a positive reinforcer. Students might also have been given pencils for these actions as well. In

addition, every quarter teachers would be asked to select two to three students whose

behavior exemplified the four B's so that they could participate in a party with

refreshments.

In the past two years the respondents indicated that these rewards/recognitions,

"haven't gotten off the ground." Further, in response to the SET questions related to

rewards, the primary teachers asserted that they were actively using these recognitions.

In the intermediate wing teachers indicated that these reinforcers had been discontinued.

The intermediate teachers indicated that they offered verbal praise on a daily basis that

complied with their already existing behavior management plan. The principal described:

> Well, we had worked Care-A Brations and that was in fact
> why we collected the Gotchas. Teachers would choose from their
> Gotchas or just take a look at your students really following
> those 4 B's and then we would maybe select two students from each
> class…at the end of the day we would have Eegee's or just
> acknowledge and talk about what it means to our school for
> them to follow that great example. We were trying to do that
> at least every quarter…but that hasn't…pitfalls every now and then
> haven't really done anything this quarter.

For example, a 5th grade teacher indicated that she gave "verbal rewards every day." A

grade level team member stated "I give rewards within my own classroom management."

These teachers were asked about the "Gotchas" indicating that "unfortunately, they have

been discontinued...time wise it was very difficult to fill them out. " The primary

teachers at the school indicated immediately that the reward system used was, "The

Gotchas." This primary teacher described, "Yes, we still use the Gotchas…it is sort of up

to the teacher as to how much they use them."

System for Responding to Behavioral Violations

The school does have in place a systematic referral form. This form included information such as name, date, grade, referring teacher, time, location, and eight specific behaviors for possible referral. The SET scores indicated that 0-50% of staff agreed with the administration about what behaviors were office-managed and what problems were classroom-managed. Collectively, the respondents mentioned all of the behaviors listed on the referral form. The principal discussed the collection of these referrals:

> This year I have not formally collected…I take notes about
> when kids come into the office…We have had very little
> discipline problems this year in my office…So we don't have a
> formal system to keep track of every child that comes in here.
> However, the three mentioned by the principal were not mentioned by the
> teachers as the behaviors they expected to refer to the office.

Monitoring and Decision-Making

School C had not collected systematic discipline data since Year One of implementation. However, the principal commented that referrals were so uncommon she could actively analyze them on her own and make the decisions she needed to support her staff and students. The counselor reiterated this sentiment by providing an example of increased referrals in the cafeteria so reminders were offered to students and pencils handed out to staff in the cafeteria to increase the recognition of appropriate behavior. These referrals decreased. This type of data was shared with individual staff as necessary. There is no sharing of information or trends in referrals with staff as a group.

Management

School C was another site where the original PBS team had disbanded. In response to questions on the SET about the status of the team, 9 of 10 respondents

indicated that there was no longer a team to their knowledge. When the counselor was interviewed, she indicated that she maintained an "informal team" with the special education teacher. The counselor considered herself to be the team leader and suggested that she had made repeated attempts to ask the staff if they required support or had ideas about necessary changes to PBS at their site. She suggested that she shared information about referral trends with individual teachers. In addition, she focused her efforts on assisting teachers with recurring student discipline issues. The principal stated, "The team has dismantled itself."

District-Level Support

There is no district-level support for PBS at School C. The principal stated….

> No…we were crying last year because it was our last year to get monies (LINKS federal grant)…That was such a great help… So now we don't have a budget.

Rogers' Diffusion of Innovations

This portion of the results section will be organized to answer the research questions related to Rogers' Theory of Diffusion of Innovations. The characteristics discussed by Rogers included relative advantage, compatibility, complexity, trialability, observability, and re-invention. In addition, this study also explored the impact of Rogers' theory regarding communication networks. The results are presented to reflect the responses of participants related to each component of Rogers' theories.

Relative Advantages

The principal and teachers alike referred to PBS as a vehicle for collaboration among staff members:

> One of the things that I really like about PBS was the way in which the vehicle (PBS) allowed us to collaborate as a school, as a team…

> The first time that we ever sat down together…putting together
> something for our kids, for our school…Everybody was a part of it.

As an entire group they also shaped the creation of the system, allowing it to better fit their personal philosophies. PBS emphasized the need to remain consistent, use a common language, and provide students with concrete examples and non-examples of expected behavior. A primary teacher indicated, "We are pretty united about what we expect and I think that is good for the kids to know." Intermediate teachers expressed, "if you reinforce positively you can shape behavior that way." Also stated by intermediate grade level teachers, "what PBS does or when you have a positive behavioral mindset you tell them what they can do…you are shaping or sheparding them into the behaviors you want."

Compatibility

All respondents indicated PBS was aligned with their beliefs about education. Some indicated that they feel rules, guidelines, and structure were necessary to create an environment where students would be able to succeed academically. The principal echoed these observations:

> Well, I think if you don't have behavior principles established
> then your academics will always suffer…I think we sell our kids
> short sometimes by not expecting appropriate behaviors…Children
> need to know rules, guidelines, it creates a safety for them...It goes
> along with my own philosophy with my own kids.

Teachers made specific reference to the importance of teaching these skills especially to the students they feel are missing these experiences from their homes. Themes emerged here related to ideas of a greater social construct; "understanding these expectations is necessary for success in life."

Complexity

The principal indicated that her greatest challenges related to learning and applying PBS was the gap that occurred over time from establishment to application. This included her concern that teachers return to old habits:

> It is a mindset…It is always easier to go back to the familiar.
> We have to keep…reiterating over the speaker…remember
> the 4 B's. It would just keep it on the teachers' minds.
> Some were better than others about referring to the rules
> in the classroom. The hardest thing I think is for people
> to use the positive language. You can tend to say OK
> sit down and be quiet…instead of thank you for sitting down
> or thank you for being respectful. We're not trained to always
> look at what they are doing right. So that was a hard thing.
> And then the new people coming in didn't have the background.

Teachers remarked at times it was difficult to remember to use language that focused on the positive as opposed to redirecting inappropriate behavior. The principal discussed the issue of teacher turnover. Teaching new staff the entire development process was difficult and required a more systematic approach.

Teachers commented that the trainings were easy to understand and that PBS seemed easy to use. A teacher specifically referred to the active teaching of the expectations in specific environments as difficult and "artificial." One of the drawbacks of application were teachers' impressions that the system was being applied inconsistently. A few felt there had been too much differentiation among the staff. A specialist on site who was integral to the start-up indicated,

> At the start of the program we were all excited about it…The whole staff was
> gung-ho and then I think over the years within classrooms expectations were
> posted, presented, and reviewed but we aren't doing anything to the extent we
> were initially.

Another teacher mentioned, "when the rubber meets the road is always harder."

Trialability

High priority was given by the principal to model and set aside time to organize

assemblies to teach the expectations to the students. The principal remarked about

her belief that in order to effect global change the change had to begin with her by

"setting the tone." By the conclusion of the interview each staff member had collectively

mentioned using examples of each feature of PBS: using the "common language"

or expectations, modeling behaviors, providing reinforcement, and following through

with the referral system. However, each had used these features with varying rates

or individualized within their own classroom. There were also changes over time.

Certain features were implemented heavily the first year, only to be dropped

by Year Two of implementation.

Observabilty

The principal responded at length about her impressions of the impact of PBS at

her school site:

> First of all there was an order to things because normally I had
> kids just flying in here(office) for anything. Lunchtime was just a time I
> hated because the monitors were sending kids in for anything and
> everything and so it really established who I was to see and let them
> take responsibility for their jobs outside...Those kids from the upper
> grades I don't see them in here this year. My 3rd, 4^{th,} or 5th I don't see
> them. I think teachers are handling it more now…They are
> handling their own (discipline issues).

She further described the school prior to PBS with higher incidences of peer conflict,

fighting, and referrals to the office. Since introducing PBS, recess has become a much

calmer period. Also reported was a marked decline in the behavioral infractions by the

third, fourth, and fifth graders. The principal and other staff remarked that those upper

grades have been exposed to PBS since 2003 have experienced very few missteps. The intermediate teachers suggested it is also a combination of strong intermediate teachers.

The school staff separately reported a similar phenomenon in that there was a more structured response to behavior, greater school cohesiveness, and students who seem to be more kind. Some would say that for the primary grades it took the upwards of a year to notice a shift in students becoming fully aware of the "culture" of the school and its expectations.

Re-Invention

Most of the respondents indicated the program, during the initial planning stages, made sense and should be carried out with fidelity. However, by the conclusion of these interviews it became apparent that each teacher had made changes to the program. Examples might include the intermediate teachers reverting to their own recognition system as they felt the Gotchas required too much teacher time to physically fill out for multiple students. The primary teachers reviewed the rules at varying rates. The principal began collecting discipline data and then ceased as the number of referrals dropped to so few it seemed unnecessary.

Communication

These responses varied according to the role of the respondent. For example, the principal indicated that she communicated the most with her counselor who was perceived to be the team leader in assisting and motivating the staff to implement the program. Teachers indicated the most conversation occurred between grade level partners, or other faculty during staff meetings. In addition, they also made specific mention of the students. A fifth grade teacher stated,"Students are the most important

audience." The counselor explained that her efforts ranged from faculty collaborations to providing individual teachers with supports for student behavior. A specialist heavily involved in the initial start-up of PBS indicated:

> At the beginning it was whole staff ….it just kind of an understanding that the expectations are there across the board….I think kids are reminded but for new kids coming in we're not doing it up like we did in the beginning.

The counselor who was largely responsible for steering PBS at the site had stated, "I communicate most probably with the principal and a couple of teachers who are trying to change some behavior in their rooms."

Effective Behavior Support Survey

The Effective Behavior Support surveys were completed by five staff members who had been on-site since Year One of implementation. The survey was completed by the principal, two teachers from the primary grade level, and two from the intermediate grade level. The EBS provided information about individuals' perceptions of the status of behavioral supports at the school in such environments as: school-wide systems, non-classroom settings, classroom systems, and individual student systems. While it is worthwhile to view the percentage of responses to each system, generalizing these results from approximately 10-15 % of the teaching staff has its inherent limitations. Therefore, a presentation of the scores and reference to specific items in the survey is discussed to triangulate the SET and interview data.

School-Wide Systems

The scores on the EBS instrument for the current status of school-wide systems were as follows: 37% of respondents indicating school-wide features as being *in place*, 36% as *partially in place,* and 25% as *not in place*. The participants indicated the priority

for improvement of these items was 43% denoting *high* priority, 43% *medium* priority, and 12% *low* priority.

Of significant interest were responses to items within this section of the survey. First, all respondents indicated that a small number (3-5) of positively stated student expectations or rules were defined, and expected student behaviors were taught directly. Supporting the data uncovered through the SET and interviews, two staff responded to the item regarding the recognition of student behaviors as partially in place, and two others as not in place. These individuals represented the primary and intermediate grade levels. Through interview it was determined that reward of student behavior varied by grade level. These results triangulated the SET, interview, and observation data sources.

Non-Classroom Setting Systems

The scores on the instrument for the current status of non-classroom settings were as follows: 44% of respondents indicated non-classroom features were *in place,* 24% as *partially in place,* and 31% as *not in place.* Participants indicated the priority for improvement of these items, as 30% for high priority, 38% for medium priority, and 30 % for low priority.

Specific items in this section of the survey were agreed upon by all the respondents. Each provided triangulation for the SET and additional researcher interview data. Two items specifically marked the features of PBS. The items that referred to expected student behaviors applied to non-classroom settings and scheduling of movement ensured the appropriate numbers of students in non-classroom settings were viewed as *in place*.

One of the items the EBS survey effectively highlighted was that the status of student behavior and management practices was *not in place.* It appeared through interview and survey data that this school does not actively evaluate, collect, or share data regarding behavior management strategies with staff.

Classroom Systems

The scores on the instrument for the current status of classroom systems were as follows: 58% of respondents indicating classroom features as *in place*, 38% as *partially in place*, and only 3% as *not in place*. Priority for improvement scores were 48% high, 48% medium, and 4% low.

There was only one item in this section on which all the respondents agreed. All respondents agreed "expected behaviors were defined". There was disagreement on the items that related to problem behaviors being defined and expectations being taught directly. These results triangulated the findings of the SET and interview data.

Individual Student Systems

The scores on the instrument for the current status of individual student systems were: 23% *in place*, 46% *partially in place*, and 30% *not in place.* Priority for improvement scores was 36% high, 56% medium, and 6% low.

One item that illustrated the distinct opinion of staff regarding supports for individual students as *not in place* was the apparent lack of local resources used to conduct functional assessment-based behavior support planning.

Classroom Observations

To complete the classroom observations a fifth grade classroom, a fourth grade classroom, and a kindergarten classroom were selected. Each teacher had posted the

classroom expectations except for the kindergarten class. The PBS expectations were not referred to by the teacher during any of these observations.

Classroom One (5th grade) was actively engaged in a discussion of historical figures. One of the themes that emerged from the discussion included what it means to be a good citizen. The students were participating and enthusiastic about the topic. Students were grouped into pods while seated at individual desks. Additional posters were hung on the bulletin boards highlighting issues related to bullying, classroom schedules, and consequences for misbehaviors in the classroom. The teacher had an established non-verbal system for student responses to questions posed and reinforced appropriate behavior frequently.

Classroom Two (4th grade) was conducting a writing assessment during the observation. The classroom was quiet as children worked individually on their assignments. The classroom bulletin boards were filled with messages regarding behavior and students needs. The bullying poster observed in the fifth grade classroom was displayed here as well. A "Basic Needs" poster was in the middle of the central bulletin board. It stated things such as, "We need people to love us." By the entrance to the classroom there was a "Life Skills" poster. While the students worked silently on their assessment the teacher used several instances of non-verbal reinforcement. These included signals such as a "thumbs up" or shaking of the head to motivate students.

Classroom Three (K) was preparing to clean up their classroom at the end of the day following a field trip. While the PBS expectations were not posted the teacher explained she had started the year by asking the children to make "bees". These bees

then were placed around a hive and honey jar following a discussion of the four B's. Students wrote their names on the bees agreeing that they understood the expectations. These bees were still posted behind the teacher's desk. An additional poster displayed visuals of children getting along with each other illustrating "tips" or behaviors used for achieving this goal. The teacher modeled expected behaviors and used positive reinforcement. An over-sized jar sat on the teacher's desk filled with Gotchas.

<div align="center">School D: Case Study Results</div>

<div align="center">School Profile</div>

This site was located within the same large urban school district as the other schools in this study. School D was a low implementer. The year end student enrollment for the 2005-2006 school year was 382. Nearly 60% of students participated in the free and reduced cost lunch program. The school's mobility rate was approximately 30%. Student demographics indicated that for the 2005-2006 school years, of the 382 students in attendance, 71 were White/Anglo, 27 were African-American, 257 were Hispanic, 15 were Native American, and 13 were Asian American (http://www.tusd1.org/statistics).

The school was built in the early 1960s and has attempted to maintain small class sizes. Aside from the classrooms, which branch out from the office in a U-shape, the school had several outdoor portable units. School D possessed extensive volunteer and tutoring programs. The school also operated a gardening program in partnership with a local nursery. The office staff indicated that many of the families in the area have resided there for extended periods sending multiple generations to this school site.

Prelude to Implementation

School D accessed PBS as a participating school in the LINKS grant. At the time

the school district allowed regional superintendents to make decisions about which

schools could be included for possible participation in the grant program. Some of the

criteria these administrators used were to provide the support to schools not designated as

Title I or earmarked to receive desegregation funds. With the approval of the central

office administration, grant staff began the process of assisting the staff to pinpoint

specific areas of concern through a climate survey. This process that staff felt there was a

need to focus on supporting student discipline issues.

School-Wide Evaluation Tool

The SET measure provided data indicating to what degree School D implemented

and sustained PBS. More specifically, the instrument examines these levels through the

features of PBS. See Table 4 for a summary and description of the indicators of these

features. For a preview of School D's summary scores on the SET instrument, see Table

8.

The summary scores were directly related to the features of PBS. The scores for

each feature reflected the presence or absence of PBS activities, planning, documents,

and/or physical evidence of the features of PBS. The scores assigned in Table 8 indicate

evidence of the presence or absence of these features at School D. For a comparison of

the summary scores for all schools see Table 13 (Appendix F).

Table 8

School D SET Summary Scores

Features							
	Expect. Defined	Expect. Taught	Reward System	Response to Violations	Monitor	Manage	District
Score	2/4	4/8	3/4	6/8	4/8	1/16	0/4

Expectations Defined

While conducting the SET, the researcher found all of the 10 staff members interviewed could name and describe the school expectations. The school-wide expectations selected by the school were referred to as the " three R's": 1) Respect yourself, 2) Respect others, 3) Respect property.

As School D began PBS start-up procedures a parent volunteered to draw cartoon renderings related to each one of the expectations. Each drawn image showed children at school engaging in examples of being respectful, etc. These drawings were laminated and hung throughout the school during the first two years of implementation. Upon arrival to the school it was observed that a majority of the posters were missing. An office staff member indicated, "We used to have the posters with all of the rules so it was really visual." Through the course of conducting interviews it was determined those signs had been taken down and were being stored in the utility closet. The only visible signage was a student-created wall hanging in the cafeteria. This student-created sign was huge taking up half of a wall in the cafeteria. The students had used blue paint to write the rules and to make paw prints to represent the school mascot.

Behavioral Expectations Taught

All 10 respondents indicated they had actively taught the school-wide expectations to the students this year. It appeared that the school had not, as a group, held a school-wide training to systematically plan and coordinate the teaching of the expectations in specific environments. The counselor mentioned, "I briefly taught the rules at the beginning of the year." School D relied upon its teachers to teach these expectations. All staff demonstrated their knowledge of the 3 R's.

A scenario described by the counselor detailed her initial exposure to PBS as a new staff member during Year Two of implementation. She indicated she was given only the matrix and "learned about PBS through the matrix." She said, "I was given the matrix my first year…we talked about it at an assembly and that was it."

On-Going System for Rewarding Behavioral Expectations

Based on staff responses the school engaged in recognizing student behavior through the monthly assemblies, "using paws-itive" notes or stickers, and by announcing the names of students exhibiting appropriate behaviors in the announcements on Friday and Monday. It was made clear by most respondents that the "paws-itive" notes and reading of students' names during the announcements had begun just recently. The counselor mentioned sending the notes off to the printer and receiving them around the end of January. Teachers indicated their recognition of student behavior had been "verbal" or that they "reminded" students walking in the hallways to remember to "respect others by walking."

While the SET measure indicated that all staff had recognized students in the last two months, it is important to note that those reinforcers had only recently been made

available to the teachers. Currently, teachers were distributing these rewards. A special

education teacher indicated, "They have become more available this year." It also

became evident through further interview that several of the affirmative responses to this

SET question were related to respondents' perception that use of their own specific

classroom reinforcement system accounted for reward or recognition. For example, an

interviewee stated, "Yeah, we do a weekly drawing….that little jar over there… We draw

tickets….This is just my own classroom thing….A variation of something I had done at

one of my other schools." A new teacher to the building indicated, "If they are raising

their hands…or trying to help get the class quiet I will say 'thank you for helping me'….I

haven't handed out one of the paws-itive paws yet." When the principal was asked about

the reward system she explained:

> On a monthly basis we have school-wide assemblies and at that point
> teachers select students who they feel have been exhibiting the 3 R's
> in an exemplary manner…We as a faculty come together and discuss
> students on an as needed basis that are showing particular need for
> attention….We ask staff to target that student…The students receive
> paws-itive notes…The [school mascot] paw and then those are pulled
> and those names are read on Mondays and Fridays…That has just
> started…It's going very well so far.

It would appear the systematic recognition of student PBS behavior was instituted in

spring of 2007.

System for Responding to Behavioral Violations

The school created a systematic response to behavioral violations by

communicating about what behaviors were to be handled in the classroom rather than

referred to the principal. This is evident in the agreement of the SET as staff agreed

consistently (90-100%) with the principal as to what type of behaviors are referred to the

administration. Further, the school had designed an office referral system.

The office referral form has sections that required the referee to indicate location and provide comments about the problem behavior. The form provided an exhaustive list of minor and major problem behaviors and possible motivations. The form concluded by asking if others were involved in the administrative decision. This information was then entered into the district's student data management system by the principal. This information was shared with staff on an as-needed basis.

> The teachers fill out an office discipline referral sheet or a piece of paper…That form is aligned to the major behavioral infractions and includes topics like location, peers involved, time of incident, and that then is input into the (district's) system so that we are able to access it as part of our district-wide school based information system….I use it as a reflecting point to see where we are having issues…who is having issues….that includes students as well as teachers and then when there is pertinent information I share that out with the staff.

Monitoring and Decision-Making

During the interview with the school counselor it became apparent from her statements that she perceived PBS as "not actively implemented." While she participated in the other teams on campus, she claims PBS was not the focus of those meetings. In addition, she indicated discipline data was not shared with staff. Her response to questions about the presence of the team was:

> Sort of…I was thinking of the Teacher Assistance Team (TAT) I think the Rules and Procedures Committee should address PBS but they don't…I was on the Facilities Committee and have moved to the Rules and Procedures Committee…We don't have a lot of time to meet.

There appeared to be no specific understanding about what committee was responsible for steering PBS at the site.

The review and analysis of Office Discipline Referrals (ODRs) proved problematic at this site. The researcher requested these data from the principal as she stored these data files on her computer. The morning designated to retrieve the information from the principal, the computer in her office had been stolen. The principal was unable to produce this information as there were no back-up files.

Management

A component of the management of PBS included the relative priority assigned by the school to behavior support systems. The SET measure indicated that the school improvement goals did focus on academic goals and the integration of technology. The activity level of the school-wide team has changed. The school now appeared to have two teams separate from their Child Study team focused on behavioral issues. One was known as the Rules and Procedures Committee and the other was a specialized team that addresses the needs of the students with more severe behavioral problems. This specialized team met on Tuesday and consisted of the school psychologist, counselor, principal, and special education resource teachers. The Rules and Procedures committee met simultaneously with other committees that had been formed on site. The principal indicated that she traveled back and forth to these meetings to gather feedback from members. It was unclear as to what role or impact the Rules and Procedures committee had on PBS. This could have been a limitation of the interview questions.

District-Level Support

Currently, there is no district level support provided to School D.

Rogers' Diffusion of Innovations

This portion of the results section is organized to answer the research questions related to Rogers' Theory of Diffusion of Innovations. The questions are as follows: 1) How does Rogers' characteristics of an innovation relate to site-based personnel's perceptions of the characteristics of PBS? 2) How did the communication networks affect the overall implementation and sustainability of PBS? The characteristics discussed by Rogers included: relative advantage, compatibility, complexity, trialability, observability, and re-invention. In addition, this study also explored the impact of Rogers' theory regarding communication networks. The results are presented to reflect the responses of participants related to each component of Rogers' theories.

Relative Advantages

School D staff consistently referred to PBS as having focused their efforts in using a common language. These actions increased the consistency of staff and provided continuity from one classroom to another. The principal suggested that PBS has motivated the entire staff creating a "cultural cornerstone." Finally, she described the entire school as possessing a cohesiveness that was not there before. A teacher on site for 13 years commented, "It was school-wide and everyone knows what it is …kids know what you are talking about." The counselor indicated when implemented, "it provides unity within the school, a common language, and common expectations as well."

Compatability

This particular question provided the principal the opportunity to highlight what she perceived to be challenges to the on going implementation of PBS. She indicated that it took time for staff to become comfortable with the idea of "intrinsic versus extrinsic

motivators." Inherent in the features of PBS is the understanding that students will be rewarded by others. The notion that some students really required those additional reinforcers took time for staff to understand and support. It required a paradigm shift for some to consider the necessity of "differentiating supports." Overall, the staff interview data indicated they felt PBS fits within their framework.

Complexity

The staff at School D provided conflicting responses regarding the early training and application of PBS. Approximately 50 % of respondents described both the learning and application process as "easy." The remaining staff, including the principal, mentioned the importance of both processes becoming more natural over time. It was essential that as a staff there existed learning and re-learning about what types of reinforcement are appropriate. The administration said it was also learning to "accept the hills and valleys." Some teachers indicated the training was "overwhelming" and that PBS was "hard to implement." One teacher gave a colorful description that implementation will always be more difficult as you have X number of teachers with X number of differing philosophies to adjust and monitor towards one collective goal. Other responses suggested, "the training was very overwhelming…over time you apply slowly…and in the end it all comes together." Another intermediate teacher indicated," PBS is fairly easy to understand but you have to remind yourself to apply it consistently."

The counselor described her learning process after arriving to the building after Year One of implementation:

> I learned about PBS through our matrix….and really that's it…
> how I learned PBS….I was just given the matrix…My first year
> we talked about it in an assembly…As one person applying it yes it is
> difficult…Some teachers that year actually were much more

> comfortable with it…knew more about it and were ready to work
> it into their classrooms…Others not so much…So with those teachers
> it was much easier to work with their classes. There were
> camps.

A primary teacher who also arrived to the site after Year One of implementation

described her introduction to PBS:

> I believe I learned it from the handbook…We had teacher induction
> meetings…Someone took us to the side and said 'These are the
> school rules' and as far as applying them I just thought "wow"…
> If we have about three school rules and three classroom rules
> instead of having a list of 10….easy.

Trialability

During the initial implementation of PBS the respondents made specific reference

to each feature of PBS. While individually they may not have used each feature

themselves, collectively, they were making a concerted effort to use these tools. A

primary teacher stated

> We like to create a community here at School D and in my
> classroom as well and knowing that this school and the classroom
> rules are really linked together so students have the same sense
> of community out at recess as they do in the classroom knowing
> they have to follow the three R's.

Observability

Teachers remarked to the principal at a recent staff meeting that they felt PBS was

responsible for the increased achievement of their students in math. This system has

created an environment with minimal behavioral disruptions which in turn created greater

instructional time. The principal echoed this sentiment. She indicated she had more time

to observe and support teachers in the classroom.

The principal described a scene prior to PBS in which there were multiple fights with multiple students on the playground, off-campus, and on the way to school. If you track the records of the students that have been with PBS since the beginning she would suggest few to no referrals generated from the older age group. From a personnel perspective the school used to employ four monitors for lunch and recess. At this time they had only two. A primary teacher commented,

> I think it has been a positive one all the way around…I don't see any negatives…The kids know…I could ask a 5th grader 'Are you respecting property when you run down the hallways with your hands on the walls?' They know what is expected of them…and I think teaching it from Kindergarten on up I think is a great thing because they know what to do and what not to do.

Re-invention

Respondents indicated remaining faithful to PBS program features. Staff also discussed their realization that over time they had focused on certain features more than others. The only minor change was mentioned by the third grade teachers. They had added the rule, "Do the right thing," to give the students a sense of personal control or independence in making choices. The school had also used a universal hand signal (holding up three fingers) to remind students of the 3 R's.

Communication

The responses to this question indicated that there were many people discussing PBS on site. The principal described the upstart process as enveloping all teachers and all students. As time passed she delegated some of the program maintenance to the designee and school counselor. New teachers to the building described meeting and discussing PBS with their mentor teacher. Others mentioned cadre meetings, faculty

meetings, and professional development sessions. The manner in which all of this communication was circuitously directed was uncertain.

While the participants described communicating with others over time about PBS, there still existed no systematic response to this question by any of the staff members. Each respondent had communicated in a different manner.

<div align="center">Effective Behavior Support Survey</div>

The manner in which the participants responded to the EBS made it difficult to report the results. One individual who completed the survey did not respond to portions of the assessment because she didn't feel that she had sufficient knowledge to respond with accuracy about particular environments. Therefore, a completed survey could not be included as part of the final analysis. Another barrier to the analysis was a second participant responded inconsistently, neglecting to answer all of the items. Therefore, trends in the data should be viewed with the knowledge that two individuals returned incomplete surveys.

There were four items that participants responded to differently from one another. For example, when asked to indicate whether expected student behaviors were acknowledged as *in place*, *partially in place*, or *not in place,* each staff member answered differently. One staff responded as *in place*, another as *partially in place*, and the third staff member as *not in place.*

This phenomenon occurred with additional items. One item related to impressions about whether problem behaviors received the same consequences. Another item probed participant's perspectives on the activities of the behavior support team for students with chronic behavior problems. And finally, each answered differently to the

question of whether behavior is monitored and feedback provided. These survey results

suggest perceived inconsistencies. These result triangulated the SET and interview data.

<div align="center">Classroom Observations</div>

A fifth grade classroom, a second grade classroom, and the library were observed.

During the course of the observations there seemed to be no obvious physical evidence of

PBS.

Classroom One (5th grade) had students seated in pod formation while students

remained seated at individual desks. The classroom was populated with insects and

reptiles and photographs of the surrounding areas. There were pictures of the Grand

Canyon and of athletic sports highlighting themes of teamwork and perseverance. The

classroom possessed examples of the desert ecosystem.

Classroom Two (2nd grade) was an airy, open classroom with a great deal of

sunlight due to the multiple series of windows along the south side of the classroom.

There was a couch and bookshelves placed near the area rug to provide students with a

reading center. Student work was actively displayed throughout the room on bulletin

boards.

The library was neatly arranged with a long panel of wrap-around shelves

outlining the perimeter of the room. There were also several stand-alone shelves towards

the back of the room. Three or four tables were readily available for the students to

spread their materials. During the instructional period there was no reference to the PBS

expectations. However, the researcher found posted on the back wall a large graphic of

the "resiliency wheel" that described some of the underlying factors associated with

protective schools. These principles were central to the LINKS' grant activities. This poster had been placed here during up-start training at the site in the Fall of 2003.

<center>Summary of Results</center>

The results of the study indicated that high implementer schools implemented and sustained each feature of PBS, while, low implementer schools neglected to continue to implement each feature. Typically, the low implementer schools maintained the use of their school expectations and their response to behavioral violations, but neglected to reward behavior, systematically teach the expectations, or use data-based decision making.

It also appeared that the perceptions of staff regarding the characteristics of PBS affected the overall implementation and sustainability. High implementer sites found PBS to possess the characteristics described by Roger's that may have increased the rate of adoption. These sites found that PBS offered numerous advantages, aligned with their belief systems, possessed observable benefits, and allowed for individual flexibility. The low implementer sites expressed frustration at times with the theoretical principles of PBS and found the innovation to be complex. These sites further discussed resistance to the feature of rewarding students for following the behavioral expectations. Principals and teachers expressed difficulty with the concept of extrinsic versus intrinsic rewards or motivations.

The results of the study related to communication networks showed differences among the high and low implementer sites. The high implementer sites described engaging in heterophilous types of communication. In contrast, the low implementer sites described engaging in homophilous types of communication. The presence of these

types of communication networks at these sites affected the implementation and sustainability of PBS.

Finally, the results indicated that three factors led to the successful implementation and sustainability of PBS three years post training.

1) The data revealed high implementer schools continued to implement each feature of PBS over time. Low implementer schools neglected to implement each feature.

2) Participants' perceptions of the characteristics of PBS impacted implementation and sustainability. High implementer sites found PBS to possess the characteristics attributed by Rogers to increase the rate of adoption. Low implementer sites expressed conflict with these characteristics.

3) The communication networks established at school sites affected the overall diffusion of PBS. High implementer sites engaged and benefited from heterophilous types of communication. Allowing staff members universal access to grade level colleagues, non-grade level colleagues, specialists, and administration created an environment in which PBS was diffused. This access was made available by administration and site-based teams through faculty meetings, professional development sessions, retreats, and refreshers designed specifically to address PBS.

CHAPTER 5

DISCUSSION

In response to growing concerns related to excessive discipline problems and general barriers to children's development and learning, the educational community has sought alternative solutions to school-wide behavioral problems (Adelman & Taylor, 1998). Positive Behavior Support (PBS) incorporated research-based strategies such as Applied Behavioral Analysis (ABA) and other theoretical approaches to establish cultures of competence, to reduce office discipline referrals, and to create an intensive intervention system for individuals that uncovers the relationship between problem behavior and the individual's interaction with his/her surrounding environment (Safran & Oswald, 2003). Evidence-based studies have been conducted to validate the positive impact of PBS (Warren, Edmonson, Griggs, Lassen, McCart, & Turnbull, 2003). While evidence-based studies exist highlighting the overall impact of PBS, there exists no such data-based information concerning why PBS is successful in some schools but not in others.

The problem confronting administrators and school personnel who attempt to apply PBS lies in its actual implementation. Some schools adopt the innovation and integrate its components into everyday practices, making it a part of the system. Other schools attempt to use PBS minimally or even discontinue its use.

The purpose of this study was to examine the implementation and sustainability of PBS three years post training at four public elementary schools. A mixed-methods design was used to gather qualitative and quantitative data. The participants included approximately 10 school staff per school. These individuals included principals,

classroom teachers, specialists, counselors, and office support personnel. The schools selected to participate were all located in the same large urban school district. The schools were selected and placed into low versus high implementer groups using a five-step process. The instruments used for data collection were in-depth interviewing, the School-Wide Evaluation Tool, the Effective Behavior Support Survey, Additional Researcher Interview Questions, review of archival discipline records, direct observation, and field notes.

In order to examine the extent to which the features of PBS were implemented and sustained, the SET was used further to investigate the components of Rogers' Theory of Diffusion. Interview questions were derived related to the characteristics of an innovation and communication networks. Data analysis were conducted in a series of phases. First, the qualitative data were organized. This process involved reducing interview data into categories and themes. This process was systematic and required three phases of analysis: 1) Inductive Analysis, 2) Within-Case Analysis, and 3) Cross-Case Analysis. Phase two included the calculation of the quantitative data. These data were generated as described by the SET and EBS protocol.

<div align="center">The Importance of Implementing All Features of PBS for Implementation and Sustainability</div>

A discussion of the importance of the implementation of all the features of PBS appears in this section of the dissertation. Due to the similarities in the findings, the features were collapsed for the purpose of discussion efficiency. Similar themes had relevant impact on more than one feature of PBS.

Defining and Communicating the Expectations

High and low implementers described *defining the expectations* as advantageous to each site, providing a "common language" or "consistent" plan that reduced overall management of behavior across all environments. Many respondents referred to the shift PBS created in focusing on the "positive", rather than focusing on inappropriate behaviors. These results represented evidence of Rogers' relative advantage. Relative advantage describes the degree to which an innovation is perceived as being better than the idea it superceded. Rogers indicated that diffusion scholars found innovations possessing perceived advantages to be one of the strongest predictors affecting the rate of adoption (Rogers, 2003). The advantages of PBS perceived by staff may have continued to support the implementation and sustainability process for the past three years.

However, it is important to note that the simple act of creating behavioral expectations was insufficient. Most respondents specifically referred to using the language of the behavioral expectations with students such as, "are you using ABC behavior." Therefore, participant responses indicated that the expectations must not *only be defined but communicated.* The specific use of instructional strategies, awareness of antecedents, manipulations of consequences, use of reward and other reinforcement techniques all were essential to the successful performance of PBS at the school-wide level (Dunlap, 2006).

The *visual representation* of the rules through school posters indicated that PBS has become a part of the physical culture of the school. Participants described the value of the expectations becoming a part of the physical structure of the school building. In many cases, teachers remarked about using the posters to remind students of the

expectations. For example, a teacher indicated she had stopped a child who was running in the hallway, pointed to the poster and said "are we using ABC behavior?" Teachers perceived benefit in the interactive feature of the posters, which was described during the interview process as also minimizing teacher time because students understood the symbolism.

The work of Hudson and Ahlquist (2003) addressed the impact of physical artifacts hung and exhibited throughout schools attempting to affect systems change. In schools that were attempting to implement a systems change through the injection of "equity pedagogy" into the curriculum, the researchers noted an extreme difference in the visual imagery presented in the school. These schools demonstrated significantly higher levels of achievement following these changes. It is plausible that as each site embarked on what many have described as a "cultural" or "systems" change, the visual representation of those principles further reinforced or solidified for its members their acceptance of the innovation.

High implementer schools had posted their rules in each environment of the school. School A had gone one step further by creating posters describing the specific behaviors to be exhibited in those particular environments. High implementers schools used their school mascot to represent the expectations as well. One of the low implementer schools had created posters, yet, did not post them in any environment in the school, other than the cafeteria. School C had placed posters in most of the school environments; however, only one teacher referred to the use or value of the posters. Therefore, high implementers defined and communicated the expectations. Low implementers defined, but did not communicate the expectations.

Faculty commitment to Systematic Teaching

High and low implementer schools indicated school personnel knew the rules and had taught or reviewed them with students; however, there were qualitative and quantitative differences between schools. The high implementers devised systematic routines at the beginning of the year in which all staff actively engaged in teaching the expectations. The low implementer schools recently discontinued or scaled back their school-wide assemblies. Responses were particularly confusing from staff at School D where teachers indicated they taught the rules on their own; in contrast, the principal indicated there were monthly student assemblies where the rules were highlighted. These variations in faculty commitment could be linked to the compatibility of PBS. Many of the staff remarked that, "it is hard work to remember to remind and reward students of expected behavior." Also, low implementer schools mentioned the need for"time" to be well planned to organize such events. Administrators remarked,"We just need to take the time to do that again."

These patterns in the data could be explained by similar themes found in the work of Kincaid et al. (2007). This study attempted to uncover the barriers and facilitators to implementation of PBS. Systematically placing nearly 30 schools into high and low implementer groups, the researchers used a modified nominal grouping to determine themes related to implementation. Several themes emerged that might affect faculty commitment. Those themes included staff buy-in, working as a team, and team preparation. Both the high and low implementer groups assigned staff-buy-in as the primary barrier to implementation.

For the purposes of this study, low implementer school principals discussed their concerns about teachers returning to "old habits." School D's principal mentioned specifically there was a shift that had to occur in teachers' philosophies regarding the use of "extrinsic motivators" to increase appropriate student behavior. During the innovation-decision process teachers may have formed opinions that reduced their implementation activity and, therefore, affected the overall impact of PBS.

In contrast, the high implementer schools did not report these "compatibility" barriers to the implementation process. Two staff members at a high implementer school expressed contrary beliefs to some of the features of PBS, beliefs that were subsequently dispelled based upon observed results of PBS on student behavior.

Teacher Attrition and Faculty Commitment

One of the barriers to continued systematic teaching mentioned by all the principals was *teacher attrition* and the training of new staff. Each principal mentioned that there was no efficient process devised in their schools to train new staff during implementation. The current process consisted of teachers being handed their teacher's handbook with a description of the expectations. Afterwards a de-briefing occurred with the counselor, principal, or perhaps in the future with grade level partners/mentors. A principal mentioned that one of the drawbacks for these new staff members is that they did not possess the collective experience of the original staff. Therefore, a legitimate concern was, "Will someone new "buy-in" to the program and use it?"

One of the key facets, as described by Adelman and Taylor (2003), to sustaining valued functions is that the organizations reflect on the infrastructure, enhancement/development, and capacity building that address personnel mobility. In

addition, any organization approaching sustainability or systemic change should consider the following final two phases of the change process: a) institutionalization and ongoing evaluation and b) creative renewal. Unless schools make critical decisions about the management of education of new personnel to PBS, the targeted systems change may be impacted.

On-Going System for Rewarding Behavioral Expectations

Based upon the SET interview data these four schools provided *varying levels of reward or recognition* for following the PBS expectations. There were clear differences in the levels provided by the low and high implementer schools. As indicated by participants the recognitions made available to students were used differently by the low and high implementer schools.

The levels of rewards available at the high implementer schools appeared to be diverse. The respondents claimed to reward students verbally, hand out tangible rewards such as stickers and pencils, provide students with written recognition, institute a lottery drawing for prizes, and provide large group social rewards through school assemblies or luncheons with the principal. Both of the high implementer schools designed their systems to include parents as well. School A's written recognition was sent home describing the specific behaviors the student engaged in to receive the pencil that is attached to the notice. School B created an ABC postcard that forwarded the written recognition home through the U.S. Mail (See Figure. 2).

The low implementer schools *levels of reward were either used inconsistently or not used at all* for periods of time during implementation of PBS. For example, School C had used the "Gotchas" as a written recognition of student behavior. However, as

observed through interview, these "Gotchas" were used more readily by the primary teachers and had been discontinued by two of the intermediate teachers. The "Care-A-Brations" were celebrations of appropriate student behavior used during Year One of implementation. They also were discontinued. School D had only revived their "Paws-itive paws" written recognition system one month before the scheduled interview. The principal of School D described holding student assemblies once a month to recognize student PBS behavior; however, the counselor discussed in her interview only one assembly was held since her arrival in Year Two of implementation.
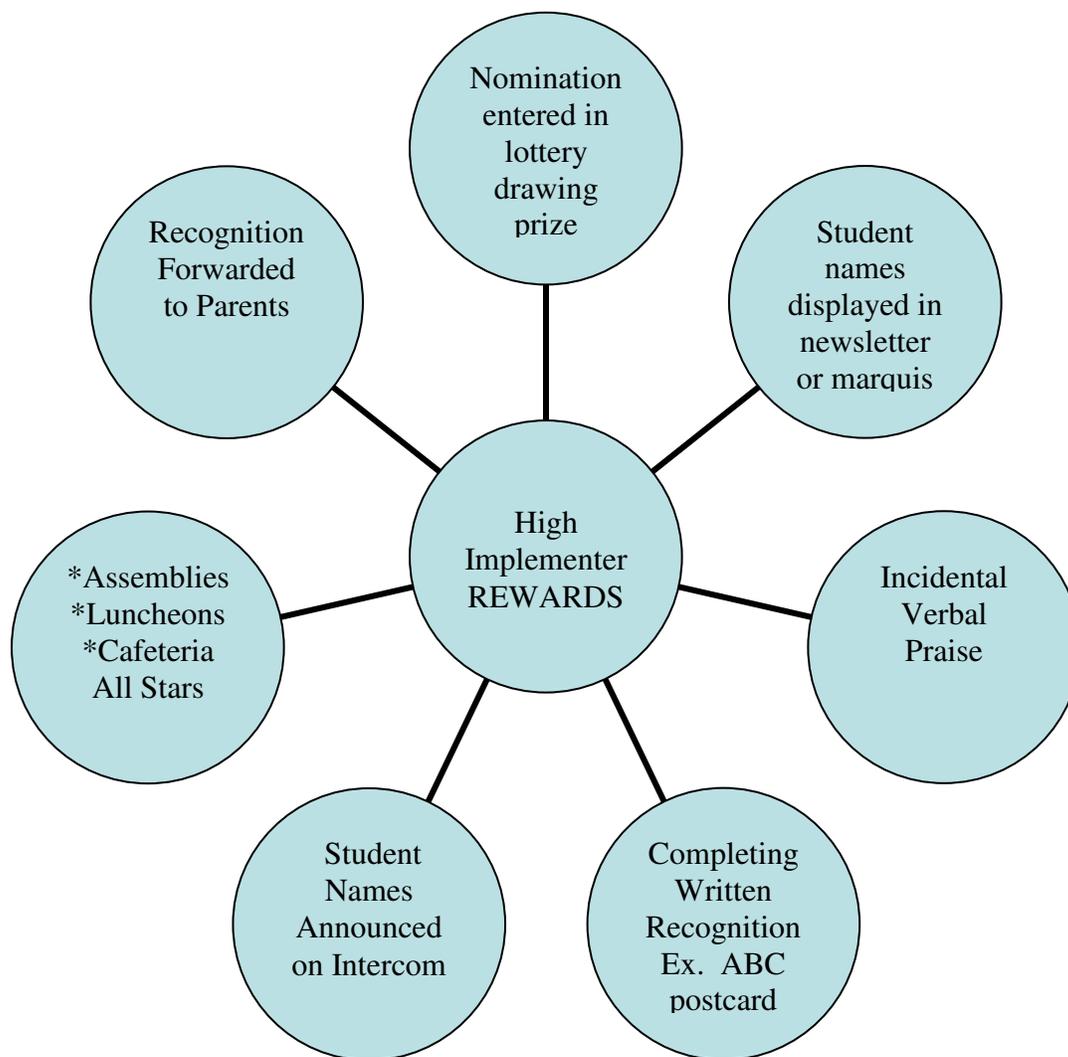
Figure 2.

High Implementer Schools' Rewards and Recognitions

The work of Kincaid et al.(2007) regarding the barriers and facilitators for implementing PBS discussed the importance of the reward system. Based on their study with high and low implementers schools in the Florida Positive Behavior Support Project, data indicated that the lack of a reward system was a "highly important" barrier to success. An implication of the study involved the systematic re-organization of PBS training to focus on six critical areas. One of these areas was "developing and implementing a reward system."

System for Responding to Behavioral Violations
and Monitoring/Decision-Making

Each school has remained faithful to the use of the referral forms they created post PBS training. These forms all contained the required elements sought after by the SET measure such as: student/grade, date, time, referring staff, location, persons involved, possible motivation, and administrative decision. The schools have all managed and stored their data differently. School A still inputs and reviews student data via the SWIS system. School B used the SWIS system for two years but has recently discontinued its use. School C has never systematically collected Office Discipline Referral (ODR) data; however, the principal remarked that there are "so few (ODRs) at this point in time perhaps it isn't necessary." At School D, the principal entered the data into the district-wide data management system mostly for her own "personal reflection." It might have been prudent to share these data with the entire staff to illustrate trends, progress, and to highlight problems with in the school.

While each school has made environmental engineering changes to their school based upon data patterns, these *data summaries are not shared with staff* regularly. The personnel involved in the data collection indicated this information was passed along

more often on an as-needed basis. For example, a principal indicated that she could monitor discipline frequency identifying whether a particular teacher required additional support or mentoring. Students could be identified as exhibiting a trend towards particular behaviors and subsequently staff could sit down and brainstorm possible functions of the behavior with the development of an intervention plan. Therefore, the data summaries at each school have maintained a narrow scope.

Handler et al. (2007) discussed the importance of communication of the site-based team and administration regarding school discipline policies. Recommendations from the researchers suggested that systematic feedback is necessary between the administration and staff. Otherwise, staff and team members may become hesitant to make decisions about school policies or discipline, by affecting the implementation of PBS.

Team Management Activities

None of the original teams are in place from Year One of implementation. The two high implementer schools *engaged in all of the activities* that would be expected of the team; however, membership and participation differed. At School A the entire staff governed itself as the team. They met and discussed PBS frequently and had specific time set aside to revisit and make planning decisions about implementation. School B still maintained their formal PBS team which met monthly and reported back to staff about developments through the circulation of meeting minutes.

At the low implementer schools, the *status and activities of the team are not clearly defined*. School C was reported to have discontinued their PBS team meetings. This was reported during the interview process by the principal and eight other staff members. However, the school counselor indicated she maintained an informal team

with the special education teacher. School D has two teams devoted to addressing behavioral issues in the school. One team met once a week to support students with more intensive behavioral problems. The other team was their Rules and Procedures Committee. However, it is unclear as to what types of activities were solely devoted to PBS. The counselor indicated during the course of the interview that she participated on both teams and could not report that PBS was a topic of discussion.

There were two bodies of work that provided assistance in the interpretation of data from these case studies related to their site-based management or team. Wohlstetter and Briggs (2003) reviewed the exhaustive literature related to School-Based Management (SBM) dating back to the 1960s. They determined there were eight factors that reappeared in the research impacting the overall effectiveness of SBM's. These factors included: active vision, meaningful decision-making authority, distribution of power, development and use of knowledge and skills, collecting and communicating information, rewards for progress, shared leadership, and cultivating resources.

The high implementer schools might benefit from bolstering their *communication* of information. While these teams collected data related to PBS they seemed to be disconnected in the transmission of this information from the administration or the counselor's office to the rest of the staff. The communication of this information might itself act as a needed *reward for progress* with PBS. The low implementer schools might benefit from revisiting the *active vision* for PBS as an entire staff, which the site-based team could then steward. In order to increase the involvement of their staff in the daily *decision-making* related to PBS, perhaps the staff could expand the *shared leadership*

governing that process. This might include the addition of new member so the team could better represent the staff.

Another study discussed the *reflexivity* in teams. Reflexivity is defined as "the extent to which group members overtly reflect upon, and communicate about, the group's objectives, strategies (decision-making) and processes (communication), and adapt them to current or anticipated circumstances"(West, Garrod, & Carletta, p. 296). Reflexive teams seem engaged in detailed planning and anticipated consequences that may occur over the long-term. Non-reflexive teams illustrate little awareness of their objectives and behave defensively in response to a perceived barrier. Based on the review of the data related to teams, in order for these sites to achieve reflexivity, purposeful planning should be considered about the long-term objectives of PBS, and communication with stakeholders should be increased. Each school indicated through interviews that teacher turnover had become a barrier to implementation. This issue could be addressed by the team.

The Impact of Rogers' Characteristics of an Innovation Upon the Implementation and
Sustainability of PBS

This study was guided by the theoretical framework of Rogers (2003). The additional interview questions used in this study were directly linked to his theory regarding the impact of the attributes of an innovation upon diffusion. The attributes he discussed were: relative advantage, compatibility, complexity, observability, trialability, re-invention, and communication. The themes that emerged related to this portion of the study will be presented.

Characteristics of PBS

Advantages and Observability

Each participant responded to these interview questions by noting a "positive" or "cohesive" culture being created by the implementation of PBS. The teachers continued to say, "The students all know the rules." Because students have a deeper understanding of the behavioral expectations, staff explained there is less time required to redirect behavior. Redirection leads students back to the positive language of the expectations versus inadvertent attention being paid to inappropriate behavior. One teacher described PBS as having the effect of "minimizing teacher attention on inappropriate behaviors and increasing attention on appropriate behaviors."

Principals were all able to relay anecdotally a significant decrease in office referrals. School A, B, and D represented those changes via their discipline data. However, the teachers did not indicate information regarding data demonstrating those changes had been shared with them to the researcher. Staff all made remarks offering qualitative descriptions of improvements in student behavior. These comments included, "The students have greater sense of community and they take care of each other." From a 5th grade teacher who had been through the evolution process of another behavior support program, the comment was "I'm surprised that this one has sustained itself, but the kids seem kinder….they hold the door for each other, etc." Many staff remarked about the decrease of "physical fights" or other "aggressive behavior" and noted that currently they seemed to deal with more "nit-picky" or minor problems.

Rogers' theories would suggest that the following generalization be made: "The observability of an innovation, as perceived by members of a social system, is positively

related to its rate of adoption" (Rogers, 258).   Also, as previously stated, if users perceived the innovation to be advantageous, then this factor alone is one of the singlemost predictive factors of the rate of adoption of an innovation.

Trialability

In the previous chapter, a discussion of how all four schools implemented or attempted to use all of the features of PBS was explored. As described in the in-depth case studies, each of the four schools has maintained those features at varying levels. Three studies investigated the factors affecting the overall implementation of PBS. The implementation of these features has been studied in urban high schools, Illinois school districts, and at approximately 200 schools by consultants in the field.

Netzel and Eber (2003) identified four factors that affected the implementation of PBS in an Illinois school district.   These factors included: (a) building-level administrative buy-in and follow through, (b) self-evaluation, (c) fostering shared philosophy among staff, and (d) long term commitment from administration and district. This study's findings showed low implementer schools possessed inconsistent staff "buy-in" and follow through, had no team to perform self-evaluations, were unable to connect with other staff regarding PBS due to types of communication networks, and lacked a long-term plan maintaining features of PBS. These themes also were noted in the work of Bohanon et al. (2006) and Handler et al. (2007).

Re-Invention

While schools did not stray dramatically from the framework of PBS, they each added small features to their implementation which were not expressly addressed at the early trainings. For example, each of the schools experimented with a universal hand signal that functioned as a reminder of the expectations. Others created and dropped particular types of rewards/recognitions. The principals reported PBS provided supports for 90% of their students. Additional supports were needed for the remaining 10% of students. PBS allowed them to more effectively "differentiate these interventions."

High implementer School A targeted cafeteria behavior by supporting students through the "Cafeteria All-Stars" and also offering an intermediate support to teachers/students for time-out from reinforcement. High implementer School B sought alternative solutions to excessive lunch discipline referrals which included added training for monitors, engineering of playground into quadrants, and now piloting the reverse lunch program. They have also created a positive reinforcement system for students with excessive absences referred to as the "Good Morning Club."

Low implementer schools reported maintaining fidelity with PBS. Therefore, while schools did not radically change the manner in which PBS was implemented, high implementer schools created extensions of the system by supporting the needs of the students and staff. The principals indicated that would not have been possible without PBS.

Rogers' (2003) indicated that often in diffusion research re-invention on the part of the adopter was considered to have a negative impact on the innovation. However, he suggested that the adopters of the innovation view this flexibility within a program as

positive. He stated, "Flexibility in the process of adopting an innovation may reduce mistakes and encourage customization of the innovation to fit it more appropriately o changing conditions" (Rogers, p.185). The respondents in the high implementer schools indicated their appreciation for the "flexibility" of PBS.

<div align="center">The Impact of the Types of Communication Networks on Diffusion</div>

The schools each described varying communication networks in place at their schools. Rogers explained communication networks existed when interconnected individuals were linked by patterned flows of information. These networks are so complex it is difficult for one user to fully realize the impact of their transmission of information. The mathematical formula $N(N-1)/2$ can determine the number of possible network links. Therefore, an approximation of each school's enrollment, with a minimum of 20 teachers, would produce possibly 68,265 communication networks within each school.

High implementer School A seemed to have communication networks that were built over time. Initial communication occurred between the principal and school counselor. Then, a large team attended the initial trainings, and followed staff retreats where the entire staff engaged in talking about PBS. All the respondents in School A mentioned that PBS is something they consistently address together as a staff at meetings. High implementer School B participated in a process that is the mirror image of School A. The staff continued to discuss PBS at the faculty meetings as well. High implementers also used a reinforcement system that was sent home to parents adding them to networks of communication.

Low implementer School C possessed communication networks that functioned independently from one another. The primary and intermediate staff communicated within their own grade levels. There also appeared to be a slight disconnect between specialty service providers and the administration. For example, the principal indicated there was no team, and the counselor indicated she was maintaining an informal team. These staff members were all actively using PBS, yet differentiated their use among grade levels and other staff members. Low implementer School D had similar networks in operation to School C. There appeared to be a small group of consistent, informed personnel that focused their efforts on supporting students with more extreme behaviors. How much of that was transmitted to other staff is unclear. Other staff members made mention of "PBS becoming more accessible to them recently."

Rogers (2003) discussed the importance of understanding communication networks as they relate to the diffusion of innovations. Two principles that drive these networks are *homophily* and *heterophily*. Homophily indicated the degree to which individuals who communicated were similar. Heterophily was the degree to which individuals who communicated differed. Homophily and communication escalated in kind. The more communication that took place between two people the more likely they were to become homophilious. However, homophily was a barrier to diffusion. The more narrow the scope of the homophily the less likely members were to communicate about the innovation. These homophilous types of communication slowed diffusion. The results suggested this is what took place at low implementer School C. It was clear through the interview process that the primary and intermediate wings functioned

separately from one another. These respective grade levels indicated that they also communicated the most about PBS with their students and grade level partners.

Limitations

The purpose of the study was to examine the impact of the features of PBS on the implementation and sustainability of the innovation. The study limitations included issues related to the small size of the sample and population. However, Merriam (1998) suggested the use of working hypotheses. "Working hypotheses not only take account of local conditions, they offer the educator some guidance in making choices-the results of which can be monitored and evaluated in order to make better future decisions" (Merriam, p.209). While small sample size may not make results widely generalizeable, others may use the results of this study as guidelines for achieving successful implementation and sustainability in similar settings.

The limitations also existed in the selection of participants. Random sampling was not utilized. However, a detailed description of the purposeful selection of participants was explored in the Methods section of the study. Participants were carefully selected based upon their designated role at each school site and in some cases for the length of tenure at a school site.

The final phases of this study included analysis and discussion. During these processes errors may have occurred in the coding of interview data. To enhance the internal validity of the study several strategies were implemented. These strategies included triangulation through multiple data sources, offering respondents member checks, peer examination, and addressing researcher's biases.

Finally, two limitations emerged unique to this study. The classroom observations were polluted with too many external factors. While attempts were made to select consistent times of the day, or particular instructional periods, each teacher had a varying schedule. The scope of the classroom observations were further limited by the school district's committee process for the approval of outside research. The study proposal originally intended to investigate and report evidence of PBS through student and teacher observable behavior within classrooms. The school district restricted the collection of this type of information. A more systematic approach to the collection of classroom observation data would be necessary for future study.

The second limitation was related to the use of the SET instrument. Over time PBS began to lose some of the original markers of implementation as systems change occurred at the high implementer schools. For example, when using the SET measure, the researcher entered scores of zero related to management of the team because thexisted no formal team existed. However, during the interview process staff indicated that the entire faculty now functioned as the team. Therefore, the SET instrument did not reflect the sensitivity to possible systems change regarding PBS over time.

<div align="center">Implications</div>

Future research should address the limitations of this study. Replication of this study and further studies addressing the factors that affect the implementation and sustainability of PBS in schools are needed. However, the findings of this study suggested that in order to achieve successful implementation of PBS users should be mindful of the following:

1. High implementer schools retained fidelity with the features of PBS and
    subsequently implemented and sustained the program. Low implementer
    schools inconsistently applied the features and, therefore, maintained
    varying levels of implementation and sustainability. Schools considering
    PBS as a school-wide discipline program should implement all the
    features of PBS.

2. High implementer schools perceived the characteristics of PBS as
    possessing relative advantage, compatibility, trialability, observability and
    the ability to re-invent the innovation. Low implementers described
    conflict with these characteristics. Prior to implementation schools should
    perform a needs assessment to determine staff perceptions about the
    characteristics of PBS. This information would provide school
    administration insight into the relative "readiness" or "fit" of PBS with
    school staff.

3. School staff, site-based steering mechanisms, and external training
    agencies should encourage heterophilous types of communication. This
    type of communication allows for more rapid diffusion of the innovation.

4. The site-based team should be provided with separate and specific
    training related to steering the PBS development process. This would
    include developing a clear mission, identifying specific team activities,
    and communicating effectively with the entire school staff.

5. Themes emerged from this study that suggested the role of the
    administrator in the implementation and sustainability of PBS should

include: (a) modeling and preparing of events for teaching the behavioral

expectations, (b) presence and participation at PBS team meetings, (c)

active analysis and discussion with staff regarding office discipline

referral data, (d) and provide time for school staff to collaborate and

engage in decision-making regarding the PBS process.

6. During training or ongoing professional development sessions each of

these abovementioned issues should be addressed and informally

evaluated so necessary changes to the PBS development process could be

implemented and sustained.

Other points of interest for the researcher would include a similar study to investigate the

impact of existing organizational health on the implementation and sustainability of

innovations like PBS. Also, two more focused studies could be conducted related to the

impact of the leader and school teams on PBS.

<div align="center">Recommendations</div>

Recommendations for Administrators

Prior to selecting PBS as an innovation for their site administrators should

consider whether the school staff could devote the time necessary for implementing all of

the features of PBS to maximize the benefits illustrated by the high implementers.

Principals desiring to become high implementer schools also need to dedicate

professional development time for refreshers or study groups to revisit the issues

surrounding PBS. There is a need to prepare proactively for teacher turnover, and to

designate a committee or rely on the PBS team to provide background and illustrative

examples about the use of PBS. Participants must attend the team meetings regularly and

work with local districts to collect or consider outsourcing the systematic management of discipline data. Data could be shared frequently with staff as recognition for their PBS behavior.

Recommendations for Teachers

It is essential that the expectations be clearly defined, actively taught, communicated, and reinforced. This must be an on-going process that is revisited each week in classrooms. Communicating with colleagues across grade levels is essential to broaden the scope of teacher implementation. Participants need to take advantage of the flexibility PBS offers while maintaining fidelity with the implementation of the features of PBS.

Recommendations for Teams

Teams should be representative of the school-wide staff. They should meet regularly and determine a systematic manner for reporting progress related to PBS. Also, teams should be the conduit for staff concerns or observations. The team should possess the foresight to anticipate potential barriers to PBS implementation specific to their site.

However, it should be understood that in the high implementer schools the team did not exist in the traditional sense. It is only necessary that a mechanism exist to govern the activities necessary to implement and sustain PBS.

Recommendations for Professional Development

Teachers consistently mentioned through the interview process their frustration at how to support the 5-7 % of students with more severe behavioral issues. It would complement the PBS school-wide system to designate professional development sessions for learning strategies to support students with the need for intensive intervention.

Setting aside time for staff to meet in collaborative settings to explore PBS progress was emphasized by teachers necessary to the "learning and applying" process.

Recommendations for the Evaluation of PBS

As a greater number of schools continue to implement and sustain PBS, the current evaluation instruments may need to be re-tooled to capture and report accurately the status of PBS. As PBS sustains itself, the markers previously used to gauge implementation disappears as systems change occurs. For example, teams may fade as the entire staff becomes the decision-making body that stewards PBS.

Conclusions

On the basis of this study alone, it is difficult to be certain about the factors that affect the implementation and sustainability of PBS in elementary schools. However, these in-depth case studies have provided a great deal of insight into these processes and together with the existing research, three themes emerged from the research: (a) the extent to which the feature of PBS were implemented affected the implementation and sustainability of PBS, (b) the perceptions of participants regarding Rogers' characteristics of innovations affected the rate of adoption, implementation, and sustainability of PBS, (c) the types of communication networks established at school sites impacted the diffusion, implementation of PBS, and sustainability of PBS. These three themes provided insight into what factors led to the successful implementation and sustainability of PBS three years post training in elementary schools. The following discussion highlights those factors.

High implementer schools maintained all of the features of PBS. Low implementer schools were inconsistent in their implementation of the features of PBS.

Schools intending to successfully implement and sustain PBS would need to replicate the activities of the high implementer schools by maintaining each feature of PBS. Specifically related to those features schools could impact their successful implementation by defining and communicating the expectations, ensuring faculty commitment to systematic teaching of the expectations, sharing results of data based decision-making, and formalizing the activities of the site-based team.

The perceptions of participants related to the characteristics of PBS differed among implementation groups. The high implementer schools described positive associations with the characteristics of PBS, whereas the low implementer schools experienced frustrations with PBS. This factor potentially affected the rate of adoption and implementation of PBS. It would be prudent for a school contemplating implementation of PBS to conduct an assessment of staff's beliefs and orientation to the principles and features of PBS.

The communication networks at these four school sites impacted the overall diffusion of PBS. Further, these communication networks affected the overall implementation and sustainability of PBS. The heterophilous nature of communication at the high implementer sites allowed non-grade level colleagues and other resource personnel to access information and engage in decision-making regarding PBS. Without the support and initiative of administration and site-based steering mechanism to procure time for these types of meetings, this type of communication would have been limited. The low implementer schools no longer possessed site-based teams and there was no evidence that suggested systematic activities were established to avoid

homophilous communication. Therefore, low implementer schools' communication was insular and confined often to grade level partners.

In conclusion, based upon the scope of this study, the researcher would suggest that the three themes that emerged from the data suggest specific factors leading to the successful implementation of PBS three years post training in elementary schools. These factors include: (a) the implementation and sustainability of all the features of PBS, (b) participants' perceptions of the characteristics of PBS including perceived advantages, compatibility with beliefs, minimal level of complexity, observability, trailability, and the ability to be flexible, and (c) diligence and a school an environment conducive to heterophilous communication. These factors collectively had an effect on the overall implementation and sustainability of PBS in four public elementary schools in Southern Arizona.

APPENDICES

APPENDIX A: RESEARCHER INTERVIEW QUESTIONS

1. (relative advantage) Describe the advantages of PBS.

2. (compatibility) How does PBS fit with your current beliefs about education?

3. (complexity) How would you characterize the process of "learning and applying" PBS?

4. (Trialability) How did you begin using PBS? Give me some examples.

5. (Observability) What was the impact of PBS? Examples.

6. (Re-invention) Did you or others you know make changes to PBS?

7. (Communication Channels) With whom did you communicate the most about PBS?

APPENDIX B: SCHOOL-WIDE EVALUATION TOOL

School-wide Evaluation Tool
(SET-D)
Implementation Guide

School _____   **Date** _____

District _____   **State**_____

Step 1: Make Initial Contact

A. Identify school contact person & give overview of SET page with the list of products needed.
B. Ask when they may be able to have the products gathered. Approximate date: _____
C. Get names, phone #'s, email address & record below.

Name _____ Phone _____

Email _____

Products to Collect

1. _____ Discipline handbook [A1; E1; E3; F6]
2. _____ School improvement plan goals [G1]
3. _____ Annual Action Plan for meeting school-wide behavior support goals [G8]
4. _____ Social skills instructional materials/implementation timeline [A1; B1; C1; D1; E1]
5. _____ Behavioral incident summaries or reports (e.g., office referrals, suspensions, expulsions)
6. _____ Office discipline referral form(s) [F1]
7. _____ Crisis manual [E3]
8. _____ Other related information

Step 2: Confirm the Date to Conduct the SET

A. Confirm meeting date with the contact person for conducting an administrator interview, taking a tour of the school while conducting student & staff interviews, & for reviewing the products.
   Meeting date & time: _____

Step 3: Conduct the SET

A. Conduct administrator interview.
B. Tour school to conduct observations of posted school rules & randomly selected staff (minimum of 10) and student (minimum of 15) interviews.
C. Review products & score SET.

Step 4: Summarize and Report the Results

A. Summarize surveys & complete SET scoring.
B. Update school graph.
C. Meet with team to review results.
   Meeting date & time: _____

School-wide Evaluation Tool
(SET-D)
Scoring Guide

School _____   **Date** _____

District _____   **State** _____

Pre _____   **Post** _____   **SET data collector** _____

Feature	Evaluation Question	Data Source (circle sources used) P= product; I= interview; O= observation	Score: 0-2
A. Expectations Defined	1. Is there documentation that staff has agreed to 5 or fewer positively stated school rules/ behavioral expectations? (0=no; 1= too many/negatively focused; 2 = yes)	Discipline handbook, Instructional materials P Other _____	
	2. Are the agreed upon rules & expectations publicly posted in 8 of 10 locations? (See interview & observation form for selection of locations). (0= 0-4; 1= 5-7; 2= 8-10)	Wall posters O Other _____	
B. Behavioral Expectations Taught	1. Is there a documented system for teaching behavioral expectations to students on an annual basis? (0= no; 1 = states that teaching will occur; 2= yes)	Lesson plan books, Instructional materials P/I Other _____	
	2. Do 90% of the staff asked state that teaching of behavioral expectations to students has occurred this year? (0= 0-50%; 1= 51-89%; 2=90%-100%)	Interviews Other _____ I	
	3. Do 90% of team members asked state that the school-wide program has been taught/reviewed with staff on an annual basis? (0= 0-50%; 1= 51-89%; 2=90%-100%)	Interviews Other _____ I	
	4. Can at least 70% of 15 or more students state 67% of the school rules/behavioral expectations? (0= 0-50%; 1= 51-69%; 2= 70-100%)	Interviews Other _____ I	
	5. Can 90% or more of the staff asked list 67% of the school rules/behavioral expectations? (0= 0-50%; 1= 51-89%; 2=90%-100%)	Interviews Other _____ I	
C. System for Developing Social-Emotional Competen-cies	1. Is there a documented system in place for teaching social and emotional competencies on an annual basis (e.g., a specific curriculum in use or deliberate strategies used in the general curriculum)? (0= no; 1 = states that teaching will occur, but not documented; 2= documentation/specific program -yes)	Lesson plan books, Instructional materials P Interviews Other _____	
	2. Do 90% or more of staff asked indicate that their students have been taught specific social and emotional competencies (e.g., social problem solving, conflict resolution, assuming responsibility, developing empathy) to students over the past 2 months? (0= 0-50%; 1= 51-89%; 2=90%-100%)	Interviews Other _____ I	
D. On-going System for Rewarding Behavioral Expectations	1. Is there a documented system for rewarding student behavior? (0= no; 1= states to acknowledge, but not how; 2= yes)	Instructional materials, Lesson Plans, Interviews P Other _____	
	2. Do 50% or more students asked indicate they have received a reward (other than verbal praise) for expected behaviors over the past two months? (0= 0-25%; 1= 26-49%; 2= 50-100%)	Interviews Other _____ I	
	3. Do 90% of staff asked indicate they have delivered a reward (other than verbal praise) to students for expected behavior over the past two months? (0= 0-50%; 1= 51-89%; 2= 90-100%)	Interviews Other _____ I	

	4. Do 90% of staff asked indicate that they have contacted a parent about positive student behavior in the last two months? (0= 0-50%; 1= 51-89%; 2= 90-100%)	Interviews Other _____ I	
E. **System for Responding to Behavioral Violations**	1. There is a documented system for dealing with behavioral violations and it does not focus only on the use of punishment (e.g., other positive techniques are used instead of, or in combination with the use of punishment, as appropriate). (0= no/punitive; 1= practice OR policy; 2 = practice and policy)	Discipline handbook, Interviews Instructional materials P/I Other _____	
	2. Do 90% of staff asked agree with administration on what problems are office-managed and what problems are classroom–managed? (0= 0-50%; 1= 51-89%; 2= 90-100%)	Interviews Other _____ I	
	3. Is there a documented crisis plan for responding to extreme dangerous situations? (0= no; 1= states to document; but not how; 2 = yes)	Discipline handbook Crisis manual Other _____ P	
	4. Do 90% of staff asked know the procedure for handling extreme emergencies (stranger in building with a weapon)? (0= 0-50%; 1= 51-89%; 2= 90-100%)	Interviews Other _____ I	
F. **Monitoring Evaluating, & Decision-Making**	1. Does the discipline referral form list (a) student/grade, (b) date, (c) time, (d) referring staff, (e) problem behavior, (f) location, (g) persons involved, (h) probable motivation, & (i) administrative decision? (0=0-3 items; 1= 4-6 items; 2= 7-9 items)	Referral form (circle items present on P the referral form)	
	2. Can the administrator clearly define a system for collecting & summarizing discipline referrals (computer software, data entry time)? (0=no; 1= referrals are collected; 2= yes)	Interviews Other _____ I	
	3. Does the administrator report that the team provides discipline data summary reports to the staff at least three times/year? (0= no; 1= 1-2 times/yr.; 2= 3 or more times/yr)	Interviews Other _____ I	
	4. Does the administrator report that program evaluation includes teacher, parent, and student surveys of school climate? (0=no; 1= 1 or 2 sources; 2=all 3 sources)	Interview Other _____ I	
	5. Do 90% of team members asked report that discipline and survey data are used for making decisions in designing, implementing, and revising school-wide effective behavior support efforts? (0= 0-50%; 1= 51-89%; 2= 90-100%)	Interviews Other _____ I	
	6. Is there a documented system for involving families in the development and evaluation of the school discipline plan? (0=no; 1=parents are informed of the plan; 2= parents are included in development and/or evaluation of the plan)	Letters to parents Discipline handbook Other _____ P/I	
	1. Does the school improvement plan list improving behavior support systems as one of the top 3 school improvement plan goals? (0= no; 1= 4th or lower priority; 2 = 1st- 3rd priority)	School Improvement Plan, P Interviews Other _____ I	
	2. Can 90% of staff asked report that there is a school-wide team established to address behavior support systems in the school? (0= 0-50%; 1= 51-89%; 2= 90-100%)	Interviews Other _____ I	
	3. Does the administrator report that team membership includes representation of all staff? (0= no; 2= yes)	Interview Other _____ I	
	4. Can 90% of team members asked identify the team leader? (0= 0-50%; 1= 51-89%; 2= 90-100%)	Interviews Other _____ I	
G.	5. Is the administrator an active member of the school-wide behavior support team? (0= no; 1= yes, but not consistently; 2 = yes)	Interview Other _____ I	

Management	6. Does the administrator report that team meetings occur at least monthly? (0=no team meeting; 1=less often than monthly; 2= at least monthly)	Interview Other _____ I	
	7. Does the administrator report that the team reports progress to the staff at least four times per year? (0=no; 1= less than 4 times per year; 2= yes)	Interview Other _____ I	
	8. Does the team have an action plan with specific goals that is less than one year old? (0=no; 2=yes)	Annual Plan, calendar Other _____ P	
	9. A system is in place to coordinate the work of the school-wide team with other behavioral support teams in the school (0=no; 2=yes).	Interview Other _____ I	
H. District-Level Support	1. Does the school budget contain an allocated amount of money for building and maintaining school-wide behavioral support? (0= no; 2= yes)	Interview Other _____ I	
	2. Can the administrator identify an out-of-school liaison in the district or state? (0= no; 2=yes)	Interview Other _____ I	

Summary Scores:	A = /4	B = /10	C = /4	D = /8	E = /8
	F = /12	G = /18	H = /4	Mean = /8	

Administrator Interview Guide

Let's talk about your discipline system

1) Do you collect and summarize office discipline referral information?   Yes   No   If no, skip to #4.
2) What system do you use for collecting and summarizing office discipline referrals? (F2)
    a)   What data do you collect? _____
    b)   Who collects and enters the data? _____

3) What do you do with the office discipline referral information? (F2)
    a)   Who looks at the data? _____
    b)   How often do you share it with other staff? _____

4) What type of problems do you expect teachers to refer to the office rather than handling in the classroom/ specific setting? (E2)

5) When a student is sent to the office, what is the general discipline procedure? (E1)

6) What is the procedure for handling extreme emergencies in the building (i.e. stranger with a gun)? (E4)

7) a. In what ways are families involved in your discipline program (e.g., they are informed of it; they participate in
       its evaluation)?

    b. Is there a parent on your school-wide team?

Let's talk about your school rules or motto

8) Do you have school rules or a motto?   Yes   No   If no, skip to # 12. (A1)

9) How many are there? _____

10) What are the rules/motto? (B4, B5)

11) What are they called? (B4, B5)

12) Do you acknowledge students for doing well socially?   Yes   No   If no, skip to # 14.

13) What are the social acknowledgements/ activities/ routines called (student of month, positive referral, letter home, stickers, high 5's)?   (D2, D3)

14) Does your school curriculum include teaching students specific social-emotional competencies (e.g., social problem solving, conflict resolution, assuming responsibility, developing empathy)?   If so, what curriculum do you use (if any)? If a curriculum is not used, in what curriculum areas do you deliberately teach such competencies?

Let's talk about your school PBS Team

15) Do you have a team that addresses school-wide discipline?   Yes   No If no, skip to # 23

16) Has the team taught/reviewed the school-wide program with staff this year? (B3)   Yes   No
17) Is your school-wide team representative of your school staff? (G3) Yes   No
18) Are you on the team? (G5)   Yes   No
19) How often does the team meet? (G6) _____

20) Do you attend team meetings consistently? (G5) Yes   No
21) Who is your team leader/facilitator? (F4) _____

22) Does the team provide updates to faculty on activities & data summaries? (G3, G7) Yes   No
     If yes, how often? _____

23) How is the school-wide discipline plan evaluated?

24) Do you gather school climate data from teachers? Students? Parents?

25) a. Do you have a separate team that consults collaboratively with individual teachers to plan
        interventions at the classroom or individual student level?

    b. If yes, how do the two teams (school-wide and individual) coordinate their work?

26) Do you have an out-of-school liaison in the state or district to support you on positive behavior
systems
     development?   (H2)   Yes   No
     If yes, who? _____

27) What are your top 3 school improvement goals? (G1)

28) Does the school budget contain an allocated amount of money for building and maintaining School-
     wide behavioral support? (H1)   Yes   No

Additional Interviews

In addition to the administrator interview questions there are questions for Behavior Support Team
members, staff and students. Interviews can be completed during the school tour. Randomly select students and staff as you walk through the school. Use this page as a reference for all other interview questions. Use the interview and observation form to record student, staff, and team member responses.

Staff Interview Questions
Interview a minimum of 10 staff

1) What are the _____ (school rules, high 5's, 3 bee's)? (B5)
   (Define what the acronym means)

2) Have you taught the school rules/behavioral expectations this year? (B2)

3) Have you given out any _____ since _____? (D3)
   (rewards for appropriate behavior) (2 months ago)

4) Have you contacted any parents about a student's positive behavior since _____?
   (2 months ago)

5) Have your students been taught specific social emotional competencies (e.g., social problem solving, conflict resolution, assuming responsibility, developing empathy) over the past two months? (C2)

6) What types of student problems do you or would you refer to the office? (E2)

7) What is the procedure for dealing with a stranger with a gun? (E4)

8) Is there a school-wide team that addresses behavioral support in your building?

9) Are you on the team?

Team Member Interview Questions

1) Does your team use discipline data to make decisions? (F5)

2) Has your team taught/reviewed the school-wide program with staff this year? (B3)

3) Who is the team leader/facilitator? (G4)

Student interview Questions
Interview a minimum of 15 students

1) What are the _____ (school rules, high 5's, 3 bee's)? (B4)
   (Define what the acronym means.)

2) Have you received a _____ since _____? (D2)
   (reward for appropriate behavior) (2 months ago

APPENDIX C: EFFECTIVE BEHAVIOR SUPPORT SURVEY

Effective Behavior Support (EBS) Survey
Assessing and Planning Behavior Support in Schools

Name of school _____   Date _____

District _____   State _____

Person Completing the Survey:

☐ Administrator   ☐ Special Educator   ☐ Parent/Family member

☐ General Educator   ☐ Counselor   ☐ School Psychologist

☐ Educational/Teacher Assistant ☐ Community member ☐ Other _____

1. Complete the survey independently.

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

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

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

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

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

4. Return your completed survey to _____ by _____ .

1

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SCHOOL-WIDE SYSTEMS

Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	**School-wide** is defined as involving all students, all staff, & all settings.	High	Med	Low
			1. A small number (e.g. 3-5) of positively & clearly stated student expectations or rules are defined.			
			2. Expected student behaviors are taught directly.			
			3. Expected student behaviors are rewarded regularly.			
			4. Problem behaviors (failure to meet expected student behaviors) are defined clearly.			
			5. Consequences for problem behaviors are defined clearly.			
			6. Distinctions between office v. classroom managed problem behaviors are clear.			
			7. Options exist to allow classroom instruction to continue when problem behavior occurs.			
			8. Procedures are in place to address emergency/dangerous situations.			
			9. A team exists for behavior support planning & problem solving.			
			10. School administrator is an active participant on the behavior support team.			
			11. Data on problem behavior patterns are collected and summarized within an on-going system.			
			12. Patterns of student problem behavior are reported to teams and faculty for active decision-making on a regular basis (e.g. monthly).			
			13. School has formal strategies for informing families about expected student behaviors at school.			
			14. Booster training activities for students are developed, modified, & conducted based on school data.			
			15. School-wide behavior support team has a budget for (a) teaching students, (b) on-going rewards, and (c) annual staff planning.			
			16. All staff are involved directly and/or indirectly in school-wide interventions.			

2

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Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	**School-wide** is defined as involving all students, all staff, & all settings.	High	Med	Low
			17. The school team has access to on-going training and support from district personnel.			
			18. The school is required by the district to report on the social climate, discipline level or student behavior at least annually.			

Name of School _____ Date _____

NONCLASSROOM SETTING SYSTEMS

Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	**Non-classroom settings** are defined as particular times or places where supervision is emphasized (e.g., hallways, cafeteria, playground, bus).	High	Med	Low
			1. School-wide expected student behaviors apply to non-classroom settings.			
			2. School-wide expected student behaviors are taught in non-classroom settings.			
			3. Supervisors actively supervise (move, scan, & interact) students in non-classroom settings.			
			4. Rewards exist for meeting expected student behaviors in non-classroom settings.			
			5. Physical/architectural features are modified to limit (a) unsupervised settings, (b) unclear traffic patterns, and (c) inappropriate access to & exit from school grounds.			
			6. Scheduling of student movement ensures appropriate numbers of students in non-classroom spaces.			
			7. Staff receives regular opportunities for developing and improving active supervision skills.			
			8. Status of student behavior and management practices are evaluated quarterly from data.			
			9. All staff are involved directly or indirectly in management of non-classroom settings.			

Name of School _____   Date _____

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CLASSROOM SYSTEMS

Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	**Classroom settings** are defined as instructional settings in which teacher(s) supervise & teach groups of students.	High	Med	Low
			1. Expected student behavior & routines in classrooms are stated positively & defined clearly.			
			2. Problem behaviors are defined clearly.			
			3. Expected student behavior & routines in classrooms are taught directly.			
			4. Expected student behaviors are acknowledged regularly (positively reinforced) (>4 positives to 1 negative).			
			5. Problem behaviors receive consistent consequences.			
			6. Procedures for expected & problem behaviors are consistent with school-wide procedures.			
			7. Classroom-based options exist to allow classroom instruction to continue when problem behavior occurs.			
			8. Instruction & curriculum materials are matched to student ability (math, reading, language).			
			9. Students experience high rates of academic success ($\geq$ 75% correct).			
			10. Teachers have regular opportunities for access to assistance & recommendations (observation, instruction, & coaching).			
			11. Transitions between instructional & non-instructional activities are efficient & orderly.			

Name of School _____   Date _____

5

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INDIVIDUAL STUDENT SYSTEMS

Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	**Individual student systems** are defined as specific supports for students who engage in chronic problem behaviors (1%-7% of enrollment)	High	Med	Low
			1. Assessments are conducted regularly to identify students with chronic problem behaviors.			
			2. A simple process exists for teachers to request assistance.			
			3. A behavior support team responds promptly (within 2 working days) to students who present chronic problem behaviors.			
			4. Behavioral support team includes an individual skilled at conducting functional behavioral assessment.			
			5. Local resources are used to conduct functional assessment-based behavior support planning (~10 hrs/week/student).			
			6. Significant family &/or community members are involved when appropriate & possible.			
			7. School includes formal opportunities for families to receive training on behavioral support/positive parenting strategies.			
			8. Behavior is monitored & feedback provided regularly to the behavior support team & relevant staff.			

Name of School _____   Date _____

6

EBS Survey Summary Graph

School: _____   Date: _____
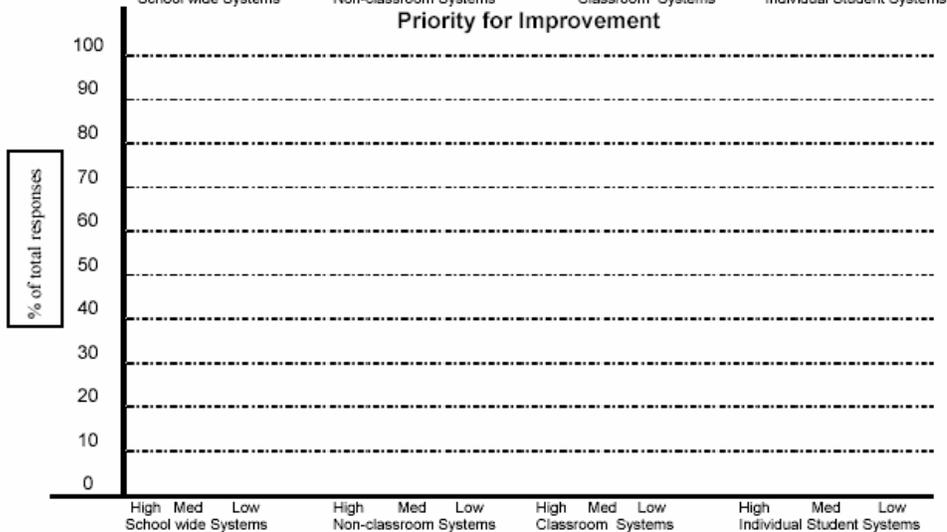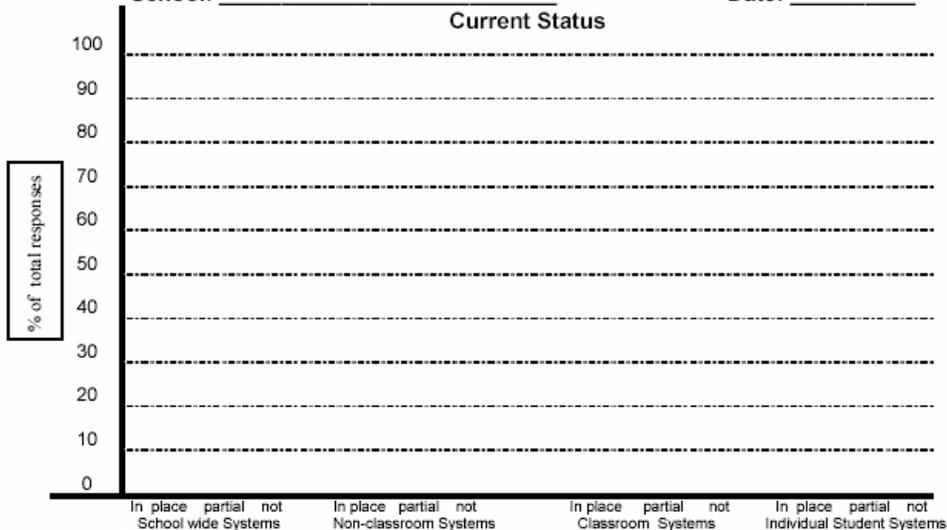
Current Status

100
90
80
70
60
50
40
30
20
10
0

% of total responses

| In place partial not | In place partial not | In place partial not | In place partial not |
| School wide Systems | Non-classroom Systems | Classroom Systems | Individual Student Systems |

Priority for Improvement

100
90
80
70
60
50
40
30
20
10
0

% of total responses

| High   Med   Low | High   Med   Low | High   Med   Low | High   Med   Low |
| School wide Systems | Non-classroom Systems | Classroom Systems | Individual Student Systems |

7

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EBS Survey Summary

School: _____   Date: _____

Use the EBS Survey Tally page and the EBS Survey Summary Graph to develop an accurate summary & determine initial focus area priorities

For each system area, follow the steps as outlined below	Overall Perception			
	School-wide	**Non-classroom**	**Classroom**	**Individual Student**
1. Use *EBS Survey Summary Graph* to rate overall perspective of EBS implementation & circle High, Med. or Low	High Med Low	High Med Low	High Med Low	High Med Low
2. Using *EBS Survey Tally Pages*, list three major strengths	a. b. c.	a. b. c.	a. b. c.	a. b. c.
3. Using the EBS Survey Tally pages, list three major areas in need of development. 4. For each system, circle one priority area for focusing development activities	a b. c.	a. b c	a. b. c.	Targeted group or Individual interventions a. b. c.
5. Circle or define activities for this/next year's focus to support area selected for development	a. Organize a team b. Define/teach school rules c. Define consequence systems for appropriate & inappropriate behavior d. Define a measurement system linked to school improvement goal e. Establish communication cycles with other school teams f. Develop implementation plan	a. Define/teach routines b. Supervisor booster training & feedback sessions c. Data management d. Maintain team & communication cycle with other school teams e. Develop implementation plan	a. Define/teach routines/ link with school wide rules b. Classroom staff boosters & feedback sessions for creating effective strategies/materials c. Data management d. Maintain team & communication cycle with other school teams e. Develop implementation plan	a. Process for referral & support plan design, implementation & monitoring b. Plan to develop & use FBA to support skills c. Data management d. Maintain team & communication cycle with other school teams e. Develop implementation plan
6. Specify system(s) to: sustain (S) & develop (D).				
7. Use the EBS Annual Action Planning form for determining management, design & implementation activities in the selected focus areas.				

APPENDIX D: PRINCIPAL CONTACT LETTER

(Principal's Name Here),

Toni Sparks-Hopkins here checking in on you to see what you consider to be the status of Positive Behavioral Supports (PBS) at your school site. Hopefully, you will remember me from all of our interactions through the LINKS grant and our work together on Positive Behavioral Supports, and Functional Behavioral Assessment trainings.

My purpose in checking-in with you is to ask you two simple questions:
1. Are you still implementing PBS at your site?
2. Could you direct me to the individual you would consider to be the site-based "team leader" or "facilitator" that assisted or continues to support the process??

 I am in the process of completing my doctorate and will be formulating a study to investigate the development process related to PBS. If you can help to answer these two questions you will assist me in my effort to narrow the scope of the study.

I realize how valuable your time is so please understand how much I appreciate your taking time to forward this information.

Thank you,

Toni Sparks-Hopkins

APPENDIX E: TEAM LEADER INITIAL CONTACT

Team Leader ,

Your principal was gracious enough to forward your name regarding some questions I have about Positive Behavior Supports (PBS) at your school site. My name is Toni Sparks-Hopkins and I am a doctoral student writing my dissertation on PBS. I also have worked with the LINKS grant (since 2003) and was part of the development process at many of your sites. I was involved in large trainings related to PBS and Functional Behavioral Assessment.

The reason I am contacting you specifically has to do with determining what schools are still doing so that I might have more information for the purposes of selecting sites for potential study.

I know that there is little time in a school day to accomplish all that you have to do so please understand how much I appreciate your taking the time to answer these questions if possible. You will find that most of the questions are related to your PBS team and data collection.

1. Your principal has identified you as the PBS team leader or facilitator. Have you served in that role since 2003?
2. If not, for how long have you served as the team leader?
3. Do you have a team that you meet with regularly to discuss PBS? If so, how many members? Are these members from the '03 team or are they new to the role.
4. Do you collect discipline data? Office discipline referrals? Do you use an external system like SWIS to collect your data?
5. Do you have (1) discipline data prior to your implementation of PBS, (2) data from '03 (post PBS), (3) and data for every subsequent year of implementation? (I don't need numbers just a sense of what type of information you collected).

**If you are certain that any of this information hasn't been collected just let me know.

If you have any questions please feel free to call me at 360-7662 (c).

Thanks again for your time.

Toni Sparks-Hopkins

APPENDIX F: TABLES

Table 9

School A Interviewee Descriptions

Role	Tenure at Site	Completed SET	Responded to Roger's Interview	Completed EBS	Classroom Observations
Principal	Prior to PBS	X	X	X	
Teacher (3)	Prior to PBS	X	X	X	
Teacher (2)	Prior to PBS	X	X	X	X
Counselor	Post Year 2 of Implementation	X	X		
Teacher (K)	Post Year 1 of Implementation	X	X		
Teacher (4)	Post Year 1 of Implementation	X	X		X
Teacher (K)	Post Year 1 of Implementation	X	X		
Teacher (1)	Prior to PBS	X	X		
Teacher (K)	Prior to PBS	X	X		
Teacher Pre-K Ex. Ed.	Prior to PBS	X	X	X	
Teacher (2)	Prior to PBS			X	X

Table 10

School B Interviewee Descriptions

Role	Tenure at Site	Completed SET	Responded to Roger's Interview	Completed EBS	Classroom Observations
Principal	Prior to PBS	X	X	X	
Teacher (3)	Prior to PBS	X	X		
Teacher (2)	Prior to PBS	X	X		X
Counselor	Prior to PBS	X	X	X	
Teacher (K)	Post Year 1 of Implementation	X	X		
Teacher (4)	Post Year 1 of Implementation	X	X		X
Reading Specialist	Prior to PBS	X	X	X	
Teacher (1)	Prior to PBS	X	X		
Office Manager	Prior to PBS	X	X	X	
Custodian	22 years on site	X	X		
Teacher (4)	Prior to PBS	X	X	X	X

Table 11

School C Interviewee Descriptions

Role	Tenure at Site	Completed SET	Responded to Roger's Interview	Completed EBS	Classroom Observations
Principal	Prior to PBS	X	X	X	
Teacher (5)	Prior to PBS	X	X	X	X
Teacher (4)	Prior to PBS	X	X	X	
Counselor	Prior to PBS	X	X	X	
Teacher (K)	Prior to PBS	X	X	X	
Teacher (3)	Post Year 1 of Implementation	X	X		
Teacher (1)	Prior to PBS	X	X		
Office Manager	Prior to PBS	X	X		
Teacher (2)	Post Year 1 of Implementation	X	X		
Social Worker	Prior to PBS	X	X		

Table 12

School D Interviewee Descriptions

Role	Tenure at Site	Completed SET	Responded to Roger's Interview	Completed EBS	Classroom Observations
Principal	Prior to PBS	X	X	X	
Teacher (1)	Prior to PBS	X	X		X
Teacher Sp Ed SC	Prior to PBS	X	X	X	
Counselor	Post Year 1 PBS	X	X		
Teacher (4)	New Teacher to building	X	X		
Teacher (2)	Post Year 1 of Implementation	X	X		
Teacher (K)	Prior to PBS	X	X		
Office Manager	Prior to PBS	X	X	X	
Resource Sp. Ed.	Prior to PBS	X	X	X	X
Teacher (5)	Prior to PBS	X	X		X

Table 13

School-Wide Evaluation Tool Summary Scores

SET Feature	High Implementer		Low Implementer	
	School 1	School 2	School 3	School 4
Expectations	4/4	4/4	4/4	2/4
Expectations Taught	8/8	8/8	3/8	4/8
Reward System	4/4	4/4	2/4	3/4
Behavioral Violations	6/8	7/8	6/8	6/8
Monitoring	5/8	6/8	2/8	4/8
Management	3/16	13/16	0/16	1/16
District Support	4/4	2/4	0/2	0/2

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