Program-wide Positive Behavioral Interventions and Supports in Rural Preschools

Elizabeth A. Steed
Georgia State University
Tina Pomerleau
Howard Muscott
New Hampshire Center for Effective Behavioral Interventions and Supports at the Southeastern Regional Education Service Center
Leigh Rohde
University of New Hampshire

Abstract

This article describes the quantitative findings from an evaluation of program-wide positive behavioral interventions and supports (PBIS) in three rural preschool programs. Each rural preschool program included children 3 through 5 years of age with and without disabilities. Following 3 years of on-site training, technical assistance, and coaching support in universal tier PBIS, participating preschool programs increased their use of strategies and supports to prevent young children's challenging behavior. Specific improvements in universal PBIS practices are presented across each year of the initiative. The successes and challenges involved in implementing program-wide PBIS in rural preschools are discussed.

Keywords: Positive behavioral interventions and supports (PBIS), preschool, rural settings, social emotional development, early childhood education

One promising systematic framework for addressing challenging behavior and supporting social emotional development in early childhood programs in rural communities is program-wide positive behavioral interventions and supports (PBIS). Program-wide PBIS is a developmentally appropriate adaptation of school-wide positive behavioral interventions and supports (SWPBIS) for early childhood settings, such as Head Start, private or district preschools, and childcare programs (Fox & Hemmeter, 2009). Program-wide PBIS has a growing literature base to support its use to decrease young children's challenging behavior and increase social emotional skills (e.g., Blair, Fox, & Lentini, 2010; Smith, Lewis, & Stormont, 2011).

Program-wide PBIS uses a tiered prevention approach that includes a universal tier for all young preschool children, a secondary tier for children at risk for social emotional difficulties, and a tertiary tier for children who exhibit severe or chronic challenging behavior (Fox & Hemmeter, 2009). The universal tier of program-wide PBIS includes (1) building positive relationships amongst preschool personnel, children, and families; (2) establishing a positive classroom climate; (3) developing and teaching core behavioral expectations; and (4) having an organized and predictable classroom environment (Benedict, Horner, & Squires, 2007; Stormont, Covington-Smith, & Lewis, 2007).

One critical feature of the universal tier of the program-wide PBIS framework is an emphasis on fostering positive relationships between teachers, children, and their families (Fox & Hemmeter, 2009). Two research-based strategies associated with creating a positive classroom environment are the use of praise and precorrection (Stormont et al., 2007). Preschool teachers should use specific praise statements (e.g., "Thanks for cleaning up" or "I saw you share with your friend") following desired social behavior. Another proactive strategy that is associated with increases in improved compliance with teacher directions is precorrection. Precorrection is the use of positively stated reminders of expectations prior to an activity (Stormont et al., 2007). An example of a precorrection: "Please use walking feet in the hallway" prior to leaving the classroom to walk down the school's hallway. Increasing teachers' use of encouraging positive verbal statements and precorrection is often a key outcome of initial universal PBIS efforts. Another feature of universal program wide PBIS is the creation of 3-5 program-wide behavioral

Author's Note

Support and funding for the project was provided by the New Hampshire Department of Education, Bureau of Special Education and the U.S. Department of Education, Office of Special Education Programs Grant No. H323A070028.
Address all correspondence to Dr. Elizabeth A. Steed (esteed@gsu.edu).

Rural Special Education Quarterly ✦ Volume 32, No. 1—pages 38-45 ✦

expectations, such as "Be safe, Be kind, and Take care of your things." These behavioral expectations are then described more specifically for each classroom routine (e.g., arrival, center time, circle) and preschool environment (e.g., hallway, playground). Once the expectations within routines are defined, preschool teachers develop lessons and systematically teach and practice the expected behaviors, with additional reinforcement of prosocial skills across the preschool day (Stormont, Lewis, & Beckner, 2005). Finally, the universal tier includes practices associated with an organized and predictable environment including (a) following a consistent classroom schedule and structuring transitions (e.g., a verbal warning prior to transition, an auditory transition signal, visual cues for lining up), (b) preparing materials prior to starting an activity, and (c) responding consistently to challenging behavior (Benedict et al., 2007). Together, these universal supports are associated with the prevention and reduction of most young children's challenging behavior (Lewis, Beckner, & Stormont, 2009).

As a foundation for the PBIS practices being implemented, a leadership team, data collection and monitoring system, and programmatic resources are established to support adoption, fidelity of implementation, and sustainability. First, a representative preschool leadership team (e.g., lead and assistant teachers, center director, behavior consultant) is established to work collaboratively with families to address children's challenging behavior, make decisions about specific PBIS strategies to use, and make regular adjustments to the PBIS plan (Fox & Hemmeter, 2009). Data collection systems are put in place to guide decision-making and evaluate the effectiveness of PBIS to impact child outcomes (e.g., rates of challenging behavior). Finally, the identification of program and district resources (e.g., PBIS coordinator) is an integral component to build internal capacity (Lewis et al., 2009).

Rural Challenges

There are unique challenges that accompany program-wide PBIS implementation in rural early childhood settings. Generally, challenges to rural service delivery include the geographically large service area, lack of well-qualified and/or sufficient personnel, a dearth of technological equipment or resources, increased costs of service delivery, and the compounding issue of increased poverty in rural areas (Dexter, Hughes, & Farmer, 2008; Human & Wasem, 1991; Jung & Bradley, 2006; Pearce, 2009). When young children have a disability or behavioral issues, the rural setting may complicate the provision of effective interventions. The geographic distance between rural areas and specialized behavioral consultants may hinder the use of mental health services for young children (Cohen & Hesselbart, 1993). There is also often a shortage of personnel qualified to deliver early childhood and special education services in rural areas (Ludlow, 1998; Monk, 2007). Compensation tends to be lower in rural schools, and this can negatively impact efforts to recruit and retain teachers (Monk, 2007). Further, because rural areas are less populated, a child with unique behavioral needs may not have access to personnel with particular expertise for a successful intervention (Jung & Bradley, 2006).

Purpose of the Study

Most of the studies that have evaluated program-wide PBIS implementation in preschool settings have been conducted in urban and suburban settings (e.g., Benedict et al., 2007; Muscott, Pomerleau, & Dupuis, 2009; Muscott, Pomerleau, & Szczesiul, 2009; Smith et al., 2011). There is one published case study that reported on the use of program-wide PBIS in a rural early childhood program in southeastern Kansas (Hemmeter, Fox, Jack, Broyles, & Doubet, 2007). The rural community included six counties designated as medically underserved and a service area covering more than 7200 square miles. After 4 years of PBIS implementation in this rural preschool program, young children demonstrated increases in their use of prosocial behaviors and decreases in challenging behavior (Hemmeter et al., 2007). There were also documented reductions in the number of children referred for mental health interventions as a result of PBIS implementation.

The current report extends the literature base on the use of program-wide PBIS in rural preschool settings. The study reviews descriptive findings from a 3-year initiative that was instituted in three rural, inclusive preschool programs in the northeast. Consultants from the state's regional education center targeted the use of universal tier PBIS strategies with participating preschool personnel. Results are discussed as they relate to early-, mid-, and long-term adoption of PBIS.

Method

Participants

The teachers, administrators, and children from three rural preschool programs participated in this study. Preschool programs were recruited through a statewide campaign that included announcements on the state's Department of Education website, informational mailings to key stakeholders in early childhood agencies, and orientation meetings for prospective participants. During the recruitment process, information was provided to address readiness criteria, time and resource commitments, and the technical assistance and coaching support that would be provided.

Five early childhood programs that were dispersed across each of the five state administrative regions chose to participate. Four of the 5 programs completed the initiative. Three preschools located in rural areas are included in this report. Characteristics of the three rural preschool programs are provided in Table 1.

Children Unlimited, Inc. The first preschool program was a private non-profit early learning center located in a rural community of 3,800. According to the 2010 U.S. Census Bureau, the unemployment rate for the community was 11%, well above the national average. Children Unlimited operated two morning preschool classrooms with afternoon childcare availability and one full-day kindergarten classroom serving 48 children with and without disabilities between the ages of 3 and 5 years. Twenty-two personnel from Children Unlimited participated in the initiative.

Newport Community Preschool. The second preschool program was an inclusive preschool program housed in a public elementary school within a rural community of almost 7,800. The area's unemployment rate was close to 6%

Table 1.

Characteristics of Participating Children and Personnel in Rural Preschool Programs.

	Children Unlimited Inc.	Newport Community Preschool	Timberlane Learning Center
Number of Children	48	40	72
Percent from Low-Income Households	38%	24%	22%
Race/Ethnicity of Children	48	40	72
White	90%	96%	82%
Hispanic	4%	0%	14%
African-American	4%	4%	0%
Asian	0%	0%	4%
Native American	2%	0%	0%
Children with Disabilities	24	24	46
Developmental delay	58%	56%	17%
Autism	21%	22%	11%
Speech and language delay	13%	17%	65%
Other Health Impairment	8%	5%	4%
Visual or Orthopedic impairment	0%	5%	2%
Personnel	22	10	20
Lead teachers	3	2	4
Assistant teachers	3	2	0
Paraprofessionals	8	1	4
Speech and language pathologists	1	1	2
Speech and language assistants	2	0	0
Physical therapists	1	1	1
Occupational therapists	0	1	1
Play therapists	1	0	0
Behavioral consultants	1	0	1
Nurses	1	0	1
Autism tutors	1	0	5
Administrative assistants	1	0	0
Executive director	1	2	1

(U.S. Census Bureau, 2010). Newport Community Preschool provided a combination of six part-day morning and afternoon sessions in two classrooms for 40 children ages 3-5 years with and without disabilities. Ten Newport Community Preschool personnel participated in the initiative. Because all participating professionals were employed by the local school district, they were required to possess the appropriate certification or educator license for their assignment.

Timberlane Learning Center. The third preschool program was operated by a regional school district and housed within an elementary school in a rural community of 7,600. The unemployment rate for the area was 8.7% (U.S. Census Bureau, 2010). Timberlane Learning Center operated four preschool classrooms with part-day sessions for 72 children between the ages of 3 and 4 years. Three classrooms primarily served children with disabilities, while one classroom included children with and without disabilities. Timberlane Learning Center had 20 personnel participate in the study.

Program-wide PBIS Implementation

Each participating preschool program engaged in a 3-year process that included on-site training, technical assistance, and coaching support in universal tier PBIS from two consultants contracted from the New Hampshire Center for Effective Behavioral Interventions and Supports, a statewide technical assistance center. Participating preschools were also involved in a Response to Intervention (RtI) initiative during the same time period. A separate agency provided RtI technical assistance and coaching support to participating preschool personnel with the goal of improving children's academic outcomes.

PBIS consultants. The first PBIS consultant had a

Master's degree in Educational Studies with a concentration in Emotional and Behavioral Disorders. She had over 10 years of experience providing PBIS consultation to schools and preschools across the state. The second consultant had an Ed.D. in Educating Students with Emotional Disturbances, a Master's degree in Early Childhood Special Education, and 35 years of experience in the field. He was the director of a state-wide initiative to provide PBIS in schools and preschools. The first consultant provided support to Children Unlimited and Newport Community Preschool; the second consultant supported Timberlane Learning Center.

Professional development framework. The professional development provided to participating personnel in the three rural preschool programs included scientifically-based and promising practices in the field of consultation including (a) networking opportunities, (b) long-term involvement over multiple years, (c) representative participation from early childhood educators in each program, (d) active learning, (e) alignment with state standards, and (f) a content-focus (Desimone, Porter, Garet, Yoon, & Birman, 2002). A developmentally appropriate practice framework guided implementation activities across the three preschool programs, differentiating program-wide PBIS from the SWPBIS initiatives that were being implemented concurrently in area elementary schools (Bredekamp & Copple, 1997).

Moreover, in order to create lasting changes in the practices, behaviors, and beliefs of early childhood educators, the initiative employed the Managing Complex Change model (Thousand & Villa, 1995). This model indicates that effective sustainable change requires (a) comprehensive and continuous planning activities; (b) time, financial support, and human resources; (c) incentives and building of teacher efficacy; (d) action planning; and (e) reflective practices.

Professional development activities. Initial meetings between consultants and participating personnel at each site were designed to develop effective team functioning and strategies for collaboration with faculty and families. The meetings focused on building relationships among all parties, establishing a leadership team at each site, and designing effective team problem-solving and documentation procedures. Following these activities, personnel at each site participated in a 3-hour on-site workshop designed to support each preschool program's development of the following universal features: (1) clearly defined behavioral expectations, (2) plans for teaching expectations and expected behaviors, (3) guidelines for encouraging expected behaviors, (4) strategies for discouraging problem behaviors, and (5) procedures for monitoring and record keeping.

Subsequent to training, consultants provided on-site support for ½ to 1 full day per month in each preschool program over the 3 years of the initiative. On-site support included leadership meeting attendance and/or classroom support. During leadership team meetings, consultants provided ongoing feedback to teams regarding implementation of universal strategies and use of data for decision-making. During classroom visits, consultants observed teachers implementing universal features (e.g., teaching behavioral expectations) and provided feedback and guidance to facilitate effective and consistent implementation.

PBIS consultants personalized the time and intensity of support dedicated to each preschool based on need, responsiveness to consultation, and fidelity of implementation. By the end of the 3-year initiative, the two consultants had provided a total of 67 contacts with participating preschool personnel (range = 18-29) for a total of 255 hours (range = 38-70). The first consultant visited Children Unlimited a total of 29 times for 70 hours and Newport Community Preschool a total of 18 times for 47 hours. The second consultant visited Timberlane Learning Center a total of 20 times for 38 hours.

Measures

Three measures were used to evaluate implementation of universal PBIS in each program. These measures were administered during the first, second, and third years of implementation. Administration occurred early in the academic year (i.e., fall) during the first year of implementation. Measures were administered late in the academic year (i.e., spring) during the second and third years of the initiative. An outside consultant conducted the first two measures after completing the training protocols for each instrument. Preschool PBIS leadership teams collectively completed the third measure.

Preschool-wide Evaluation Tool. The Preschool-wide Evaluation Tool (PreSET) (Steed, Pomerleau, & Horner, 2012) is a research-validated instrument that is designed to evaluate critical universal features of PBIS implementation in early childhood programs. The PreSET subscales include (a) expectations defined, (b) behavioral expectations taught, (c) responses to appropriate and challenging behavior, (d) organized and predictable environment, (e) monitoring and decision making, (f) family involvement, (g) management, and (h) program support. There are initial data to indicate that the PreSET is a reliable and valid tool to measure universal PBIS (Steed & Webb, in press). The instrument has an overall Cronbach's alpha of .91, high interobserver reliability with an average percent agreement of 95%, and an overall Kappa of .80. The content validity of the PreSET has been documented through comparison with a similar measure and sensitivity to change following PBIS implementation (Steed & Webb, in press).

Classroom Assessment Scoring System Pre-K. The Classroom Assessment Scoring System Pre-K (CLASS Pre-K; Pianta, LaParo, & Hamre, 2007) is an evidence-based observational instrument that assesses classroom quality in preschool settings. The CLASS Pre-K includes four cycles of 15-min. observations of teachers and students. Items are rated on a scale from 1 (low) to 7 (high) across three subscales, including (a) emotional support, (b) classroom organization, and (c) instructional support. The CLASS Pre-K has adequate psychometric properties, including criterion and predictive validity, and associations with other measures of classroom quality (Pianta et al., 2005).

The first two subscales on the CLASS Pre-K include items conceptually related to the PBIS framework. Overall, the CLASS Pre-K and PreSET scores utilized in this study were positively correlated (r = .24). Conceptually matched subscales (e.g., Organized and Predictable Environment on the PreSET and Classroom Organization on the CLASS Pre-K) were positively and moderately related (r = .33).

Table 2.

Means and Standard Deviations of Rural Preschool Programs' PreSET Subscale and Total Scores (Scale 0-100) in Years 1, 2, and 3 (n = 3).

PreSET Subscale	Year 1	Year 2	Year 3
Expectations Defined	63% (21.36)	100% (0)	96% (6.93)
Behavioral Expectations Taught	45% (25.42)	94% (9.81)	94% (9.81)
Responses to Appropriate and Challenging Behavior	45% (25.06)	90% (16.74)	100% (0)
Organized and Predictable Environment	90% (17.32)	100% (0)	100% (0)
Monitoring and Decision-Making	0% (0)	42% (38.19)	63% (21.36)
Family Involvement	60% (20.00)	87% (5.77)	90% (10.00)
Management	67% (14.43)	100% (0)	97% (4.62)
Program Support	100% (0)	88% (21.36)	71%) (40.29)
Total	59% (8.89)	88% (7.23)	89% (7.00)

Means and standard deviations of preschool program's subscale and total scores on the PreSET and CLASS Pre-K were reported across each year of involvement in the PBIS initiative.

Response to Intervention Preschool Leadership Team Checklist. The Response to Intervention Preschool Leadership Team Checklist (3.0; RtI-PLT; Rohde & Pomerleau, 2010) is a 42-item progress monitoring and action-planning tool. The instrument measures program-wide PBIS and evidence-based emergent literacy strategies as part of the concurrent RtI initiative that took place in participating preschool programs. The RtI-PLT measures seven critical features that include (a) establishment of commitment; (b) team maintenance; (c) program assessment; (d) screening; (e) establishment, implementation and monitoring of program-wide curriculum for literacy instruction; (f) establishment, implementation and monitoring of universal program-wide positive behavioral supports; and (g) progress monitoring. Personnel rate the degree to which each item is *In Place*, *Partially in Place*, or *Not in Place*. The subscale and total scores were computed by dividing the number of items rated *In Place* by the total number of subscale items or total items. Means and standard deviations of preschool program's subscale and total scores on the RtI-PLT will be reported across each year in the PBIS initiative.

Data Analyses

The descriptive findings (means and standard deviations) of data collected in the three rural preschool programs are presented across the 3 years of implementation. Percent increases from Year 1 to Year 2 and Year 2 to Year 3 are described for each measure's subscale and total scores.

Results

Pre-SET

Preschool programs' PreSET scores increased across each year of the initiative for all subscales, with the exception of Program Support (see Table 2). PreSET subscale scores increased an average of 52% from Year 1 to Year 2 and an average of 2% from Year 2 to Year 3. Scores on the subscale Program Support decreased by 12% from Year 1 to Year 2 and by 29% from Year 2 to Year 3. Total PreSET scores across programs increased by 4% between Year 1 and Year 2 and by 1% between Year 2 and Year 3.

Table 3.

Means and Standard Deviations of Rural Preschool Programs' CLASS Pre-K Subscale and Total Scores (Scale 1-7) in Years 1, 2, and 3 (n = 3).

CLASS Pre-K Subscale	Year 1	Year 2	Year 3
Emotional Support	4.10	5.00	5.92
	(.24)	(.87)	(.52)
Classroom Organization	4.39	5.08	6.00
	(.35)	(.41)	(0)
Instructional Support	4.39	5.21	6.00
	(.54)	(.09)	(0)
Total	4.32	5.07	6.13
	(.25)	(.29)	(.32)

CLASS Pre-K

Findings related to changes in CLASS Pre-K scores also indicated increases in subscale and total scores from Year 1 to Year 2 to Year 3 (see Table 3). CLASS Pre-K scores across subscales increased an average of 19% between Year 1 and Year 2 and 23% between Year 2 and Year 3. Total CLASS Pre-K scores increased by 17% between Year 1 and Year 2 and 21% between Year 2 and Year 3.

RtI-PLT

Preschool programs' RtI-PLT scores increased across each year of the initiative for all subscales, with the exception of Establishment of Commitment (see Table 4). RtI-PLT subscale scores increased an average of 47% from Year 1 to Year 2 and an average of 19% from Year 2 to Year 3. The subscale Establishment of Commitment decreased by 11% from Year 1 to Year 2 and increased 11% from Year 2 to Year 3. Total RtI-PLT scores across programs increased by 34% between Year 1 and Year 2 and 18% between Year 2 and Year 3.

Discussion

The results of this evaluation of program-wide PBIS in three rural preschool programs indicated an increase in the use of universal tier PBIS across the 3 years of implementation. These descriptive data indicated that teachers improved in their use of universal PBIS practices over each year of the initiative. While not evaluated for statistical significance, improvements were observed on the PreSET in defining program-wide behavioral expectations, teaching expectations, responding consistently to children's challenging behavior, providing an organized and predictable environment, using data for decision-making, involving families, and maintaining an effective leadership team. Teachers also improved their use of strategies to support children's emotional development, provide an organized classroom, and offered differentiated and encouraging instruction over each year, as measured by the CLASS Pre-K. Program-wide PBIS leadership teams self-reported an increase in their adoption and use of universal PBIS strategies and systems level supports (e.g., team maintenance, program assessment) associated with high fidelity of implementation and sustained use.

A decrease in PreSET scores was noted across years in the subscale Program Support that pertains to administrative endorsement of the PBIS initiative. The decrease is likely attributed to administrative and staff changes that occurred at the beginning of the third year in one preschool. A new Director of Student Services instituted changes that affected systems-level processes related to implementation (e.g., assessment and services of children with behavioral issues). In the final year of the project, the leadership team revived their PBIS efforts and implemented several key features of the universal tier.

Across the three rural preschool programs, increases in universal PBIS, as measured by the PreSET and the RtI-PLT, were greater from Year 1 to Year 2, with more moderate increases in scores from Year 2 to Year 3. Increases in CLASS Pre-K scores were more balanced between years. There may be a few explanations for the trend in more significant universal PBIS implementation from Year 1 to Year 2, when compared to improvements observed from Year 2 to Year 3. First, the timing of measurement for Year 1 occurred early in the academic year (i.e., fall) while measurement occurred later in the year (i.e., spring) during Years 2 and 3. Consequently, intervention was longer. In other words, there was more time for teams to implement universal PBIS between Year 1 and Year 2 than in subsequent years. Second, teams implemented many critical features of universal PBIS between Years 1 and 2, making significant improvements over their Year 1 baseline scores. Following this considerable advancement, it is possible that teams had a lull in universal implementation between Years 2 and 3. It is also probable that, once preschool PBIS leadership teams had executed key elements of universal PBIS with fidelity, they began to shift their attention to RtI efforts related to academic outcomes and/or secondary or tertiary PBIS.

Table 4.

Means and Standard Deviations of Rural Preschool Programs' RtI-PLT Subscale and Total Scores (Scale 0-100) in Years 1, 2, and 3 (n = 3).

RtI-PLT Subscale	Year 1	Year 2	Year 3
Establishment of Commitment	100% (0)	89% (19.05)	100% (0)
Team Maintenance	67% (33.50)	100% (0)	100% (0)
Program Assessment	33% (38.19)	75% (43.30)	100% (0)
Screening	42% (52.04)	75% (25.00)	100% (0)
Program-wide Curriculum for Literacy	83% (14.43)	92% (14.43)	100% (0)
Program-wide Universal PBIS	67% (4.04)	92% (0)	95% (4.62)
Progress Monitoring	50% (36.59)	67% (25.00)	97% (4.62)
Total	62% (20.88)	83% (10.69)	98% (0)

Limitations

There are several notable limitations of this study. First, there was a small sample of rural preschool programs. The small sample size limited the kinds of analyses that could be conducted on the findings and restricts the generalizability of the results. In addition, each program was a willing participant in this initiative. This convenience sample may not be representative of typical preschool programs. Further, each preschool program was located in a rural area of a northeastern state. The economic and racial/ethnic characteristics of this geographic region may not be representative of preschools in other rural areas of the U.S.

Another limitation is the absence of data demonstrating child outcomes. This particular PBIS initiative focused on early childhood personnel's adoption of PBIS and did not have a concentration on child outcomes. Each participating preschool program is currently working on building the infrastructure and systems to support ongoing data collection of children's social emotional outcomes (e.g., social emotional screening instruments, behavioral incident reports).

Finally, one consultant provided on-site support to two of the participating preschool programs while a second consultant provided support to the third program. This was done to provide each program with one consistent contact person over the 3 years of the project. One person could not have provided the intensity of professional development that was delivered to all three sites. The design of consultants' program assignments made sense logistically and met the aims of the project. Every attempt was made to ensure that consultants provided, if not identical, very similar training and professional development in each program. For example, each consultant had the same goals during the initial meetings with participating personnel at each site and used the same training materials for the 3-hour workshop delivered in each program. However, the use of two consultants who provided differentiated and individualized contacts and hours negatively impacts the internal validity of the study. It is possible that differences in consultant characteristics and/or disparities in dosage explained teachers' implementation of PBIS.

Implications for Practice and Future Directions

The findings from the present program evaluation have important implications for policy and practice. First, the findings support the contention proposed by the Office of Special Education Program's Center on Positive Behavioral Interventions and Supports that successful implementation of PBIS requires a multi-year commitment to systematic and comprehensive investments in training, coaching, coordination, and evaluation. Par-

ticipating preschool programs made significant improvements in their use of PBIS between Year 1 and Year 2 of the project. However, a third year was necessary to extend implementation in the areas of responding consistently to challenging behavior, developing and using a data-based system for decision-making, establishing commitment, screening, and involving families. Even by the third year of implementation, each preschool program continued to have goals around their use of a database to monitor children's behavior. In the third year, preschool programs were beginning to adopt secondary and tertiary tier PBIS while building their RtI process for academic goals. It was clear that a long-term commitment (i.e., at least 3 years) was necessary to develop effective and contextually appropriate systems (e.g., consistent responses to challenging behavior), change teacher practices, and build internal capacity for the leadership team and PBIS coordinator to carry the efforts forward.

The consultants and personnel from the rural preschool programs in this study had to address challenges involving large geographic areas, staff turnover, limited time and resources, and the compounding influence of poverty. Each preschool program was geographically far from the other programs and from the consultants' home base. This meant that the consultants had less face time with the participating personnel than they would have for urban preschools. The consultants used alternative ways to communicate (e.g., email, internet video calls) with participating personnel in between site visits. All of the preschool programs had staff turnover during the project, consistent with the literature on the high turnover of teachers in rural areas. The programs' limited budgets negatively affected PBIS when participating personnel could not implement recommended strategies (e.g., screening system) because they did not have the resources to purchase the materials. When possible, the consultants provided necessary materials and resources for each program. It is unlikely that the preschool programs would have been able to overcome these challenges without the substantial investment of high quality training, coaching, and facilitation support provided by the state's Department of Education and technical assistance centers.

Second, the findings support the use of a systems change process that requires preschool educators to make informed contemplative decisions regarding participation in a multi-year professional development initiative. It is strongly recommended that potential preschool programs be required to commit, in advance, to the readiness features necessary for implementation with fidelity. Such insightful involvement can only occur by providing preschool administrators and staff with (a) an overview of program-wide PBIS at a full faculty meeting; (b) information on the system, data, and practice features of PBIS in a variety of formats; and (c) opportunities to visit implementing programs prior to commitment.

Third, the findings indicate that administrative leadership and support at the preschool, district, and state level are crucial to successful implementation. Such commitment begins with a depth of understanding and genuine philosophical alignment with the use of positive, preventative, and evidence-based practices. Committed administrators have a deep understanding that successful sustained implementation requires more than merely creating a positive learning environment in preschool classrooms. Successful implementation of PBIS requires a culture of staff and family empowerment, data-based decision making, effective and reciprocal communication among all stakeholders, and on-going reflective practice.

The final lesson learned: It is essential to interweave content in PBIS with support in developing and maintaining effective team processes. The procedures involved in establishing representative and efficient leadership teams (e.g., committing to a common mission, developing a clear agenda, action planning) are often not addressed in early childhood pre-service or in-service professional development. An intentional emphasis on building early childhood personnel's capacity to independently carry out effective teaming techniques is important to the success of any PBIS effort. Program-wide PBIS is only as strong as the thread that binds the seams (or teams) together.

References

Benedict, E. A., Horner, R. H., & Squires, J. (2007). Assessment and implementation of positive behavior support in preschools. *Topics in Early Childhood Special Education, 27*, 174-192.

Blair, K. C., Fox, L., & Lentini, R. (2010). Use of positive behavior support to address the challenging behavior of young children within a community early childhood program. *Topics in Early Childhood Special Education, 30*, 68-79.

Bredekamp, S., & Copple, C. (1997). *Developmentally Appropriate Practice in Early Childhood Programs.(Revised Edition)*. Washington, DC: National Association for the Education of Young Children.

Cohen, P., & Hesselbart, C. S. (1993). Demographic factors in the use of children's mental health services. *American Journal of Public Health, 83,* 49-52.

Desimone, L., Porter, A. C., Garet, M., Yoon, K. S., & Birman, B. (2002). "Does professional development change teachers' instruction? Results from a three-year study." *Educational Evaluation and Policy Analysis*, *24*, 81–112.

Dexter, D. D., Hughes, C. A., & Farmer, T. W. (2008). Responsiveness to intervention: A review of field studies and implications for rural special education. *Rural Special Education Quarterly, 27*, 3-9.

Fox, L., & Hemmeter, M. L., (2009). A program-wide model for supporting social emotional development and addressing challenging behavior in early childhood settings. In W. Sailor, G. Dunlap, G. Sugai, and R. Horner (Eds.), *Handbook of Positive Behavior Support* (pp. 177-202). New York: Springer.

Hemmeter, M. L., Fox, L., Jack, S., Broyles, L., & Doubet, S. (2007). A program-wide model of positive behavior support in early childhood settings. *Journal of Early Intervention, 29*, 337-355.

Human, J., & Wasem, C. (1991). Rural mental health in America. *American Psychologist, 46,* 232-239.

Jung, L. A., & Bradley, K. D. (2006). Rural special education service delivery: A study of the kindergarten population using the ECLS-K. *Rural Special Education Quarterly*, *25*, 25-30.

Lewis, T. J., Beckner, R., & Stormont, M. (2009). Program-wide positive behavior support: Essential features and implications for Head Start. *NHSA Dialog, 12*, 75-87.

Ludlow, B. L. (1998). Preparing special education personnel for rural schools: Current practices and future directions. *Journal of Research in Rural Education, 14*, 57-75.

Monk, D. H. (2007). Recruiting and retaining high quality teachers in rural areas. *The Future of Children, 17*, 155-174.

Muscott, H. S., Pomerleau, T., & Dupuis, S. (2009). Anchors Away! Implementing program-wide positive behavior supports at the Visiting Nurses Association Child Care and Family Resource Center. *NHSA Dialog, 12*(2), 104–121.

Muscott, H., Pomerleau, T., & Szczesiul, S. (2009). Large-scale implementation of program-wide positive behavioral interventions and supports in early childhood education programs in New Hampshire. *NHSA Dialog, 12,* 148-169.

Pearce, L. R. (2009). Helping children with emotional difficulties: A response to intervention investigation. *The Rural Educator, 30*, 34-45.

Pianta, R. C., Howes, C., Burchinal, M., Bryant, D., Clifford, R., Early, C., et al. (2005). Features of prekindergarten programs, classrooms, and teachers: Do they predict observed classroom quality and child-teacher interactions? *Applied Developmental Science, 9*(3), 144-159.

Pianta, *R. C.,* LaParo, K. M., *&* Hamre, *B. K. (2007). Classroom assessment scoring system (CLASS) manual, Pre-K. Paul Brookes Publishing: Baltimore, MD.*

Rohde, L., & Pomerleau, T. (2010). *Response to intervention preschool team checklist 3.0, Tier 1: Primary prevention system self-assessment and action planning tool.* Durham, NH: Institute on Disability, University of New Hampshire; Bedford, NH: New Hampshire Center on Positive Behavioral Interventions and Supports at Southeastern Regional Education Service Center.

Smith, S. C., Lewis, T. J., & Stormont, M. (2011). The effectiveness of two universal behavioral supports for children with externalizing behavior in Head Start classrooms. *Journal of Positive Behavior Interventions, 13*, 133-143.

Steed, E. A., Pomerleau, T. M., & Horner, R. H. (2012). *Preschool-wide Evaluation Tool: Research Edition*. Paul Brookes Publishing Co.

Steed, E. A., & Webb, M. L. (in press). The psychometric properties of the preschool-wide evaluation tool (Pre-SET): *Journal of Positive Behavior Interventions*.

Stormont, M., Covington-Smith, S., & Lewis, T. J. (2007). Teacher implementation of precorrection and praise statements in Head Start classrooms as a component of program-wide positive behavioral support. *Journal of Behavioral Education, 16*, 280–290.

Stormont, M., Lewis, T. J. & Beckner, R. (2005). Positive behavior support systems: Applying key features in preschool settings. *Teaching Exceptional Children, 37*, 42-29.

Thousand, J., & Villa, R. (1995). Managing complex change toward inclusive schooling. In R. Villa and J. Thousand (Eds.), *Creating an inclusive school* (51-79). Alexandria, VA: Association for Supervision and Curriculum Development.

U. S. Census Bureau (2010). *American community survey*. Retrieved from http://factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml