

North Carolina Positive Behavior Intervention &
Support Initiative

Evaluation Report

2007-2008

Heather Reynolds and Diann Irwin

North Carolina Department of Public Instruction

Bob Algozzine

University of North Carolina at Charlotte

National Technical Assistance Center on Positive Behavioral Interventions and Supports

January 2009



Executive Summary

The vision of the North Carolina Positive Behavior Intervention & Support Initiative is that all schools in the state will implement Positive Behavior Intervention & Support (PBIS) as an effective and proactive process for improving social competence and academic achievement for all students. The initiative's mission is to provide leadership, professional development, resources, and on-going support in order for schools to successfully implement PBIS. With the addition of the state PBIS Consultant position in 07-08, the effort is now supported with a blend of local, state, and federal (IDEA) funding. The message that teachers teach and children learn behavior in schools is spreading throughout the state and its educational programs. Administrators, teachers, and other professionals are identifying effective practices, creating the structures to support them, and using data to guide their decision-making and evaluate their efforts. From the creation of a single center in the fall of 2000, the North Carolina Positive Behavior Intervention & Support Initiative has grown to 691 schools and programs in 102 educational units (i.e., schools systems, charter schools, juvenile justice centers) in the 2007-2008 implementation year. Throughout the state, educators are requesting information about how to implement PBIS. In schools using PBIS, office discipline referrals as well as in-school and out-of-school suspensions are dropping and administrators and teachers are gaining valuable instructional time. As the effort continues to spread throughout the state, students participate in positive, proactive teaching programs in all aspects of their lives and North Carolina's Positive Behavior Intervention & Support Initiative is becoming a model of successful statewide implementation for widespread replication, dissemination, and review. The state leadership team has set goals of increasing evaluation and defining key features of sustainability to foster support for its past, current, and future PBIS efforts.

Report Citation:

Reynolds, H., Irwin, D., & Algozzine, B. (2009). *North Carolina Positive Behavior Intervention & Support Initiative Evaluation Report 2007-2008*. Raleigh, NC: Department of Public Instruction, Exceptional Children Division, Behavioral Support Services.

North Carolina Positive Behavior Intervention &
Support Initiative

[\[http://www.ncpublicschools.org/positivebehavior/\]](http://www.ncpublicschools.org/positivebehavior/)

Evaluation Report

In 2003-04, Pine Valley Elementary School in New Hanover County reported 944 office discipline referrals (ODRs). By the end of 2007-08, ODRs had dropped by 82 percent to 173. These changes resulted in gains of 28 days of administrator time and 89 days of instructional time. Troutman Middle School (Iredell-Statesville Schools) reported 914 ODRs, 431 days of Out-of-School Suspension (OSS), attendance at 95.78 percent, and an End-of-Grade (EOG) Composite of 61.3 percent. In 2007-08, they reported 604 ODRs, 179 days of OSS, 96.46 percent attendance, and 68.0 percent EOG Composite. At Washington High School in Beaufort County, the number of ODRs dropped 35% in just one year, while the EOC Composite went from 59.25 to 62.25. Schools across the state are providing similar data as North Carolina's Positive Behavior Intervention & Support Initiative continues to grow.

<http://www.ncpublicschools.org/positivebehavior/data/goodnews/>

Context

Beginning in 1997, the State Board of Education developed a statewide accountability system that sets annual performance standards for each school in the state to measure the growth in academic performance. Students in North Carolina have made significant gains as reported by the ABC Accountability Program since that time. Rigorous and relevant academic standards and assessments are central to the system. The No Child Left Behind (NCLB) federal legislation has created a new way to look at academic progress. Schools have begun to use research-based practices to teach students reading, writing, and mathematics. In addition, NCLB is requiring that

states identify “Persistently Dangerous Schools.” Positive Behavior Intervention & Support (PBIS) implementation is a way to impact the learning environments in all schools in order to support high academic performance and to reduce behavior problems.

PBIS is a systems approach or process, not a specific curriculum. The goal is to help educate all students, especially those with challenging behaviors. Because of the emphasis on continuous, data-based improvement, each school individualizes its implementation of PBIS. The adoption and sustained use of effective leveled-practices is central to PBIS and there is a strong emphasis on systematically teaching behavior using effective instructional methods, approaches, and practices. There is support for teaching and encouraging pro-social behavior to small groups of students, as well as for systematically teaching and implementing behavior interventions for the most difficult students.

Positive Behavior Intervention & Support in North Carolina

School-wide positive behavior intervention & support establishes and reinforces clear expectations for behavior. It is a team-based system that requires participation of teachers, administrators, families, and students and a common approach to discipline that is proactive, instructional, and outcome-based. Data guide decision-making with teams using information from the entire school and the whole school day.

The need for systematic attention and positive behavior intervention & support is compelling and long-standing in most states. PBIS programs provide a comprehensive process for teaching socially appropriate behaviors in order to optimize academic achievement for each student. The U. S.

Department of Education’s Office of Special Education Programs has established the National

Technical Assistance Center for Positive Behavioral Interventions and Supports (Center) at the University of Oregon to:

- f Identify and enhance knowledge about, and practical demonstration of, school-wide PBIS practices, systems and outcomes along the three-tiered continuum (primary, secondary, tertiary); and
- f Develop, conduct, and evaluate technical assistance and dissemination efforts that allow implementation of evidence-based practices on a large scale with high durability and effectiveness.

To accomplish its mission, the Center operates as a consortium of researchers, advocates, family members, teacher educators, professional association leaders, and model developers and receives guidance from an external evaluation team. A network of professionals provides feedback and support for Center-related products and activities, receives and disseminates Center-related resources and information, and participates in Center-sponsored local, state, and national events and activities. Bob Algozzine, Director of the Behavior and Reading Improvement Center at UNC Charlotte is North Carolina's center-affiliated partner and collaborator.

What Support is Available in North Carolina?

The Behavioral Support and Special Programs Section in the Exceptional Children (EC) Division at the North Carolina Department of Public Instruction provides technical assistance and access to program funds to school systems throughout North Carolina. This agency specifically assists school systems with developing programs and services for difficult to serve children with disabilities. The Behavioral Support and Special Programs Section has taken the lead in implementing Positive Behavior Intervention & Support Programs in North Carolina. During the past

year, individuals, schools, and systems receiving support continued to grow with PBIS programs implemented in more than three-fourths of the counties in the state. Six two-thirds time Positive Behavior Intervention & Support Regional Coordinators are now hosted by five school systems and one Charter School. The addition of these professionals has greatly increased the capacity to support local education agencies (LEAs) implementing PBIS in the state. In addition, the NC Legislature created a PBIS Consultant position during its 2007 session. This professional serves as the lead implementer for the state and provides leadership and technical assistance to the Regional Coordinators, LEAs, and schools. The creation of this position will also allow, over time, for more comprehensive evaluation, and will facilitate the state's efforts to participate more fully in the growing network of education agencies and professionals implementing PBIS. The state consultant position was filled in January of 2008. The creation of this position also marks the first time that state funding has been specifically earmarked for the support of North Carolina's PBIS Initiative.

North Carolina also has an active Positive Behavior Intervention & Support Leadership Team that includes state and local representation as well as professionals from college and university professional development programs and community agencies. The team has a focused Action Plan and meets regularly to define and refine the work being done in North Carolina's PBIS schools. The PBIS Regional Coordinators co-lead three subcommittees that are working on coaching and training, evaluation, and visibility and political support. The work of the subcommittees and the PBIS Leadership Team is also greatly expanding North Carolina's capacity to support and sustain implementation and evaluation of efforts to improve academic and social behavior in its schools. During the 2007-08 year the Leadership Team completed, published on the website, and provided training on a Data Collection Manual designed to assist

schools, coaches, trainers, and coordinators with school and LEA data collection and evaluation. Another addition to the Initiative is the creation of a multi-level school recognition system that provides schools with an opportunity to be recognized for the often challenging work of facilitating systems change. Schools can apply for one of three levels of recognition: Green Ribbon, Banner, or Exemplar. Green Ribbon schools are required to have completed Module 1 training, scored at least 80% on their SET and Level I on the Implementation Inventory, and submitted the data requested for any PBIS school. Banner schools must complete Modules 1 and 2, score 90% or better on the SET and Level 2 or higher on the Implementation Inventory, and submit required data. Exemplar schools have completed all 3 Modules, scored 95% on the SET and Level 3 or 4 on the Implementation Inventory, show improvement on data indicators, and be able to document at least one additional type of data that they regularly use for decision-making in their own school (i.e., staff retention data, climate and other attitude surveys, suspension, expulsion, and referral numbers for special education, and/or individual student data collection methods). The school recognition system is encouraging heightened acknowledgement and offering important incentives for the PBIS efforts in North Carolina.

Who Is Providing Support?

Support for schools and LEAs implementing PBIS is provided at multiple levels. While the Leadership Team sets the goals and the tone for PBIS implementation in the state, supporting those goals and objectives relies heavily on the PBIS Consultant and the Regional Coordinators. The state PBIS Consultant works directly with the Regional Coordinators to plan and implement training and technical assistance for trainers, coordinators, coaches, LEAs and sometimes, directly to schools. The Regional Coordinators work with trainers across the state to ensure that PBIS training is occurring regularly and with fidelity. The Regional Coordinators also serve as

the link between the Leadership Team and the implementing schools. In LEAs that have their own district PBIS coordinators, Regional Coordinators work with them to ensure that district and school-level implementation is occurring with fidelity. For districts that have not identified an LEA coordinator, the Regional Coordinators are also frequently the direct contact for support in schools.

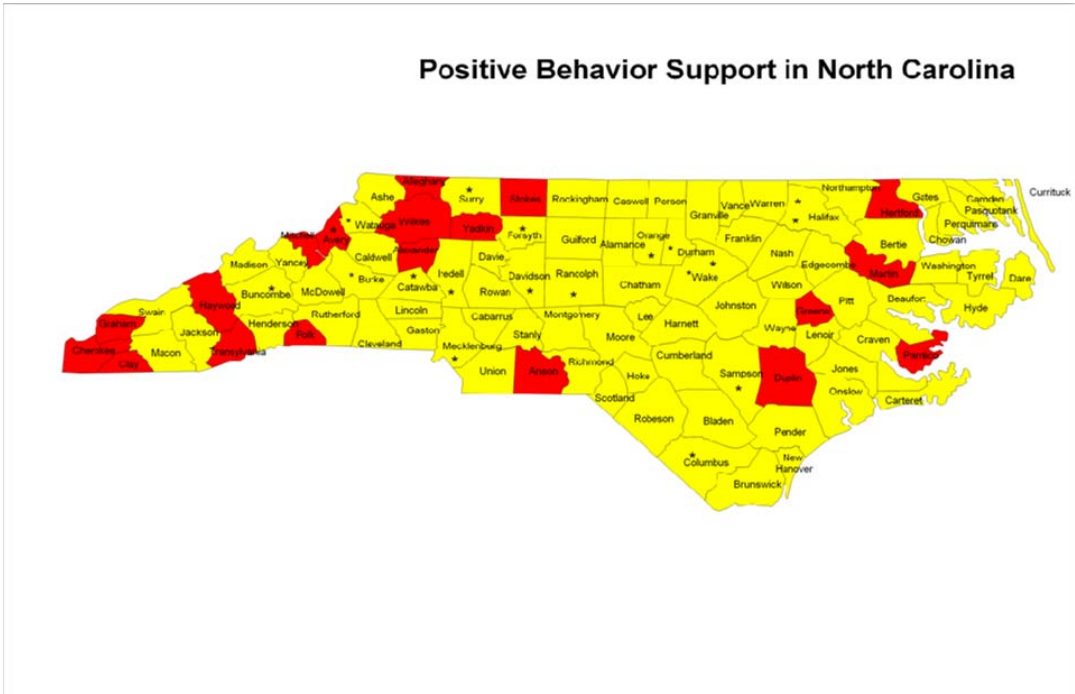
While the state consultant and the regional coordinators are currently the only positions funded directly by the initiative, implementing schools receive support from multiple other sources. Several LEAs have created and funded PBIS Coordinator and Coach positions to provide on-going and continuous support to their implementing schools. The initiative also relies heavily on the support of other personnel in the Behavior Support and Special Programs section at the state, regional, and local LEA level. In addition, many school and LEA personnel serve voluntarily as informal coaches, trainers, and/or contact people for the regional coordinators. Without these “volunteers” and the cooperation of their supervisors, efforts to provide the number of trainings needed to meet the requests of our ever-growing numbers of interested schools would be less successful.

Who Is Receiving Training and Support?

Positive Behavior Intervention & Support started in August of 2000 as a part of North Carolina’s federally-funded State Improvement Program that included seven centers focusing on reading, one center addressing mathematics, and one center targeting improvements in social behavior. The primary purposes of the grant were professional development of school personnel and systems change. Currently, more than three-fourths of the counties in the state have at least one school participating in the North Carolina Positive Behavior Intervention & Support Initiative (see Figure 1).

Steady growth has been evident (see Figure 2 and 3) and improving and sustaining the effort has been supported with increasing amounts of targeted state funding in recent years (see Figure 4).

Figure 1



Note. Light-shaded counties have at least one school participating in Positive Behavior Intervention & Support Initiative.

Figure 2

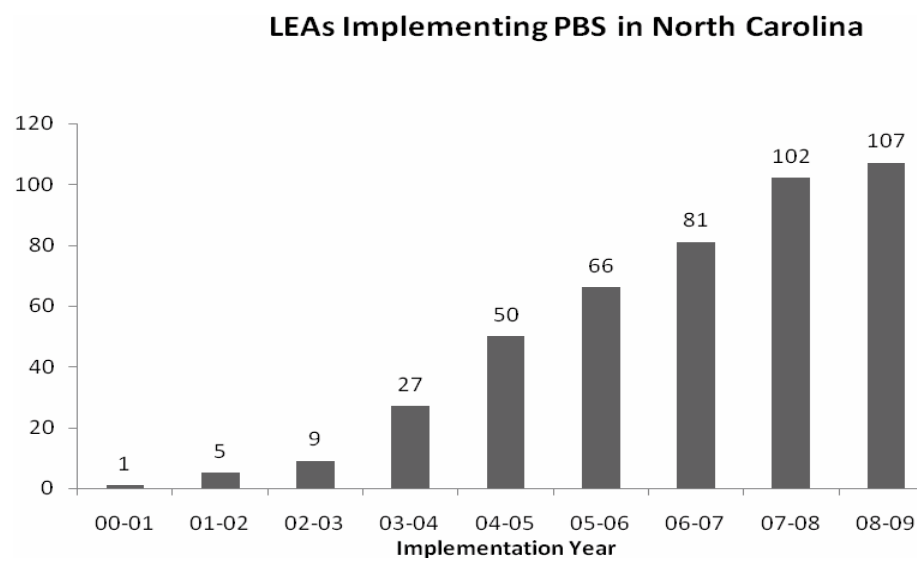


Figure 3

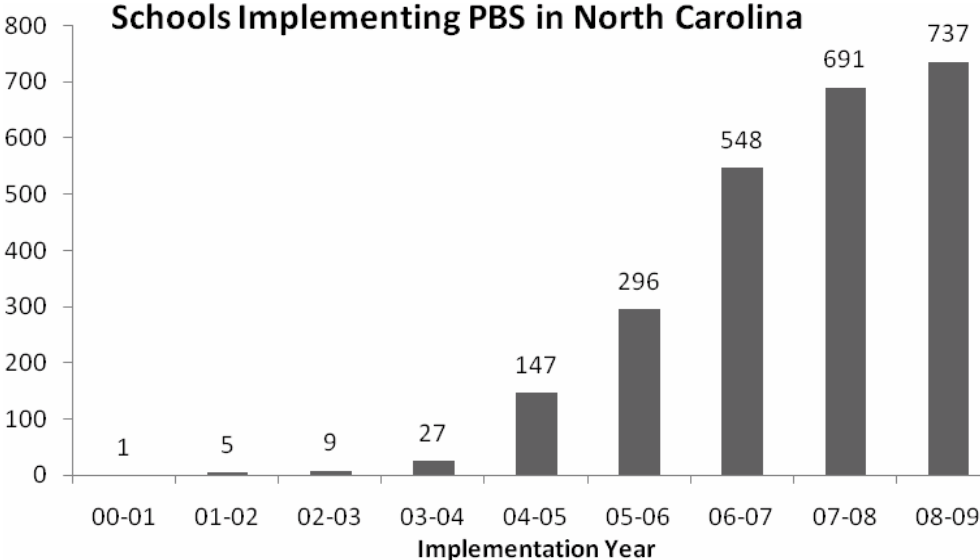
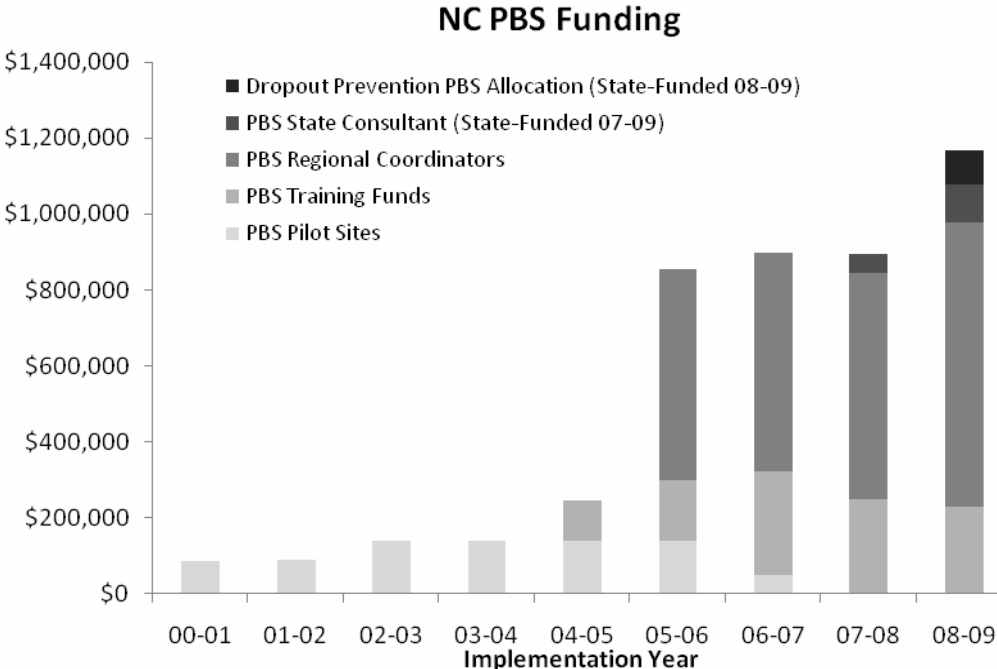


Figure 4



What school systems are implementing positive behavior intervention & support?
Currently, 102 of 115

LEAs (89%) in North Carolina participate in the PBIS initiative; and, an additional 21 LEAs began the process during the 2007-08 school year. Ten Charter Schools (10% of all charter schools) and 5 Youth Development Centers (100% of all YDC) are actively implementing PBIS. Of the 691 schools implementing PBIS in North Carolina, 423 (61%) are elementary schools, 175 (25%) are middle/junior high schools, 59 (9%) are high schools, 29 are alternative schools (4%), and 5 (1%) are K-8 or K-12 schools. The 691 schools now participating represent 29% of all the schools in North Carolina.

What schools are receiving implementation support? North Carolina has phased out financial support for individual implementation sites and continues to emphasize PBIS training with the development of Regional PBIS Coordinator positions. As LEAs develop their own PBIS trainers, they are eligible to request funding to support training of additional schools. In 2007-08 thirty-six LEAs received funding to support PBIS training for schools in their areas. Overall, across the state, the number of LEAs implementing PBIS has continued to grow each year and the ongoing efforts have been supported by local school districts as an integral part of their ongoing educational programs.

What Professional Development Supports the Implementation Process?

The Exceptional Children Division through the Positive Behavior Intervention & Support Regional and Charter Consultants coordinated new school team trainings throughout the state. School System staff must be identified as coach/trainers and participate in module training with school teams. After these individuals complete the three modules and train the three modules, they are considered PBIS trainers for school teams in their own and other local education agencies. Trained personnel throughout the state are sharing a consistent set of materials

[<http://www.ncpublicschools.org/positivebehavior/implementation/>]. PBIS Coordinators are available in all regions of the state:

Name	Region	Contact
Minnie Kidd	Northeast	mkidd@ecpps.k12.nc.us
Margaret Gannon	Southeast	margaret_gannon@pender.k12.nc.us
Correy Watkins	Central	cwatkins@wस्क12.org
Richard Tedescucci	Charter Schools	rtedescucci@gmail.com
Cayce McCamish	Midwest	cmccamish@mgsd.k12.nc.us
Julie Weatherman	West	jmweatherman@yancey.nc.net

In addition to Module trainings provided for the schools teams, the Regional Coordinators are encouraged to continue their own professional development by participating in state conferences, national forums, and international conferences.

What training events were conducted? During 2007-08, Modules 1, 2 and 3 were provided for school teams multiple times across the state. In February, coaches, trainers, and coordinators were invited to participate in a multi-day training opportunity. The first part of this training introduced the new Data Collection Manual and the School Recognition system. The second part of the training was facilitated by Susan Barrett (PBIS Technical Assistance Center Partner) and focused on quality coaching practices. Additional trainings were provided by regional coordinators in their regions as requested. Topics for these events ranged from SET Training to Classroom Management to Research-Based Interventions to De-escalation Strategies. Some of these trainings were targeted at specific schools or trainers, while others were open

Who participated in the training events? For module trainings, school teams of five or six plus a school system coach/trainer participated in the training sponsored by the regional coordinator or LEA. For the remainder of the training opportunities, regional coordinators issued invitations based on need, space, and interest.

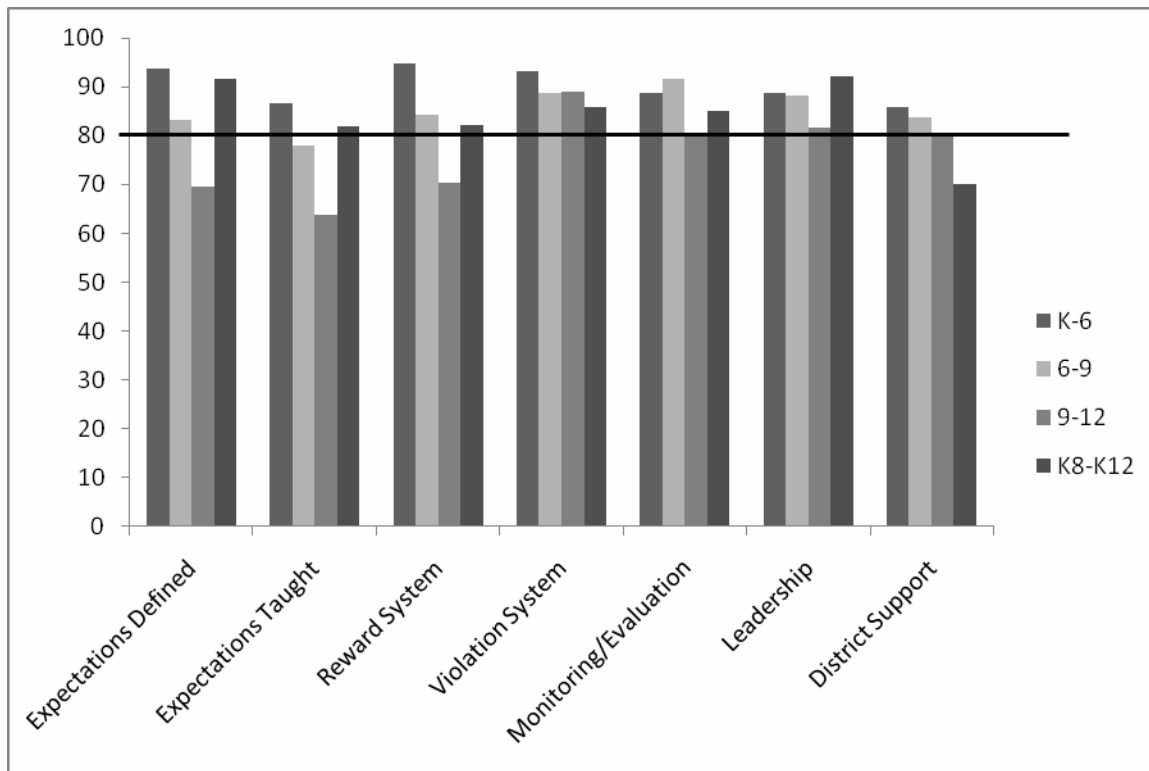
To What Extent have Behavior Support Practices Changed?

During the 2007-08 school year, the Positive Behavior Intervention & Support Regional Coordinators and LEA coach/trainers evaluated some of the schools implementing PBIS using the School Wide Evaluation Tool (SET) developed by the National Positive Behavior Interventions and Supports Center and widely used in PBIS evaluation efforts (Horner, Todd, Lewis-Palmer, Irvin, Sugai, & Boland, 2004; <http://www.ncpublicschools.org/positivebehavior/data/evaluation/>). Areas of the SET focus on: Expectations Defined, Behavioral Expectations Taught, On-going System for Rewarding Behavioral Expectations, System for Responding to Behavioral Violations, Monitoring and Decision-Making, Management, and District-Level Support. The SET is useful for assessing and evaluating the critical features of school-wide effective behavior support. It provides trend lines of improvement and sustainability over time. Evaluation data are from interviews with the administrators, teachers, other staff, and students and observations in the school. The Effective Behavior Support (EBS) Self-Assessment Survey is also used by school staff for assessment of the status and need for improvement of school-wide discipline systems, non-classroom (e.g., cafeteria, hallway, and playground) management systems, classroom management systems, and systems for individual students engaging in chronic problem behaviors (Safran, 2006).

SET data were available for 117 (59%) elementary, 49 (25%) middle, 18 (9%) high schools, and 15 (7%) combined enrollment (e.g., K-8, K-12) schools ($N = 199$); the distribution

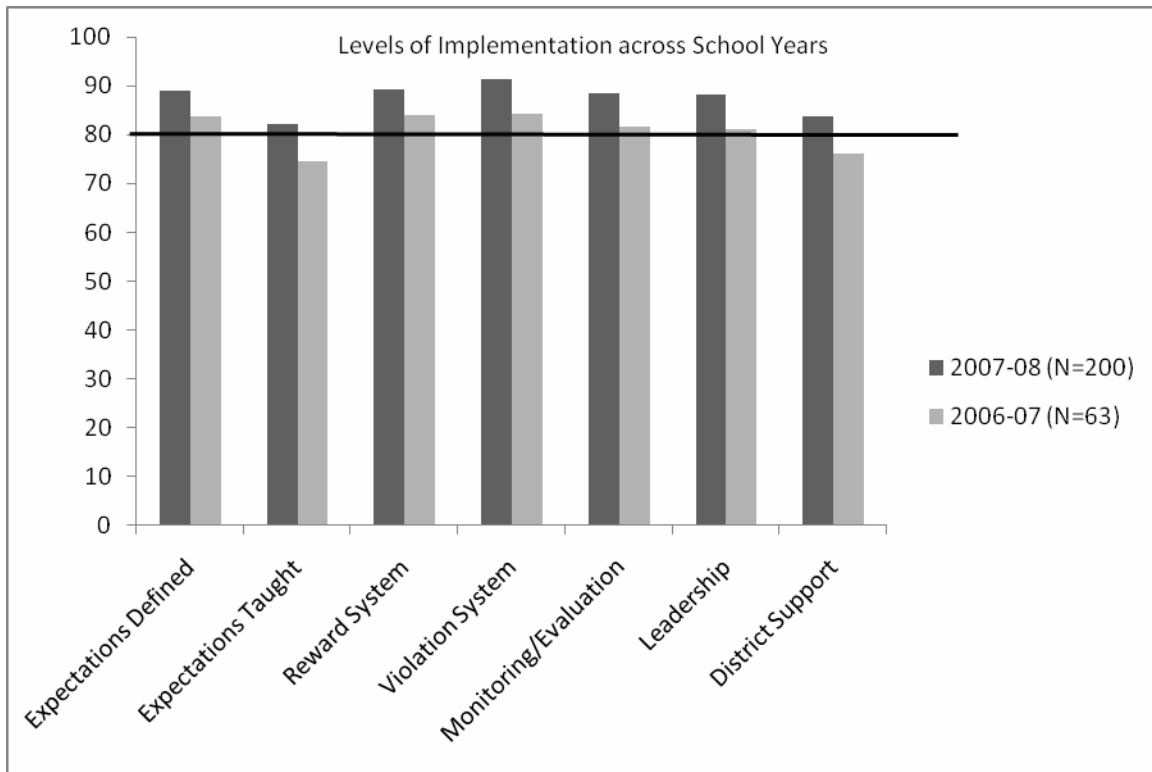
by type of schools was similar to that for schools implementing PBIS across the state (see p. 9). Seventy-eight percent of the schools ($n = 156$) had SET Total scores of 80% or higher; and, 89% of elementary, 71% of middle, 39% of high, and 67% of combined enrollment schools met this level of implementation. Average scores on SET subscales varied across levels of schools and were generally higher for elementary than middle, high, or combined enrollment schools (see Figure 5). Horner et al. (2004) "...suggest that a school is implementing the primary prevention practices of school-wide PBIS when both SET total and Expectations Taught subscale scores are at least 80%" (p. 11). Approximately 70% of the schools reporting 2007-2008 SET data met this criterion, including 79% of elementary, 61% of middle, 33% of high, and 60% of combined enrollment schools.

Figure 5



During the previous school year, SET data were available for 51 schools. A similar pattern of implementation was evident across both years (e.g., higher scores on all subscales for elementary compared to middle, high, and mixed enrollment schools). Scores were generally higher during the 2007-2008 than the 2006-2007 school year (see Figure 6); and, during the current reporting year, 16% more schools (70% vs. 54%) documented both SET total and Expectations Taught subscale scores at or above the 80% target criterion reflecting a high level of implementation of schoolwide positive behavior intervention & support.

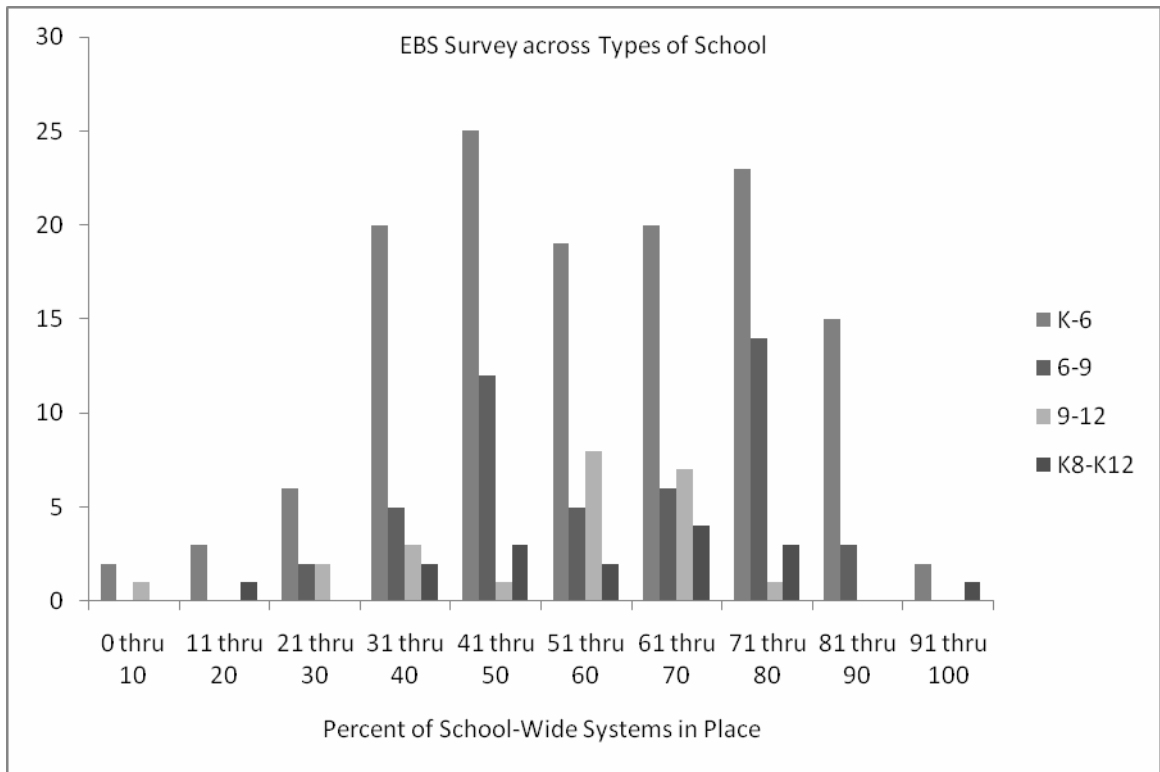
Figure 6



EBS data were available for 135 (61%) elementary, 47 (21%) middle, 23 (11%) high schools, and 16 (7%) combined enrollment (e.g., K-8, K-12) schools ($N = 221$); the distribution by type of schools was similar to that for schools implementing PBIS across the state (see p. 9) and for schools reporting SET data. Average percent of systems in place was statistically similar,

$F(3,217) = 0.96, p > .01$, across levels of schools and the level of implementation reflected in these data was generally higher for elementary than middle, high, or combined enrollment schools (see Figure 7). The percent of schoolwide systems in place ($M = 56.65, SD = 18.76$) for schools reporting EBS data during the 2007-08 school year ($n = 221$) was statistically significantly higher ($t = 5.92, df = 289, p < .01$) than for schools ($n = 70$) reporting similar data during the previous school year ($M = 42.11, SD = 14.83$); the effect size (.82) for this difference was large.

Figure 7



In general, implementation data reflect positive changes in behavior support practices. Increases were observed from the previous year in the number of schools collecting and reporting information on SET (63 to 199) and EBS (70 to 221) indicators and higher levels of

implementation were evident for each of these markers in comparisons completed across school years.

To What Extent is There an Impact on Student Behavior?

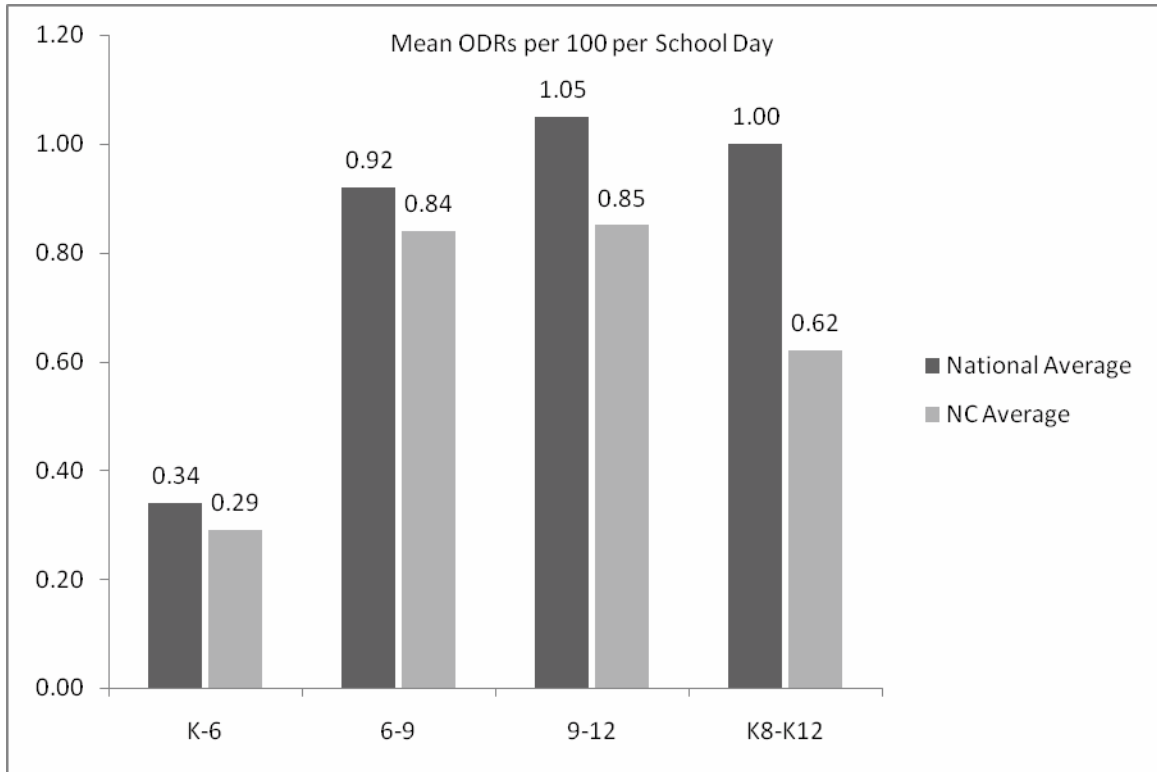
Office discipline referrals (ODRs), suspensions, expulsions, and levels of behavior risk are reflective of changes resulting from implementation of positive behavior intervention & support systems (cf.

<http://www.ncpublicschools.org/positivebehavior/data/>). Attendance, academic achievement, and school risk factors are also useful impact indicators. Selected outcomes reflective of improvements in NC schools are summarized below; other indicators are regularly reported and updated in other sources (cf. <http://www.ncpublicschools.org/positivebehavior/data/goodnews/> and <http://www.ncpublicschools.org/positivebehavior/data/gains/>).

Office discipline referrals. The School-Wide Information System (SWIS) is a web-based program used to improve behavior support in elementary, middle (junior high) and high schools (www.swis.org). SWIS provides school personnel with accurate, timely, and useful information for making decisions about PBIS systems and discipline events. SWIS data are available on office discipline referrals (ODRs), suspensions, and levels of behavior risk in schools implementing PBIS in North Carolina. Across the country, office discipline referrals are used as markers for managing and monitoring disruptive behavior in schools (Metzler, Biglan, Rusby, & Sprague, 2001; Sugai, Sprague, Horner, & Walker, 2000). During 2007-08 school year, SWIS users were in 1,762 elementary schools, 482 middle schools, 176 high schools and 312 combined enrollment schools and 1,244,026 referrals were entered into the system. The average ODRs (majors) per 100 students per school day was .34 ($SD = .45$) across grades K-6, .92 ($SD = .141$) across grades 6-9, 1.05 ($SD = 1.56$) across grades 9-12, and 1.00 ($SD = 1.85$) in schools enrolling students

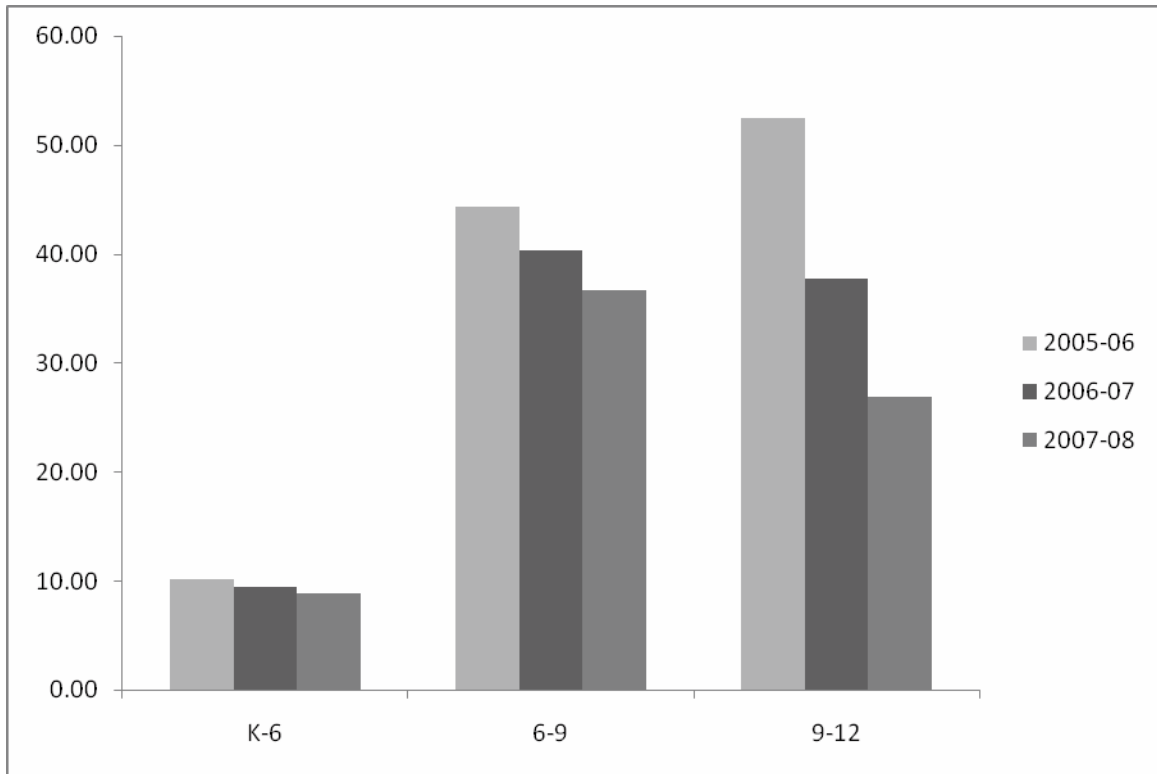
across Kindergarten to grades 8-12 (www.swis.org). Available data from schools implementing PBIS in North Carolina compare favorably with these national averages (see Figure 8).

Figure 8



Suspensions. Disciplinary offenses are often dealt with using short-term suspensions, which can last up to ten days. Time out of school almost always has a negative impact on achievement and progress; suspending students from schools takes valuable time teachers can devote to instruction and administrators can spend on other leadership activities. There has been a consistent decrease in suspensions across schools implementing PBIS in North Carolina over the past three years (see Figure 9).

Figure 9

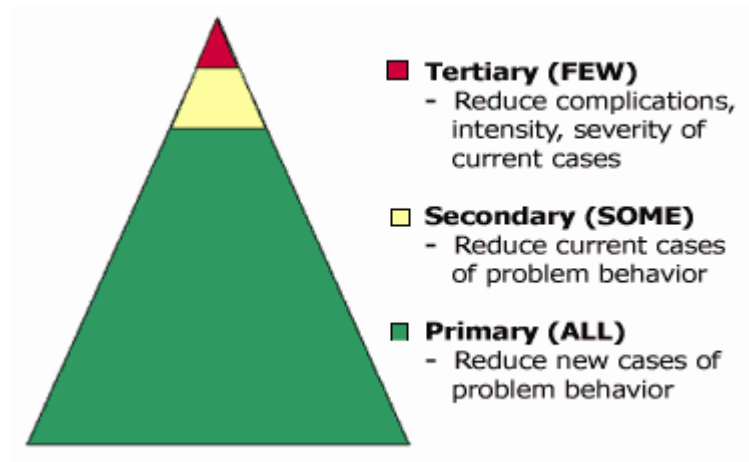


Levels of behavior risk. A key component of PBIS is creating and sustaining primary (school-wide), secondary (classroom), and tertiary (individual) systems of support for academic and social behavior in schools (Sugai, et al., 2005). The “triangle” (see Figure 10) is used as a heuristic to reflect these levels of intervention as well as to represent levels of behavior risk (e.g., 0-1 ODRs low risk, 2-5 ODRs some risk, 6+ ODRs high risk). Normative ODR distributions reported by Horner, Sugai, Todd, and Lewis-Palmer (2005) suggest that across schools 87% ($SD=10$) of students had 0 to 1 ODRs, 9% ($SD=6$) had 2 to 5 ODRs, and 4% ($SD=5$) had 6 or more ODRs. Similar indices for levels of behavior risk have been suggested (cf. Irvin, Tobin, Sprague, Sugai, & Vincent, 2004) and used in large scale evaluation research (cf. Ervin, Schaughency, Matthews, Goodman, & McClinchey, 2007): Levels of behavior risk evident in

schools implementing PBIS in North Carolina were comparable to these expectations and better than those evident in comparison schools not systematically implementing PBIS (see Figure 11).

Figure 10

Level of Intervention



Levels of Risk

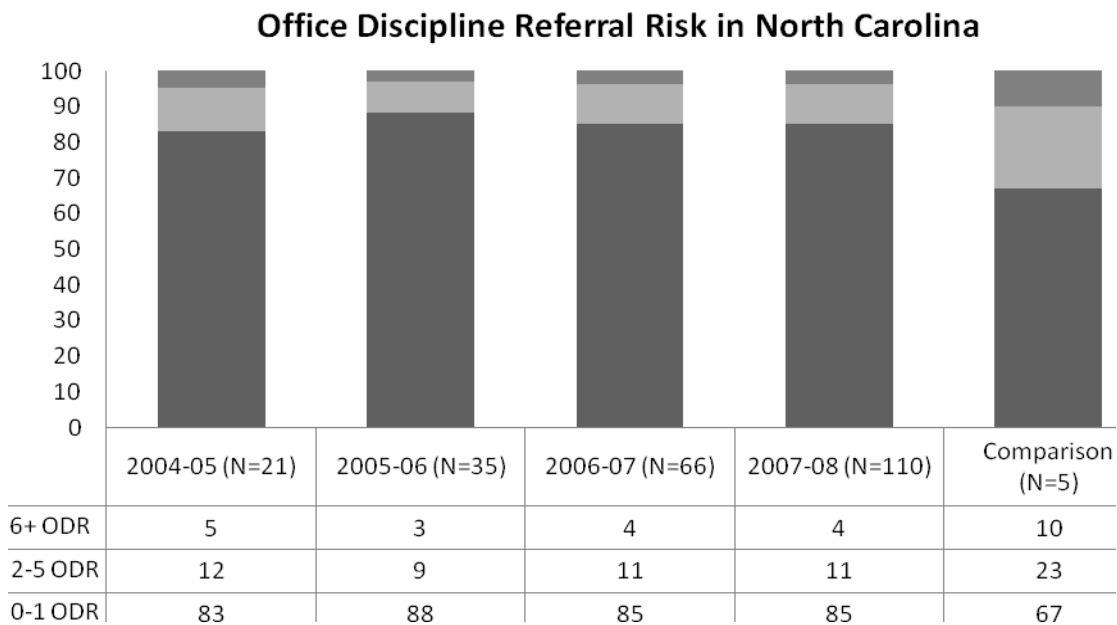
High Risk (6+ ODRs)

Some Risk (2-5 ODRs)

Low Risk (0-1 ODRs)

Source: OSEP Technical Assistance Center for Positive Behavioral Interventions and Support

Figure 11



To What Extent has Academic Performance changed in Participating Schools?

End-of-Grade Reading scores and rate of office discipline referrals per day per 100 students were available for 38 schools. The average percent of students reading at Mastery (Level III or IV) was 86 and the average office discipline referral rate was 0.36 and the correlation between these scores was statistically significant ($r = -0.45, p < .05$) suggesting that higher achievement was evident in schools with lower rates of office discipline referrals. To further investigate this relationship, we compared achievement in schools ($n = 24$) with below average office discipline referrals to that in schools ($n = 14$) with above average office discipline referrals (see Table 2). End-of-Grade Reading scores ($M=81.92, SD=6.76$) in schools with low rates of office discipline referrals were statistically significantly higher ($t = 2.58, df = 36, p < .01$) than those ($M=76.24, SD=6.18$) in schools with high rates of office discipline referrals.

Table 2

Comparison of Reading Achievement and Office Discipline Referrals

Group	Reading		Office Discipline Referrals	
	Mean	SD		
Total ($N=38$)	85.93	8.88	0.36	0.28
Low ODR ($n=24$)	81.92	6.76	0.18	0.09
High ODR ($n=14$)	76.24	6.18	0.67	0.22

To What Extent has Training and Technical Assistance Improved Capacity?

With the addition of the Positive Behavior Intervention & Support Regional Coordinators, implementation has increased throughout the state. While 296 schools were in some stage of implementation by the end of 2005-06 school year, 252 new schools (including sixteen new school systems) received training during the 2006-07 school year, and 143 additional schools and

21 school systems were trained in 2007-08. The PBIS Regional Coordinators continue to work with the trainers/coaches in their regions to coordinate training for new schools and to provide support and assistance to the trainers and school teams, and to train additional trainers. The regional coordinators continue to hold regular meetings with the trainers/coaches in their regions and work to collect PBIS implementation data regionally. The new PBIS Consultant worked with the Regional Coordinators to design and post on the website data collection sheets that follow the recommendations of the Data Collection Manual. Feedback from schools using the new sheets has overall been positive. To improve capacity of coaches and coordinators to help schools use data for decision-making, a data workshop has been planned for the annual Summer Institutes. To further improve the response rate for data collection from the schools, the state consultant will begin a project with technology staff at the Department of Public Instruction to construct an online database that schools will be able to utilize to submit annual data requirements. Work on this database is expected to last through the 2008-09 school year.

To What Extent is Implementation Affecting Outcomes?

In a recent study, Lassen, Steele, and Sailor (2006) used relationships between ODRs and SET scores to evaluate the effects of PBIS in an urban middle school. They found reductions in ODRs and suspensions and increases in standardized math and reading scores over time. They also reported a significant relationship between student problem behavior and academic performance and a positive relationship between treatment fidelity and reductions in problem behavior.

Means and standard deviations for office discipline referrals in schools that met and did not meet SET expectations are presented in Table 3. Averaged across three years, office discipline referrals were statistically significantly higher, $F(1,152) = 6.24, p > .01$, in schools

($M=0.47$, $SD=0.46$) that did not meet the SET 80/80 implementation criterion compared to those ($M=0.28$, $SD=0.44$) that did meet it. Rates of office discipline referrals in schools that met and did not meet SET expectations are illustrated in Figure 12. Small differences evident during early years of statewide implementation (2005-2006) increased greatly in recent years, consistently favoring schools with high levels of implementation support. Differences were also evident in levels of behavior risk in schools that met SET criteria for high levels of implementation of positive behavior intervention & support compared to schools that did not meet these standards (see Figure 13). Twice as many students were at some or high risk in schools with lower levels of implementation compared to schools with expected or higher levels of SET Total and Expectations Taught evidence.

Table 3

Office Discipline Referrals for Schools with Different Levels of Implementation

SET 80/80 Criterion	Year					
	2005-06		2006-07		2007-08	
	Met	Not Met	Met	Not Met	Met	Not Met
<i>M</i>	.16	.26	.21	.40	.35	.55
<i>SD</i>	.13	.24	.23	.36	.57	.54
<i>n</i>	11	7	40	16	56	28

Figure 12

Office Discipline Referrals across Levels of SET Implementation

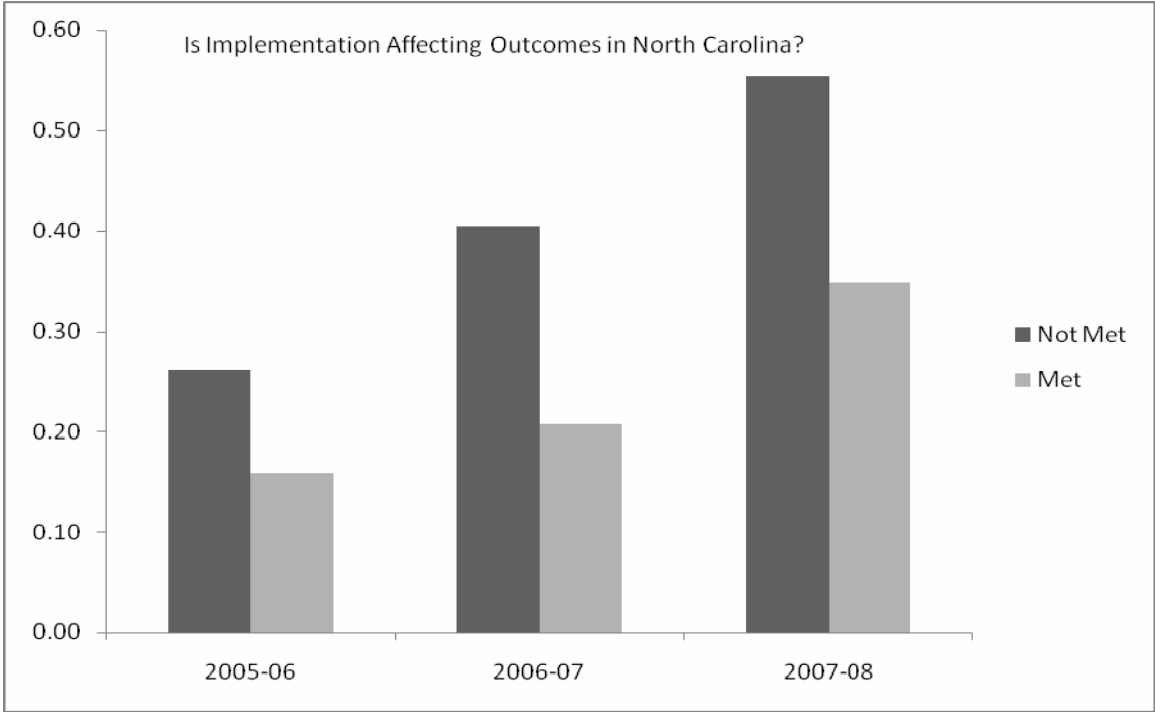
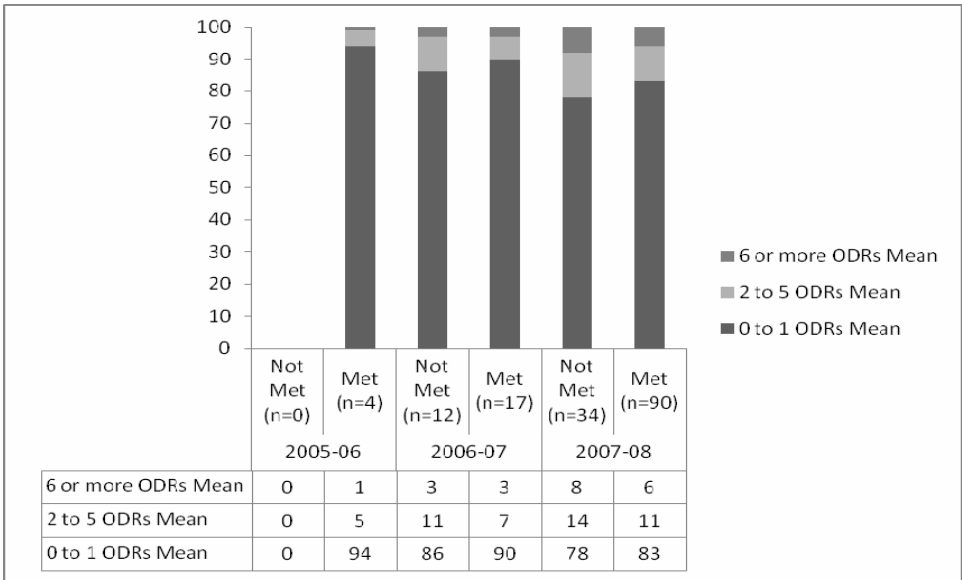


Figure 13

Behavior Risk across Levels of SET Implementation

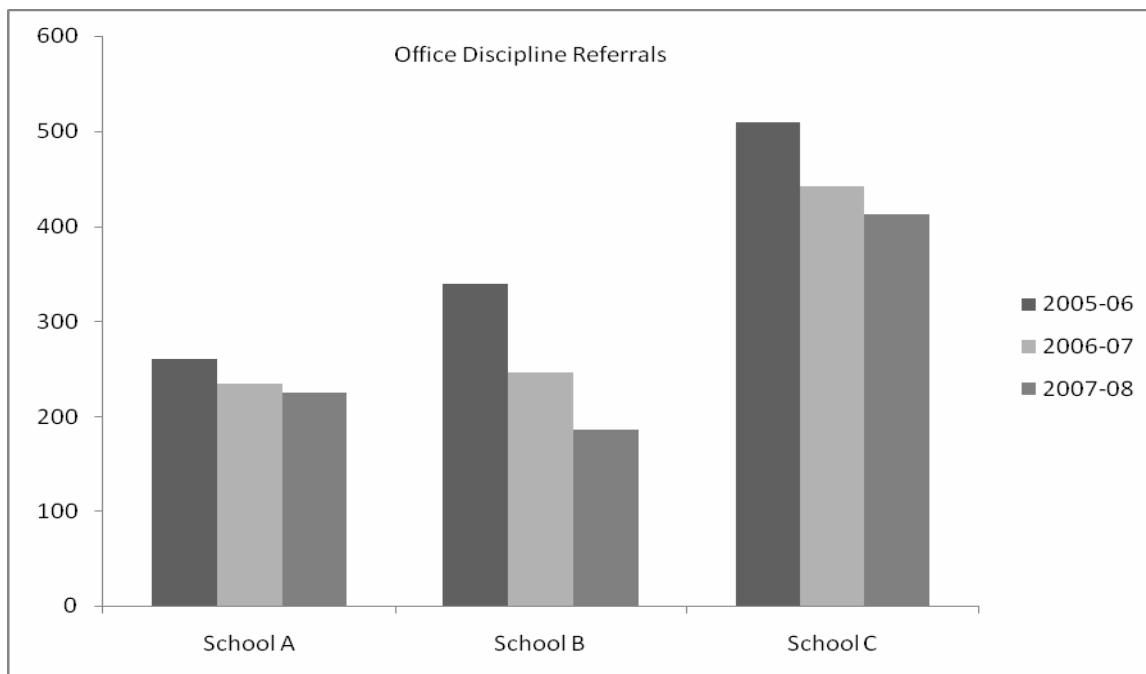


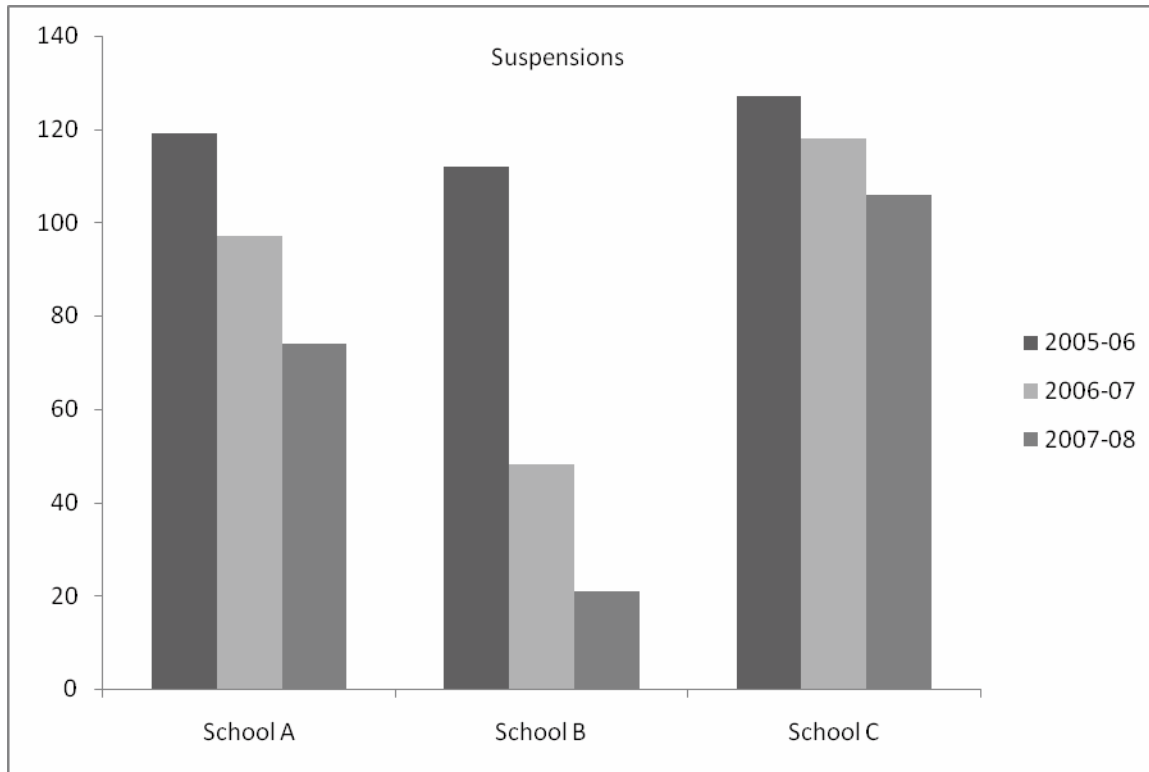
To What Extent have Changes Resulted in Savings in Time Allocated to Problem Behavior?

Office discipline referrals and suspensions were compared in three elementary schools each with similar enrollments across three years of implementation; improvements were evident in each school for these markers of problem behavior (see Figure 14). The average number of office discipline referrals in these schools decreased by 17% from 2006 to the 2007 school year and 12% from 2007 to the 2008 school year. The average number of suspensions in these schools decreased by 28% from 2006 to the 2007 school year and 30% from 2007 to the 2008 school year. Using conservative estimates of 30 minutes of teacher time and 20 minutes of administrator time for each office discipline referral, approximately 32 days of teaching time and 30 days of leadership time were gained in these schools as a result of continuing reductions in office referrals.

Figure 14

Changes in Problem Behavior Markers in Three Elementary Schools





Lessons Learned and Directions for Change for Positive Behavior Intervention & Support in North Carolina

National, state, and local education agency policy makers want to use findings from research and evaluation studies to implement practices and reforms that improve outcomes for students. The mission of North Carolina's Positive Behavior Intervention & Support Initiative is to provide leadership, professional development, resources, and on-going support in order for schools to successfully implement evidence-based practices designed to improve academic and social outcomes for all students. Wallace et al. (2008) suggest that such implementation is a mission-oriented activity involving many decisions, well-defined actions, and continuous correction that results in *paper*, *process*, and *performance* outcomes.

Paper outcomes include context evidence of putting new policies and procedures into place as a result of adopting an innovative practice or reform. North Carolina has an active Positive Behavior Intervention & Support Leadership Team that meets regularly. The team includes state and

local representation as well as professionals from college and university professional development programs and community agencies and it has a focused Action Plan that defines policies and procedures for initiating and sustaining school-wide positive behavior intervention & support in all schools. Regional Coordinators co-lead three subcommittees that are working on coaching and training, evaluation, and visibility and political support; and, with these positions and professionals in place, implementation has increased throughout the state. This practice of putting new policies and procedures in place is also beginning to happen in LEAs as they re- write codes of conduct and discipline policies to reflect the shifts resulting from PBIS implementation.

Process outcomes include input evidence of putting new policies and procedures into place to provide training, supervision, forms, and other support needed as a result of adopting an innovative practice or reform. The creation and sustained funding of the Regional Coordinator and, most recently the PBIS Consultant position is evidence of the process outcomes of PBIS in NC. It has only been with the creation of these roles and the efforts of the individuals in these roles that PBIS implementation in NC has really exploded. In fact, these roles are leading some LEAs to see the necessity for similar LEA roles, and LEAs are beginning to ask each other how they are funding and sustaining these positions.

Performance outcomes include process and product evidence of putting new policies and procedures into place for documenting fidelity and outcomes as a result of adopting an innovation or reform. With the creation of the PBIS Consultant position, the initiative finally has a person whose role is to evaluate the statewide initiative to document fidelity and look for ways

to improve the data collection, analysis, and fidelity of implementation. Creation of the Data

Collection Manual and its implementation is a great first step in this process, the culmination of which will be a statewide online database.

- f Currently, three-quarters of the counties in the state have at least one school participating in the North Carolina Positive Behavior Intervention & Support Initiative (see Figure 1).
Steady growth
has been evident (see Figure 2 and 3) and improving and sustaining the effort has been supported with continued funding (see Figure 4).
- f Most of the elementary schools (89%) had SET Total scores of 80% or higher and similar scores were evident in fewer middle (71%) and high schools (39%). Average scores on SET subscales varied across levels of schools and were generally higher for elementary than middle and high schools (see Figure 5).
- f Available office discipline referral data from schools implementing PBIS in North Carolina compare favorably with national averages (see Figure 8) and there has been a consistent decrease in suspensions across schools implementing PBIS in North Carolina over the past three years (see Figure 9).
- f Levels of behavior risk (see Figure 10) evident in schools implementing PBIS in North Carolina were favorable and less than those evident in comparison schools not systematically implementing PBIS (see Figure 11).
- f End-of-Grade Reading scores were available for schools evidencing lower levels ($n=24$) and higher ($n=14$) levels of implementation of PBIS as reflected in SET scores. Performances were statistically significantly different ($t = 2.58, df = 36, p < .01$) across the groups (see Table 2), effect sizes reflecting practical differences were large. Differences were also evident in levels of behavior risk evident in schools that met SET

criteria for high levels of implementation of positive behavior intervention & support compared to schools that did not meet these standards (see Figure 13).

Best practice suggests that comprehensive models of school reform include stages of change including identifying a solution, mobilizing a process of change, shepherding a program in schools and classrooms, and institutionalizing the effort as a permanent part of the school (Wallace, Blase, Fixsen, & Naoom, 2008). Successful reforms employ innovative, research-based strategies and methods to enhance student learning, teaching, and school management, and they incorporate comprehensive designs in school functioning, instruction, assessment, management, and professional development. Continuous and effective professional development programs that include measurable goals and performance benchmarks for student achievement are the basis for comprehensive change processes. Making reforms happen in schools requires nurturing student, teacher, and administrator growth and involvement as well as parental involvement encouraging substantial levels of communication and engagement with families. Institutionalizing a comprehensive school reform program requires the coordination of material and human resources guided by data demonstrating positive outcomes that are feasible, acceptable, and real. The North Carolina Positive Behavior Intervention & Support Initiative fares well when judged by these criteria.

Recommendations for continuing supports, maintaining successful programs, and expanding implementations include the following:

- f A comprehensive school reform program employs innovative strategies and proven methods for student learning, effective teaching, and school management that are based on evidence-based research and effective practices that have been replicated successfully in schools with diverse characteristics. *Recommendation: Continue the course established*

by prior years of successful state-wide implementation and begin to systematically collect evidence supporting comprehensive positive behavior intervention & support initiatives.

- f A comprehensive school reform program employs a sound design with components for effective school leadership, instruction, assessment, classroom management, and parental involvement aligned with the curriculum, technology, and professional development to enable all students to meet challenging content and performance standards.

Recommendation: Continue the course established by prior years of successful state-wide implementation and expand cadre of local professional development consultants capable of matching program implementation to district and school expectations and standards.

- f A comprehensive school reform program employs high-quality and continual teacher and staff professional development and training. *Recommendation: Encourage closer collaboration among districts and schools implementing positive behavior intervention & support and provide opportunities for participation in local, state, and national professional development meetings, workshops, and conferences.*

- f A comprehensive school reform program employs measurable goals for student performance tied to a state's challenging content and student performance standards, as those standards are implemented, and benchmarks for meeting the goals.

Recommendation: Encourage districts and schools implementing positive behavior intervention & support to collect, analyze, and report common information reflecting important evaluation outcomes.

- f A comprehensive school reform program employs systems of support within the school for administrators, faculty, and staff—and students. *Recommendation: Establish*

newsletter or other communication to share successes and inform districts and schools within the state of opportunities created by implementation of positive behavior intervention & support programs.

- f A comprehensive school reform program employs systems for meaningful involvement of parents and local community in planning and implementing school improvement activities. *Recommendation: Encourage communities of support to be part of positive behavior intervention & support implementations and provide opportunities for responsive districts to share “best practices” at local, state, and regional meetings.*
- f A comprehensive reform program employs high-quality external support and assistance from a comprehensive school entity (which may be a university) with experience or expertise in school-wide reform and improvement. *Recommendation: Continue strong and positive collaboration with National Technical Assistance Center on Positive Behavioral Interventions and Supports and contribute to local, state, regional, and national events sponsored, coordinated, or otherwise managed by its partners.*
- f A comprehensive school reform program employs a plan for systematically evaluating outcomes and disseminating “lessons learned” so others may benefit. *Recommendation: Encourage use of common data reports, systems and measures (e.g., School Profile, School-Wide Information System, School-Wide Evaluation Tool, Self-Assessments, Effective Behavior Support Survey, School Safety Report) as well as yearly analysis and summary of key indicators of progress.*

- f A comprehensive school reform program employs continuous improvement processes and procedures. *Recommendation: Develop ongoing monitoring system to support state-wide positive behavior intervention & support implementation.*

Effective school-wide systems of positive behavior intervention & support have seven components in common a) an agreed upon and common approach to improving behavior, b) a positive statement of purpose, c) a small number of positively stated expectations for all students and staff, d) procedures for teaching these expectations to students, e) a continuum of procedures for encouraging displays and maintenance of these expectations, f) a continuum of procedures for discouraging displays of rule-violating behavior, and g) procedures for monitoring and evaluation the effectiveness of the discipline system on a regular and frequent basis. North Carolina's Positive Behavior Intervention & Support Initiative has made considerable progress in "institutionalizing" these components in increasing numbers of schools and school districts. Continuing the course will likely bring increasing benefits in efforts to impact learning environments in schools in order to support high student performance and reduce behavior problems.

Resources

Effective Behavior Support (EBS) Self-Assessment Survey Version 2.0. Retrieved from National Technical Assistance Center on Positive Behavioral Interventions and Supports (PBIS) web site: <http://www.pbis.org/tools.htm>

Ervin, R. A., Schaughency, E., Matthews, A., Goodman, S. D., & McClinchey, M. T. (2007). Primary and secondary prevention of behavior difficulties: Developing a data-informed problem-solving model to guide decision making at a school-wide level. *Psychology in the Schools, 44*, 7-18.

Horner, R., Sugai, G., & Lewis-Palmer, T. (2005). *School-wide positive behavior support evaluation template*. Eugene, OR: University of Oregon, Educational and Community Supports. Retrieved December 1, 2006, from <http://www.pbis.org/files/Evaluation%20Template%2010-05.doc>

Horner, R.H., Sugai, G., Todd, A.W., & Lewis-Palmer, T. (2005). School-wide positive behavior support. In L.M. Bambara & L. Kern (Eds.), *Individualized supports for students with problem behaviors: Designing positive behavior support plans* (pp. 359–390). New York: Guilford Press.

Horner, R. H., Todd, A. W., Lewis-Palmer, T., Irvin, L. K., Sugai, G., & Boland, J. B. (2004). The School-Wide Evaluation Tool (SET): A research instrument for assessing school-wide positive behavior intervention & support. *Journal of Positive Behavior Interventions, 6*, 3-12.

<http://www.ncpublicschools.org/positivebehavior/>

<http://www.pbis.org/main.htm>

- Irvin, L.K., Tobin, T.J., Sprague, J.R., Sugai, G., & Vincent, C.G. (2004). Validity of office discipline referral measures as indices of school-wide behavioral status and effects of school-wide behavioral interventions. *Journal of Positive Behavior Interventions*, 6, 131–147.
- Lassen, S. R., Steele, M. M., & Sailor, W. (2006). The relationship of school-wide positive behavior support to academic achievement in an urban middle school. *Psychology in the Schools*, 43, 701-712.
- Metzler, C. W., Biglan, A., Rusby, J. C., & Sprague, J. R. (2001). Evaluation of a comprehensive behavior management program to improve school-wide positive behavior support. *Education and Treatment of Children*, 24, 448-479.
- North Carolina Department of Public Instruction. (2006). *Annual study of suspensions and expulsions 2004-2005*. Raleigh, NC: Author.
- Sugai, G., & Horner, R. (2007). *Evidence base for school-wide positive behavior support*. Retrieved from National Technical Assistance Center on Positive Behavioral Interventions and Supports (PBIS) web site: <http://www.pbis.org/>
- Safran, S. P. (2006). Using the Effective Behavior Supports Survey to guide development of schoolwide positive behavior support. *Journal of Positive Behavior Interventions*, 8, 3-9.
- Sugai, G., Horner, R.H., Sailor, W., Dunlap, G., Eber, L., Lewis, T., et al. (2005). *School-wide positive behavior support: Implementers' blueprint and self-assessment*. Eugene, OR: University of Oregon.

Sugai, G., Sprague, J. R., Horner, R. H., & Walker, H. M. (2000). Preventing school violence:

The use of office discipline referrals to assess and monitor school-wide discipline interventions. *Journal of Emotional and Behavioral Disorders*, 8, 94-101.

Wallace, F., Blase, K., Fixsen, D., & Naoom, S. (2008). *Implementing the findings of research:*

Bridging the gap between knowledge and practice. Alexandria, VA: Educational

Research Service.

Last page intentionally blank.