

THE EFFECTS OF POSITIVE BEHAVIOR SUPPORT WITHIN  
A DISTRICT MODEL OF IMPLEMENTATION

by

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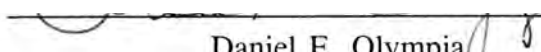
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## ABSTRACT

Public schools in the United States face challenges as they attempt to increase the academic achievement and social competencies of today's students. Many schools are turning to strategies known as positive behavior interventions and supports in a national effort to focus on prevention rather than on reactive disciplinary programs.

This study examined the effects of positive behavior support within a district model of implementation. Through a state-supported program called the Utah Behavior Initiative, five elementary schools worked through the phases of infrastructure, implementation, and continuous improvement. Data were gathered for the baseline year and treatment year, and the effects were examined. The schools were found to be high implementers of positive behavior interventions and supports, and they also had a high level of consumer satisfaction based on student and teacher reports. The rates of positive reinforcement, reduction in office discipline referrals, and resources saved were examined on a school-by-school basis because an overall effect was not found. Implications for practice and future research were also discussed.

## TABLE OF CONTENTS

	Page
ABSTRACT . . . . .	iv
LIST OF TABLES . . . . .	viii
LIST OF FIGURES . . . . .	x
ACKNOWLEDGMENTS . . . . .	xiii
CHAPTER	
1. INTRODUCTION . . . . .	1
Discipline Issues in Schools . . . . .	2
Ineffective Practices . . . . .	4
School Environment . . . . .	5
School Violence . . . . .	7
Risk Factors/Antisocial Behaviors . . . . .	10
Protective Factors/Effective Schools and Classrooms . . . . .	11
Prevention History . . . . .	16
Definition of Positive Behavior Interventions and Supports . . . . .	18
Outcome Measures: Social Competence and Academic Achievement . . . . .	19
Practices: Supporting Student Behavior . . . . .	21
Data: Supporting Decision Making . . . . .	25
System Level: Supporting Staff Behavior . . . . .	34
General Implementation of Positive Behavior Interventions and Supports . . . . .	35
Local Implementation of Positive Behavior Interventions and Supports: Utah Behavior Initiative . . . . .	40
State Level . . . . .	40
District Level . . . . .	40
School Level . . . . .	41
Purpose of the Investigation . . . . .	46
Research Questions . . . . .	47

	Page
2. METHOD . . . . .	49
Introduction . . . . .	49
Participants . . . . .	50
Criteria for Inclusion . . . . .	50
School A . . . . .	51
School B . . . . .	51
School C . . . . .	53
School D . . . . .	54
School E . . . . .	55
Dependent Measures . . . . .	56
Office Discipline Referrals . . . . .	57
Schoolwide Evaluation Tool . . . . .	59
Principal’s 200 Club Implementation Checklist . . . . .	60
Positive Reinforcement . . . . .	61
Consumer Satisfaction/Social Validity . . . . .	61
Cost Analysis and Efficiency . . . . .	62
Research Design . . . . .	63
Procedure . . . . .	65
Phase 1: Infrastructure (Training) . . . . .	65
Phase 2: Implementation (Doing) . . . . .	67
Phase 3: Continuous Improvement (Collecting and Monitoring Data) . . . . .	68
Data Collection and Analysis . . . . .	68
Reduction in Problem Behaviors . . . . .	69
Level of Implementation . . . . .	70
Level of Consumer Satisfaction . . . . .	71
Continuum of Risk . . . . .	72
Increased Positive Environment . . . . .	73
Cost Effectiveness . . . . .	73
3. RESULTS . . . . .	75
Research Question 1 . . . . .	75
Research Question 2 . . . . .	77
Research Question 3 . . . . .	84
Research Question 4 . . . . .	87
Research Question 5 . . . . .	92
Research Question 6 . . . . .	92
Research Question 7 . . . . .	95

	Page
4. DISCUSSION . . . . .	101
Limitations of the Present Study . . . . .	109
Implications for Future Research . . . . .	110
Conclusions . . . . .	111
APPENDIX	
A. PROJECT FORMS . . . . .	113
B. EVALUATION TOOLS AND EXAMPLES . . . . .	123
C. ADDITIONAL FIGURES . . . . .	137
REFERENCES . . . . .	151

## LIST OF TABLES

Table	Page
1. Dependent Measures . . . . .	33
2. State, District, and School Agreement . . . . .	52
3. School A: Demographics . . . . .	53
4. School B: Demographics . . . . .	54
5. School C: Demographics . . . . .	55
6. School D: Demographics . . . . .	56
7. School E: Demographics . . . . .	57
8. Range, Mean, Standard Deviation, and Effect Size for Office Discipline Referrals . . . . .	76
9. Schoolwide Evaluation Tool Results ( $N = 5$ ) . . . . .	78
10. Schoolwide Evaluation Tool Questions With Lowest Averages . . . . .	81
11. Principal's 200 Club Fidelity Checklist Results ( $n = 4$ ) . . . . .	82
12. Principal's 200 Club Implementation Checklist Questions With Lowest Averages . . . . .	85
13. Rates of Responses to Social Validity Measure ( $N = 63$ ) . . . . .	86
14. Percentage of Students in the Risk Categories . . . . .	88
15. Student Survey: Grades 1, 2, and 3 ( $n = 696$ ) . . . . .	94
16. Student Survey: Grades 4, 5, and 6 ( $n = 641$ ) . . . . .	95
17. Rates of Responses to Social Validity Measure: Teacher's Perception . .	97

Table	Page
18. Rates of Responses to Social Validity Measure: Administrator's Perception . . . . .	98
19. Office Discipline Referrals, Difference, Days, and Money Saved . . .	100

## LIST OF FIGURES

Figure	Page
1. Positive social competence and academic achievement . . . . .	20
2. Continuum of schoolwide instructional and positive behavior supports . .	37
3. Utah Behavior Initiative coaching network . . . . .	42
4. District: Mean office discipline referrals per 100 students . . . . .	77
5. Total averages for Schoolwide Evaluation Tool . . . . .	79
6. District average for Principal's 200 Club ( $n = 4$ ) . . . . .	83
7. Total ( $N = 5$ ): Risk level of students receiving office discipline referrals . . . . .	89
8. School A: Risk level of students receiving office discipline referrals . .	90
9. School B: Risk level of students receiving office discipline referrals . .	90
10. School C: Risk level of students receiving office discipline referrals . .	91
11. School D: Risk level of students receiving office discipline referrals . .	91
12. XY plot of schoolwide positive reinforcement and office discipline referral rate for district during baseline year by month . . . . .	93
13. XY plot of schoolwide positive reinforcement and office discipline referral rate for district during treatment year by month . . . . .	93
14. School A: Mean office discipline referrals per 100 students . . . . .	138
15. School B: Mean office discipline referrals per 100 students . . . . .	138
16. School C: Mean office discipline referrals per 100 students . . . . .	139
17. School D: Mean office discipline referrals per 100 students . . . . .	139

Figure	Page
18. School E: Mean office discipline referrals per 100 students . . . . .	140
19. School A: Schoolwide Evaluation Tool . . . . .	140
20. School B: Schoolwide Evaluation Tool . . . . .	141
21. School C: Schoolwide Evaluation Tool . . . . .	141
22. School D: Schoolwide Evaluation Tool . . . . .	142
23. School E: Schoolwide Evaluation Tool . . . . .	142
24. School A: Principal's 200 Club . . . . .	143
25. School B: Principal's 200 Club . . . . .	143
26. School C: Principal's 200 Club . . . . .	144
27. School E: Principal's 200 Club . . . . .	144
28. School A: XY plot of schoolwide positive reinforcement and office discipline referral rate during baseline year . . . . .	145
29. School A: XY plot of schoolwide positive reinforcement and office discipline referral rate during treatment year . . . . .	146
30. School B: XY plot of schoolwide positive reinforcement and office discipline referral rate during baseline year . . . . .	146
31. School B: XY plot of schoolwide positive reinforcement and office discipline referral rate during treatment year . . . . .	147
32. School C: XY plot of schoolwide positive reinforcement and office discipline referral rate during baseline year . . . . .	147
33. School C: XY plot of schoolwide positive reinforcement and office discipline referral rate during treatment year . . . . .	148
34. School D: XY plot of schoolwide positive reinforcement and office discipline referral rate during baseline year . . . . .	148



Figure	Page
35. School C: XY plot of schoolwide positive reinforcement and office discipline referral rate during treatment year . . . . .	149
36. School E: XY plot of schoolwide positive reinforcement and office discipline referral rate during baseline year . . . . .	149
37. School E: XY plot of schoolwide positive reinforcement and office discipline referral rate during treatment year . . . . .	150

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## CHAPTER 1

### INTRODUCTION

In recent years, the responsibility placed on public schools in the United States has appeared to increase and evolve. Public schools have a legal duty to maintain an orderly and effective learning environment through reasonable and prudent control of students (Dragow & Yell, 2002; Yell, 1998). The United States has seen an increase in school violence as well as an increase in high-stakes testing with federal legislation such as the *No Child Left Behind Act of 2001* (2001). The attention given to school discipline problems consumes a significant amount of time from school personnel (Putnam, Luiselli, Handler, & Jefferson, 2003). Educational research is indicating that interventions most commonly used for discipline problems such as suspension are ineffective and correlated with school dropout (Ekstrom, Goertz, Pollack, & Rock, 1986; Morrison & Skiba, 2001). According to the U.S. Department of Education, National Center for Education Statistics (2009), the total percentage of high school dropouts among persons 16 to 24 years old was 8.7% in 2007. Broken down by ethnicity, the percentage of high school students is as follows: 5.3% White, 8.4% Black, and 21.4% Hispanic. In addition to a correlation effect with dropout rate, suspension has been shown to have little positive effect on students (Cameron, 2006; Christie, Nelson, & Jolivet, 2004). Educational research from the 1970s showed schools with more formal punishment

systems had higher rates of misbehavior (Cameron; Heal, 1978; National Institute of Education, 1978). More recent studies have also shown that teachers use more punitive than positive approaches with students (Brophy, 1996; Brophy & McCaslin, 1992). In the last few years, there has been a national effort to focus on prevention through schoolwide discipline programs rather than on reactive disciplinary programs (Drasgow & Yell; Horner, Sugai, & Horner, 2000; Walker & Epstein, 2001).

### Discipline Issues in Schools

In a national sample of U.S. schools that participated in the National Study of Delinquency Prevention in the Schools, Gottfredson and Gottfredson (2001) described a variety of school-based prevention activities currently used. Principals from 1,287 schools were sent a questionnaire to identify activities their schools had in place to “promote schools safety, prevent or manage problem behavior, and enhance the orderly operation of the school” (Gottfredson & Gottfredson, p. 320). Based on their survey, they found that schools employ a variety of responses for undesirable student conduct. The most commonly reported responses were mild forms of social control such as notifying parents, talking to the student, conferencing with parents, reprimanding orally, briefly excluding from class, and withdrawing a privilege short term. These responses were nearly universal for the participants. More punitive responses for the elementary setting included suspension (86%); restitution (81%); sending student to school counselor (79%); written reprimand (78%); brief exclusion from school not officially designated

suspension (77%); probation (69%); work duties, chores, or tasks (69%); writing assignments as punishment (67%); calling or notifying police (68%); and after-school detention (63%). More severe responses were used more often in secondary settings than in elementary settings. These settings included expulsion, Saturday detention, and notifying the police. When asked about rates of suspension and expulsion, principals noted that in 91% of the cases with regard to possession of a gun, drugs, alcohol, or a knife, students were suspended or expelled automatically or usually after a hearing. Suspension or expulsion for physical fighting, possession of tobacco, and profane or abusive language was common but not rated by the principals as automatic (Gottfredson & Gottfredson).

School administrators need to be prepared to react to behaviors such as aggression, violence, noncompliance, and severe disruptions. Traditionally, schools have reacted to severe behavioral situations in a more punitive manner and have moved to remove students from schools as a consequence for serious problem behaviors (Dragow & Yell, 2002). Researchers have stated that the more traditional disciplinary approaches such as detention and suspension are often identified as the most commonly used disciplinary reactions to student infractions (Morrison & Skiba, 2001; Skiba, Peterson, & Williams, 1997). A study by Brophy and McCaslin (1992) on general approaches to discipline showed that teachers tended to rely on neutral or supportive strategies when they were disciplining children with internalizing behaviors. However, when teachers were disciplining children with externalizing disorders, they chose more punitive and controlling

strategies. Their research also supported existing research that teachers preferred strategies that are brief and simple to implement (Bear, 1998; Brophy & McCaslin).

### Ineffective Practices

In a meta-analysis, Lipsey (1991) found in a review of 500 articles that the least effective responses to violence were psychotherapy, counseling, and punishment (Lewis, Sugai, & Colvin, 1998). Previous research has indicated that reactive disciplinary actions such as “bottom-line” consequences or “zero-tolerance” policies, hiring security personnel, in-and-out-of-school suspension, and expulsion have not been adequately studied or validated.

Little research has been conducted to document the effects on these procedures as an effective measure of change (Morrison & Skiba, 2001). Although these procedures may result in short-term reductions in serious problem behaviors, they have been ineffective in producing long-term effects and creating more sustained positive school environments (McCord, 1995; Patterson, Reid, & Dishion, 1992; Sugai & Horner, 2002). These types of procedures are not teaching replacement behaviors for students who lack the necessary skills for success. Previous studies of school suspension found that 40% of school suspensions are due to repeat offenders, indicating that this is not an effective intervention (Bowditch, 1993; Costenbader & Markson, 1994; Morrison & Skiba). Suspension has not been shown to be an effective behavior intervention or to increase the student’s school success (Mendez, Knoff, & Ferron, 2002). School suspension

cannot only function as a reinforcer for some students but it also appears to be moderately correlated with school dropout (Ekstom et al., 1986; Morrison & Skiba). Out-of-school suspension is also applied in school settings inequitably. Minority students, males, students with disabilities, and students from lower socioeconomic home situations are all disproportionately suspended from school (Mendez et al.). In their study, Mendez et al. noted the lack of out-of-school suspension research in the elementary setting. In a study of a large school district in Florida, they found that demographic variables, particularly socioeconomic status, race, and mobility rate, tend to show the strongest relationships with suspension rates at individual schools. These results are correlational and not causal. Other variables can help to account for the variance in predicting suspension rates such as prevention measures, schoolwide discipline plans, and parent involvement (Mendez et al.).

### School Environment

How do teachers and students feel about their school environments? In 1984, the MetLife Survey of the American Teacher began as a survey of teachers' opinions on teaching and learning. It has become an annual series covering a variety of topics. The MetLife Survey of the American Teacher (2001) report, "Key Elements of Quality Schools," surveyed students (Grades 7 to 12) and educators (kindergarten to 12). The 2001 report stated that according to principals ( $N = 1,004$ ), their most important roles are creating supportive environments (81%) and maintaining discipline and safety (79%). However, of the students



surveyed ( $N = 2,049$ ), 7% said their school was not safe and 45% said it was somewhat safe. Students in urban schools were less likely than suburban or rural schools to report their school as safe, and minority students were less likely than nonminority students to report they attend a safe school. When teachers were asked to grade the teachers in their school on maintaining discipline in the classroom, 33% gave their colleagues an "A." When principals were asked the same question, 48% gave the teachers in their school an "A." Teachers with more than 25 years of experience were more likely than new teachers (5 years or less) to report they felt adequately prepared to manage a classroom (70% compared with 52%). Students were also asked to grade their teachers on their ability to maintain discipline in the classroom; 27% of the students in Grades 7 and 8 gave their teachers an "A" compared with 23% of the students in Grades 9 and 10 and 20% of the students in Grades 11 and 12. Most teachers (79%) strongly agreed that they are passionate about teaching. Elementary school teachers (70%) were more likely than secondary school teachers (61%) to describe teachers in their school as *very* committed to teaching. Similar results were found with elementary school principals (84%) reporting teachers' commitment to teaching compared with secondary school principals (70%). Secondary school teachers were less likely than elementary school teachers to *strongly agree* that they feel successful at their job (50% compared with 56%).

The MetLife Survey of the American Teacher (2002), "Student Life—School, Home, and Community," sampled 7th- to 12th-grade teachers. The



students were surveyed with regard to their perceptions of students' daily life at school, at home, and in the community. According to this research, 22% of the students' surveys ( $N = 2,308$ ) worry *a great deal* about being safe at school and 25% worry *somewhat*. One in 10 students reported having skipped school because he or she was being bullied and 1 in 12 students reported having skipped school because he or she did not feel safe.

### School Violence

The efforts to address issues of problem behavior are more imminent due to national attention on school violence, bullies, and victimization (Sugai & Horner, 2002). The nation has also seen an increase in severity of violence in schoolyard murders such as in Mississippi, Kentucky, California, Pennsylvania, Oregon, and Colorado (Dragow & Yell, 2002). The 2006-2007 school year was plagued with school violence throughout the country. Vermont, Wisconsin, Colorado, Pennsylvania, and Washington all experienced school shootings, and in April 2007, the most deadly school shooting in U.S. history occurred at Virginia Polytechnic Institute and State University with the death toll at 33.

As a result of the Columbine High School attack in June 1999, two government agencies, the U.S. Secret Service and the U.S. Department of Education, began a collaborative investigation resulting in the Safe School Initiative. This investigation examined 37 incidents of school shootings and school attacks in the United States between 1974 and 2000. An emphasis was placed on preattack behaviors and communications to help prevent future attacks (Vossekuil,

Fein, Reddy, Borum, & Modzeleski, 2002).

The Safe School Initiative final report (Vossekuil et al., 2002) implicated findings for the prevention of targeted school violence. Some of the prevention measures included in this report were the following: (a) Recognize that students can be an important part of the prevention efforts; (b) create a safe and supportive environment for students to report threats; (c) schools can assure students that they have a “fair, thoughtful, and effective system to respond to whatever information students do bring forward” (p. 33); and (d) schools should not try to determine the “type” of student who may engage in school violence and should not use profiles to identify potential threats. Rather, the focus should be on behaviors and communications. School personnel need to recognize the range of behaviors in a student’s life that may be noticeable and prompt additional probings and make appropriate referrals. It is critical that educators play a role in ensuring that not only are students not bullied but that educators are ensuring that schools do not permit bullying and empower other students to let adults know if students are becoming victims to bullying. Schools should develop preventive measures in addition to emergency plans, including procedures for responding and managing threats (Vossekuil et al.).

Morrison and Skiba (2001) noted the problem with predicting extreme acts of violence from patterns of breaking rules at school. The school discipline process is just a piece of the developmental background of a student that may lead to violence on school campuses (Morrison & Skiba). The relatively high base rates of

behavior problems in young children make it difficult to predict future antisocial behavior (Gresham, Lane, & Lambrom, 2000).

The rate of occurrence of this severe type of attack is low, with other types of problems being far more common. However, the lasting impact these attacks have on the school, communities, and nation results in more research in prevention. In the 2003 indicators of school crime and safety report, the Bureau of Justice Statistics and the National Center for Educational Statistics suggested that some areas of victimization decreased between 1995 and 2001. However, one problem behavior at school was shown to have increased. The number of students who reported that they had been bullied at school in the last 6 months increased from 5% in 1999 to 8% in 2001 (DeVoe et al., 2003).

In the rise and recognition of bullying, many states are rethinking how school policies may be modified or expanded to address bullying (Limber & Small, 2003). In the legislation, some states require districts to establish a definition of bullying, whereas other states define bullying in the state statutes. Some states do not provide definitions or provide for local definitions in the legislation.

Comprehensive state antibullying policies should include the following components:

- (a) define bullying (statewide or local);
- (b) prohibit bullying by students;
- (c) inform students and others of antibullying policy;
- (d) enable students and parents to report bullying incidents;
- (e) require teachers and school staff to report bullying incidents;
- (f) provide immunity to those reporting bullying incidents and protection from reprisal, retaliation, or false accusation against victims, witnesses,

or others with information with regard to a bullying incident; (g) require administrators to investigate reported incidents; and (h) encourage or require bullying prevention education in schools (Dounay, 2005).

### Risk Factors/Antisocial Behaviors

Research has shown that parents and communities contribute to behavior problems by not providing appropriate prerequisite skills needed or by modeling appropriate social interactions (Lewis et al., 1998). In the body of literature on juvenile corrections, suggestions have been made that the more risk factors a child is exposed to over time, the more likely the child will have negative outcomes such as school failure and delinquency (Walker et al., 1996). In turn, children bring severe risk profiles with them to the schooling process. Therefore, the primary task of school personnel is to help children reach resilient outcomes because they will have already been exposed to multiple risk factors before they enter the school setting (Walker et al.). According to Farrington (2005), risk factors for antisocial behavior include impulsiveness, low intelligence and low school achievement, poor parental supervision, child physical abuse, punitive or erratic parental discipline, cold parental attitude, parental conflict, disrupted families, antisocial parents, large family size, low family income, antisocial peers, high delinquency rate schools, and high crime neighborhoods (Farrington).

Students are coming to school less prepared and less equipped to handle social situations and interactions with peers and adults. Subsequently, public schools are asked to respond by filling in the deficit gaps:

Students with a high number of risk factors for delinquency may fit better in a school where the principal or school leader in charge of discipline takes a broad view of the student's behavior and garners support to keep that student in school and behaving in a productive way. (Morrison & Skiba, 2001, p. 180)

The national reports on school violence have noted that while it is important to be aware of risk factors, severe violent incidents are difficult to predict due to the variability of the attackers.

Research on antisocial children and youth has emphasized the importance of increasing protective factors in students. Effective early warning systems and prevention measures are needed in the public schools to ensure that students are exposed to effective learning environments.

#### Protective Factors/Effective Schools and Classrooms

Early research has shown that the powerful predictor of resilience is not characteristic of the child but rather describes families and communities in which the child was raised. This important finding suggests that resilience can be conceptualized as a property of caretaking settings (Doll & Lyon, 1998; Doll, Zucker, & Brehm, 2004). Schools and classrooms can be categorized as these caretaking settings, therefore serving as protective factors for their students.

Previous research on effective schools listed necessary qualities as (a) clear goals and high expectations for all students; (b) schoolwide sense of order and discipline; (c) teachers reward, praise, and recognize student performance; (d) school has a monitoring system that reports student progress; (e) the amount of time students spend engaged in academic tasks is high; (f) teachers use a variety of discipline

strategies for managing disruptive behavior; and (g) teachers handle disruptive behavior in a low-key manner (MacKay, 1982).

Based on the research by Ron Edmunds, Larry Lezotte, and John Goodlad, Partin (1995) identified the following characteristics as exemplifying the most effective schools:

1. The professional staff is committed to the belief that all students can learn.
2. Teachers hold high expectations for their students.
3. Teachers believe their efforts do make a difference in the lives of their students.
4. Students believe their success in school is related to how hard they work.
5. The principal functions as an instructional leader. The principal is able to set high goals for his or her buildings and to inspire the staff to move toward those goals.
6. A safe and orderly school environment is provided.
7. Continued professional development is encouraged and facilitated.
8. Firm, consistent, and fair enforcement of appropriate student behavior is emphasized. Disruptive and dangerous behaviors are not tolerated. Rules and expectations are clearly communicated to all.
9. A climate of cooperation exists among the staff. The faculty works as a team. Collaboration becomes part of the school culture.



Mutually supportive relationships exist between the principal and staff.

10. Students exhibit a high level of school spirit. They identify with their school and feel good about attending their school.
11. Academic learning time is safeguarded. Frivolous interruptions of class activities are minimized.
12. Parents feel welcome in the school. The community is supportive of their school.
13. Student progress is systematically monitored.
14. Staff input into instructional decisions is invited.
15. Student's level of on-task behavior is relatively high.
16. An emphasis is placed upon developing basic academic skills in students.
17. Continuity of instruction from one grade level to the next is emphasized.

Doll et al. (2004) described a resilient classroom as a place where a student can be successful emotionally, academically, and socially. They identified six characteristics that describe the classrooms where children can be more successful academically and interpersonally. They are classrooms where (a) students are able to see themselves as competent and effective learners (academic efficacy); (b) students set and work toward self-selected learning goals (academic self-determination); (c) students behave appropriately and adaptively with a minimum

of adult supervision (behavioral self-control); (d) caring and authentic relationships are seen between teachers and students (teacher-student relationship); (e) students have ongoing and rewarding friendships with their classmates (peer relationships); and (f) families know and strengthen the learning that occurs in the classroom (home-school relationships).

Research suggests that without psychosocial behavioral skills, students are less academically successful and teachers are prevented from teaching (Dwyer, 2002). There is a strong, well-documented relationship between academics and behavior (Epstein, Kinder, & Bursuck, 1989; Kauffman, 1997; Scott, Nelson, & Liaupsin, 2001). Maguin and Loeber (1996) identified three especially strong relationships in their meta-analysis of academic and behavior research. First, poor academic performance is related to the onset, frequency, persistence, and seriousness of delinquent offending. Second, poor academic performance and frequency are strongly associated with cognitive deficits and attention problems. Last, a reduction in the prevalence of delinquency is associated with interventions that improve academic performance. "Current failures are great predictors of future failures and the longer this pattern persists, the less likely it is to be changed" (Scott et al., p. 314). Juel (1988) found that children who do not read by the fourth grade have a .88 probability of never learning to read, regardless of the intervention. Much like reading, Walker et al. (1996) found: "If an antisocial behavior pattern is not changed by the end of grade 3, it should be treated as a chronic condition, much like diabetes" (p. 6). In addition, Caprara, Barbaranelli,



Pastorelli, Bandura, and Zimbardo (2000) found that children's academic achievement in the eighth grade could be better predicted by their social abilities at third grade rather than their academic achievement at third grade. Likewise, Malecki and Elliott (2002) found that social skills were a significant predictor of future academic performance.

A schoolwide model that involves monitoring and evaluation of student progress and uses data-based decision making to identify students whose academic or behavior performance indicate school failure is more likely to prevent problems (Scott et al., 2001). According to Dwyer (2002),

Prevention without early intervention serves those not at risk, and intensive interventions without preventions result in overuse of costly high intensity services. It is the integration of all three that ensures all children will have maximum opportunities to learn. (p. 169)

The climate of the school serves as an antecedent promoting either responsible or irresponsible behavior (Sprick, Borgmeier, & Nolet, 2002; Sprick, Garrison, & Howard, 1998; Sprick, Sprick, & Garrison, 1992). Their research showed the impact on student behavior at a schoolwide or universal level. Some factors shown to impact behavior at this level were the following: (a) clearly defined expectations for academic and antisocial behavior, (b) direct instruction of expectations, (c) effective staff supervision of common areas, (d) clearly defined procedures for responding to misbehavior, (e) procedures for providing age-appropriate positive feedback, and (f) effective classroom and organization management (Sprick et al., 2002; Sprick et al., 1998; Sprick et al., 1992; Sugai & Horner, 1999).

### Prevention History

The foundation for a more preventive approach is founded on the public health theory, which was introduced in 1957 by the Commission on Chronic Illness. Three types of prevention were introduced. The goal of primary prevention was to decrease the number of new cases of a disorder or illness. The goal of secondary prevention was to lower the rate of established cases of a disorder or illness in a population or to lower prevalence rates. The goal of tertiary prevention was to decrease the amount of disability associated with an existing disorder. Gordon (1987) modified this model and introduced a risk-benefit perspective. In 1992, the Committee on Prevention of Mental Disorders, a subcommittee of the Institute of Medicine, prepared a report on the levels of prevention and included the following three approaches: (a) Universal interventions were targeted at the general public at whole group; (b) selective interventions were targeted at individuals or subgroups whose risk of developing a mental disorder was significantly higher than average; and (c) indicated interventions were targeted at high-risk individuals (Mrazek & Haggerty, 1994).

Walker et al. (1996) used the public health model to organize a framework to illustrate how schools can deliver interventions more efficiently while improving outcomes. In any school setting, the students could be categorized into three groups: (a) compliant students who are not typically at risk for problems, (b) students who are at risk for developing antisocial problems, and (c) students who are displaying antisocial or delinquent behavior (Walker et al.). Just as these

students can be grouped into a severity of risk continuum, the level of behavior assistance required and prevention can likewise be grouped into a continuum of support. Primary prevention interventions are used universally. All students are exposed to the intervention at the same level. An emphasis is placed on teaching all staff and students expectations, disciplinary policies, and procedures. The school environment should be encouraging socially desirable behavior and maximizing academic success (Sugai & Horner, 2002; Walker et al.).

Secondary prevention interventions are offered to students who are at risk or who have not responded to the more universal interventions. These students' behavior has shown that they require more intensive interventions. These interventions may include contracting, being placed in small social skills groups, peer mentoring, or peer tutoring (Walker et al., 1996).

Tertiary prevention is used for more chronic behavior problems. These interventions are highly individualized, using more comprehensive plans for students and involving a team of individuals to monitor their progress. Students requiring this level of behavioral support usually have more delinquent activities and social destructiveness (Walker et al., 1996).

If school systems are able to adopt this model of prevention, they are more likely to prevent some problem behaviors before they start. In addition, they are more likely to effectively use the resources they have by matching student need to available interventions. At the universal level, schools are increasing the protective factors needed for students to be successful both socially and academically.

### Definition of Positive Behavior Interventions and Supports

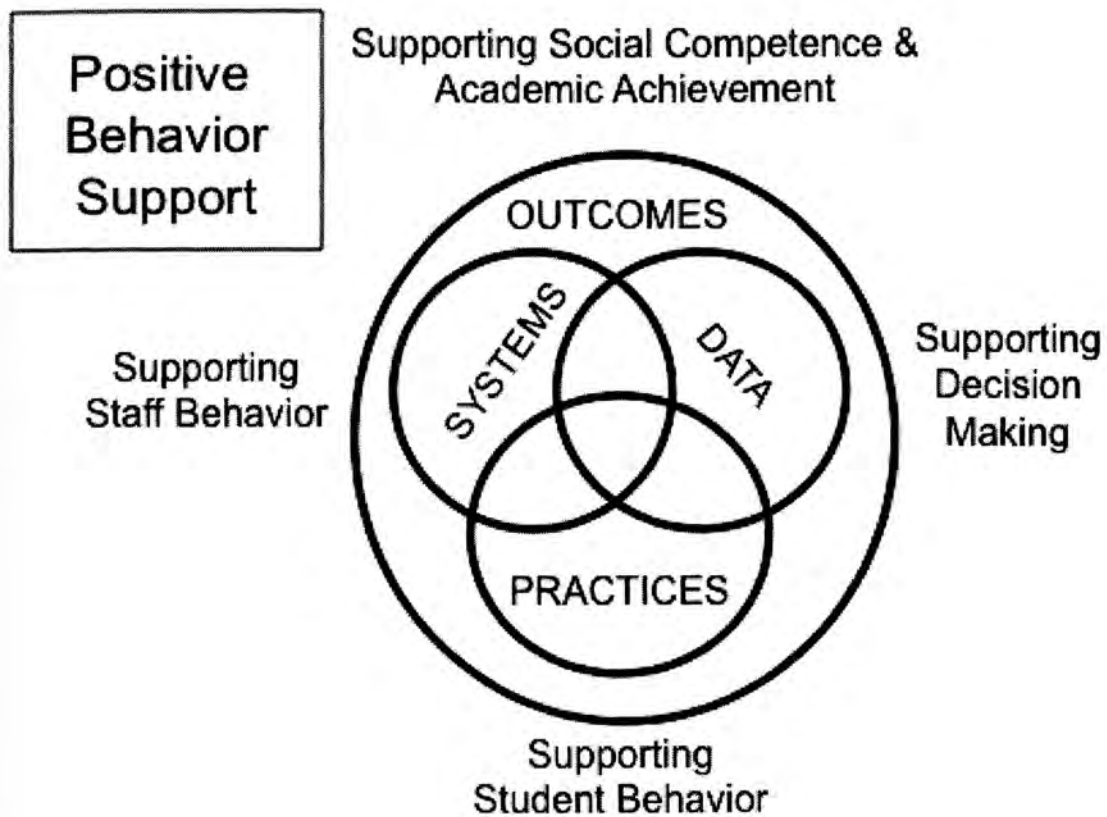
The Office of Special Education Programs Technical Assistance, Center on Positive Behavioral Interventions and Supports described positive behavior interventions and supports (PBIS) as “the broad range of systematic and individual strategies for achieving important social and learning outcomes while preventing problem behavior” (Sugai & Horner, 2002, p. 29). The philosophy of PBIS is an extension of applied behavior analysis (Carr et al., 2002). Originally described as an approach for individual students with severe disabilities who display significant behavior problems, recent applications of PBIS show success among students with average cognitive abilities in a whole school setting (McCurdy, Mannella, & Eldridge, 2003). PBIS takes the behavior analysis and uses the whole school as the unit of analysis (Lewis et al., 1998). The focus becomes global schoolwide changes that result in more positive outcomes for all participants (Carr et al.). Students receive the “therapeutic and preventive interventions in the same way that they are exposed to academic instruction, namely through daily, systematic, and predictable routines with teachers” (Putnam et al., 2003, p. 1039).

Sugai and Horner (2002) listed the four key elements of PBIS as follows: (a) outcomes, (b) practices, (c) data, and (d) systems. Outcomes are the measures (i.e., academic achievement and social competence) valued by stakeholders (i.e., families, students, teachers, and employers). Schools need to be able to measure student and staff outcomes. Practices refer to the research-validated practices and curricula that maximize achievement of outcomes. PBIS schools use data to guide

their decision making at all levels (i.e., individual, classroom, and school). Last, PBIS schools address the systems needed to effectively address outcomes, practices, and data (Sugai & Horner; see Figure 1).

#### Outcome Measures: Social Competence and Academic Achievement

“What outcomes schools choose to measure is dependent upon what they see as being a socially valid indicator of success” (Scott, 2007, p. 108). A review of the literature on PBIS shows that schoolwide systems of behavior support can be an efficient system for reducing the incidence of disruptive and antisocial behaviors in schools (Sugai & Horner, 2002). Nelson, Martella, and Marchand-Martella (2002) found that schoolwide programs improved the social competence and academic outcomes of targeted students and that teachers were supportive of the project. A growing body of research supports implementation of PBIS, leading not only to a decrease in problem behavior but also to an increase in standardized academic scores (Luiselli, Putnam, Handler, & Feinberg, 2005). Lassen, Steele, and Sailor (2006) found an increase in reading and math standardized test scores and a decrease in office discipline referrals (ODRs) and suspensions. Conclusions from this study were drawn; that is, PBIS may have a significant impact on academic performance through increasing the amount of time students are in their classroom. The correlation of behavior and academics is shown throughout the literature. McIntosh, Horner, Chard, Boland, and Good (2006) showed a predictive relationship of kindergarten reading scores to fifth-grade ODRs in their longitudinal study of reading and behavior screening measures. In a study of three-tiered



*Figure 1. Positive social competence and academic achievement.*

*Note.* From *School-Wide Positive Behavior Support Implementers' Blueprint and Self-Assessment* (p. 15) by Center on Positive Behavioral Interventions and Supports, 2004, Eugene, OR: University of Oregon. Copyright 2004 by Center on Positive Behavioral Interventions and Supports. Reprinted by permission.



models of behavior and reading, an integrated approach to behavior and reading produced a higher effect size ( $Z = .53$ ) than of reading or behavior alone (Stewart, Benner, Martella, & Marchand-Martella, 2007).

Another discipline that is seeing a positive impact with the implementation of PBIS is school-based mental health. In 1999, the surgeon general found that schools are often the only provider for mental health services for children. Mental health systems benefit from collaborating with schools implementing PBIS by reaching children in need of care, providing care to those exhibiting behaviors as well as serious risk, and providing better assessment of children's needs (Bazelon Center for Mental Health Law, 2006). Eber, Sugai, Smith, and Scott (2002) discussed the benefits of collaborating with a school-based wraparound approach and PBIS working together to create more effective school environments and improved outcomes for students with or at risk of behavioral challenges.

It is imperative that schools become more articulate in measuring student and staff outcomes that are valued by significant stakeholders. According to Sugai and Horner (2002), schools will become more successful and efficient in the following: (a) selecting and presenting relevant curriculum, (b) conducting meaningful educational assessments and evaluations, (c) utilizing dwindling resources, and (d) creating positive school climates.

#### Practices: Supporting Student Behavior

PBIS systems are not packaged intervention programs sold to schools interested in effective outcome measures. Rather, PBIS schools work at

establishing host environments that provide the support needed to sustain evidence-based practices. According to a document released by the Office of Special Education Programs Technical Assistance, Center on Positive Behavioral Interventions and Supports (2009) entitled “Is Schoolwide Positive Behavior Support an Evidence-Based Practice?” a practice or procedure considered evidence-based should include the following:

(1) Explicit description of the procedure/practice, (2) clear definition of the settings and implementers who use the procedure/practice, (3) identification of the population of individuals who are expected to benefit, and (4) the specific outcomes expected. Criteria for an evidence-based practice are generally proposed by different agencies to determine the level of experimental rigor and the confidence to make the claim of being an evidence-based practice. (p. 1)

The PBIS model allows for some variability in what specific interventions are used along the continuum of positive behavior support, allowing for the consideration of individual school climates and allowing school teams to take ownership for the processes and procedures in their school. Schools that implement PBIS systems often have similar types of interventions due to the need of researched validated components. The critical pieces of a PBIS system include (a) establishing expectations, (b) teaching expectations, (c) reinforcing expectations, and (d) correcting problem behaviors.

Establishing expectations. Schools and administrators may choose from packaged schoolwide plans or develop a customized program based on their needs. Some critical features to consider when establishing rules (Bowen, Jenson, & Clark, 2004) are the following: (a) Rules should be positively and clearly stated;



(b) rules should be limited to five or less; (c) rules should be in written form and publicly posted; (d) rules should be distributed to students and families; (e) rules should be practiced; (f) consequences for following rules should be clearly explained; (g) consequences for breaking rules should be clearly explained; and (h) monitor students and consequence rule infractions consistently. Examples of these types of programs include the High Five Program (Taylor-Greene et al., 1997), Magic Five (Carpenter & McKee-Higgins, 1996), and Stoplight Rules (White, Algozzine, Audette, Marr, & Ellis, 2001).

Teaching expectations. In order for students to perform appropriate behaviors, they must be taught what is expected. Herner (1998) said:

If a child doesn't know how to read, we teach. If a child doesn't know how to swim, we teach. If a child doesn't know how to multiply, we teach. If a child doesn't know how to drive, we teach. If a child doesn't know how to behave, we . . . teach? . . . punish? Why can't we finish the last sentence as automatically as we do the others? (p. 2)

Breaking down the procedures into small steps, demonstrating while describing them verbally, and allowing students to practice them several times prior to implementing consequences are essential strategies (Bowen et al., 2004). The High Five Program (Taylor-Greene et al., 1997) is an example of a positive schoolwide program where teachers define, teach, and reward appropriate behavior. Other examples of teaching expectations include schoolwide social skills training (Fister, Conrad, & Kemp, 1998; Jones, Sheridan, & Binns, 1993) where teachers identify pro-social skills followed by in-class social skills training. Teaching appropriate expectations can also be location specific, as seen in the Structured Recess

Program (Jones, Wilson, Birns, & Wadsen, 1992) and schoolwide cafeteria interventions (Lewis et al., 1998; Sprick, 1995).

Reinforcing expectations. Reinforcing expectations provides opportunities to catch the student doing something well and acknowledging that behavior. Positive reinforcement is defined as a consequence associated with a future increase in the frequency of the behavior it followed. Jenson, Olympia, Farley, and Clark (2004) reported that rewards that are contingently given for successful performance toward realistic goals are more likely to enhance motivation and decrease problem behaviors. Certain factors make reinforcement or praise more successful and include reinforcing immediately, reinforcing frequently, being enthusiastic, having eye contact, describing the behavior one likes, creating anticipation, and incorporating variety and variability in the types of reinforcement (Loveless, 1996).

One way to reinforce expectations is through public posting. Public posting is not generally an independent intervention; it is often used as one part of a successful program. Public posting is visual advertising of student success and, in fact, can enhance student motivation (Bowen et al., 2004; Jenson & Reavis, 1996). Public posting was one intervention used with timing, self-scoring, and specific instructions as part of a study to successfully increase the number of words written by second- and fifth-grade students (Van Houten, Morrison, Jarvis, & McDonald, 1974). In the elementary school environment, public posting can be seen in the form of artwork or various awards such as the behavior or academic student of the

month. Public posting adds a component critical to child and adolescent development: peer acknowledgment.

Correcting problem behaviors. Effective PBIS systems have procedures for addressing problem behaviors that are organized along a continuum of minor and major rule violations as well as increased intensity and aversiveness of responses (Sugai & Horner, 2002). One example of a schoolwide procedure to correct problem behavior is other-class time-out. In addition, teachers can be trained in ways to increase compliance by using methods such as precision commands and 1-minute skill builders (Fister et al., 1998). A critical feature observed in a PBIS is the systematic process for correcting problem behavior. All teachers, staff, and volunteers in the building approach problem behavior in the same way. It is clear to the staff what problem behaviors should be handled in the classroom and what behaviors should be sent to the office.

#### Data: Supporting Decision Making

Although specifics of PBIS can change across settings to fit the environment of the school, a need exists for regular feedback to staff about the status of schoolwide efforts (Sugai & Horner, 2002). One of the core characteristics of a PBIS model is the team involvement in evaluation and decision making based on data from the school. "Teams should be able to examine patterns at least across students, time locations, behavior types (appropriate and inappropriate), consequences, and staff members to improve the effectiveness, efficiency, and relevance of their efforts" (Sugai & Horner, p. 33). The systematic gathering and

examining of data are not easy tasks for some school settings, as seen in the research of Kincaid, Childs, Blasé, and Wallace (2007). The authors identified barriers and facilitators in the implementation of schoolwide positive behavior support by surveying PBIS implementing teams. The themes that were seen as both barriers and facilitators were (a) funding, (b) staff recognition, (c) district supports communication, (d) school-level training, (e) use of data, (f) administration support, (g) parent/community support, (h) staff buy-in, (i) reward systems, (j) team functioning, and (k) plan implementation.

To effectively show the breadth of systems changes and impact on schools, evaluation measures should include a multimethod approach. The first approach is researched based, standardized, and experimentally rigorous or quantitative measures. The second area is more descriptive measures or qualitative measures. A comprehensive model of evaluation should include multiple measures to accommodate the variability needed in evaluation (Horner, Sugai, & Lewis-Palmer, 2005).

Quantitative measures. Elementary and secondary schools alike routinely collect degrees of data (e.g., absences, tardies, grades, and disciplinary actions). Schools that subscribe to PBIS have a school-based team that meets regularly to review the data, determine progress, and make decisions. By gathering the right type of data, these school teams can more adequately make appropriate decisions for their environment. Specific school data can be analyzed using programs such as the Schoolwide Information System or MES Discipline Tracker® (Mansker

Enterprises Software, 2007-2009). This method of record-keeping allows teams to look at data such as ODRs by month, location, infraction, student, and grade. In addition, school personnel can track the positive reinforcement or rewards given to students such as student of the month or good behavior tickets.

A middle school in Kansas reported that (based on referral data for the first 2 years of PBIS implementation) ODRs were reduced by 19%, in-school conferences with students were reduced by 23%, time-outs were reduced by 30%, in-school suspensions were reduced by 12%, and short-term suspensions were reduced by 60% (Turnbull et al., 2002). An urban elementary school in Illinois with 1 year of implementation showed a 22% reduction in overall suspensions, increased positive attitudes of staff and students, overall climate, and a decrease in staff turnover (Netzel & Eber, 2003).

Several data sources are used to measure PBIS practices in the schools; however, emphasis is placed on ODRs. Schools implementing PBIS are encouraged to distinguish between minor offenses, which are handled by the classroom teacher, and major offenses, which are handled by the office and become the ODR. ODRs are widely used due to their practicality. Some research findings suggest that they are related to poor student outcomes such as school failure and juvenile delinquency (Clonan, McDougal, Clark, & Davison, 2007; Tobin & Sugai, 1999).

ODRs can be used as a primary source to identify areas of intervention at the universal level. Schools following recommendations from the Schoolwide Positive Behavior Support Implementers' Blueprint and Self-Assessment (Center on



Positive Behavioral Interventions and Supports, 2004) review graphs, at least quarterly, of the following five data displays: (a) number of ODRs per day per month, (b) number of ODRs by type of problem behavior, (c) number of ODRs by school location, (d) number of ODRs by student, and (e) number of office referrals by staff member.

By using ODRs as a unit of analysis, the school can obtain information to select intervention objectives (Putnam et al., 2003). In their study of ODRs, Putnam et al. found that 86% of students had received between one and five referrals and that 4.7% of students had received 11 or more referrals. This latter group of students accounted for only 28% of all referrals for the year. They also found that the majority of teachers did not make frequent referrals; thus, it was more efficient to intervene with those who had initiated the most referrals. This type of data analysis allowed them to select intervention objectives.

Guskey (2000) added that information gathered by ODRs can be valuable for assessing staff development efforts, making comparisons between classrooms and schools, and making comparisons from one time to another. Irvin, Tobin, Sprague, Sugai, and Vincent (2004) studied the validity of using ODRs for assessing schoolwide behavioral climate, effectiveness of schoolwide behavioral intervention programs, and differing needs across schools in developing positive behavioral environments. They found a substantial basis for interpreting and using ODR measures in these ways.

However, Nelson, Benner, Reid, Epstein, and Currin (2002) found that the relatively high levels of false negatives suggest that the use of ODRs as an early screening device may fail to identify large numbers of students who need services for externalizing behaviors and even more pronounced for internalizing behaviors. Another limitation is the potential of teacher bias in the documentation of student behavior and a lack of objective data (Clonan et al., 2007; Morrison & Skiba, 2001; Nelson, Benner et al.; Wright & Dusek, 1998). Using ODRs as a measure of PBIS is not without limitations, but it does offer an accessible and widely used measure for schools to respond to problems in a time-efficient manner, to monitor effects of intervention, and to adjust them as needed (Clonan et al.).

Although ODR data look at the individual student data, the Schoolwide Evaluation Tool (SET; Sugai, Lewis-Palmer, & Horner, 2001) is an instrument to measure the implementation of positive behavior support at the schoolwide level. The SET reports meeting the basic psychometric criteria for measurement tools used in research with high interobserver agreement, excellent test-retest reliability, a valid index of PBIS, and enough sensitivity to be useful in documenting change in levels of implementation (Horner et al., 2004). The SET is designed to assess and evaluate critical features of schoolwide effective behavior support across each school year. The SET results are used to (a) assess features that are in place, (b) determine annual goals for schoolwide effective behavior support, (c) evaluate ongoing efforts toward schoolwide behavior support, (d) design and revise procedures as needed, and (e) compare efforts toward schoolwide effective

behavior support from year to year (Sugai et al.). The SET has seven indicator categories:

1. Expectations defined (a)
2. Behavioral expectations taught (b)
3. Ongoing system for rewarding behavioral expectations (c)
4. System for responding to behavioral violations (d)
5. Monitoring and decision making (e)
6. Management (f)
7. District- and state-level support (g).

Research on PBIS also shows that positive changes occur in nonclassroom settings such as hallways, recesses, cafeterias, playgrounds, and transition times (Lewis et al., 1998; Oswald, Satran, & Johanson, 2005). A culturally diverse elementary school within a large urban district in the northeastern United States showed a reduction in ODRs and student fighting after 2 years of project implementation, with a 53.8% reduction per student in ODRs originating from recess (McCurdy et al., 2003). Hallway behavior improved 42.36% in a middle school after a 5-week PBIS intervention (Oswald et al.).

Descriptive measures. The second set of measures in PBIS analysis is descriptive, which is tied to the local context, including satisfaction reports of faculty, administrator, and teachers. In 2002, *USA Today* reported the finding of a poll relating to work satisfaction (Gallup, Inc., 1993-1998). The Gallup organization reported that the more “yes” answers workers give to the following



questions, the more engaged they are at work, resulting in less turnover, higher profitability, and higher customer satisfaction. These questions are as follows:

1. I know what is expected of me.
2. I have the materials and equipment I need to do my job right.
3. At work, I have the opportunity to do what I do best every day.
4. In the last 7 days, I have received recognition or praise for doing good work.
5. My supervisor, or someone at work, seems to care about me as a person.
6. There is someone at work who encourages my development.
7. At work, my opinions seem to count.
8. The mission/purpose of my company makes me feel my job is important.
9. My associates (fellow employees) are committed to doing quality work.
10. I have a best friend at work.
11. In the last 6 months, someone at work has talked about my progress.
12. In the last year, I have had opportunities at work to learn and grow.

These same questions can be asked of faculty, administrators, and students.

Based on faculty and student perceptions, does implementation of the PBIS create positive environment? The social validity piece is not only important but it is a crucial piece in implementation (Baer & Schwartz, 1991; Carr et al., 2002; Kern

& Manz, 2004). Most studies that address social validity use a questionnaire format, and the results from the research are uniformly positive. These data suggest that “consumers find schoolwide support a practical strategy that results in observable student improvement” (Kern & Manz, p. 55). However, one limitation noted in this research was the narrow range of consumers. Respondents are typically all school staff. More research needs to be done in student satisfaction of schoolwide support systems.

According to Bowen et al. (2004), the more costly an intervention, the less likely it will be used consistently. In addition, the amount of time it takes to implement is seen as one of the most important aspects of any intervention (Bowen et al.; Elliott, 1998). To increase the likelihood of PBIS being used in schools, evaluating the time and money saved by staff and students in PBIS environments can be an additional selling point to high stakeholders. Scott and Barrett (2004) found that total administrator minutes dedicated to disciplinary suspensions decreased from 3,465 during baseline to 1,440 during the 1st year of implementation and 990 in the 2nd year. When multiplied by the administrator’s daily salary, the cost of time saved was \$6,024.84 over baseline in the 1st year and \$6,932.69 over baseline in the 2nd year. This study also addressed the loss of instruction time by students with ODRs. Total student instruction time missed due to ODRs dropped from 12,160 minutes during baseline to 2,160 minutes during the 1st year of implementation and to 920 minutes during the 2nd year of implementation. This decrease represents a gain of 27.7 days over baseline in the

1st year and 31.2 days over baseline in the 2nd year. A fiscal analysis was done of this school based on administration and instructional time saved, resulting in total savings of \$9,106.92 during the 1st year and \$10,667.74 during the 2nd year (Scott & Barrett).

In summary, data-based decision making should become the foundation for school implementation of PBIS. This foundation enables schools to have a more effective problem-solving process where data are routinely being gathered and shared with staff as well as key stakeholders such as district- and state-level personnel. The literature supports the adoption of a multifaceted data collection procedure, which may include the dependent measures shown in Table 1.

Table 1

*Dependent Measures*

Outcome	Measure
Reduction in problem behaviors	Office discipline referrals
More positive environment	Teacher-to-student positive interactions
Opportunities for engaged class time	Tardies, absences, in-school suspensions, out-of-school suspensions
Level of implementation of positive behavior interventions and supports	Schoolwide Evaluation Tool, intervention fidelity checklists
Consumer satisfaction/social validity	Teacher surveys, student surveys
Positive behavior interventions and supports effectiveness	Cost-benefit analysis, teacher and administrator surveys

### System Level: Supporting Staff Behavior

The research on PBIS is beginning to validate the effectiveness of this model at the systems level (Kutash, Duchnowski, & Lynn, 2006). The systems approach will reduce the likelihood that the program is identified with one individual where the rate of success is contingent on that individual. Scott (2007) stated that an essential feature for facilitating a system's approach is individualization: "Every system must determine the strategies that are most appropriate for their problems, contexts, and personalities" (p. 107), which is called *contextual fit*. Another essential feature is consensus, which can be characterized by proactive collaboration where all stakeholders are working together to assess, plan, and evaluate the outcomes facilitated by effective prevention (Scott). Literature on school reforms suggests that positive climate and teacher attitudes provide a supportive foundation for pedagogical change (Rowan, Camburn, & Barnes, 2004; Sterbinsky, Ross, & Redfield, 2006).

By taking a more systematic approach to gathering data, reinforcement, and correction, schools are able to create institutional memory in which the practices and policies become part of the school culture. A PBIS system considers the systems (i.e., processes, routines, working structures, and administrative supports) needed to support those valued outcomes (Sugai & Horner, 2002). The critical factors of systems change include using collaborative team problem solving, research-based interventions, multiple data sources for planning and evaluation, and positive strategies to reduce punitive disciplinary practices (Safran & Oswald,

2003). This systems change would be easier to implement if schools were implementing PBIS with a “one-size-fits-all” philosophy. PBIS is a framework for organization (Scott & Martinek, 2006). Whereas schools have common components, they still assess their own needs, select logical strategies, implement with fidelity, and monitor outcomes. However, no matter the location of school, a PBIS system could refer to the effectiveness, efficiency, and relevance of organizational working structures, policies and guiding principles, operating routines, resource supports, staff/professional development, and administrative leadership (Sugai & Horner).

#### General Implementation of Positive Behavior Interventions and Supports

The four elements (i.e., outcomes, data, practices, and systems) need to be incorporated into a multiple systems approach for the most effective and efficient PBIS systems (Sugai & Horner, 2002). Schools function within four systems: (a) schoolwide systems, (b) classroom systems, (c) nonclassroom systems, and (d) individual systems. On the schoolwide systems, schools with effective implementation of PBIS share six common features: (a) a positively stated statement of purpose that links academics and behavior and focuses on all staff, all students, and all locations; (b) clearly defined expectations and examples in all school settings; (c) procedures for teaching expectations and expected behaviors; (d) procedures for encouraging expected behaviors; (e) procedures for preventing problem behaviors; and (f) procedures for record keeping and decision making

(Sugai & Horner).

Within classroom systems, effective PBIS schools support teachers to create environments that teach behavioral expectations, incorporate teaching and learning, and maximize instruction. The staff needs to be supported and trained with effective behavior management techniques as well as empirically supported curriculum data. Within nonclassroom settings, students need to be instructed on their behavioral expectations accompanied by positive adult supervision. These settings typically have a strong social atmosphere for students with limited adult supervision. Finally, effective PBIS systems support the individual student whose behavior is more severe and chronic. These students have not been responsive to general school or classroom procedures.

These systems all rely on a “continuum of behavior support in which the intensity of the behavior support necessarily increases relationships to increases in the behavioral needs and challenges of the student” (Sugai & Horner, 2002, p. 37). The continuum applies to behavioral needs as well as to prevention perspectives. The continuum is described in the three-tiered approach: (a) primary, (b) secondary, and (c) tertiary (see Figure 2).

By encompassing all three types of prevention levels, schools are establishing host environments that provide the adequate support needed to sustain evidence-based practices (Sugai & Horner, 2002). Traditionally, schools respond to one behavior problem at a time by having a behavior expert come into the school environment and develop solutions that are rarely adopted by the local school team



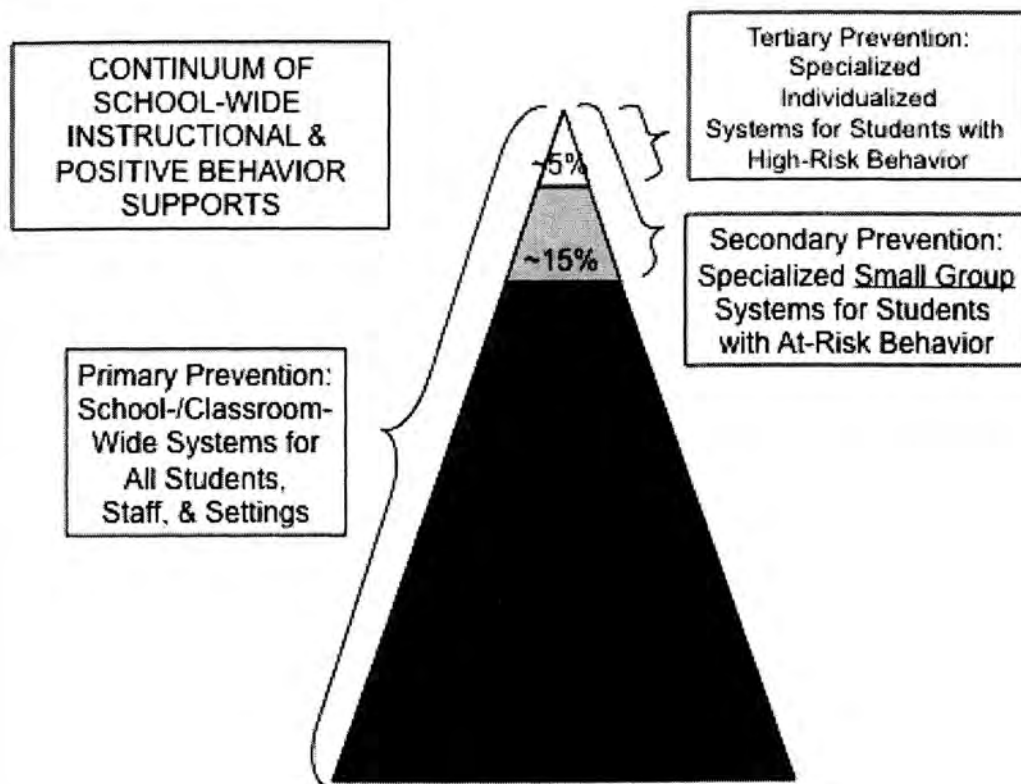


Figure 2. Continuum of schoolwide instructional and positive behavior supports.

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or teacher. As noted by Walker et al. (1996), a fully integrated approach is expected to solve between 75% and 85% of the adjustment problems with well-implemented primary prevention strategies in place. Therefore, a majority of the remaining students should respond to the more intensive secondary prevention strategies and a very small number of students would remain, requiring tertiary prevention strategies (Walker et al.).

As noted by Sugai and Horner (2002), five basic steps characterize the implementation of a schoolwide PBIS approach:

1. Establish a leadership team: PBIS cannot be implemented by one person alone. A schoolwide leadership team is needed to guide the implementation of the programs. The team should be representative of the school, have behavioral competence, have regular and effective communication, be respected by their peers, and be actively supported by their peers. Schools should assess what committees already exist and minimize when possible.
2. Secure schoolwide agreements and supports: The leadership teams need to secure support on the time commitment and investment in the effort (3 to 4 years) as well as the nature and priority of staff development. It is recommended that 80% of staff support these agreements. In addition to staff support, adequate fiscal support is needed for implementation materials, training, time, and so on.



3. Develop data-based action plans: Early in the process, the team needs to review data to determine which practices need to be improved, adopted, or eliminated. Data that may be reviewed include attendance and tardies, ODRs, detention, suspension and expulsion, and behavioral incidence data. Information can also be obtained through self-assessment inventories, surveys, or checklists. All of this information is considered to develop an action plan for the school year.
4. Arrange for high-fidelity implementation: Schools will not be successful in implementing their action plan if they cannot ensure that staff are fluent with the skills and strategies of the plan. Likewise, adequate supports need to be available to sustain implementation among the staff and to ensure appropriate leadership is in place.
5. Conduct formative data-based monitoring: Data systems must be in place to adequately judge whether adequate progress is being made. A variety of data can be collected, but one of the best data sources is behavioral incidents data that are usually collected in the form of ODRs. To increase confidence in data, it is important that good, reliable data be gathered. Processes should be in place for storing, manipulating, and summarizing the data and for the data-based decision making.

## Local Implementation of Positive Behavior Interventions and Supports: Utah Behavior Initiative

### State Level

Utah has been implementing PBIS practices in local preschools, elementary schools, and secondary schools for 8 years as the Utah Behavior Initiative (UBI). Foundations of the UBI project were started with the Behavioral and Educational Strategies for Teachers project in the late 1990s. The UBI serves as the vehicle to implement PBIS in Utah. The state team consists of employees of the Utah Personnel Development Center, Utah State Office of Education, and Utah State Professional Development Improvement Grant. The state team meets twice a month. In addition to the UBI state team, there is also a UBI advisory council. The advisory council meets quarterly and consists of members representing the state team, district representatives, university faculty, state mental health and substance abuse people, Utah State Office of Education Title I people, and comprehensive guidance people. At the beginning of 2005-2006, the UBI changed to a district model of service delivery rather than to the state-to-school model. The district model of implementation was designed to increase fidelity of implementation and to increase the likelihood of sustainability on a local level.

### District Level

The first step taken by the district is the selection of a district coach. The district selects a district coach to act as the support, the trainer, and the liaison between local schools and state specialists. The district coach works with the state

specialists and participates in the district-coaching network, working with the coaches from other participating districts. The district coach is also responsible to coordinate the district team, schedule quarterly meetings with this team, complete a district self-assessment, create a district action plan, and evaluate the UBI efforts in the schools and district. The district coach is responsible for yearly training of the participating UBI schools. The district coach is also responsible to assist the local or UBI teams at each school, which consists of (a) helping them establish regular meetings; (b) identifying, training, and coaching the coordinator at each school to manage and facilitate individual school efforts; (c) trouble shooting with team; (d) managing funding efforts; (e) developing a coordinator network; and (f) training school team in UBI practices and behavioral interventions. The UBI coaching network is shown in Figure 3.

### School Level

The district coach acts as a manager of the coordinators. Each participating PBIS school has a coordinator. The coordinator is someone in the building who facilitates the PBIS efforts on the local level. The coordinator schedules regular meetings, delegates assignments, and leads the UBI team.

Likewise, each participating school has a UBI team. This team consists of an administrator, a coordinator, special education and regular education teachers, a parent, and a student—when necessary. At the beginning of the year, the team submits an application to the district coach with their agreement to be a part of the UBI project. Once selected, the school team begins the training with the district

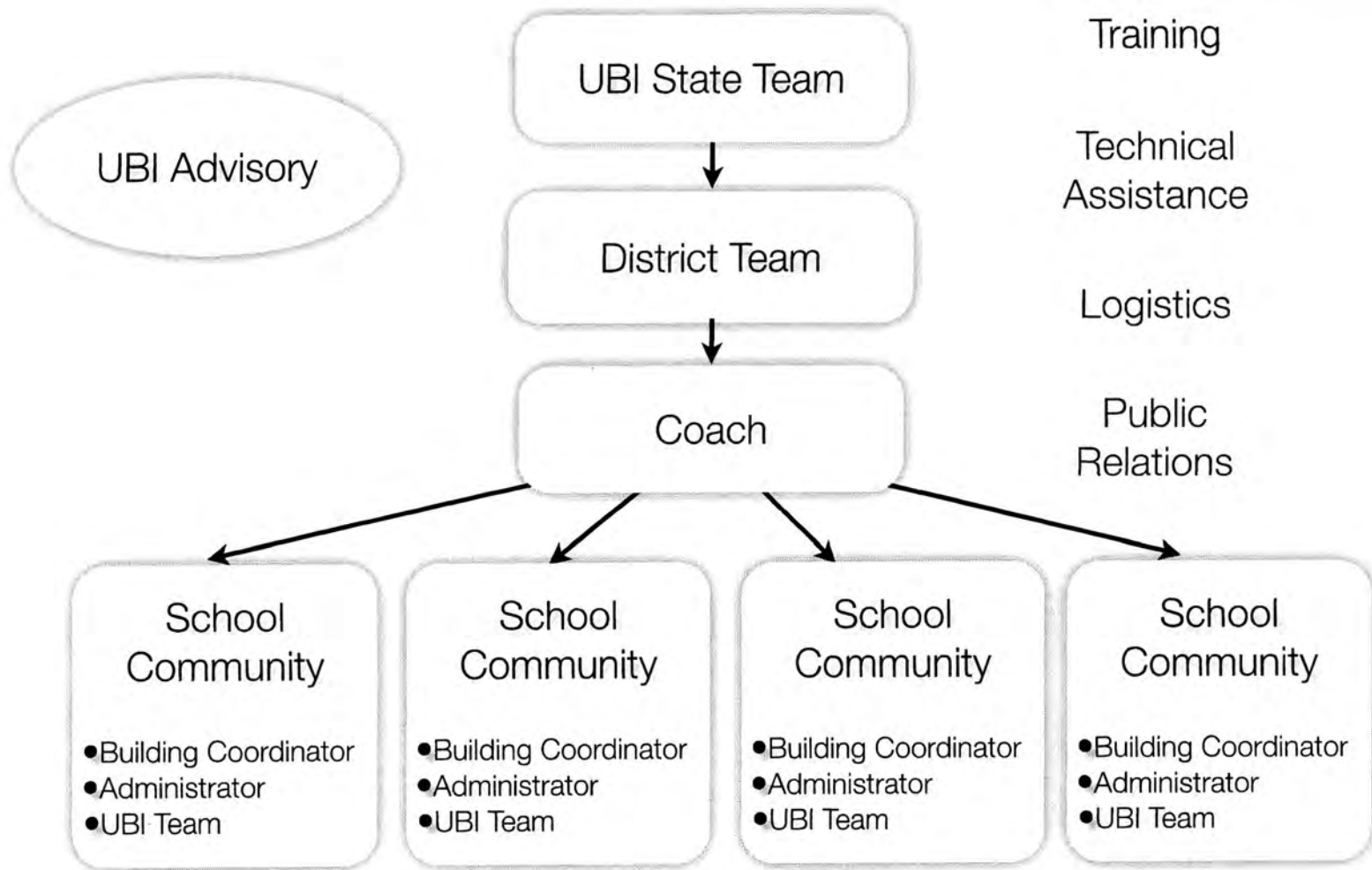


Figure 3. Utah Behavior Initiative coaching network.

coach.

Following a 2-day summer training, the school also submits an action plan of goals for the implementation of PBIS. This action plan maps out the individual implementation plan on the four pillars of PBIS: (a) establishing expectations, (b) teaching expectations, (c) reinforcing expectations, and (d) systematically correcting problem behaviors. Each school plan is unique to the school; however, examples of implementation are shared with each of the schools. Implementation examples are available in Appendix A (Mathie, 2005). As previously mentioned, the implementation plans vary from school to school, with some common interventions used in the Utah schools, including (a) the Principal's 200 Club, (b) the Behavior Education Plan, and (c) Think-Time.

Principal's 200 Club. This intervention combines public posting and mystery motivators in a "catch-them-being-good" type of program. A large laminated poster is divided into 200 squares prepared and posted in a visible location in the school. The squares are large enough for students to write their name in or display their ticket. The poster is placed in a prominent location in the school. Plastic chips, tags, or tickets are numbered 1 to 200 and placed in the office. A large sealed envelope with a big question mark is attached to the principal's door. Inside the envelope is a piece of paper with a selected reward written on it. The selected reward includes the principal in some positive fashion. Teachers and staff members in the school are provided coupons to present to students who are observed to be following school rules. Students who received

coupons are instructed to go to the office during a specific time of day with their coupon. The student selects a number and writes his or her name or places his or her ticket in the corresponding box. Students sign their name in the good behavior book. A corresponding phone call home is additional recognition and reinforcement. Students continue to fill the poster, and when 10 names or coupons are displayed in a row (across, down, or diagonal), those 10 students are called to the office as the Principal's 200 Club winners. The mystery envelope is opened, and they participate in the activity with the principal. All of the names or coupons are removed, and the process is started over (Bowen et al., 2004; Jenson, Rhode, Evans, & Morgan, 2006).

Check-in, check-out/homenote. A daily report card rating disruptive behavior has been shown to be effective in reducing problem behaviors while increasing assignment completion (Davies & McLaughlin, 1989). Recent studies show the effectiveness of a check-in, check-out program implemented in a PBIS system as a secondary-level intervention (Hawken, MacLeod, & Rawlings, 2007). The Behavior Education Plan is a secondary prevention support for students who have been identified as having persistent but not dangerous patterns of behavior (Crone, Horner, & Hawken, 2004). The Behavior Education Plan also provides additional positive support for appropriate behavior. At the end of the day, the student checks out with the designated adult, presents his or her tracker, receives a treat, and takes the tracker home. At the end of the week, the team reviews the data present in the Behavior Education Plan to evaluate the effectiveness of the



intervention (Crone et al.). The Behavior Education Plan has been shown to be effective in reducing problem behavior as measured by a reduction in ODRs in elementary students (Hawken et al.). In addition, the Behavior Education Plan decreases the need for more intensive services for most services such as a special education referral. Not only was the Behavior Education Plan shown to be effective with decreasing problem behavior, but it was also shown to be implemented in a public elementary school setting with a high degree of fidelity (Hawken et al.). In general, daily behavior report cards have been found to be highly adaptive in representing an array of possibilities and to have general acceptance by teachers (Chafouleas, Riley-Tillman, & Sassu, 2006).

Other-class time-out. Other-class time-out or Think Time is a program that combines precision requests, other-class time-out, problem solving, and teacher feedback to reduce noncompliant and disruptive behaviors (Nelson & Carr, 1996). This procedure involves removing a student from a reinforcing environment to a less reinforcing one. The student is removed from his or her classroom to a different classroom for a limited amount of time. Once the rules and classroom procedures have been explained and demonstrated to the student, a designated signal is designed to indicate that it is time for the student to go to other-class time-out. When the student arrives at the other-class time-out location, he or she waits at the door until the teacher signals him or her to enter. The student moves to the designated spot and completes a debriefing form. The student waits for direction from the teacher to return to his or her own class. The time-out period is



20 to 30 minutes maximum (Bowen et al., 2004).

Schools may request one-time funding for start-up materials from the state team. This funding request accompanies the action plan to ensure that the money requested is tied to the school goals. During the school year, the UBI team is expected to meet twice a month and produce team notes and a data summary to the district coach. The monthly data summary tracks the following: (a) ODRs/majors, (b) minors, (c) tardies, (d) in-school suspensions, (e) out-of-school suspensions, and (f) schoolwide positives. The monthly data summary also provides spaces for additional information. The data summary prompts the team to pick a target behavior and the method of data collection for that behavior as well as report on the previous month's target behavior. Templates for all of the required forms are available in Appendix A (Mathie, 2005).

#### Purpose of the Investigation

The nation has seen an increase in the severity and frequency of problem behaviors. Students are coming to schools with more risk factors and fewer skills to prepare them for the future. The public school system is being asked to make up the difference both academically and behaviorally. Schools need to be able to address these concerns in more systematic ways in order to create problem-solving strategies while promoting positive environments. Historically, schools have used methods such as suspension and expulsion with problem students with no success in increasing skills the students need for success.

The Utah State Office of Education (2008) recently came out with a board rule, stating that it is the school district's responsibility to do the following:

Develop and implement a board-approved comprehensive district plan for school discipline. The plan should include (a) written standards for student behavior expectations; (b) effective instructional practices for teaching student expectations; (c) systematic methods for reinforcing expected behaviors and uniform methods for corrections of student behavior; (d) uniform methods for annual evaluation of efficiency and effectiveness; and (e) ongoing staff development. (n.p.)

In Utah, there are approximately 846 public schools. Of those schools, the UBI project has trained only about 12%. Individual districts need to scale up and be able to apply the effective principles learned in the UBI training initiative to all of the schools in their districts.

Although numerous studies have discussed the effectiveness of PBIS, the current study looked at the effectiveness of a PBIS system within a district model of implementation and provided information that can assist other districts in "going to scale" or replication of PBIS with high implementation and low cost. Using the UBI project as the scaffolding for training, user friendly tools and practices were shared. In addition, facilitators and barriers to implementation were discussed.

#### Research Questions

1. Does the implementation of PBIS result in a reduction of ODRs?
2. What is the level of implementation of PBIS?
3. What is the level of consumer satisfaction among teachers with the implementation of PBIS and what are the implications of social

validity?

4. With the implementation of PBIS, do students fall into the percentages represented in the continuum of schoolwide instructional and positive behavior support (i.e., 80% of students are compliant, 15% of students identify as at risk, and 5% of students identify as at high risk). What group of students has the largest reduction in ODRs?
5. With implementation of the PBIS, is there a correlation between ODRs and positive reinforcement?
6. What is the level of consumer satisfaction based on student report with implementation of PBIS?
7. With implementation of PBIS, is administrator time and school resources used more efficiently?

## CHAPTER 2

### METHOD

#### Introduction

Utah has a long history of behavioral interventions in the schools. The purpose of the UBI project is to take a more systematic approach to behavioral strategies that have been taught. UBI helps foster the individual school culture with an underlying foundation of PBIS principles. The UBI project is the vehicle with which PBIS is being implemented in the local schools. The intended outcome of the UBI project is to help local schools use data for decision making and intervention planning as well as to help schools evaluate the effectiveness of their programs and the appropriate allocation of resources.

Intervention outcomes should produce socially important and practical effects rather than merely statistical significance (Gresham, 2004). The current study includes a variety of evaluation measures to disseminate the effectiveness of PBIS within five elementary schools in one school district. Baer, Wolf, and Risley (1987) stated that measuring effectiveness in the future should be built primarily on systemwide interventions and high-quality failures. They argued that failures teach and increasing effectiveness comes with difficult, expensive, repetitive, and sometimes ineffective research. The methods used in the current research address those behavior changes and failures at the systemwide level in order to offer

solutions for PBIS implementation at the individual school level and district level.

### Participants

In spring, the UBI project routinely notifies all districts throughout the state, allowing them to complete an application to become participants in the project for the upcoming school year. Districts that are already participating in the project have an opportunity in the spring to notify individual schools within their districts to complete the UBI application. The district team then makes the decision which schools would participate in the project. The schools selected to participate in the current study were five elementary schools in the Davis School District. These schools completed an application for the UBI project, and they were reviewed by the district UBI team. Although more schools expressed interest in becoming part of the project (during spring 2005), these five schools were the only sites that completed the application. The district team found that these schools met the criteria for participation, showed an interest in the project, and were selected as participating sites.

### Criteria for Inclusion

Interested schools within the local school district were required to complete an application for participation in the UBI project. The application was completed in the spring and submitted to their district team for consideration for the following year. The UBI application consists of three sections: (a) UBI readiness questions, (b) demographic worksheet, and (c) UBI district agreement (see Appendix A;

Mathie, 2005). Specific terms of the agreement for the state, the district, and the school are displayed in Table 2. The agreement includes team membership and team responsibilities for each participating partner (i.e., state, district, and school).

### School A

School A has approximately 776 students with 50% on free and reduced lunch, and it has a 26% minority population. At the time the data were gathered, School A had 143 students move into the school and 130 students move out of the school, for a 35% mobility rate. School A had 36 certified staff members and 41 classified staff members, with 9 new teachers for the 2006-2007 school year.

School A had 3 special education teachers providing resource services and 1 self-contained class (functional skills) with a 12% ( $n = 93$ ) special education population. School A had 1 full-time counselor and 1 part-time school psychologist. During the 2006-2007 school year, School A changed from a traditional schedule to a year-round schedule. School A passed annual yearly progress during the baseline year (2005-2006) and implementation year (2006-2007; see Table 3).

### School B

School B, a Title I school, has an average of 339 students with 55% on free and reduced lunch, and it has a 37% minority population. At the time the data were gathered, School B had 68 students move into the school and 43 students move out of the school, for a 33% mobility rate. School B had 23 certified staff

Table 2

*State, District, and School Agreement*

State	District	School
<p>Team membership: —Utah State Office of Education staff members and Utah Personnel Development Center staff members</p>	<p>Team membership: —Special education director, UBI district coach, student services specialist, general education specialist, and community leader</p>	<p>Team membership: —Administrator, special education, general education (lower and upper grades or department representatives), related services providers, support personnel, new teacher, parent, and student</p>
<p>Team responsibilities: —Funding to assist in making the plan successful —On-site consultation from UBI district coach and UBI state support team —Additional on-site training</p>	<p>Team responsibilities: —Allocate district coach time (.25 full-time equivalent per four schools) —Meet as a district steering committee at least quarterly —Complete a district self-assessment —Create a 3- to 5-year district action plan in coordination —Ensure that student social and academic behavior is the top priority of the district —Develop a dissemination strategy to establish visibility in the district</p>	<p>Team responsibilities: —Provide substitutes for training dates out of building allotment —Attend summer training (2 days) —Attend two statewide training sessions called UBI institutes (fall and spring) —Allow new schools to attend advanced schools and observe model interventions —Participate in systematic evaluation —Collect data, write, implement, and report on school plan, which will be UBI benchmarks —Meet twice a month as a team (30 to 45 minutes per meeting) —Report monthly data summaries and meeting notes using online reporting system</p>

*Note.* UBI = Utah Behavior Initiative.



Table 3

*School A: Demographics*

	<i>n</i>	%
Number of students	776	
Number of staff	77	
Free and reduced lunch	390	50.00
Minority population	202	26.00
Special education population	93	12.00
Mobility		35.00

and 1 part-time school psychologist. During the 2004-2005 school year, School B started the Read 180 Program, which is a pilot program for reading intervention. During the 2006-2007 school year, the administrator changed the grades of the teachers for approximately half of the staff. School B had 2.5 special education teachers with resource classes and 1 self-contained class (learning center). School B had a 19% ( $n = 68$ ) special education population. School B passed annual yearly progress during the baseline year (2005-2006) and implementation year (2006-2007; see Table 4).

School C

School C has an average of 725 students with 47% on free and reduced lunch, and it has a 26% minority population. At the time the data were gathered, School C had 65 students move into the school and 71 students move out of the school, for a 19% mobility rate. School C had 31 certified staff members and 47

Table 4

*School B: Demographics*

	<i>n</i>	%
Number of students	339	
Number of staff	51	
Free and reduced lunch	186	55.00
Minority population	125	37.00
Special education population	64	19.00
Mobility		33.00

classified staff members, with 9 new teachers for the 2006-2007 school year.

School C had 1 full-time counselor and 1 part-time school psychologist. School C had 2 special education teachers providing resource-only resource services and a 5% ( $n = 36$ ) special education population. School C had a new administrator for the 2006-2007 school year. School C did not pass annual yearly progress during the baseline year (2005-2006) but did pass during the implementation year (2006-2007; see Table 5).

School D

School D, a Title I school, has an average of 657 students with 43% on free and reduced lunch, and it has a 40% minority population. At the time the data were gathered, School D had 85 students move into the school and 54 students move out of the school, for a 21% mobility rate. School D had 39 certified staff members and 41 classified staff members, with 11 new teachers for the 2006-2007

Table 5

*School C: Demographics*

	<i>n</i>	%
Number of students	725	
Number of staff	78	
Free and reduced lunch	341	47.00
Minority population	188	26.00
Special education population	40	5.00
Mobility		19.00

school year. School D had 1 full-time counselor and 1 part-time school psychologist. School D had 3 special education teachers providing resource services and 1 self-contained class (functional skills), with a 14% ( $n = 92$ ) special education population. During the 2006-2007 school year, School D had 1 new administrative intern, 1 new counselor, and 1 new UBI building coordinator. School D passed annual yearly progress during the baseline year (2005-2006) and during the implementation year (2006-2007; see Table 6).

School E

School E, a Title I school, has an average of 301 students with 77% on free and reduced lunch, and it has a 35% minority population. At the time the data were gathered, School E had 63 students move into the school and 54 students move out of the school, for a 39% mobility rate. School E had 21 certified staff members and 37 classified staff members, with 5 new teachers for the 2006-2007

Table 6

*School D: Demographics*

	<i>n</i>	%
Number of students	657	
Number of staff	80	
Free and reduced lunch	285	43.00
Minority population	259	40.00
Special education population	84	14.00
Mobility		21.00

school year. School E had 2 part-time school counselors and 1 part-time school psychologist. School E had 3 special education teachers providing resource services and 1 self-contained class (learning center), with a 14% ( $n = 44$ ) special education population. During the 2006-2007 school year, School E had a teacher pass away. School E passed annual yearly progress during the baseline year (2005-2006) and during the implementation year (2006-2007; see Table 7).

#### Dependent Measures

In order to show the impact of effectiveness for the UBI project, a variety of dependent measures were analyzed to show the implementation level of PBIS. The literature suggests that it is essential to include a multimethod approach in order to show the breadth of system changes and the impact on schools. The dependent measures support the variability needed in evaluation.

Table 7

*School E: Demographics*

	<i>n</i>	%
Number of students	301	
Number of staff	58	
Free and reduced lunch	231	77.00
Minority population	106	35.00
Special education population	44	14.00
Mobility		39.00

Office Discipline Referrals

As part of the training protocol, each school team developed a hierarchy of discipline at their school distinguishing between minor infractions (i.e., what is handled in the classroom) and major infractions (i.e., what is handled in the office). For the purpose of this project, major infractions were called ODRs. Some examples of these major offenses included (a) vandalism, (b) fighting, (c) abusive swearing, (d) harassment, and (e) repeated noncompliance. Each school adopted an office referral form to track its major offenses. Although the referral form is individual to each school, each school was asked to consider the following questions when developing its form: (a) Is there consensus with staff with regard to the purpose of ODRs? (b) Is there a clear distinction between reports and referrals of problem behaviors? (c) Is your form easily transportable and a single sheet of paper? (d) Does your form require mainly checkmarks rather than writing? (e) Are

all categories clearly defined with no overlap? (f) Do you have the following required categories: student name, date, time of incident, location of incident, problem behavior, and referring staff? (g) Do you need any of the following supplemental categories: student grade level, others involved, consequences, and possible motivation/function? (h) Do the categories on the form match the database categories? and (i) Are there procedures for transferring ODR data into the database?

The schools also adopted a data-gathering system to track and report the number of minor and major offenses. The participants used the commercially available system, MES Discipline Tracker<sup>®</sup> (Mansker Enterprises Software, 2007-2009), for the baseline year. Four out of the five schools used the district system in the treatment year, and the fifth school continued to use the commercial system. The district system was designed to use the same data gathered by commercially available systems to enable schools in the district to track the same type of data. Each participating school developed a process to regularly enter the data in its school system.

ODRs are often used as an ongoing indicator of student behavior (Clonan et al., 2007). According to Wright and Dusek (1998), ODRs can be used for four specific purposes: (a) to measure aggression, (b) to compare schools and different interventions or approaches with management in the schools, (c) to compare and make predictions about behaviors within student subgroups, and (d) to identify early in the school year students who have special behavioral support needs. The

current study tracked the number of ODRs entered each month by the participating school.

### Schoolwide Evaluation Tool

The purpose of the SET (Sugai et al., 2001) is to measure the level of schoolwide implementation of PBIS. The SET results are used to (a) assess features that are in place, (b) determine annual goals for schoolwide effective behavior support, (c) evaluate ongoing efforts toward schoolwide behavior support, (d) design and revise procedures as needed, and (e) compare efforts from year to year (Sugai et al.). The following three methods of data sources are contained in the SET: (a) interviews (i.e., administrator, staff, and students); (b) observation; and (c) permanent product. The products collected include (a) discipline handbook, (b) school improvement plan goals, (c) annual action plan, (d) social skills instructional time line, (e) behavioral incident summaries, and (f) ODR form. The district-level coach administers the SET by scheduling time with the school to conduct the interviews and observations as well as by gathering the necessary permanent products. After gathering all of the required information, the coach then scores the SET and writes a feedback report to the school. Scoring the SET includes looking at all of the information gathered and rating the schools on each of the 28 questions. The questions are scored based on a Likert-type scale of 0, 1, and 2. The SET questions are grouped into seven indicator categories in which the schools are scored: (a) expectations defined, (b) behavioral expectations taught, (c) ongoing system for rewarding behavioral expectations, (d) system for



responding to behavioral violations, (e) monitoring and decision making, (f) management, and (g) district- and state-level support. Once the data are gathered and scored, the participants receive an overall percentage and a percentage for each indicator. A school is considered to be a high implementer by scoring 80% or higher on 80% of the indicators. A copy of the SET protocol is available online.

#### Principal's 200 Club Implementation Checklist

The Principal's 200 Club Implementation Checklist measure was designed to assess the level of treatment integrity of the Principal's 200 Club Implementation Checklist as an intervention. Three methods of data sources are included in the measure: (a) interviews (i.e., administrator, staff, and students); (b) observation; and (c) permanent product. The implementation checklist includes 27 questions. The questions are scored based on a Likert-type scale of 0, 1, and 2. The district-level coach administers the Principal's 200 Club Implementation Checklist. Once the data are gathered and scored, the participants receive a percentage for each indicator. The checklist has five indicator categories in which the schools are scored: (a) setting and implementing, (b) staff, (c) students, (d) school-based Principal's 200 Club manager, and (e) administrator. A school is considered to be a high implementer by scoring 80% or higher on 80% of the indicators. A copy of the Principal's 200 Club Implementation Checklist is included in Appendix B (Mathie, 2006).

### Positive Reinforcement

As part of the UBI training, each school team designs a schoolwide system to positively reinforce their students for displaying the school's expectations. Student reinforcement is intended to be individual rather than for an entire class or grade. Similar to ODRs, the school team designs a form or ticket that is to be used for reinforcement and then uses the same data system to track the number of positives. Examples of individual positive reinforcement include (a) Principal's 200 Club tickets, (b) Student of the Month, (c) Praise Tickets, (d) Be "4" Greatness, and (e) Hawk Award. The data are gathered by the number of individual positives given for each month during the school's participation in the study. Examples can be obtained from the Utah Personnel Development Center (Mathie, 2006; see Appendix B).

### Consumer Satisfaction/Social Validity

Kratochwill (1985) suggested that inclusion of social validity in studies will improve case-study research. According to Baer et al. (1987), social validity is not sufficient for effectiveness but is necessary for effectiveness. The authors suggested that the current behavioral problems are more complex, with many agents of reinforcement/punishment and stimulus control working within a system. Therefore, to effectively work within these systems, they suggested the following remedies: (a) recognize the concept of systems change, (b) implement the systemwide intervention, (c) discern the problems that need short duration interventions and chronic problems with maintaining interventions, and

(d) establish a context to respond to failures. The suggestions proposed by Baer et al. fit into a PBIS system, as PBIS emphasizes both the need for systematic change and the recognition of a continuum of services.

Baer et al. (1987) suggested that giving consumers any opportunity to express complaints and discontents may save some programs from fatal backlashes. In the current study, consumers were identified as the teachers and the students. The study measured the level of consumer satisfaction for teachers and students in participating UBI schools. In each case, consumer satisfaction was measured by questionnaires gathered from the staff and students at each participating school. The surveys can be found in Appendix B (Mathie, 2006).

#### Cost Analysis and Efficiency

In recent literature, the economic concept of cost analysis is being used to measure the effectiveness of PBIS in schoolwide systems (Blonigen et al., 2008). Baer et al. (1987) also listed cost-benefit analysis as a measure of effectiveness to increase social validity. Cost analysis was analyzed by time measures converted into dollars based on the average salary of an administrator in the participating district. The difference in the time saved for average 15-minute ODRs was calculated for baseline and treatment years. The concept of efficiency was measured through the perceptions of both the teachers and administrator by analyzing the respective paper-and-pencil questionnaires.

### Research Design

The design of the study was an  $A_1B_1$  single-subject design in which each school was the subject of analysis in the treatment condition. Single-subject design relies on the application of treatment (PBIS) to the subject (school) in order to determine the treatment effects. According to Rapoff and Stark (2008), single-subject designs have a number of advantages over traditional group designs. Some of those advantages include the following:

They provide flexibility in the choice of independent variables and allowance for changes in these over the course of a study; they are better at exposing individual variability in outcome measures; and they are recognized as legitimate designs to help establish empirically validated treatments and evidence-based practices. (p. 16)

According to Kazdin (1981), case studies are usually considered to be inadequate in drawing valid scientific inferences because of the ambiguity of the influences that are responsible for change. These alternative influences that can potentially affect change were categorized as threats to internal validity. Kazdin noted that case-study research is historically discounted because of these threats to internal validity, which could not be ruled out in experimentation. However, Kazdin argued that many threats to internal validity could be ruled out and conclusions reached about the impact of treatment. Kazdin presented the following five major dimensions that can distinguish case studies: (a) type of data, (b) assessment occasions, (c) past and future projections, (d) type of effect, and (e) number and heterogeneity of subjects. Kazdin made the following suggestions: (a) collecting objective data, (b) assessing performance on several occasions before

and after treatment, (c) continuing assessment, and (d) systematically accumulating clients receiving treatment at different points in time.

Kratochwill (1985) noted the importance of case-study research in the field of school psychology in order to provide a knowledge base and to evaluate treatments. Similarly, Kratochwill offered strategies for improvement in case-study research. Some of these strategies consisted of the following: (a) an increase in the type of data included (e.g., objective data such as frequency counts and self-report data), (b) the number and timing of assessment as well as the number of different measures used in assessment, (c) the use of effect sizes and the impact of treatment, (d) an increase in the number of subjects/clients, (e) the integrity of the assessment and the treatment/intervention, (f) the use of comparative data by using baseline, (g) the inclusion of social validation, (h) a formal statistical analysis, and (i) maintenance assessment.

Baer et al. (1987) noted that “the hallmark of any applied discipline ought to be effectiveness” (p. 322). The authors noted that effectiveness can be subtle such as the degree to which the target behavior has been changed. “Almost every successful study of behavior change ought to routinely present two outcomes, a measure of the changed target behaviors, of course, and a measure of the problem displays and explanations that have stopped or diminished in consequence” (Baer et al., p. 322). The authors suggested that other measures of effectiveness should include cost-benefit ratios, social validity measures, or the extent to which the consumers of an intervention like it.

The present study followed the strategies for improvement in case-study research and effectiveness by including a variety of indicators to measure the implementation of PBIS in the selected schools, including measuring effect size, cost-benefit ratios, and consumer satisfaction scales. In addition, the data were gathered on multiple occasions throughout the entire school year.

### Procedure

The study was conducted across 2 consecutive years beginning when school started in August and concluding in May. The study consisted of two phases: (a) baseline or Year 1 (2005-2006) and (b) treatment or Year 2 (2006-2007). The data were gathered over an 18-month period at each of the five participating schools. The study intervention was the school's participation in the UBI project or implementation of PBIS. The intervention included the following three phases: (a) infrastructure (training), (b) implementation (doing), and (c) continuous improvement (collecting and monitoring data).

#### Phase 1: Infrastructure (Training)

Phase 1 consisted of the following:

1. The school administrator completed an application.
2. The school administrator selected a building coordinator.
3. The school administrator selected a UBI team.
4. The school administrator and building coordinator attended 1-day summer training (in June) provided by state specialists. The topics



included were rationale for PBIS, key components of PBIS, role of building coordinator, steps for managing change, and an introduction to the UBI data system (i.e., entering meeting notes, compiling monthly data summaries, and requesting funding).

5. The UBI team attended a 2-day summer training (in August) provided by the district coach. The topics included were having an overview of key components for PBIS, establishing expectations, teaching expectations, reinforcing expectations, and correcting problem behaviors.
6. The team decided on school expectations and developed a plan to teach and reinforce expectations. Examples were given from other schools.
7. The team decided on the hierarchy of behavioral corrections in the school and also decided on major and minor infractions.
8. The team decided on the method to use for regular data collection.
9. The team created an action plan for the year, with no more than four goals. The action plan included methods for disseminating information to the entire staff and the funding needed to help facilitate the plan.
10. The team planned for team logistics, including regular meeting times twice a month and team roles and responsibilities. Examples can be obtained from the Utah Personnel Development Center (Mathie,



2006; see Appendix B).

11. The team attended two state training sessions held in the fall and spring. The state-sponsored institutes bring all participating UBI schools together for training and networking opportunities. The institutes have a keynote speaker in the morning and team time in the afternoon.
12. The building coordinator for each building met monthly with the district coach and other building coordinators to discuss successes and challenges.

#### Phase 2: Implementation (Doing)

Phase 2 consisted of the following:

1. The team prepared the school for new school rules. The team made school-rule posters for central locations and for each teacher.
2. The team set aside time at the beginning of the school year to teach the students new school rules in all locations throughout the school.
3. The team introduced the schoolwide system for reinforcing school rules to teachers, students, and parents. The team purchased reinforcers for both students and staff.
4. The team introduced the system for correcting problem behaviors to teachers, students, and parents.

### Phase 3: Continuous Improvement (Collecting and Monitoring Data)

Phase 3 consisted of the following:

1. The team met twice a month, reviewed data, and made necessary program changes. The team reviewed ODRs and PBIS tickets on a schoolwide level.
2. The team entered data summaries monthly on the UBI database.
3. The team gave staff members regular updates at monthly staff meetings.
4. The team planned booster sessions to teach school rules and expectations.
5. The team planned for the end-of-year SET and Principal's 200 Club Implementation Checklist.
6. The team used the formative evaluation provided by the district coach during monthly visits.

### Data Collection and Analysis

Each school served as the participant of analysis in all treatment conditions. Each school was evaluated as an independent participant. During the baseline year of the study, the school gathered behavioral data using a commercially available program. Schools used this system to enter ODRs or major infractions, classroom referrals or minor infractions, and schoolwide positives. This data system allowed schools to track referrals and positives by teacher, grade, student, location, and

time of day. Through the treatment year of the study, the district developed its own data-tracking system called *Encore*, with four out of the five schools using the Encore system. The fifth school continued to use the original system. The new Encore system was developed with my input, mirroring the data collected in common data-tracking systems. As a participating UBI school, once per month the school is required to submit a data summary online through the UBI database, to enter SET scores yearly, and to gather routine survey-level data. The data summary form is available in Appendix A (Mathie, 2005).

#### Reduction in Problem Behaviors

The question of a reduction in ODRs was answered by using the monthly data summary totals for ODRs submitted by the participating schools. In order to test for the effectiveness of PBIS implementation on ODRs, both visual inspection and the effect-size measure, as suggested by Busk and Serlin (1992), were used. An individual school effect size and a districtwide (projectwide) effect size were calculated. Cohen (1988) defined *effect size* as the difference between the means, M1 (baseline year) minus M2 (treatment year), divided by the baseline standard deviation. The effect size was calculated by the difference in the means of the baseline and treatment years divided by the baseline standard deviation:

$$M1 - M2/SD = ES.$$

### Level of Implementation

The level of implementation of PBIS was answered by using information gathered by the district coach for the SET evaluation and the Principal's 200 Club Implementation Checklist. The SET produces a percentage on each of the seven indicators as well as an overall percentage. For a school to be considered a high-implementing PBIS school, the school's SET scores should reflect 80% or greater on 80% of the indicators. In addition to the overall implementation percentages, the three low indicators were identified and factored out to determine specific areas where the schools showed the most difficulty. Taking the average score for each of the 28 questions and identifying the lowest average scores across the questions identified the most difficult areas.

The Principal's 200 Club Implementation Checklist was developed to measure intervention integrity. Modeled after the SET, the Principal's 200 Club Implementation Checklist has five indicators, each producing a percentage. Similar scoring of 80% or greater on 80% of the indicators reflects fidelity of implementation. In addition to the overall implementation percentages, the three low indicators were identified and factored out to determine specific areas where the schools showed the most difficulty. Taking the average score for each of the 27 questions and identifying the lowest averages across the questions identified the most difficult areas.

### Level of Consumer Satisfaction

The level of consumer satisfaction among teachers and students was measured by evaluating routinely gathered surveys. These data were entered into Excel data sheets in which descriptive analysis was completed on the indicated questions.

A voluntary sample of teachers completed the survey. A stack of surveys with instructions was left in the teachers' lounge with a box of candy bars as reinforcement for completion. The survey was a paper-and-pencil questionnaire with eight questions based on a 5-point, Likert-type scale (1 = *strongly disagree* and 5 = *strongly agree*). The following four questions were extracted to answer the question of consumer satisfaction: (a) I feel like UBI/PBIS is making a positive difference in my school; (b) I have seen a decrease in problem behaviors with the implementation of UBI/PBIS; (c) I like working in a school that promotes positive behavior; and (d) I have more instructional time because behavior is dealt with in a systematic way. Sixty-three teacher surveys were gathered from the schools.

The UBI project routinely gathers student surveys in the fall and asks the participating schools to randomly select students to complete the paper-and-pencil survey. The surveys are put in the teachers' boxes. The teachers are asked to distribute the surveys to a few students and then return them to the office when complete. There are two surveys: (a) lower elementary (Grades 1, 2, and 3) and (b) upper elementary (Grades 4, 5, and 6). The lower-elementary survey consists of seven yes/no questions. The questions used for the current study are as follows:

(a) I like school; (b) I know the school rules; (c) I like my teachers; and (d) My teachers like me. The upper-elementary survey consists of nine questions, with three potential answers (*always*, *sometimes*, and *never*). The questions used for the current study are as follows: (a) I follow my teacher's rules; (b) My teachers care about me; (c) My teachers are fair; and (d) In my school, everyone gets along.

### Continuum of Risk

With the implementation of PBIS, researchers have suggested that students should fall into a schoolwide continuum of risk (Sugai & Horner, 2002; Walker et al., 1996). For example, 80% of the students are compliant or display no risk, 15% are identified as at risk, and 5% are identified as high risk. The project modeled the national trend of zero to one ODRs representing compliance or no risk, two to five ODRs representing the at-risk group, and six or more ODRs representing the high-risk group. Percentages were reported of students falling into the designated risk groups. Using their data system, each school can print behavior reports detailing the number of students who fall into each risk category in the baseline and treatment year. In order to visually represent the data and to maintain consistency with the national trend, the continuum was plotted on a triangle graph with representation for each risk category. As enrollment at each school varies, the percentages of students in each risk category were calculated per 100 students in order to maintain consistency.

### Increased Positive Environment

The question of an increased positive environment was answered by using the monthly data summary totals for schoolwide positives submitted by participating schools. The respective scatterplots for each participating school showed the relationship between ODRs and positive reinforcement. Using Pearson's correlation, the monthly totals of ODRs and positives, per 100 students, were used to determine the significance of the relationship.

### Cost Effectiveness

Using the monthly data summaries submitted by the schools, the difference in the total number of ODRs for the baseline year and treatment year was calculated to determine time and money saved by each school administrator. Time saved was calculated by multiplying the referral difference of the baseline year and treatment year by 15 minutes, which is a conservative estimate for the time it takes an administrator to deal with an ODR:

$$\text{Baseline ODRs} - \text{Treatment ODRs} \times 15 \text{ minutes.}$$

Total minutes were calculated into hours, days, or both. Students are usually in school approximately 6 hours; thus, 1 day was equal to 6 hours. Once the time was calculated into hours, days, or both, it was converted into a dollar amount. The average administrator's salary was broken down into hours and days. In the participating district, an administrator who has been working for 10 years makes \$77,460 for a 260-day contract, making the salary \$297.92 per day. Each school



received the amount of time and money saved through this calculation.

Three questions on the paper-and-pencil teacher questionnaire were used to measure administrator efficiency as perceived by the teachers. The first two questions were based on a 5-point, Likert-type scale (1 = *strongly disagree* and 5 = *strongly agree*). These questions were as follows: (a) As a UBI/PBIS school, my administrator's time is used more effectively and (b) With the implementation of UBI/PBIS, our school resources are used more effectively. The third question was a multiple-choice question, stating: I would like to see my administrator provide more (a) instructional leadership in the classroom, (b) options for disciplining the most difficult students, or (c) other (where the participant can fill in the blank). The administrator at each participating school was asked to complete a paper-and-pencil questionnaire that asked the following questions: (a) I feel like my time is used more effectively with the implementation of UBI/PBIS; (b) With the implementation of UBI/PBIS, our school resources are used more effectively; and (c) I have more time because behavior is dealt with in a systematic way.

## CHAPTER 3

### RESULTS

The goals of the present research were to determine the effects of positive behavior support within a district model of implementation.

#### Research Question 1

Research Question 1 asked: Does the implementation of PBIS result in a reduction of ODRs? The collection of data utilized the commercially available data system MES Discipline Tracker® (Mansker Enterprises Software, 2007-2009) for the baseline year and the district system for the intervention school year. Data are reported per 100 students in order to standardize the scale. Table 8 displays the range, mean, standard deviation, and effect size of the district and each participating school. Effect sizes in the current study were based on Cohen's (1988) standard: An effect size of .20 was considered a small effect, an effect size of .50 was considered a medium effect, and an effect size of .80 was considered a large effect.

Of the five schools, only two schools showed a medium effect size of the intervention. School B had an effect size of 0.5075 and School C had an effect size of 0.6989, both indicating a medium effect size. School D had an effect size of -0.0970, indicating a less than small effect size. The other two schools showed a

Table 8

*Range, Mean, Standard Deviation, and Effect Size for Office Discipline Referrals*

	Range	<i>M</i>	<i>SD</i>	Effect size
<u>School A</u>				-6.2824
Baseline	2.4675 to 6.1428	3.5995	1.3627	
Intervention	7.4550 to 18.8946	12.1606	3.3568	
<u>School B</u>				0.5075
Baseline	3.6144 to 26.0240	9.6656	8.5832	
Intervention	4.6109 to 6.4265	5.3089	0.6106	
<u>School C</u>				0.6989
Baseline	2.1857 to 7.3360	5.4295	3.1951	
Intervention	0.0448 to 5.5289	3.1964	1.8744	
<u>School D</u>				-0.0970
Baseline	0.9360 to 8.2683	3.1435	2.7942	
Intervention	0.1472 to 7.552	3.4167	2.3054	
<u>School E</u>				-2.7074
Baseline	5.0445 to 7.5964	6.3204	1.8044	
Intervention	7.5709 to 18.7066	11.2057	3.3403	
<u>Total (N = 5)</u>				-0.2809
Baseline	0.9360 to 26.0240	5.6235	5.2153	
Intervention	0.0448 to 18.8946	7.0888	4.6135	

negative effect size: School A had an effect size of -6.2824 and School E had an effect size of -2.7074. Overall, the district total effect size was -0.2809. Although some effect was noted at three of the schools, Research Question 1 was not satisfied because there was not an overall effect. Figure 4 shows the district total of ODR data per 100 students for the baseline and treatment years.

### Research Question 2

Research Question 2 asked: What is the level of implementation of PBIS? In order to answer this question, the district coach conducted an on-site evaluation using the SET and the Principal's 200 Club Implementation Checklist.

The SET measures the overall level of PBIS implementation by calculating seven subscale scores and an average summary score. A school can be considered

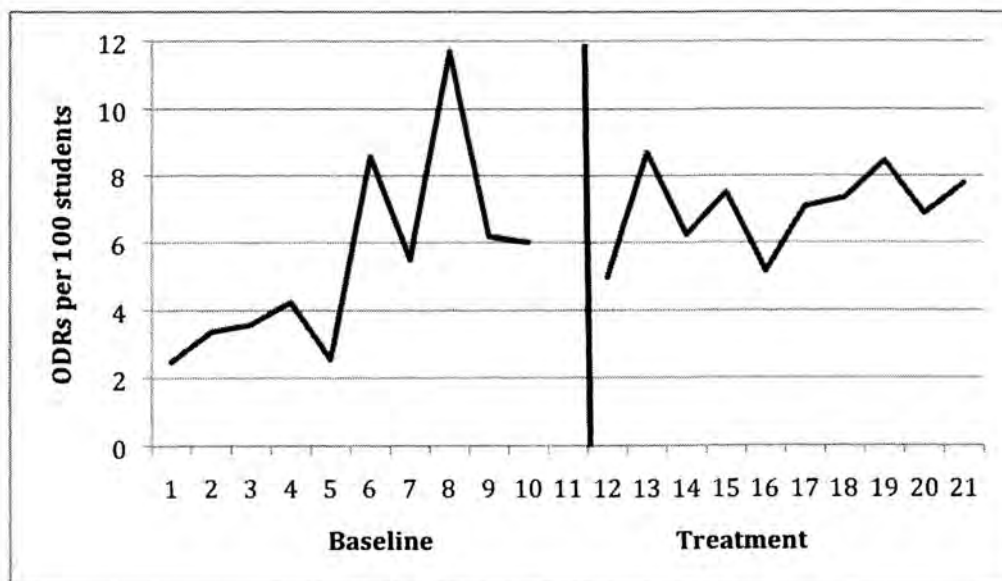


Figure 4. District: Mean office discipline referrals per 100 students.

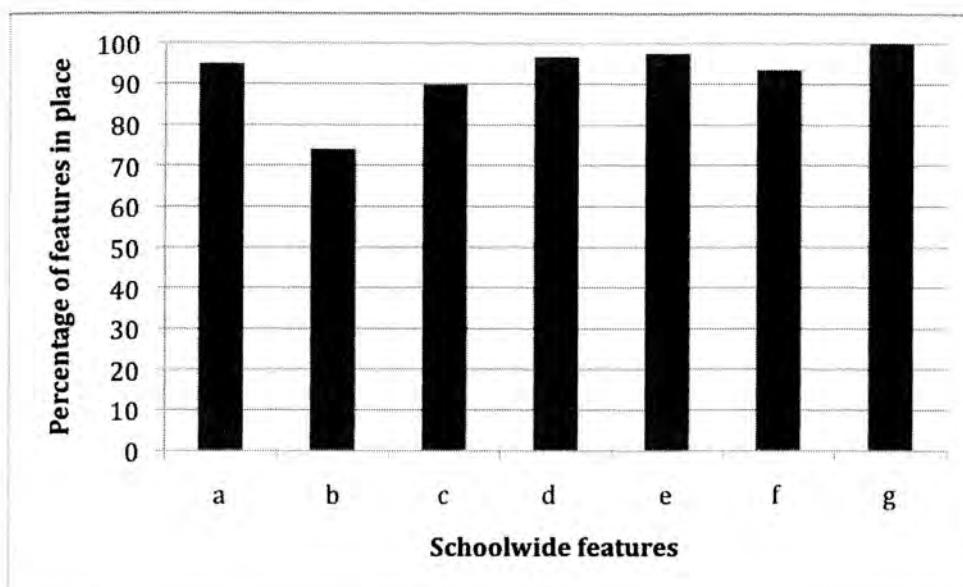
to have a high fidelity of implementation by meeting the following two conditions: (a) scoring 80% or higher on the summary score and (b) scoring 80% or higher on at least six of the seven subscales. Based on the SET, the five participating schools had a high level of implementation. Table 9 presents the range of scores achieved by the participants on the seven subscales and the summary score as determined by the SET. The two indicators with the most variability were expectations defined and teaching expectations. These areas are where the schools have the most difficult time maintaining a high level of implementation.

Figure 5 shows the district average of the five participating schools. The district averages indicate that this district would be considered a high-implementing district, with six of the seven indicators being above 80%. The lowest three indicators were the following: (b) behavioral expectations taught, scoring 74%; (c) ongoing system for rewarding behavioral expectations, scoring 89.8%; and

Table 9

*Schoolwide Evaluation Tool Results (N = 5)*

	Range (%)	M (%)	SD
Expectations defined	75.00 to 100.00	95.00	11.1803
Teaching expectations	50.00 to 90.00	74.00	15.1657
Rewarding expectations	83.00 to 100.00	89.80	9.3112
Correcting behavioral errors	83.00 to 100.00	96.60	7.6026
Monitoring behavior	88.00 to 100.00	97.60	5.3665
Managing data	81.00 to 100.00	93.60	9.0166
District and state support	100.00	100.00	.0000
Summary score	86.90 to 98.60	92.38	5.1577



*Figure 5.* Total averages for Schoolwide Evaluation Tool.

(f) management, scoring 93.6%. The highest three indicators were the following: (g) district- and state-level support, scoring 100%; (e) monitoring and decision making, scoring 97.6%; and (d) system for responding to behavioral violations, scoring 96.6%.

Likewise, at the school level, each of the participating sites would be considered high-implementing schools based on their SET scores. School A's lowest indicators were the following: (b) behavioral expectations taught, scoring 70%; (f) management, scoring 81%; and (c) ongoing system for rewarding behavioral expectations, scoring 83%. The highest three indicators were the following: (a) expectations defined, scoring 100%; (d) system for responding to behavioral violations, scoring 100%; and (g) district- and state-level support, scoring 100%.

School B's lowest indicator was (b) behavioral expectations taught, scoring 80%. School B scored 100% on the other six indicators. Similarly, School C's lowest indicator was (b) behavioral expectations taught, scoring 90%. School C also scored 100% on the other six indicators. School D's lowest indicators were the following: (a) expectations defined, scoring 75%; (b) behavioral expectations taught, scoring 80%; (c) ongoing system for rewarding behavioral expectations, scoring 80%; and (d) system for responding to behavioral violations, scoring 83%. The highest indicators for School D were the following: (e) monitoring and decision making, scoring 100%; (g) state- and district-level support, scoring 100%; and (f) management, scoring 87%. School E's lowest indicators were the following: (b) behavioral expectations taught, scoring 50% and (c) ongoing system for rewarding behavioral expectations, scoring 83%. School E scored 100% on the other five indicators (see Appendix C).

Each of the seven indicators on the SET has individual questions that were factored into each indicator score. By taking the average of each of the 28 questions, the lowest average per question reflected potential areas of difficulty for PBIS progress at the school level. The questions are scored 0, 1, or 2. The questions contributing to indicator (b), behavioral expectations taught, are the majority of questions with the lowest average score. Students and staff being able to state school rules when asked are two areas with low-average scores. Another question with a low average is the reflection of the schoolwide effort to improve behavior as part of the school improvement plan. This question asks schools to



recognize the implementation of PBIS as a priority, not just another initiative in their building. This question also indicates that time and resources will be allocated for implementation of the PBIS. Table 10 shows the individual SET questions with the lowest averages.

Another source of data used to measure the level of implementation was the Principal's 200 Club Implementation Checklist. The purpose of the Principal's 200 Club Implementation Checklist is to measure the treatment fidelity of the Principal's 200 Club. The Principal's 200 Club questions are grouped into the following five indicator categories: (a) setting and implementation (i.e., visibility

Table 10

*Schoolwide Evaluation Tool Questions With Lowest Averages*

Question	Indicator	Average
Can at least 70% of 15 or more students state 67% of the school rules?	(b) Behavioral expectations taught	0.8
Does the school improvement plan list improving behavior support systems as one of the top three school improvement plans goals?	(f) Management	1.2
Can 90% or more of the staff asked list 67% of the school rules?	(b) Behavioral expectations taught	1.4
Is there a documented system for teaching behavioral expectations to students on an annual basis?	(b) Behavioral expectations taught	1.6
Do 90% of the staff asked state that teaching behavioral expectations to students has occurred this year?	(b) Behavioral expectations taught	1.6
Do 90% of the staff asked indicate they have delivered a reward (other than verbal praise) to students for expected behavior over the past 2 months?	(c) Ongoing system for rewarding behavioral expectations	1.6

of the Principal's 200 Club matrix, Principal's 200 Club tickets, and Principal's 200 Club record book); (b) staff participation; (c) student participation; (d) school-based manager; and (e) administrator's participation. A school with high fidelity would be a school that is receiving at least an 80% average score on 80% of the indicators.

Table 11 presents the scores achieved by the participants on the five indicators included with the Principal's 200 Club Implementation Checklist and the summary scores. The areas with the most variability are the setting and implementation indicator and the administrator's participation indicator. These indicators represent the difficulty with initial start-up of a new intervention and the principal's participation in the positive reinforcement.

Figure 6 shows the district average for the four participating schools. One of the schools (School D) did not use the Principal's 200 Club to track

Table 11

*Principal's 200 Club Fidelity Checklist Results ( $n = 4$ )*

	Range (%)	<i>M</i> (%)	<i>SD</i>
Setting and implementation	57.00 to 100.00	80.25	22.98
Staff participation	100.00	100.00	00.00
Student participation	83.00 to 100.00	90.25	6.99
School-based manager	88.00 to 100.00	97.00	6.00
Administrator participation	75.00 to 100.00	90.63	11.97
Summary score	83.00 to 97.50	92.03	6.56

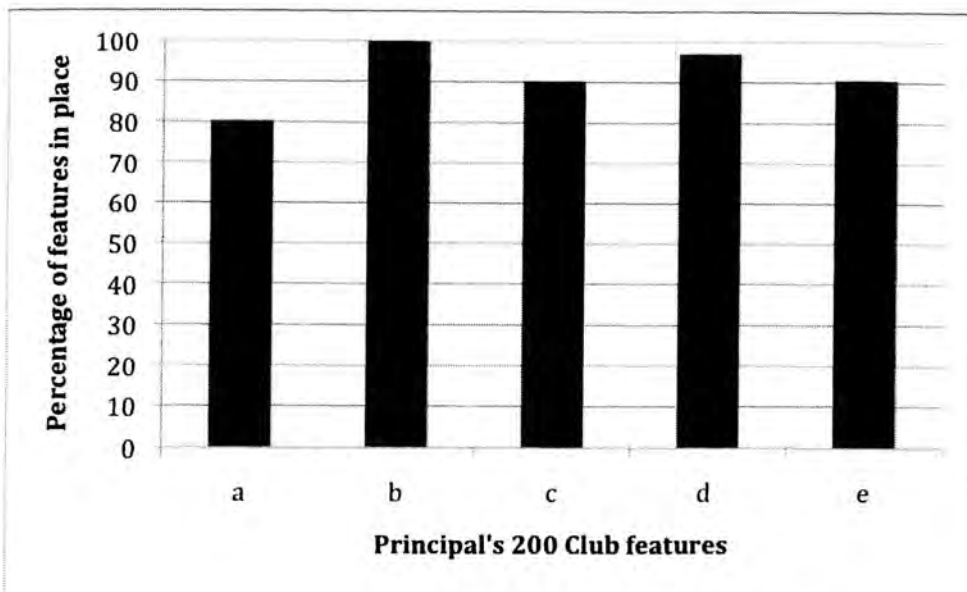


Figure 6. District average for Principal's 200 Club ( $n = 4$ ).

reinforcement. The district averages indicate that this district would be considered a district with high fidelity, with all of the five indicators being above 80% (see Figure 6). The lowest district indicator was (a) setting and implementation, scoring 80.25%, and the highest indicator was (b) staff, scoring 100%.

School A's lowest indicators were the following: (a) setting and implementation, scoring 57% and (d) administration, scoring 75%. The highest indicators for School A were the following: (b) staff, scoring 100%, and (d) school-based manager, scoring 100%. School B's lowest indicator was (e) administration, scoring 87.5%. The other four indicators for School B were all scored at 100%. School C's two lowest indicators were the following: (d) school-based manager, scoring 88%, and (c) students, scoring 93%. School C scored 100% on the remaining three indicators. The lowest indicators for School E were

the following: (a) setting and implementation, scoring 64%, and (c) students, scoring 93%. School E scored 100% on the additional indicators (see Appendix C).

Taking the average for each of the 27 questions reflected the lowest average per question and, thus, areas of difficulty for the participating schools. Each question was scored 0, 1, or 2. The questions with low-average scores contributing to the low average of indicator (a), setting and implementation, were displaying the activities, having students sign the reward book, and calling parents to notify them of student success. These indicators involved critical elements of success. Table 12 shows the questions with the lowest averages. Based on the indicators of implementation (i.e., SET and Principal's 200 Club Checklist), the participating schools would be considered implementing PBIS at a high level, satisfying Research Question 2.

### Research Question 3

Research Question 3 asked: What is the level of consumer satisfaction among teachers with the implementation of PBIS and what are the implications of social validity? In order to answer this question, teachers at participating schools completed the survey. Using a 5-point, Likert-type scale, ranging from 1 = *strongly disagree* to 5 = *strongly agree*, survey respondents were asked to specify their level of agreement to statements related to the following: (a) I feel like UBI/PBIS is making a positive difference in my school; (b) I have seen a decrease in problem behaviors with the implementation of UBI/PBIS; (c) I like working in a school that promotes positive behavior; and (d) I have more instructional time

Table 12

*Principal's 200 Club Implementation Checklist Questions With Lowest Averages*

Question	Indicator	Average
Are the Principal's 200 Club activities displayed?	(a) Setting and implementation	1.00
What is the average time between a bingo on the Principal's 200 Club board and the delivery of the reinforcement or reward?	(e) Administrator	1.25
Does the school have a record book where students can sign their name upon turning in a Principal's 200 Club ticket?	(a) Setting and implementation	1.50
Does the school systematically notify parents when a student receives a Principal's 200 Club ticket?	(a) Setting and implementation	1.50

because behavior is dealt with in a systematic way. Sixty-three teacher surveys were gathered from the schools.

The responses indicated a high level of overall satisfaction of PBIS in the schools, a decrease in problem behaviors, and more time for instruction; thus, Research Question 3 was satisfied. Of the teachers surveyed, 82% saw a positive impact in their schools and 98% liked working in a school that promoted positive behaviors. Of the teachers surveyed, 68% saw a decrease in problem behavior and 57% believed they had more instructional time because behavior was dealt with systematically. Table 13 represents the overall response rates for all four questions.

Table 13

*Rates of Responses to Social Validity Measure ( $N = 63$ )*

Question	1 = <i>Strongly disagree</i>		2 = <i>Disagree</i>		3 = <i>Not sure</i>		4 = <i>Agree</i>		5 = <i>Strongly agree</i>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Positive difference in school	0	0.00	3	5.00	8	13.00	23	36.00	29	46.00
Decrease in problem behaviors	0	0.00	6	10.00	14	22.00	26	41.00	17	27.00
Like working in a school that promotes positive behavior	0	0.00	1	2.00	0	00.00	13	20.00	49	78.00
More instructional time	1	2.00	4	6.00	22	35.00	20	32.00	16	25.00

#### Research Question 4

Research Question 4 asked: With the implementation of PBIS, do students fall into in the percentages represented in the continuum of schoolwide instructional and positive behavior support (i.e., 80% of students are compliant, 15% identified as at risk, 5% identified as high risk). What group of students has the largest reduction in ODRs? In order to answer this question, the frequency of ODRs per student was evaluated. The students were placed into three groups based on the frequency with which they receive an ODR. The three groups were the following: (a) no risk or zero to one infraction, (b) at risk or two to five infractions, and (c) high risk or six or more infractions. The ODR rates were compared at each school for the baseline year and the treatment year. Table 14 shows the percentage of students in the risk categories. Only four out of the five participating schools gathered enough data to evaluate the level of risk for both years.

The data suggested that two of the participating schools (School B and School C) saw a reduction in their total number of ODRs. School B saw the largest reduction in the high-risk category and School C saw the largest reduction in the at-risk category. School A saw an increase in all three levels of risk from the baseline year to the treatment year. School D displayed no change in their high-risk level, a minor change in their no-risk level, and a minor change in their at-risk level. Percentages of the schools combined showed a small increase in each category. The four schools with enough data to evaluate the level of risk for both years show their students falling into the continuum of schoolwide instructional and



Table 14

*Percentage of Students in the Risk Categories*

	No risk	At risk	High risk
<u>School A</u>			
Baseline	90	9	1
Intervention	84	12	4
<u>School B</u>			
Baseline	81	11	8
Intervention	87	12	2
<u>School C</u>			
Baseline	89	10	1
Intervention	99	1	0
<u>School D</u>			
Baseline	99	1	0
Intervention	97	2	0
<u>School E</u>			
Baseline	N/A	N/A	N/A
Intervention	73	19	8
<u>Total</u>			
Baseline	90	8	2
Intervention	88	9	3

*Note.* N/A = not applicable.

positive behavior support. The continuum suggests that 80% of the students should fall into the no-risk category, 15% into the at-risk category, and 5% into the high-risk category. The participating schools reflected these risk categories in both the baseline and treatment year. Globally, during the treatment year, the schools saw a small decrease in students falling into the no-risk category (-2%) and an increase in students falling into the at-risk (+1%) and high-risk categories (+1%). Therefore, the results of Research Question 4 are equivocal at best. However, differentially, looking at each school shows slightly different trends. Figures 7, 8, 9, 10, and 11 show the percentage of students receiving ODRs at the three levels of risk.

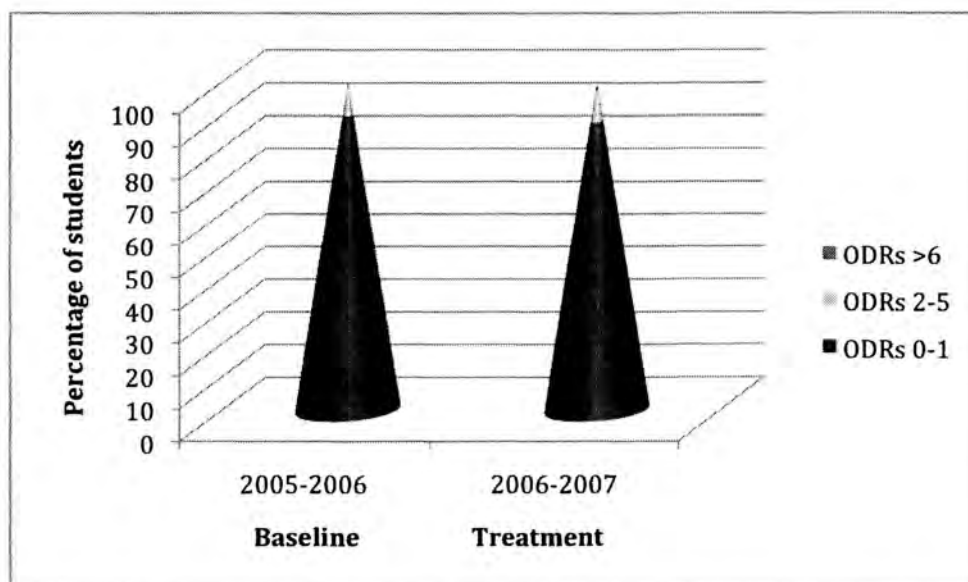


Figure 7. Total ( $N = 5$ ): Risk level of students receiving office discipline referrals.

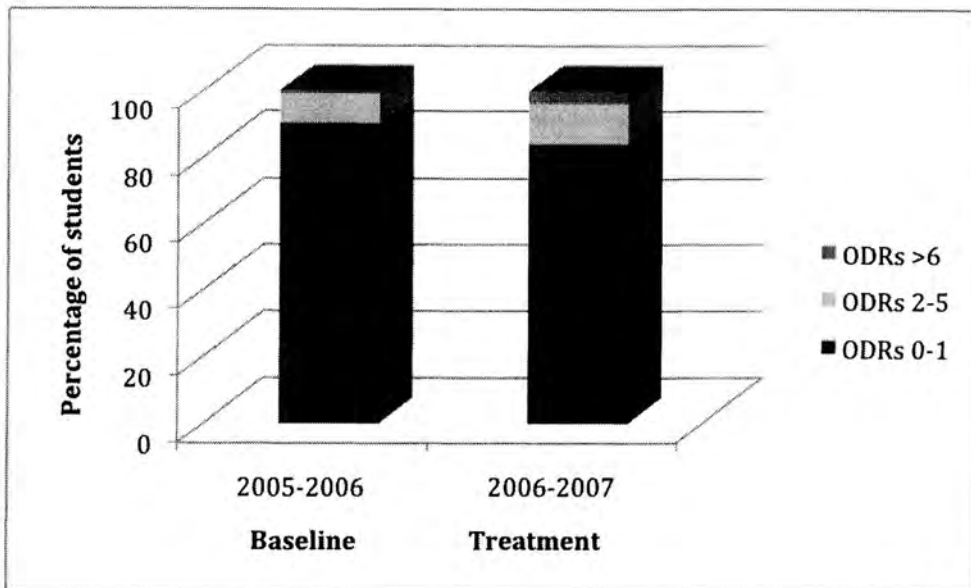


Figure 8. School A: Risk level of students receiving office discipline referrals.

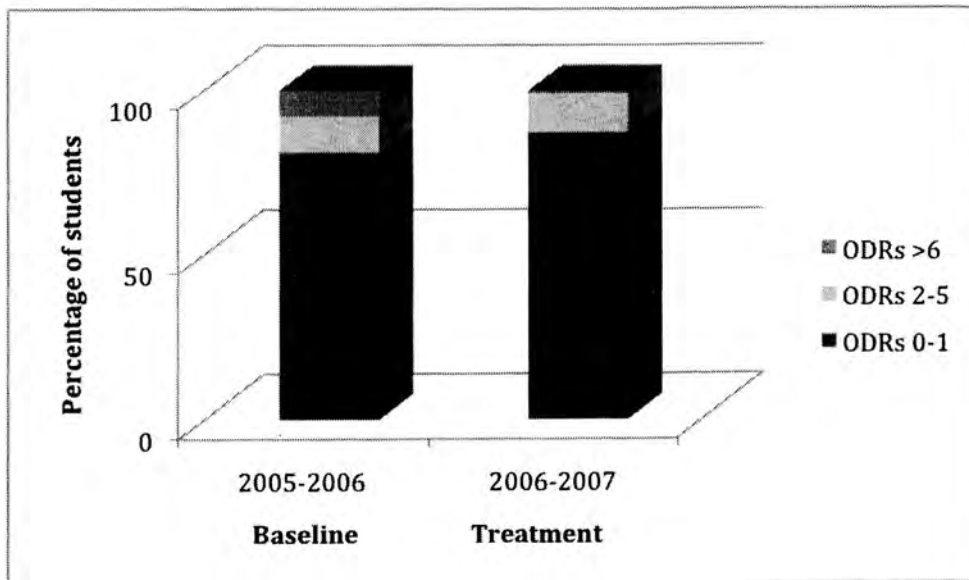


Figure 9. School B: Risk level of students receiving office discipline referrals.

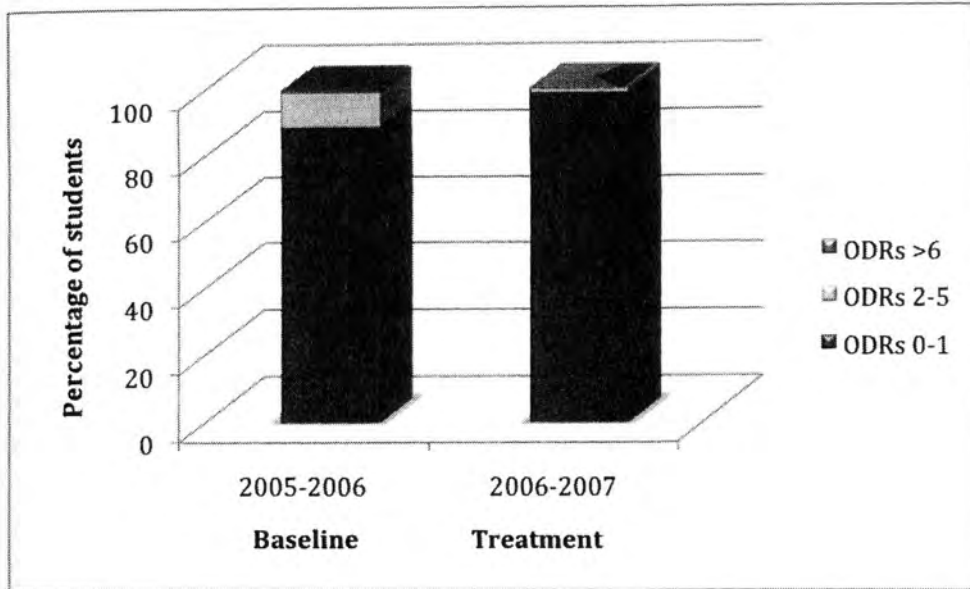


Figure 10. School C: Risk level of students receiving office discipline referrals.

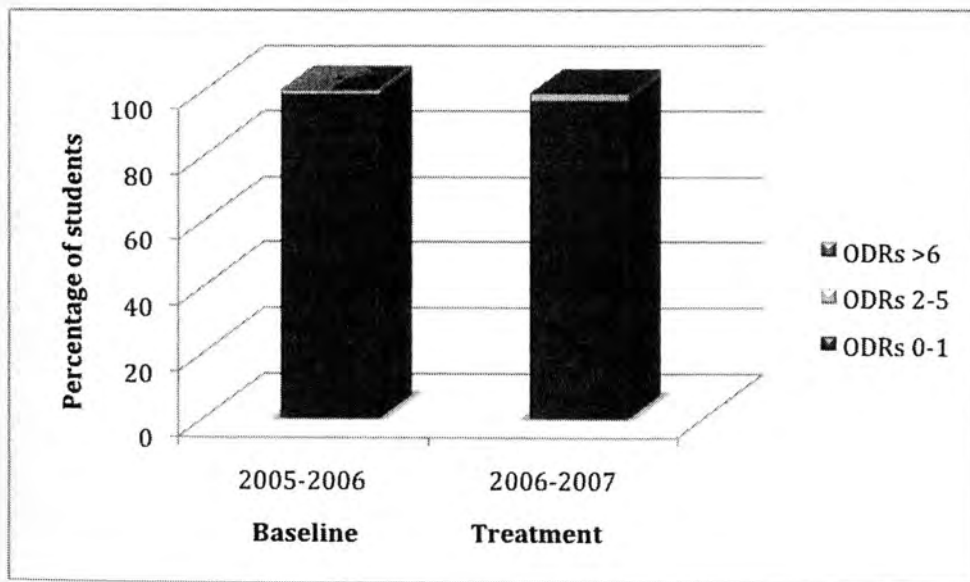


Figure 11. School D: Risk level of students receiving office discipline referrals.

### Research Question 5

Research Question 5 asked: With implementation of the PBIS, is there a correlation between ODRs and positive reinforcement? In order to answer this question, the data were collected using the UBI data summary for each participating school, tracking their ODRs and schoolwide positive reinforcement. The scatterplot suggests no trend or correlation pattern between positive reinforcement and ODRs for the treatment year. The XY plots of schoolwide positive reinforcement and the ODR rate demonstrated no linear relationships. An analysis using Pearson's correlation coefficient confirmed this observation:

(a) district total,  $r(80) = .005$ ,  $p = .962$ ; (b) School A,  $r(16) = .040$ ,  $p = .884$ ;  
(c) School B,  $r(17) = .140$ ,  $p = .592$ ; (d) School C,  $r(18) = -.065$ ,  $p = .797$ ;  
(e) School D,  $r(18) = .376$ ,  $p = .124$ ; and (f) School E,  $r(11) = -.122$ ,  $p = .720$ . Research Question 5 was not satisfied because the analysis showed no correlation between ODRs and positive reinforcement.

Figures 12 and 13 display an XY plot of schoolwide positive reinforcement and ODR rate across the district. The XY plot for each participating school ( $N = 5$ ) can be found in Appendix C.

### Research Question 6

Research Question 6 asked: What is the level of consumer satisfaction based on student report with implementation of PBIS? In order to answer this question, students completed a survey distributed during late fall at the participating schools. One survey was used for Grades 1, 2, and 3 and another survey was used for

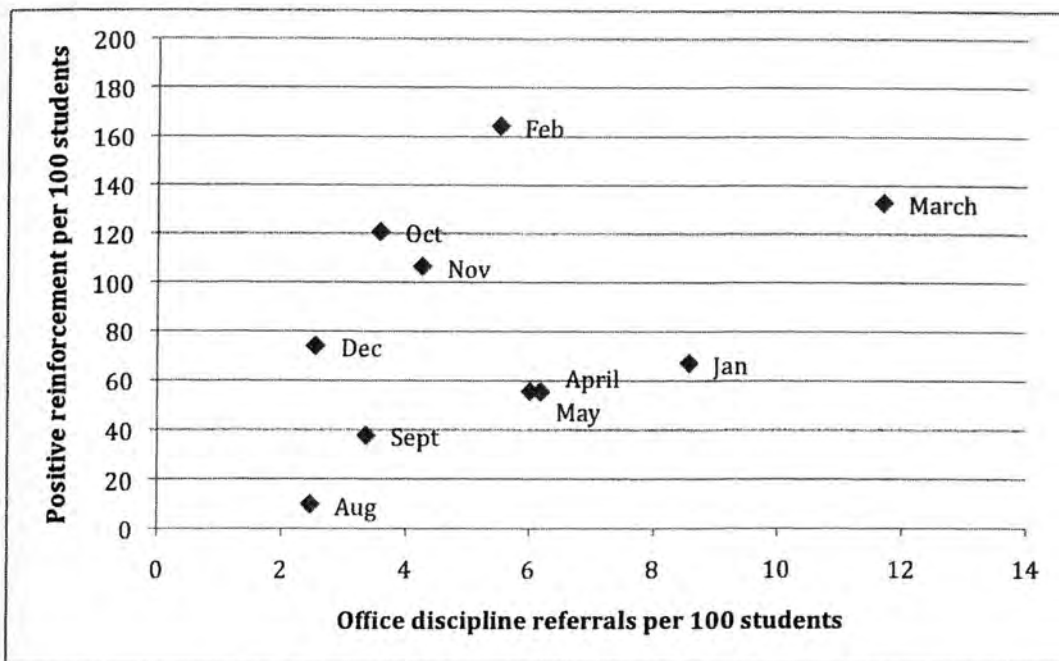


Figure 12. XY plot of schoolwide positive reinforcement and office discipline referral rate for district during baseline year by month.

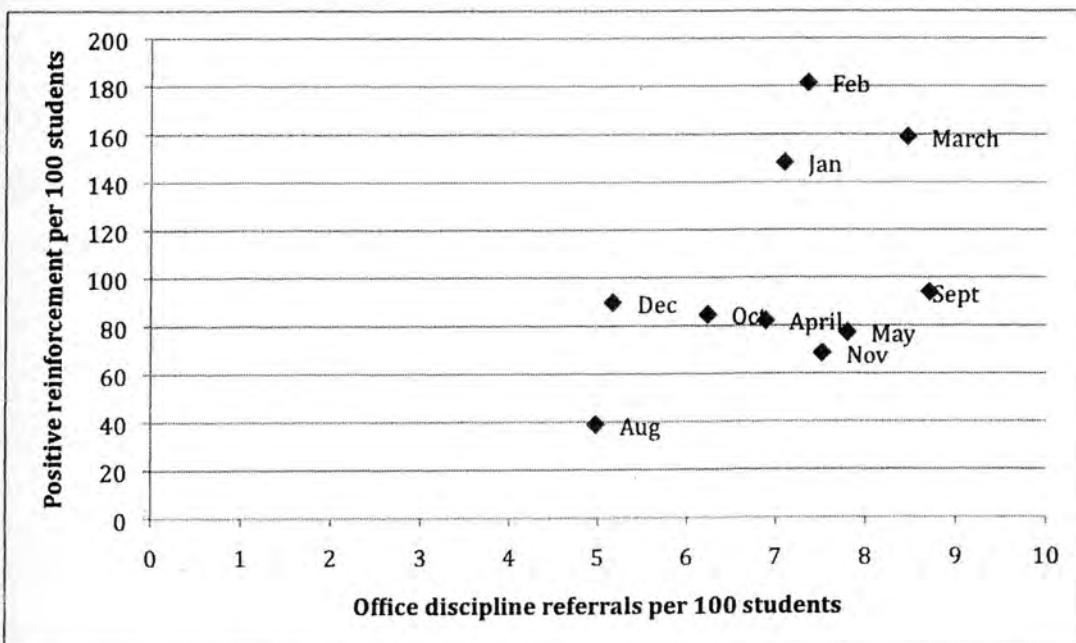


Figure 13. XY plot of schoolwide positive reinforcement and office discipline referral rate for district during treatment year by month.

Grades 4, 5, and 6. The younger students (Grades 1, 2, and 3) answered with a yes/no response and were asked the following questions: (a) I like school; (b) I know the school rules; (c) I like my teachers; and (d) My teachers like me. Six hundred ninety-six students (Grades 1, 2, and 3) completed this survey. The results of the early grade survey indicated that the majority of students likes school, likes their teachers, believes their teachers like them, and knows the school rules.

Research Question 6 was satisfied, indicating a high level of consumer satisfaction based on self-report from early elementary school students (Grades 1, 2, and 3).

Table 15 represents the overall responses for all four questions.

The older students (Grades 4, 5, and 6) answered their survey with *always*, *sometimes*, and *never*. They were asked the following questions: (a) I follow my teacher's rules; (b) My teachers care about me; (c) My teachers are fair; and (d) In my school, everyone gets along. Six hundred forty-one students (Grades 4, 5, and 6) completed this survey. The majority of students reported that they follow their teachers' rules, their teachers care about them, and their teachers are fair—

Table 15

*Student Survey: Grades 1, 2, and 3 ( $n = 696$ )*

Question	Yes		No	
	<i>N</i>	%	<i>N</i>	%
I like school.	527	88.00	74	12.00
I know the school rules.	619	90.00	70	10.00
I like my teachers.	681	99.00	5	1.00
My teachers like me.	645	93.00	51	7.00



indicating a high level of student satisfaction. The majority of students (84%) reported that the students in their school *always* or *sometimes* get along in the school. Only 2% of the students reported that the students in their school *never* get along. Based on this survey, the level of school satisfaction seems to be high in the participating schools, satisfying Research Question 6. However, that analysis, based on this survey, should be interpreted with caution. Table 16 represents the overall responses for all four questions.

#### Research Question 7

Research Question 7 asked: With implementation of PBIS, is administrator time and school resources used more efficiently? In order to answer this question, teachers and administrators at participating schools completed the survey. Using a 5-point, Likert-type scale, ranging from 1 = *strongly disagree* to 5 = *strongly agree*, teachers were asked to specify their level of agreement to statements related to the following: (a) As a UBI/PBIS school, my administrator's time is used more

Table 16

*Student Survey: Grades 4, 5, and 6 (n = 641)*

Question	<i>Always</i>		<i>Sometimes</i>		<i>Never</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
I follow my teacher's rules.	451	71.00	174	28.00	3	1.00
My teachers care about me.	595	93.00	35	6.00	8	1.00
My teachers are fair.	478	76.00	140	22.00	13	2.00
In my school, everyone gets along.	45	8.00	423	76.00	89	16.00

effectively and (b) With the implementation of UBI/PBIS, our school resources are used more effectively. Sixty-three teacher surveys were gathered from the schools. The responses indicated a high level of overall satisfaction of PBIS in the schools, a decrease in problem behaviors, and more time for instruction. In addition, 23 teachers reported they would like to see their administrator provide more options for disciplining the most difficult students, and 10 teachers reported they would like more instructional leadership in the classroom. Table 17 represents the overall response rates for the two questions.

Using a 5-point, Likert-type scale, ranging from 1 = *strongly disagree* to 5 = *strongly agree*, administrators were asked to specify their level of agreement to statements related to the following questions: (a) I feel like my time is used more effectively with the implementation of UBI/PBIS; (b) With the implementation of UBI/PBIS, our school resources are used more effectively; and (c) I have more time because behavior is dealt with in a systematic way. Nine administrator surveys (i.e., principals and assistant principals) were gathered from the schools. The responses indicated a high level of agreement that time and resources are used more effectively and that more time is available because behavior is dealt with in a systematic way. Table 18 represents the overall response rates for questions answered by the administrators.

A cost analysis for each school was calculated by taking the difference between the ODRs in the baseline year and treatment year and multiplying that difference by 15 minutes, which is a conservative estimate of administrator time

Table 17

*Rates of Responses to Social Validity Measure: Teacher's Perception*

Question	1 = <i>Strongly disagree</i>		2 = <i>Disagree</i>		3 = <i>Not sure</i>		4 = <i>Agree</i>		5 = <i>Strongly agree</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Administrator time used more effectively ( <i>n</i> = 61)	0	0.00	3	5.00	21	34.00	19	31.00	18	30.00
School resources ( <i>n</i> = 63)	0	0.00	4	6.00	15	24.00	25	40.00	19	30.00

Table 18

*Rates of Responses to Social Validity Measure: Administrator's Perception*

Question	1 = <i>Strongly disagree</i>		2 = <i>Disagree</i>		3 = <i>Not sure</i>		4 = <i>Agree</i>		5 = <i>Strongly agree</i>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Administrator time used more effectively ( <i>N</i> = 8)	0	00.00	0	00.00	0	00.00	3	36.00	5	64.00
School resources used more effectively ( <i>N</i> = 9)	0	00.00	0	00.00	2	22.00	4	45.00	3	33.00
More time available because behavior is dealt with in a systematic way ( <i>N</i> = 9)	0	00.00	0	00.00	0	00.00	6	67.00	3	33.00

used to handle the ODRs. The minutes were then converted into hours and days. The rate average salary of an elementary administrator in the participating district per day was then multiplied by the days. Two of the participating schools showed a saving in both time and money, ranging from \$1,811.95 to \$2,127.62. Three of the participating schools lost money (i.e., \$389.68, \$671.51, and \$5,227.24). Globally, the district did not save administrator time and money when implementing UBI practices in the schools. The research question was not satisfied at the global level, but at the individual school level, the results were equivocal. Table 19 shows the administrator days and salary saved by implementing UBI/PBIS.

Table 19

*Office Discipline Referrals, Difference, Days, and Money Saved*

	ODRs	Difference of ODRs	Days saved	Money saved
<u>School A</u>		-420.80	17.54	-\$5,227.24
Baseline	166.60			
Intervention	587.40			
<u>School B</u>		171.40	7.14	\$2,127.62
Baseline	320.90			
Intervention	149.50			
<u>School C</u>		145.97	6.08	\$1,811.95
Baseline	357.70			
Intervention	211.73			
<u>School D</u>		-54.10	-2.25	-\$ 671.51
Baseline	161.20			
Intervention	215.30			
<u>School E</u>		-31.40	-1.30	-\$ 389.68
Baseline	42.60			
Intervention	74.00			
<u>Total (N = 5)</u>		-104.43	-4.35	-\$1,296.26
Baseline	143.16			
Intervention	247.59			

*Note.* ODRs = office discipline referrals.

## CHAPTER 4

### DISCUSSION

Throughout the United States, schools are making an effort to focus on prevention through schoolwide discipline programs rather than on reactive disciplinary programs (Drasgow & Yell, 2002; Horner et al., 2000; Walker & Epstein, 2001). This change comes after schools historically have used more punitive disciplinary procedures when dealing with problem behaviors (Brophy & McCaslin, 1992; Drasgow & Yell; Gottfredson & Gottfredson, 2001). The research on punitive procedures has not shown positive impact or measurable outcomes in schools (Morrison & Skiba, 2001), creating a need for change. Schools throughout the county are adopting the PBIS model as a way to address those needs.

It has also been documented that communities contribute to behavior problems by not providing appropriate prerequisite skills needed or by modeling appropriate social interactions. Literature has suggested that the more risk factors a child is exposed to over time, the more likely the child will have negative outcomes such as school failure and delinquency (Lewis et al., 1998; Walker et al., 1996). Morrison and Skiba (2001) suggested that students with a high number of risk factors may fit better in a school that keeps students in school and behaving in a productive way.



One of the roles of school personnel should be to help children reach resilient outcomes (Walker et al., 1996). A resilient classroom is one in which a student can be successful emotionally, academically, and socially (Doll et al., 2004). Effective schools and classrooms have clear goals and expectations for all students, they display a sense of order and discipline, they reward teachers, they praise and recognize student performance, they have ongoing monitoring and progress reports, they use a variety of discipline procedures, and they handle disruptive behavior in a low key manner (MacKay, 1982). Schoolwide positive behavior support includes a range of systemic and individual strategies for achieving social and learning outcomes while preventing or reducing problem behavior for all students (Horner et al., 2005).

This research project looked at the effectiveness of a PBIS system within a district model of implementation. With passage of the Utah Board of Education Rule, R277-609, all districts, schools, and charters must develop the components of PBIS in their settings. Districts are in need of replicating the PBIS with high implementation and low cost. The current research used the UBI project as scaffolding for training, implementation, and evaluation for purposes of PBIS replication.

The present study measured the reduction of ODRs with implementation of the PBIS. ODRs are often used as ongoing indicators of student behavior (Clonan et al., 2007). According to Irvin et al. (2004), ODRs can be used for assessing the effectiveness of schoolwide behavioral intervention programs and schoolwide

behavioral climate. In the current study, there was not a global effect of the intervention or a total effect for all participating schools. At the global level after 1 year of PBIS implementation, there was not an overall reduction in ODRs.

However, at the school level, some effect was noted. Two of the five schools showed a medium effect size of 0.51 and 0.70 and one school showed an effect size of 0.09. The variability of these effect sizes can be explained by two possible factors. According to Rusby, Taylor, and Foster (2007), students who were in schools that had a systematic way of tracking referrals were more likely to receive a referral, suggesting that once schools begin tracking behavior they may see more students displaying that behavior or the prevalence of an “awareness bump.” Schools develop a formal tracking system and become more vigilant at tracking behavior data, which could result in an increase of ODRs once they are being tracked. In addition, the amount of time used for the present study may not have been long enough to see effective change. In another participating UBI district in Utah, it took 3 years to see a change in ODRs.

The level of PBIS was measured by the SET and the Principal’s 200 Implementation Checklist. According to Horner et al. (2004), the SET meets the basic psychometric criteria for measurement tools used in research. The SET is noted as being used for assessing the impact of personnel development efforts in the area of schoolwide PBIS. The combined average of participating schools was 80% or higher on six of the seven indicators; therefore, collectively, the sites would be considered high implementers. Of the seven indicators, the lowest global

indicator was behavioral expectations taught. In addition, teaching expectations had the most variability, with a standard deviation of 15.16. This indicator requires the most time, and it has various respondents involved, which could be factors in the high variability. This indicator is also determined by student and teacher responses, and it requires that schools plan for teaching and reteaching of the schoolwide expectations. In the current study, these areas were the most difficult to maintain. School teams have a degree of independence when teaching the schools' rules, which may be a reason for such variability. Ensuring that school procedures are being taught on a regular basis is essential to successful implementation.

The Principal's 200 Club Implementation Checklist was used to assess fidelity of the schoolwide reinforcement program. The combined average of the participating schools was 80% or higher on all five of the indicators, suggesting a high level of implementation. The lowest indicator was setting and implementation at 80%. The items included in this indicator were (a) displaying the activities, (b) having students sign the reward book, and (c) calling parents to notify them of their students' success. According to Rhode, Jenson, and Reavis (1992, 1993), the following variables will make reinforcement more effective: (a) reinforce immediately and frequently, (b) deliver the reinforcer with enthusiasm, and (c) describe the behavior that is being reinforced. The participating schools were successful with these variables and likewise a reason for the success of the intervention.

The level of teacher satisfaction was measured as way to improve this case study research. Social validity is the extent to which the consumers of an intervention like it and should be considered necessary for effectiveness (Baer et al., 1987). Faculty at the participating schools indicated a high level of overall satisfaction of PBIS, which is consistent with earlier research. Kern and Manz (2004) found that the responses by school staff on the ratings were uniformly positive, suggesting that the consumers found schoolwide support to be a practical strategy that resulted in observable student improvement. Of the staff in the current survey, 87% saw a positive impact in their school and 98% liked working in a school that promoted positive behaviors. In addition, 57% of the teachers reported having more instructional time because behavior was dealt with systematically. Previous literature has suggested that the amount of time children are actively and successfully engaged in essential academic skills will contribute significantly to achievement (Berliner, 1978; Gettinger, 1995; Harn, Linan-Thompson, & Roberts, 2008; Marzano, Gaddy, & Dean, 2000). The increase in instructional time reported by teachers could positively impact students' achievement in the participating schools.

Walker et al. (1996) suggested that schools should use the public health model to describe the level of risk in their student population. With proactive prevention in place, they suggested that 80% of the students should be in the no-risk category, with appropriate supplemental supports and interventions in place; 15% of the students should be in the at-risk category, with appropriate intensive

interventions in place; and 5% of the students should be in the high-risk category. These categories have become part of the PBIS literature as students have been placed into these categories based on the frequency with which they receive an ODR.

Sugai and Horner (2002) suggested that in the no-risk category students are receiving zero to one ODR, in the at-risk category students are receiving two to five ODRs, and in the high-risk category students are receiving six or more ODRs. The participating school sites in the current study were consistent with previous literature, with at least 80% of the students in the no-risk category, 15% of the students in the at-risk category, and 5% of the students in the high-risk category. When reviewing the impact of PBIS on each risk group, the global analysis showed a small decrease in the no-risk category and an increase in the high-risk and low-risk categories, suggesting equivocal results. These results could suggest that although PBIS may have an impact on low-risk students, PBIS has less effect on high-risk students. However, the analysis at each school showed that there was some impact on the at-risk group. Typically, the at-risk group is a difficult group to identify and offer prevention due to the nature of the behaviors. Any impact on this group of students can be viewed as a success. In addition, monitoring ODRs is a typical measure of externalizing behavior, but it does not often reflect internalizing behavior problems, making it difficult to address the behavior problems for the entire student population.

The relationship of ODRs and positive reinforcement showed no trends or correlations using a scatterplot or Pearson product-moment correlation coefficient. In analyzing the individual school data, a weak correlation ( $r = .4$ ) was identified at each of the participating schools. This correlation explains 0.16 of the variance. Likewise, the power was low due to the small degree of freedom for the current study. However, this finding is consistent with previous research in which educators reported that they prefer positive interventions; but in practice, they frequently overuse aversive procedures (Bowen et al., 2004; Shores et al., 1993). In White's (1975) early research on the praise rates of teachers, 13 out of the 16 studies suggested that rates of disapproval were higher than rates of approval. Van Acker, Grant, and Henry (1996) suggested that teacher praise appeared to be a random event unrelated to student behavior. Given this body of research, it is apparent that high rates of teacher praise that are tied to specific behaviors will take more time, commitment, and training of the staff at schools implementing PBIS.

An additional social validity aspect of the present study was the survey of students in the participating UBI schools. Kern and Manz (2004) suggested that a limitation in PBIS literature is the narrow range of consumers on social validity questionnaires. Although most schools attempt to survey the school staff, they neglect to get feedback from the students. Both the student and teacher populations are direct consumers of schoolwide support. The survey used for this research was routinely gathered in the participating schools to measure school climate and,



specifically, not to measure PBIS satisfaction. From early elementary school (Grades 1, 2 and 3), 696 students completed the survey. A strong majority of the early elementary students reported liking school, liking their teacher, and knowing the school rules. From upper elementary school (Grades 4, 5, and 6), 641 students completed the survey. Likewise, a strong majority reported that they followed their teachers' rules, believed their teachers cared about them, and reported that their teachers were fair. In an effort to minimize data gathering for the participating schools, questions from this survey were extracted to obtain a level of consumer satisfaction for PBIS according to the student population. Although these questions may be a part of the school climate, they represent a poor measure of the satisfaction with PBIS and, therefore, should be interpreted with caution.

According to Baer et al. (1987), cost-benefit ratios "are the essence of effectiveness, and ought to be routine in any applied setting" (p. 322). As a result of the implementation of PBIS, the teachers surveyed in the current study reported that administrator time and school resources were used more effectively. In addition, the administrators reported that their time and school resources were used more effectively and that they had more time available because behavior was dealt with in a systematic way. However, after 1 year of implementation, the district loss was \$1,296.26. The individual analysis of the five schools ranged from a saving of \$2,127.62 to a loss of \$5,227.24.

Scott and Barrett (2004) presented a method of using school time to monitor a cost analysis of PBIS. They found that administrator minutes dedicated to



disciplinary actions decreased from the baseline year to the 1st year of implementation and decreased again through the 2nd year of implementation. The minutes were calculated into days and multiplied by the daily salary, with the school saving more than \$6,000 each year (Scott & Barrett). Additional research by Muscott, Mann, and LeBrun (2008) found that two important outcomes of PBIS implementation were (a) increased instructional time and (b) increased time for administrative leadership. The researchers assessed the increase of time for administrative leadership, of teacher instructional time, and of student learning time by converting the reduction of ODRs and suspensions into saved days in the school year. The schools participating in the current study that saved time and money are consistent to the findings in previous literature.

#### Limitations of the Present Study

A number of limitations in the present study deserve note and point to possibilities for future research. First, the amount of time used in data collection and observation may not have been long enough to see systematic change. Likewise, the nature of public schools is an environment with a lot of variability and, therefore, difficult to rule out the impact of the variability on the research outcomes. Second, the change in a data system for the schools presents a challenge with regard to consistency of the data collection. Whereas the data systems were designed to be similar, a new data system presents the need for additional training and the learning curve expected with the development of a new program. Another challenge with the data collection is the lack of measuring accountability of schools

using their monthly data. The schools' data were entered into a central system, but there was no way to measure if the schools were utilizing their data at their monthly meetings. The teams were trained to use their data to make decisions and problem solve; but without on-site observations during the meetings, it cannot be assumed that the teams referenced their monthly data summary. Third, self-report surveys need to be interpreted with caution. The current study utilized self-report surveys with students, teachers, and administrators.

### Implications for Future Research

Within the PBIS literature, there is a strong focus on the leadership team and the team functioning as a critical role to the success of the implementation. The current study trained school-based teams and required that they enter meeting notes and data summaries on a monthly basis. Additional research should be conducted on the facilitators and barriers of successful teams designed for PBIS implementation. Although the PBIS literature often notes the reduction of ODRs, suspensions, and expulsions, these indicators tend to monitor students with externalizing behavior problems and do not offer adequate tracking for students with internalizing behavior problems. In addition, the impact of PBIS on students requiring intensive, individual interventions and how they fit into the schoolwide system need to be addressed. The current study showed that more research is needed in teacher positive to negative interactions with students. Another area of PBIS literature warranting more research is the impact of PBIS on specific populations in the school such as special education, English language learners, and

Title I. Although the present study looked at behavior in the participating schools, future research could look at the impact of UBI on academic indicators. A final area for future research is to explore the category of teaching behaviors. The current study showed the amount of variability found in teachers when they are required to teach behavioral expectations. How are schools ensuring that teaching behaviors is occurring? What systems are in place to monitor teaching behaviors?

### Conclusions

In this particular study, a single-subject design was used to target five elementary schools, within the same district, to analyze the effect of the PBIS initiative being implemented. Many states have adopted some form of PBIS as a model for system-level school improvement (George & Kincaid, 2008). Utah is no exception, with the recent board rule written by the state board of directors for education. The rule requires that districts will implement key components of the PBIS. George and Kincaid noted that “without careful planning, such districtwide implementation efforts will likely fail, as district personnel will be unfamiliar with the available resources and with the supports necessary to implement and sustain such districtwide systems change efforts” (p. 20). Several district variables can lead to the support or delay of the ability of a school to implement PBIS, including (a) readiness, (b) financial commitment, (c) previous initiatives, and (d) current competing initiatives (Handler et al., 2007).

The results suggest that the UBI project, as a vehicle to implement PBIS, was successful in certain aspects of the current research. Overall, the sites within

the district had high levels of PBIS implementation, teachers and students reported high levels of satisfaction, and the district saved administrator time and money. No significant impact was found for the reduction of ODRs or a significant correlation between ODRs and positive reinforcement. In addition, the results suggest that districts may benefit from increased professional development and monitoring of teaching expectations and of data-based problem solving in the school teams. Although creating a flawless model for districtwide PBIS implementation is a difficult task, the current study may be considered one step in the direction of high implementation and low cost scaling up at the district level.

APPENDIX A

PROJECT FORMS

## UBI Team Information

School name: \_\_\_\_\_

Meeting schedule:

Day of the Week (e.g., 1 <sup>st</sup> & 3 <sup>rd</sup> Monday)	Time (e.g., 3:30 - 4:30)

Team Roles:

Team member	Role
	Building Coordinator
	Recorder/Secretary
	Data-base Manager
	Communication Coordinator
	Social Skills Coordinator
	Reinforcement Systems Coordinator
	Time Keeper/Task Master

## Office Discipline Referral Checklist

Consider each of the following for your referral form

School:

Is there consensus with staff regarding the purpose of office disciplinary referrals?	YES	NO
Does a clear distinction between problem behaviors that are "reports" versus "referrals" exist?	YES	NO
Is your form easily transportable and a single sheet of paper?	YES	NO
Does your form require mainly check marks as opposed to writing?	YES	NO
Are all categories clearly defined with no overlap?	YES	NO
Is there consensus with the staff regarding?	YES	NO
Consider your categories – do you have the following required categories?		
-student name	YES	NO
-date	YES	NO
-time of incident	YES	NO
-location of incident	YES	NO
-problem behavior	YES	NO
-referring staff	YES	NO
Consider your categories – do you need any of the following categories?		
-student grade level	YES	NO
-others involved	YES	NO
-consequences	YES	NO
-possible motivation (function)	YES	NO
-general/special education	YES	NO
-minority/non-minority	YES	NO
-other	YES	NO
Do the categories on the form match the data base categories?	YES	NO
Are procedures for transferring data into the data-base in place?	YES	NO
Is there a dedicated person identified for data entry?	YES	NO



Totals		
Next Steps		
Needed Information		
Other		

# Settings/Locations

*E  
X  
P  
E  
C  
T  
A  
T  
I  
O  
N  
S  
/  
R  
U  
L  
E  
S*


Illustrate what each looks and sounds like

	Classroom	Lunchroom	Bus	Hallway	Assembly
Respect Others	<ul style="list-style-type: none"> <li>• Use inside voice</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Eat your own food</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Stay in your seat</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Stay to right</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Arrive on time to speaker</li> <li>• _____</li> </ul>
Respect Environment & Property	<ul style="list-style-type: none"> <li>• Recycle paper</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Return trays</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Keep feet on floor</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Put trash in cans</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Take litter with you</li> <li>• _____</li> </ul>
Respect Yourself	<ul style="list-style-type: none"> <li>• Do your best</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Wash your hands</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Be at stop on time</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Use your words</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Listen to speaker</li> <li>• _____</li> </ul>
Respect Learning	<ul style="list-style-type: none"> <li>• Have materials ready</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Eat balanced diet</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Go directly from bus to class</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Go directly to class</li> <li>• _____</li> </ul>	<ul style="list-style-type: none"> <li>• Discuss topic in class w/ others</li> <li>• _____</li> </ul>

Illustrate what each looks and sounds like

	Classroom	Lunchroom	Bus	Hallway	Assembly
Respect Others	.	.		.	.
Respect Environment & Property	.	.	.	.	.
Respect Yourself	.	.	.	.	
Respect Learning			.	.	.

## **Teaching Behavioral Expectations**

**Define the Expectation:**

**Provide a Rationale:**

**Teach the Critical Discrimination:**

Demonstrate Appropriate Behavior

Demonstrate Unacceptable Behavior

Practice telling the difference with multiple examples

**If there is a “signal” teach the signal (when should the appropriate behavior occur?)**

**Teach for fluency?**

**How will this skill be maintained?**

## UBI TEAM ROLES

Role	Responsibilities
Building Coordinator	<ul style="list-style-type: none"> <li>• Establish regularly scheduled meetings (2x's per month)</li> <li>• Develop agenda</li> <li>• Facilitate meeting</li> <li>• Follow-up on assigned tasks</li> <li>• Seek input from staff and other committees</li> <li>• Coordinate &amp; oversee PBS activities in school</li> <li>• Attend building coordinator meetings &amp; disseminate information to school team</li> <li>• Oversee funding expenditures for PBS efforts</li> <li>• Share information with UBI and/or District Coach</li> </ul>
Recorder/Secretary	<ul style="list-style-type: none"> <li>• Keep minutes</li> <li>• Distribute minutes to team members &amp; District Coach</li> <li>• Notify/remind team members of meeting time &amp; location</li> </ul>
Data-base Manager	<ul style="list-style-type: none"> <li>• Oversee data management system</li> <li>• Summarize data from previous month</li> <li>• Present update on standard data (e.g., office referrals, classroom, etc.)</li> <li>• Summarize data necessary for any pending decisions (e.g., effectiveness of new intervention)</li> </ul>
Communication Coordinator	<ul style="list-style-type: none"> <li>• Report progress &amp; data-based feedback to staff</li> <li>• Create/maintain newsletters, bulletins, teacher's lounge bulletin boards, etc.</li> <li>• Maintain systems of communication with staff and parents</li> <li>• Oversee posting of expectations</li> </ul>

	throughout school
Social Skills Coordinator	<ul style="list-style-type: none"><li>• Determine schedule for teaching skills</li><li>• Develop/distribute lesson plans</li><li>• Distribute social skills information/materials to staff</li><li>• Follow-up on implementation with staff</li><li>• Post social skills</li></ul>
Reinforcement Systems Coordinator	<ul style="list-style-type: none"><li>• Maintain system</li><li>• Distribute behavior tickets to staff</li><li>• Follow-up on supplies</li></ul>
Time Keeper/Task Master	<ul style="list-style-type: none"><li>• Monitor agenda items &amp; topics</li><li>• Keep group focused &amp; moving</li><li>• Monitor start &amp; end times</li><li>• Table the subject or call for decision</li></ul>



**APPENDIX B**

**EVALUATION TOOLS AND EXAMPLES**

## PBS Administrator Survey

Gender:

How many years have you been an administrator:

How many years have you been an administrator at this school:

Circle one:

Elementary

Secondary

*Please rate the following on a scale of 1 to 5 (circle one):*

I feel like my time is used more effectively with the implementation of PBS/UBI?

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

I feel like UBI/PBS is making a positive difference in my school.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

I have seen a decrease in problem behaviors with the implementation of PBS.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

I like working in a school that promotes positive behaviors.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

There is a difference in our school and a school that doesn't implement PBS.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

With the implementation of UBI/PBS our school resources are used more effectively.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

As a UBI/PBS school our special education students are well supported.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

I have more time because behavior is dealt with in a systematic way.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

I would like to provide more:

Instructional Leadership in the Classroom

Options for disciplining the most difficult students

Other: \_\_\_\_\_

## PBS Teacher Survey

Gender:

How many years have you taught:

How many years have you taught at this school:

What grade/ subject do you teach:

*On a scale of 1 to 5, please rate the following (circle one):*

I feel like UBI/PBS is making a positive difference in my school.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

I have seen a decrease in problem behaviors with the implementation of UBI/PBS.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

I like working in a school that promotes positive behavior.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

There is a difference in our school and a school that doesn't implement UBI/PBS.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

I have more instructional time because behavior is dealt with in a systematic way.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

As a UBI/PBS school my administrator's time are used more effectively.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

With the implementation of UBI/PBS our school resources are used more effectively.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

As a UBI/PBS school our special education students are well supported.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

I would like to see my administrator provide more:

Instructional Leadership in the Classroom

Options for disciplining the most difficult students

Other: \_\_\_\_\_

## PBS SP ED Teacher Survey

Gender:

How many years have you taught:

How many years have you taught at this school:

What grade/ subject do you teach:

*On a scale of 1 to 5, please rate the following (circle one):*

I feel like UBI/PBS is making a positive difference in my school.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

I have seen a decrease in problem behaviors with the implementation of UBI/PBS.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

I like working in a school that promotes positive behavior.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

There is a difference in our school and a school that doesn't implement UBI/PBS.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

I have more instructional time because behavior is dealt with in a systematic way.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

As a UBI/PBS school my administrator's time are used more effectively.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

With the implementation of UBI/PBS our school resources are used more effectively.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

As a UBI/PBS school our special education students are well supported.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

With the implementation of UBI/PBS our general educators are better prepared to make appropriate special education referrals.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

With the implementation of UBI/PBS our school is able to access/implement appropriate prereferral interventions.

1(Strongly Disagree).....2.....3(Neutral).....4.....5(Strongly Agree)

I would like to see my administrator provide more:

Instructional Leadership in the Classroom

Options for disciplining the most difficult students

Other: \_\_\_\_\_

## Student Survey

Grade		
1          2          3	YES	NO
Boy          Girl		
I like school.		
I know the school rules.		
I feel safe at recess.		
I like my teachers.		
Sometimes, I am scared at school.		
My teachers like me.		
Older kids are mean to me.		
If I get in trouble, my teacher is fair.		
School is a good place to be.		

## Student Survey

Grade 4            5            6	Always	Sometimes	Never
Boy            Girl			
I follow my teacher's rules.			
I feel safe at school.			
Gangs scare me at school.			
I know what to do if someone bullies me at school.			
My teachers care about me.			
I feel safe at recess.			
My teachers are fair.			
In my school everyone gets along.			
The older kids are nice to me.			

The biggest problem at our school is:  
(Circle one)

Weapons

Drugs

Bullying

Gangs

Other \_\_\_\_\_

## Principal's 200 Club Implementation Checklist

School \_\_\_\_\_ Started 200 Club \_\_\_\_\_

Building Coordinator \_\_\_\_\_

School Based Manager of 200 Club \_\_\_\_\_

Building Administrator \_\_\_\_\_

Rating Scale:

0 =No (major problems)

1=Somewhat (minor problems)

2=Yes (meets or exceeds expectations)

### Indicator 1: Setting and Implementing

Indicator	Rating	Source
1a: Does the school have a set of posted schoolwide rules		Observation 2=yes in 3 or more locations of the school common areas
1b: Is the 200 club matrix posted in a highly visible location		Observation 2= yes, posted in high traffic area (e.g. main hallway)
1c: Is acknowledgement of reinforcement types and celebration displayed?		Observation (e.g., bulletin board with mystery motivator, menu, or explanation of possible reinforcers)
1d: Are student's names easily identified on the 200 club matrix?		Observation 2=Can be read from 3 – 5 feet away



1e: Does the ticket include the following: student name, staff name, and target behavior		Observation 2=all three indicators 1=2 or fewer indicators 0=no identifying information on ticket
1f: Does the school have a record book where students can sign their name upon turning in a 200 club ticket?		Observation 2=yes 1=other recognition (procedure)
1g: Does the school systematically notify parents when a student receives a 200 club ticket?		Observation (200 Club poster card home) Interview with 200 club school based manager. 2=yes, consistently carried out 1=somewhat, done inconsistently
<b>Quantitative Score Indicator 1</b>	<u>          </u> /14	<u>          </u> %
*Do the tickets easily differentiate between a student the staff member knows and a student the staff member does not know? For example: blue tickets for students in their own class and yellow for students in another class?		Observation Bonus Question

**Indicator 2: School Based 200 Club Manager**

2a: How does staff receive tickets for distribution to students?		Interview Description of procedures for delivering tickets provides for continuous availability for staff. 2 points
2b: Why are tickets awarded "What behaviors do staff look for to give 200 club tickets?"		Interview 2 = Specific behaviors tied to schoolwide expectations or social skills 0 = nonspecific
2c: What is the procedure for collecting tickets?		Interview Description of procedure for collecting tickets allows for less than 24 hours from ticket awarded to delivery of ticket to office or School Based 200 Club Manager. 2 points
2d: When is the student's name publicly posted for receiving a 200 club ticket?		Interview 2=upon delivery of ticket to office or School Based 200 Club Manager 1=same day as delivery of ticket to office or School Based 200 Club Manager 0 = not within school day time frame
<b>Quantitative Score Indicator 2</b>	<u>        </u> /8	<u>        </u> %
Is the amount of time invested in running the 200 club worthwhile?		Qualitative Information
The procedure for data collection is consistent and yields useable data in a timely manner.		Qualitative Information

**Indicator 3: Administrator**

3a: Are the tickets continuously available to the staff?		Interview 2 = yes 0 = no
3b: What is the procedure for distributing and collecting tickets?		Interview 2 = agreement with School Based 200 Club Manager 0 = not aligned with School Based 200 Club Manager
3c: What is the average time between a bingo on the 200 club board and the delivery of the reinforcement or reward?		Interview 2 = within 48 hours 1 = within a week (5 days) 0 = more than 5 days or ambiguous answer (i.e. "whenever we can")
3d: What are some examples of 200 club rewards that you have overseen or delivered? * If only 1 is give, probe once saying: "Can you tell me any other examples?"		Social/Activity Privilege Tangible 2 = examples include social/activity 1 = examples include privileges but not social/activity 0 = examples include tangible only
<b>Quantitative Score Indicator 3</b>	<u>    </u> /8	<u>    </u> %
How is the 200 club reward selected/determined?		Qualitative question
What is the greatest strength of the 200 club as an intervention tool?		Qualitative question
What is a weakness or challenge of the 200 club as an intervention tool?		Qualitative question
Is the amount of time invested in running the 200 club worthwhile?		Qualitative question

The procedure for data collection is consistent and yields useable data in a timely manner.		Qualitative question
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**Indicator 4: Staff**

4a: Do staff report that the schedule of reinforcement is continuous and are they aware of procedures for distributing tickets (i.e., teachers access to tickets, what tickets are distributed for)?		Interview of staff and school based 200 club manager  Interview 5 staff members, 3 of 5 must agree with the school based manager of 200 club's description for 2 points
4b: Do staff report satisfaction with the 200 club in the school?		Interview 2=3 to 5 Yes responses 1=1 to 2 Yes responses 0=0 Yes response
4c: Do staff report using specific behavioral feedback when awarding tickets to individual students?		Interview 2=3 to 5 Yes responses 1=1 to 2 Yes responses 0=0 Yes response
4d: Do staff report using the 200 club tickets for specific targeted behavior rather than classwide praise?		Interview 2=3 to 5 Yes responses 1=1 to 2 Yes responses 0=0 Yes response
4e: Do noncertified staff have access to the 200 Club tickets?		Interview school based manager of 200 club and 1 noncertified staff member. Agreement = 2
<b>Quantitative Score Indicator 4</b>	<u>        </u> /10	<u>        </u> %
*Are staff members reinforced for participation in the 200 club program?		Interview, observation Qualitative questions

**Indicator 5: Students**

5a: Do students report knowledge of the how/why a student would receive a 200 club ticket? "How does someone get a 200 club ticket?"		Interview  Interview 5 students, 3 of 5 must agree with the school-based manager of 200 club's description for 2 points
5b: Can students explain the procedure for receiving and turning in tickets?		Interview 5 students, 3 of 5 must agree for 2 points
5c: Do students report receiving 200 club tickets? "Have you received a 200 club ticket?"		Interview 2=3 to 5 Yes response 1=2 0=1 or fewer Yes response <i>*Note: Student report is regarding receipt of a 200 club ticket, not being in the winning row, column, or diagonal</i>
5d: Can students verbalize why they have received 200 club tickets in the past (i.e., specific behavior)? "What did you do to get a 200 club ticket?"		Interview 2=3 to 5 Yes responses 1=1 to 2 Yes responses 0=0 Yes response
5e: Do students report knowledge of the reinforcement activity types? "Can you tell me some of the things that kids who win the 200 club get to do?"		Interview 2=3 to 5 Yes responses 1=1 to 2 Yes responses 0=0 Yes response
5f: Do students value 200 club tickets and the subsequent activities or reinforcement? "Do you like having a 200 club at your school?"		Interview 2=3 to 5 Yes responses 1=1 to 2 Yes responses 0=0 Yes response

5g: Can students explain the chance or how winning is achieved? How do you win the 200 Club?		Interview 2=3 to 5 Yes responses 1=1 to 2 Yes responses 0=0 Yes response
<b>Quantitative Score Indicator 5</b>	<u>        </u> /14	<u>        </u> %
*Can students reinforce other students or the staff members for displaying social appropriate behavior?		Qualitative Question



APPENDIX C

ADDITIONAL FIGURES

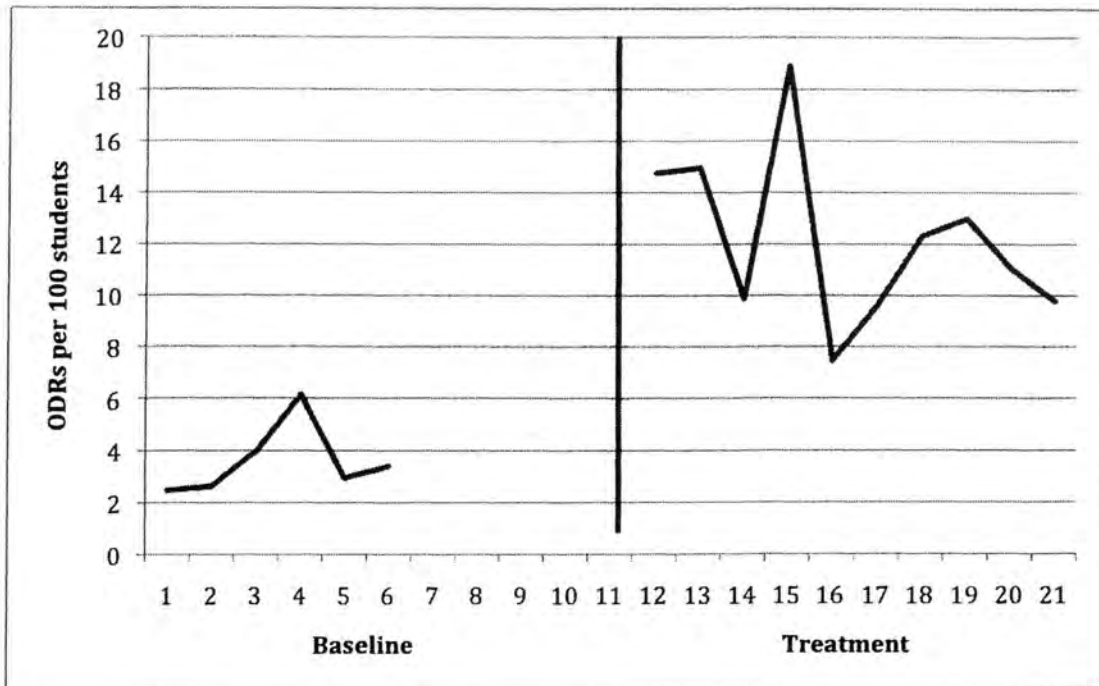


Figure 14. School A: Mean office discipline referrals per 100 students.

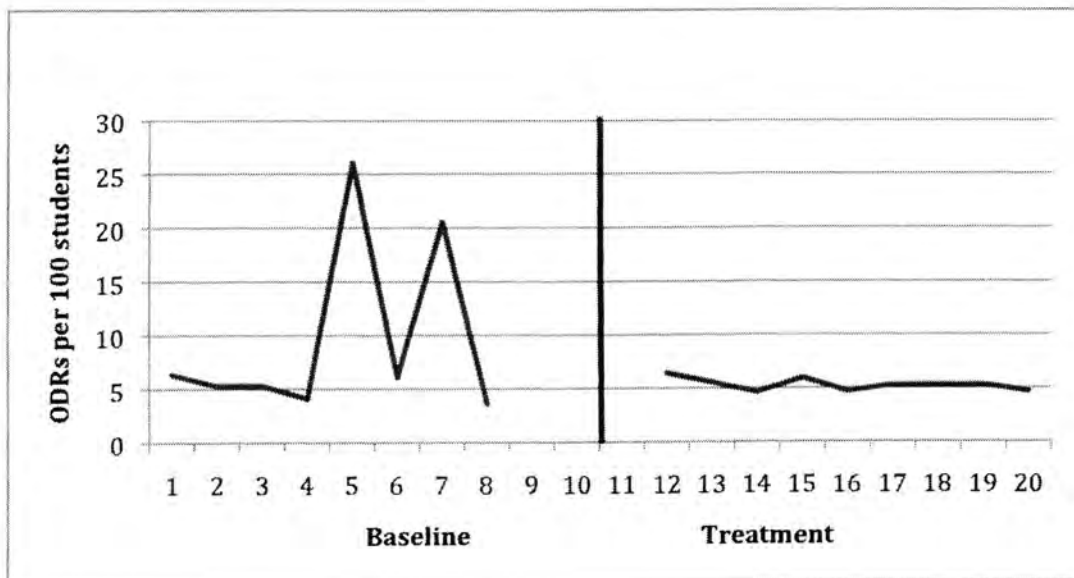


Figure 15. School B: Mean office discipline referrals per 100 students.

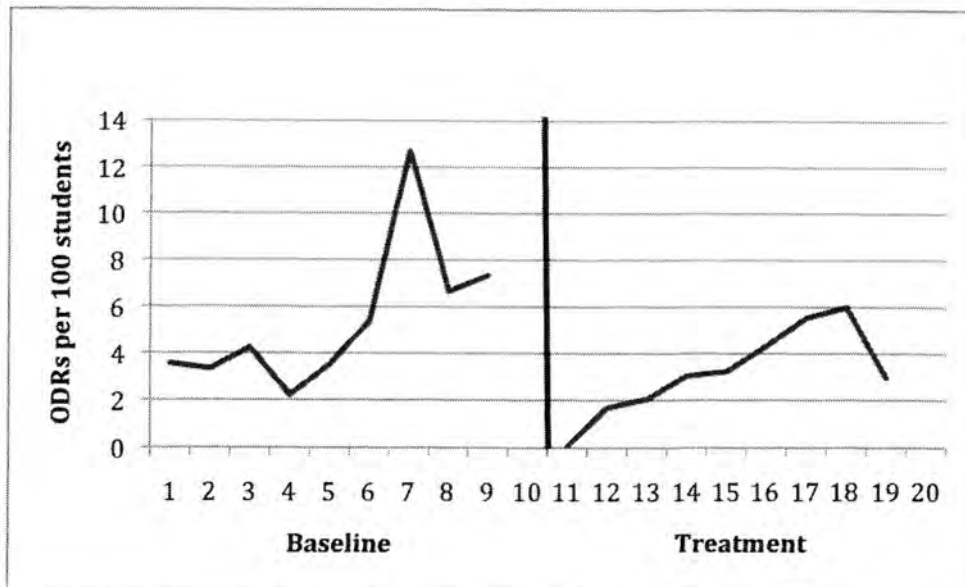


Figure 16. School C: Mean office discipline referrals per 100 students.

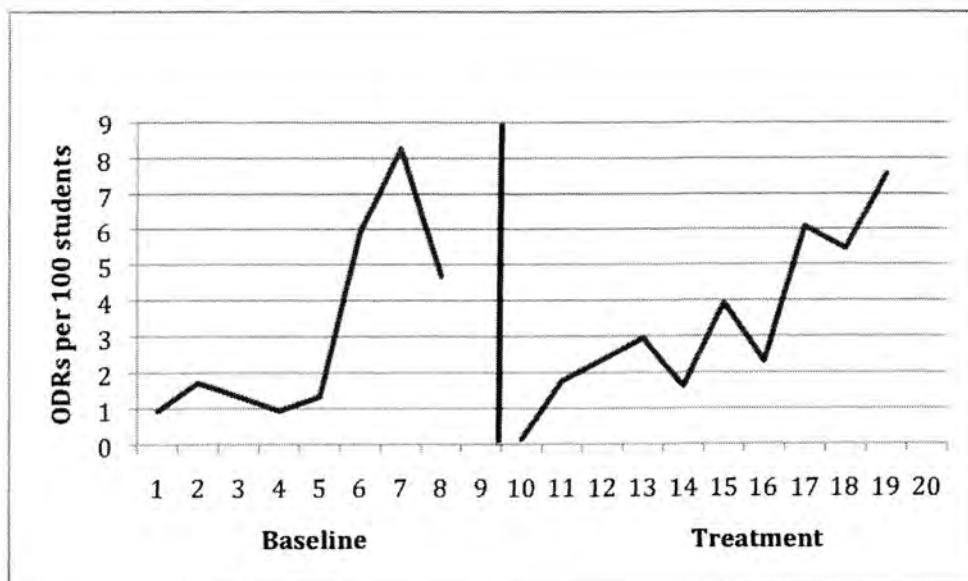


Figure 17. School D: Mean office discipline referrals per 100 students.

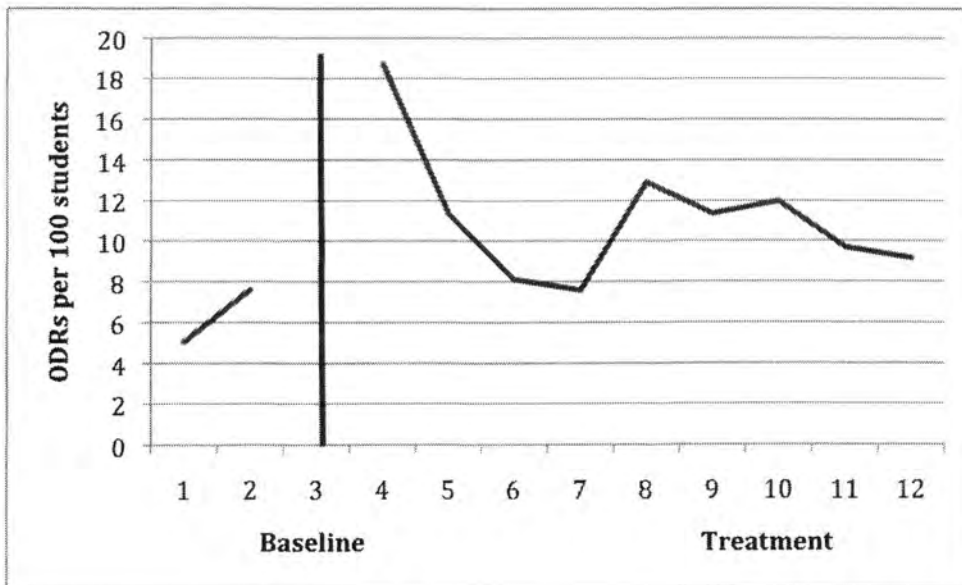


Figure 18. School E: Mean office discipline referrals per 100 students.

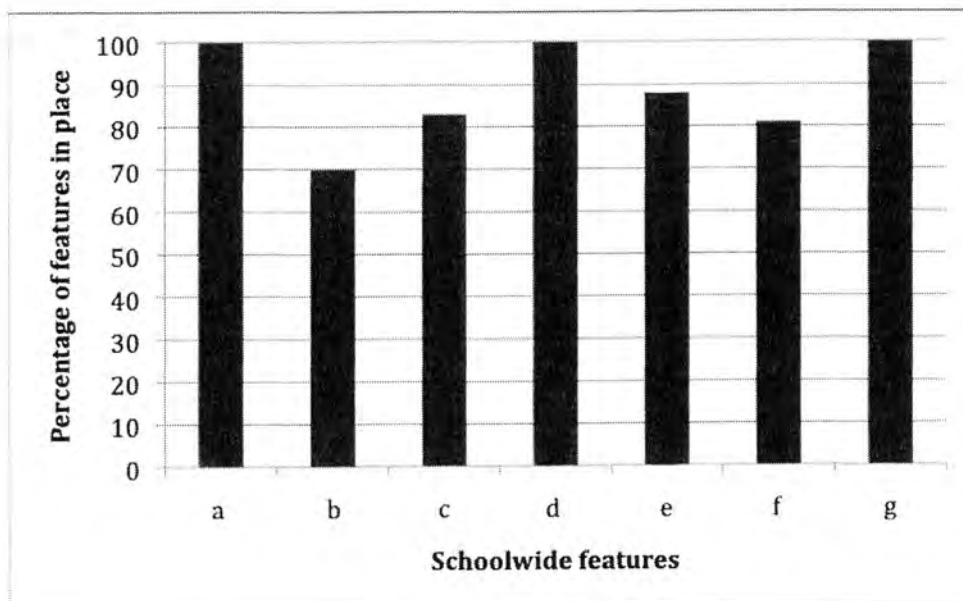


Figure 19. School A: Schoolwide Evaluation Tool.

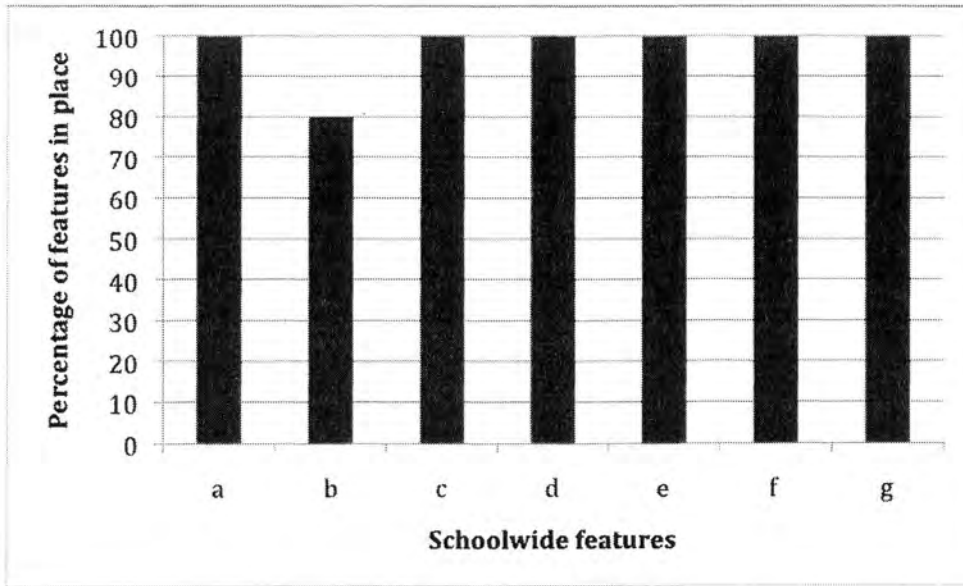


Figure 20. School B: Schoolwide Evaluation Tool.

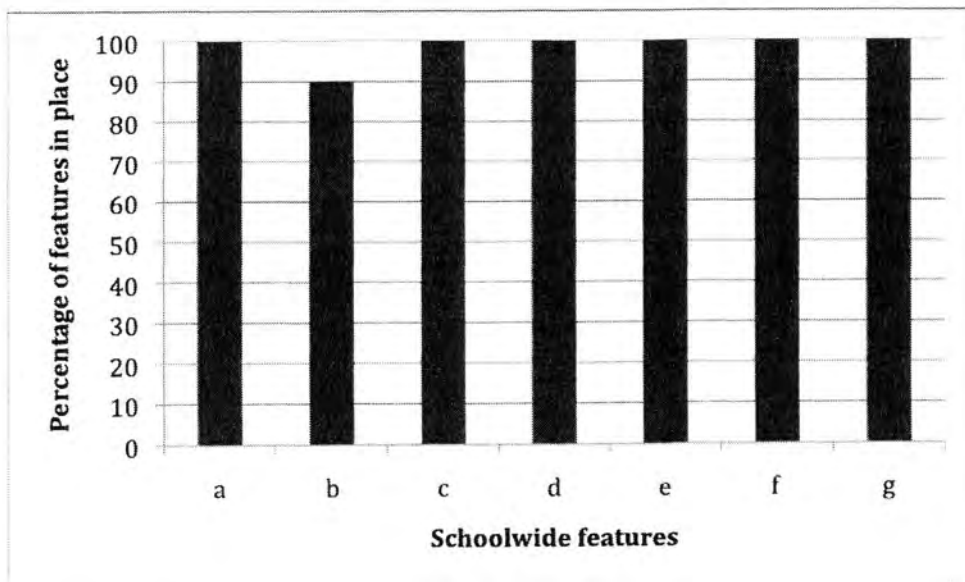


Figure 21. School C: Schoolwide Evaluation Tool.

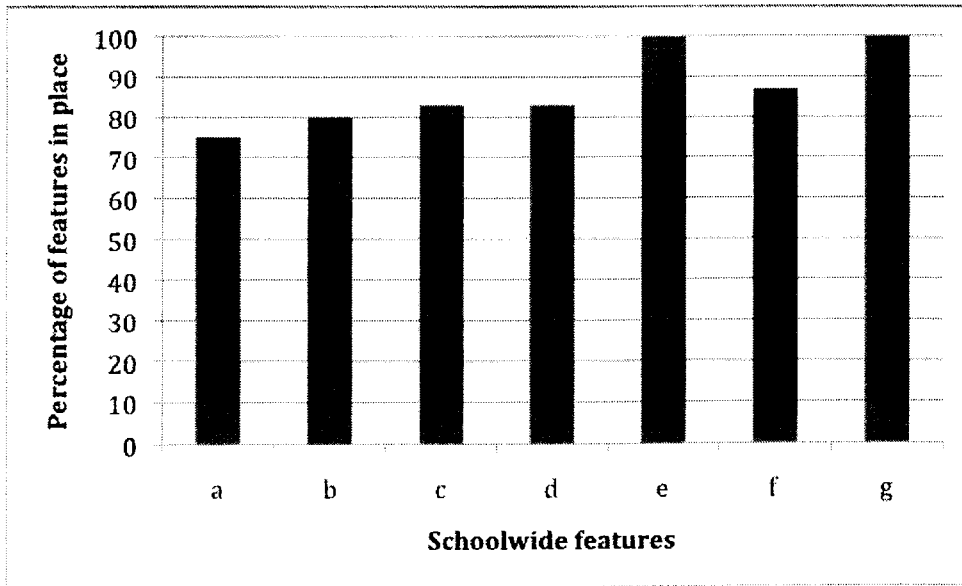


Figure 22. School D: Schoolwide Evaluation Tool.

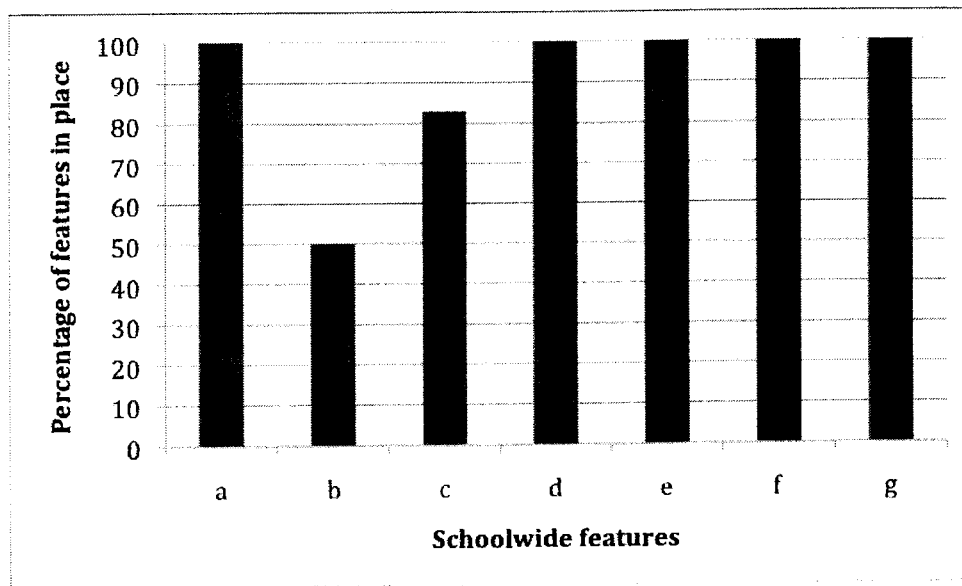


Figure 23. School E: Schoolwide Evaluation Tool.

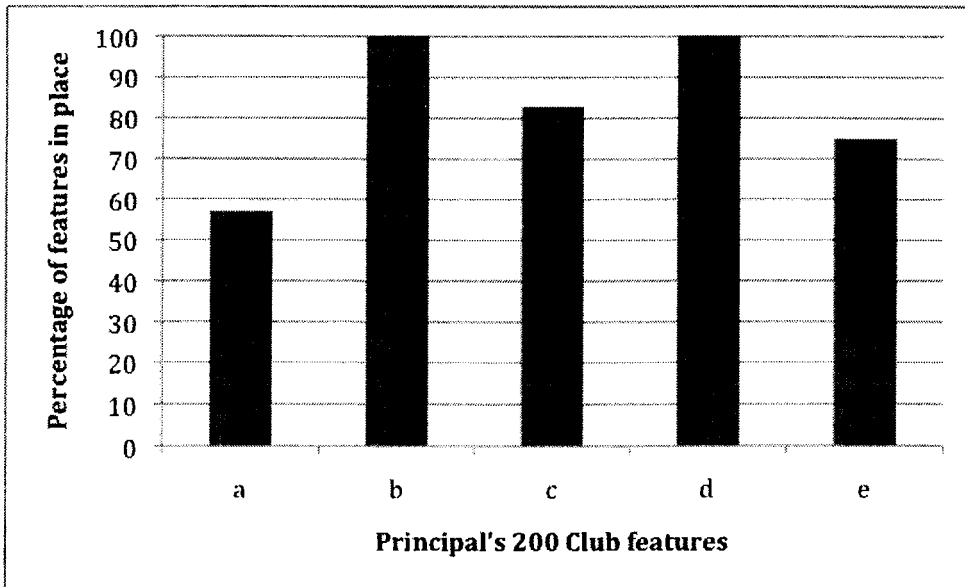


Figure 24. School A: Principal's 200 Club.

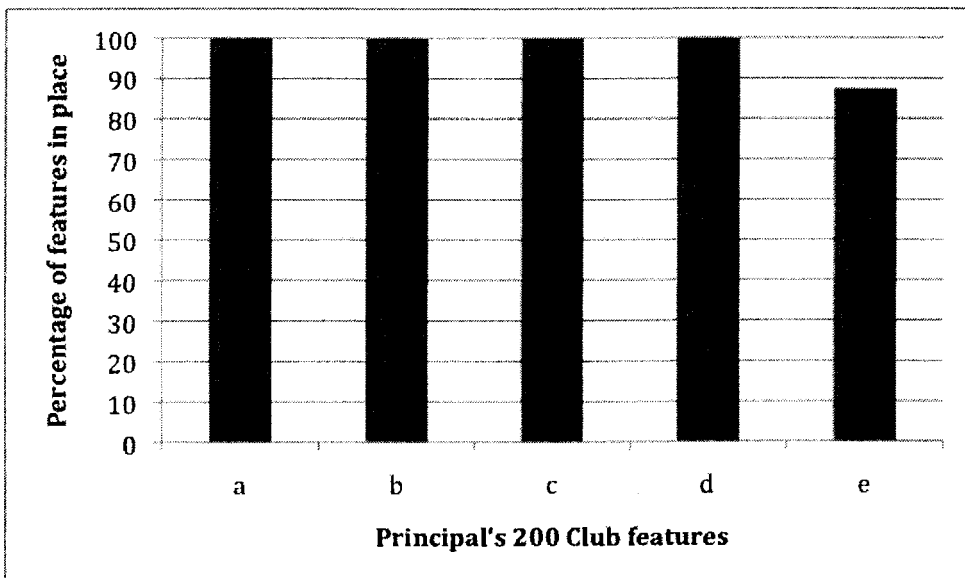


Figure 25. School B: Principal's 200 Club.



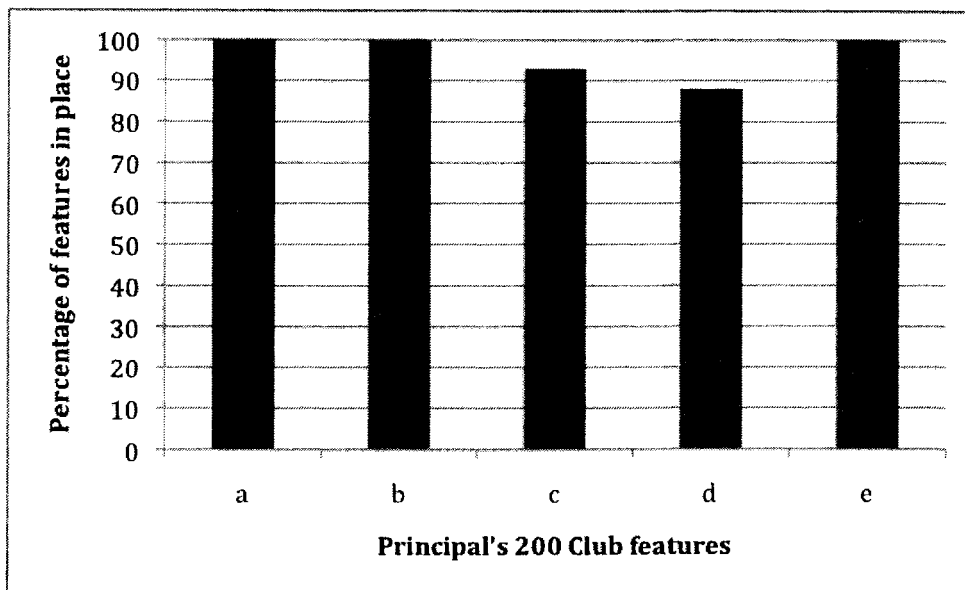


Figure 26. School C: Principal's 200 Club.

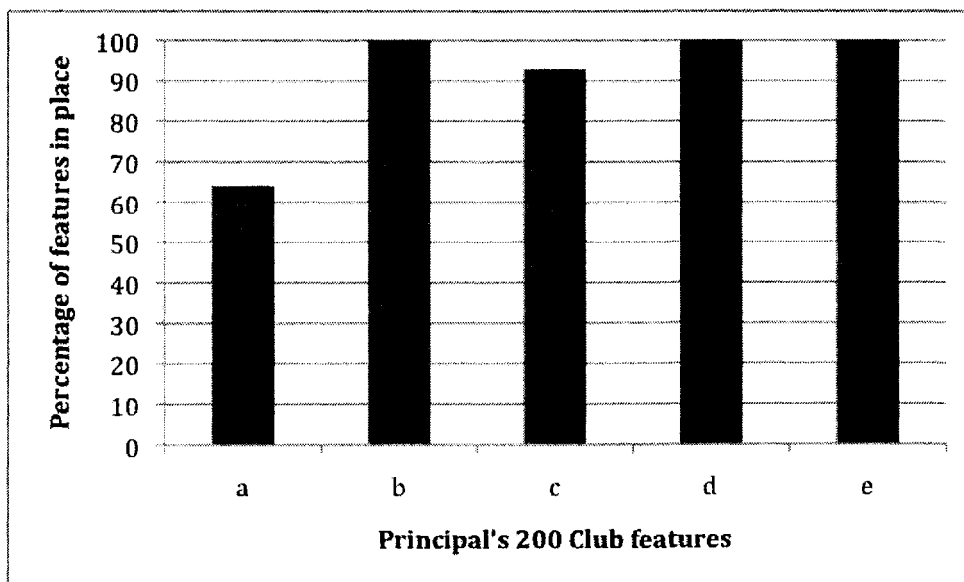


Figure 27. School E: Principal's 200 Club.

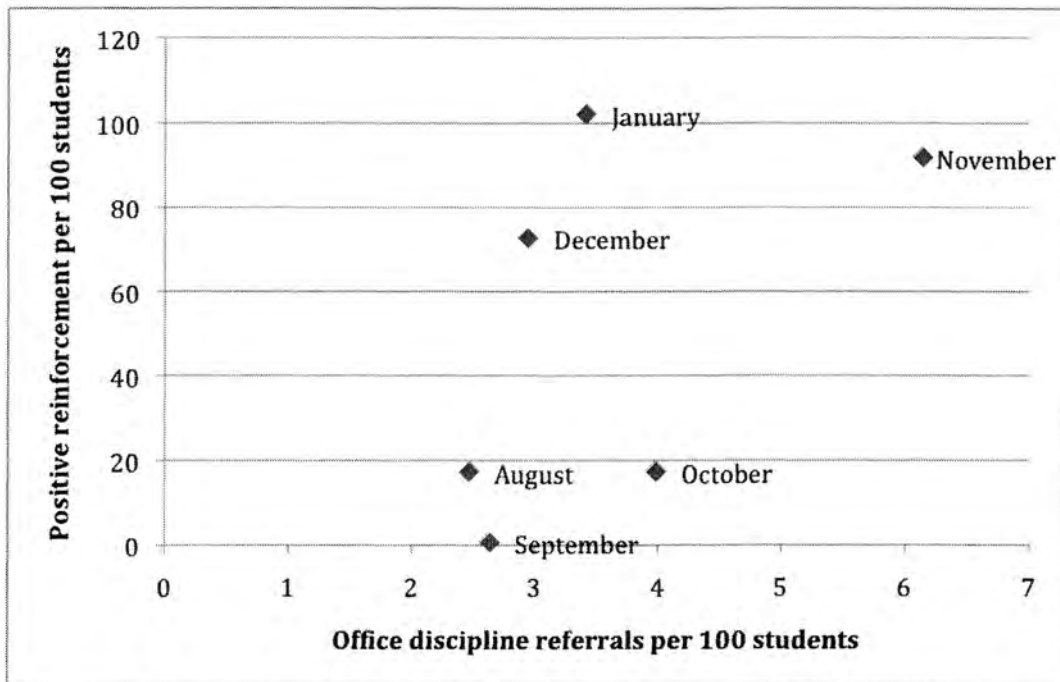


Figure 28. School A: XY plot of schoolwide positive reinforcement and office discipline referral rate during baseline year.

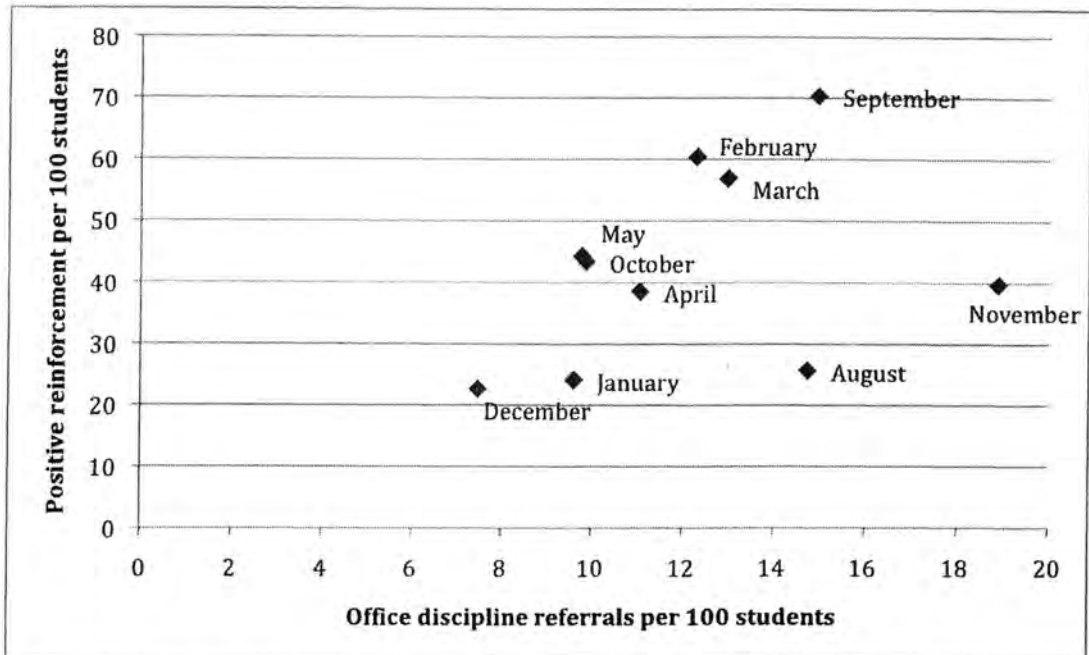


Figure 29. School A: XY plot of schoolwide positive reinforcement and office discipline referral rate during treatment year.

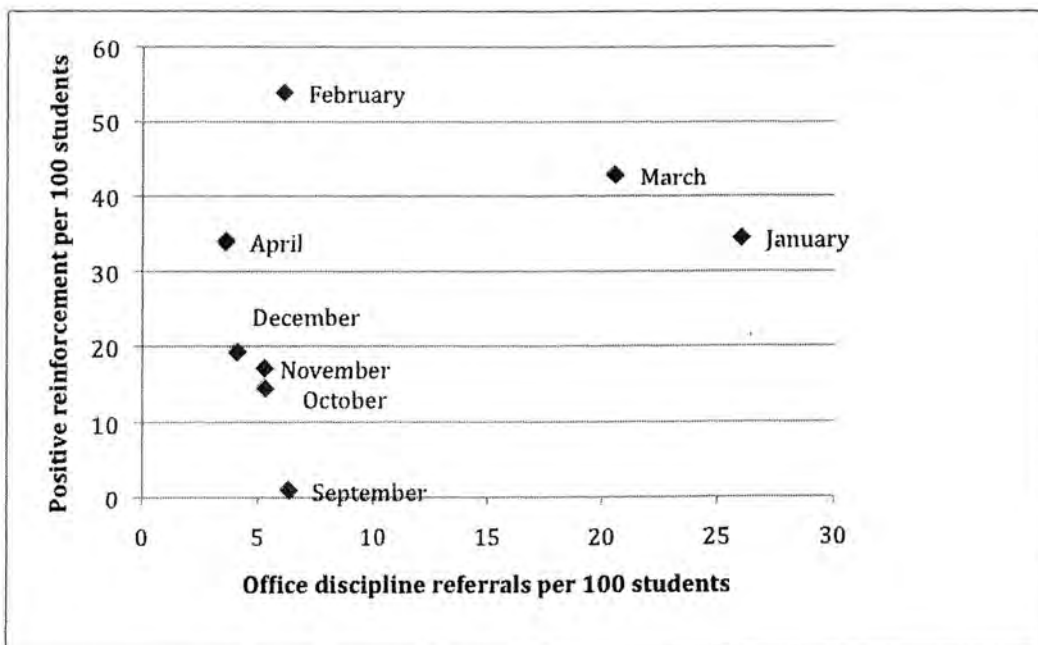


Figure 30. School B: XY plot of schoolwide positive reinforcement and office discipline referral rate during baseline year.

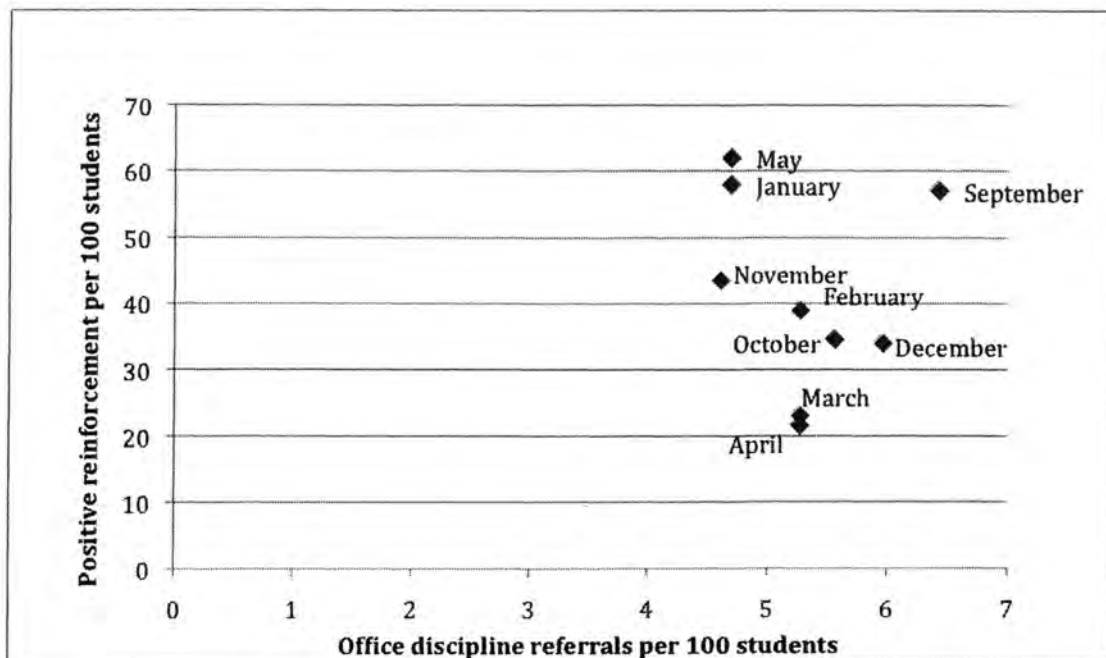


Figure 31. School B: XY plot of schoolwide positive reinforcement and office discipline referral rate during treatment year.

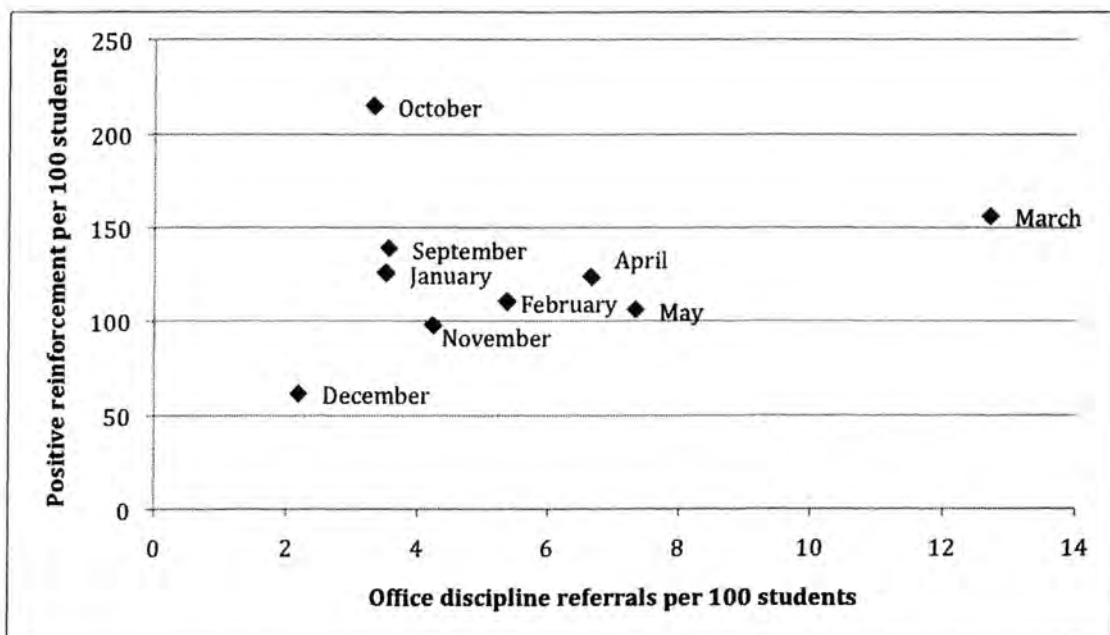


Figure 32. School C: XY plot of schoolwide positive reinforcement and office discipline referral rate during baseline year.

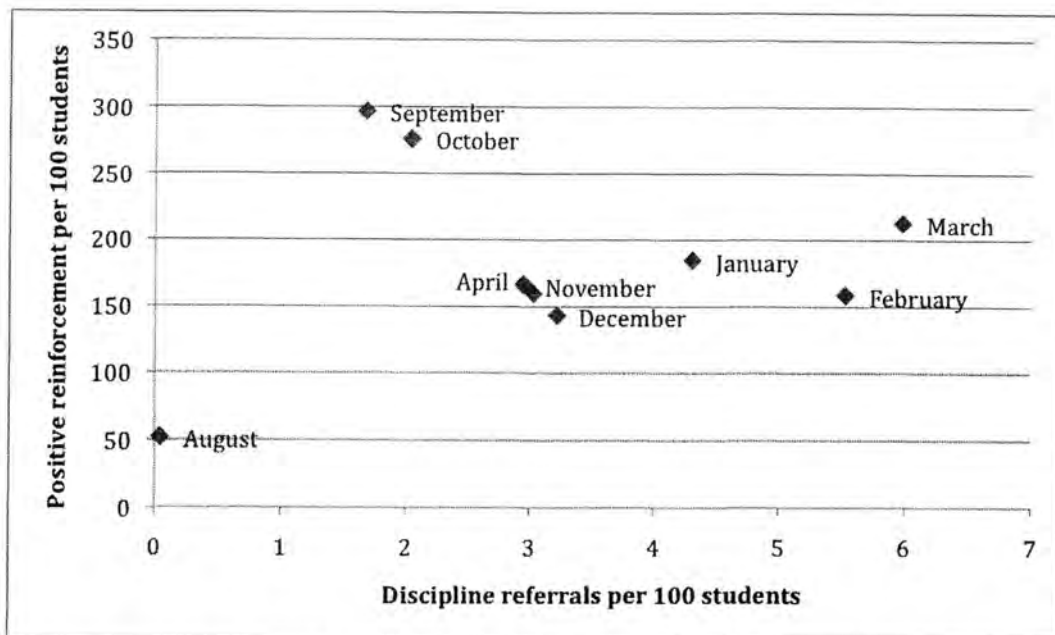


Figure 33. School C: XY plot of schoolwide positive reinforcement and office discipline referral rate during treatment year.

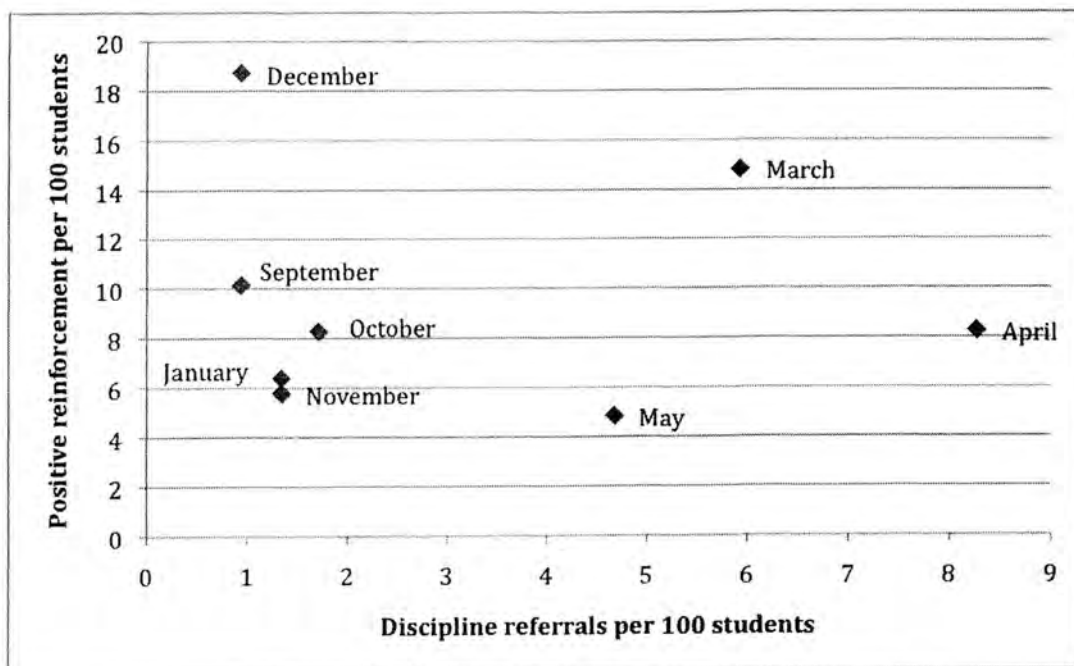


Figure 34. School D: XY plot of schoolwide positive reinforcement and office discipline referral rate during baseline year.

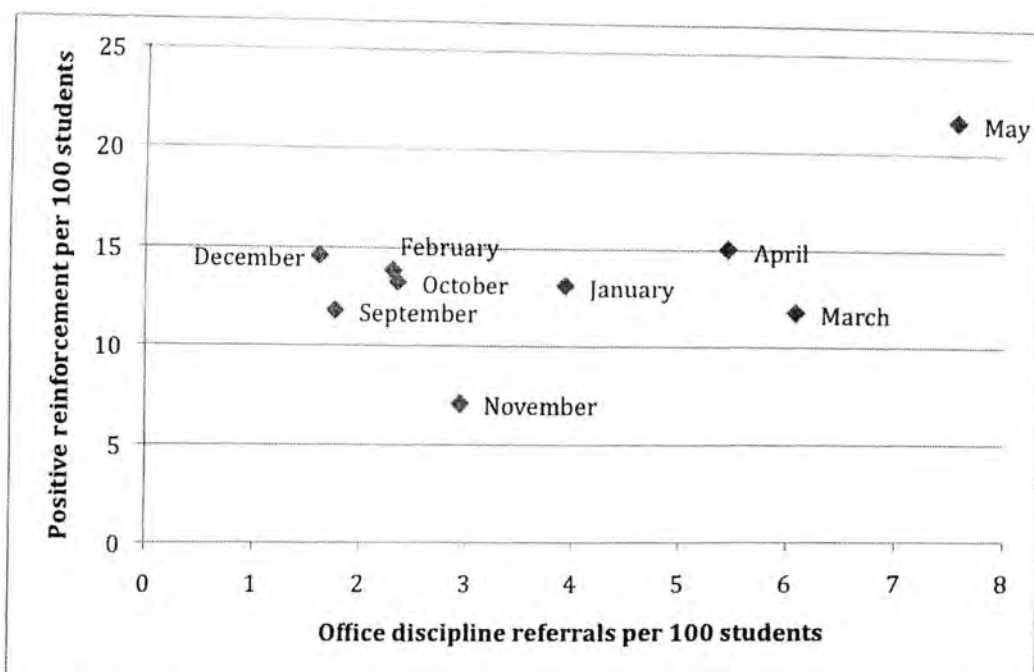


Figure 35. School C: XY plot of schoolwide positive reinforcement and office discipline referral rate during treatment year.

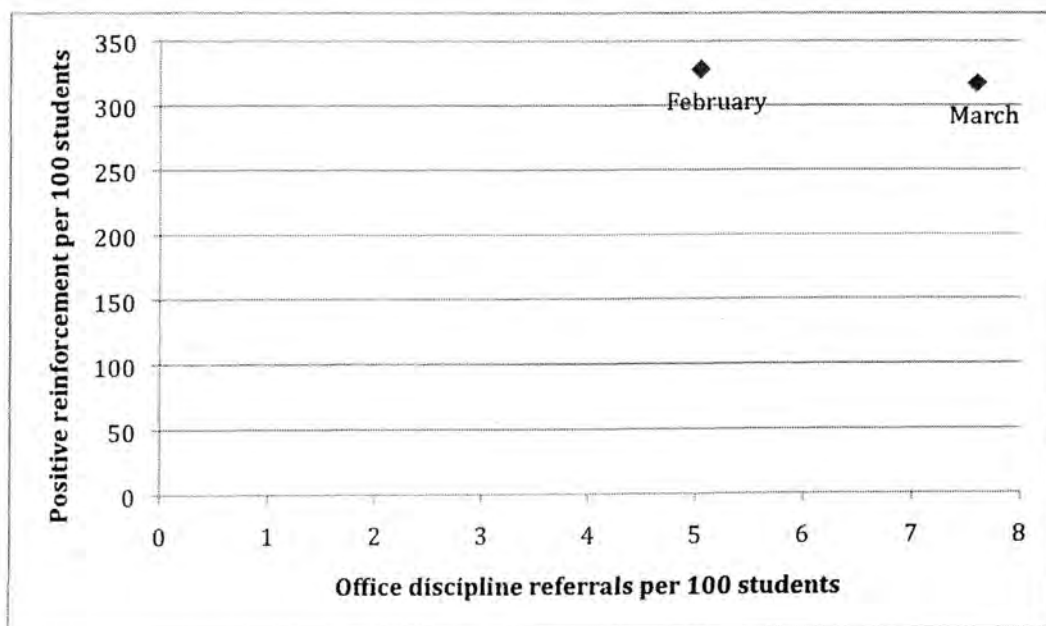


Figure 36. School E: XY plot of schoolwide positive reinforcement and office discipline referral rate during baseline year.

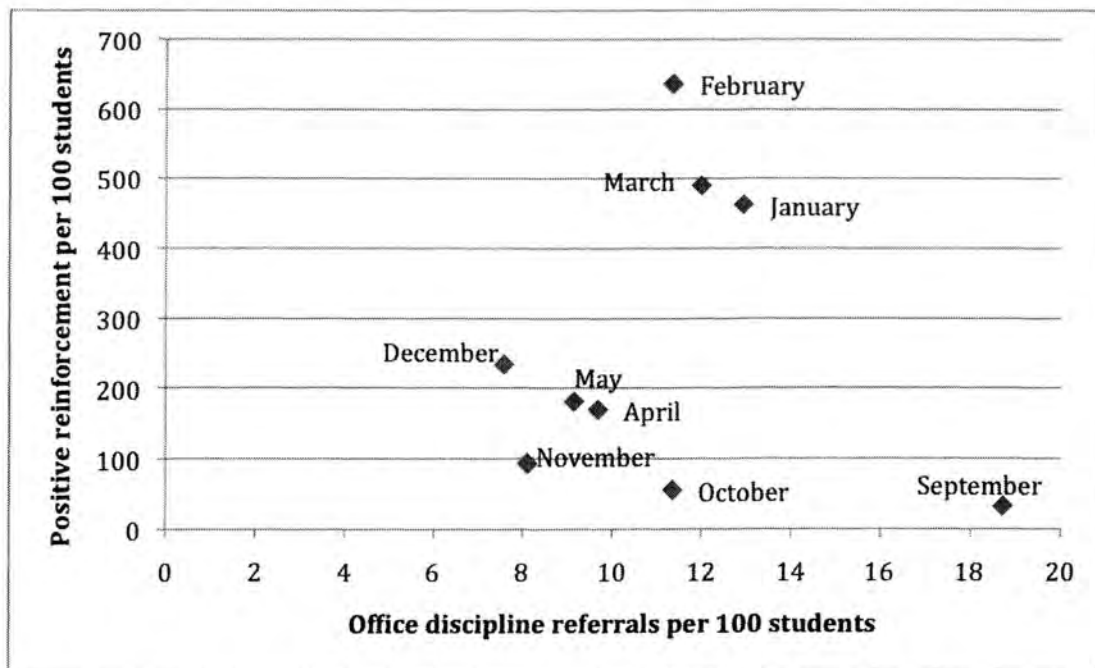


Figure 37. School E: XY plot of schoolwide positive reinforcement and office discipline referral rate during treatment year.



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