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National Survey on Leadership Capacity and Scaling-up of PBIS Implementation

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The University of Southern Mississippi

NATIONAL SURVEY ON LEADERSHIP CAPACITY AND
SCALING-UP OF PBIS IMPLEMENTATION

by

Julie Lynn Hawkins Lowery

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

December 2015

ABSTRACT

NATIONAL SURVEY ON LEADERSHIP CAPACITY AND SCALING-UP OF PBIS IMPLEMENTATION

by Julie Lynn Hawkins Lowery

December 2015

This study examined State Education Agency (SEA) efforts to scale up Positive Behavioral Interventions and Supports (PBIS) implementation across K-12 public schools within the United States of America. The researcher used archival data to determine percentages of school within each state currently implementing PBIS and a survey method to determine each state's status regarding standards of PBIS implementation and variables of leadership capacity. The survey instrument was the State PBIS Implementation and Leadership Survey (SPILS). The participants were SEAs from each state and the District of Columbia, as represented by PBIS Coordinators or other designated PBIS professionals. The purpose of this study was to determine which states could be considered taking PBIS to scale as evidenced by > 60% of the schools implementing PBIS and scores of 80% or higher on the standard of PBIS implementation and the variables of leadership capacity prongs of the SPILS form.

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2015

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SCALING-UP OF PBIS IMPLEMENTATION

by

Julie Lynn Hawkins Lowery

A Dissertation
Submitted to the Graduate School
and the Department of Curriculum, Instruction, and Special Education
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

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DEDICATION

This journey would not have been possible without the spark and passion planted in my soul as a young child by my grandmother, Josie Kelley Ayers. I am forever grateful to her.

There is a frame that hangs on my office wall, waiting to display my doctoral degree. Until then, it holds a Bible verse, Philippians 4:13, "I can do all things through Christ who strengthens me." I am confident in this truth and extend my utmost appreciation to God for sending me a partner who exemplifies the peace that passes all understanding. I dedicate this dissertation to my husband, Robert G. Lowery, for supporting me at every turn, for having so much faith in my ability, and for being so very, very patient. You deserve a Medal of Honor for completing this ride with me. It is evident that the strength of Christ was provided to me through your love and service to our family.

In addition to my husband, I would like to dedicate this endeavor to my lifelong best friend, Kathy Skipper. She has believed in me, comforted me, inspired me, and always, always been there for me. Words cannot express how much your friendship blesses my life.

Finally, I want to recognize my sons, Trey and Peyton Walchak, and my mother, Jean Ayers Hawkins. You have been important and cherished inspirations along this road. It was through your love and support that I gained the fortitude needed to accomplish my goal. Thank you.

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CHAPTER I

INTRODUCTION

The Individuals with Disabilities Education Improvement Act of 2004 (Public Law 108-446), referred to as IDEA throughout this study, is the United States Government's statute that mandates educational services for children with disabilities. Originally written as the Education for All Handicapped Children Act of 1975 (Public Law 94-142), the law has been amended, reauthorized, and renamed Individuals with Disabilities Act of 1997, Individuals with Disabilities Education Improvement Act of 2004 in response to litigation, educational research, and government policy. The current version of IDEA was signed into law on December 3, 2004.

The United States Department of Education (US-DOE) develops federal regulations to support each individual state in implementing services for children with disabilities and enforcing compliance of IDEA mandates. These regulations are housed in the Code of Federal Regulations under section 34 C.F.R. 300 and are aligned with the IDEA statute and the No Child Left Behind Act of 2001 (NCLB). State Education Agencies (SEA) defer to 34 C.F.R. 300 when developing state policy on providing educational services to children with disabilities.

Each SEA, often called the State Department of Education, is responsible for developing policies and procedures that promote adherence to rules set forth in 34 C.F.R. 300. This federal regulation governs each individual school district (i.e., local education agencies [LEA]) within each state. Therefore, each SEA

must monitor how each LEA implements the federal regulation. LEAs rely on federal and state funding that is contingent upon adherence to these regulations.

Within the IDEA legislation, Congress listed its findings regarding improved educational experiences for children with disabilities. Throughout the IDEA language, a central theme points to policies and procedures that would afford children with disabilities greater opportunities to be included in the general education curriculum and to be educated with their non-disabled peers. Based on three decades of research, Congress espoused that positive behavioral interventions and supports (PBIS) is an effective means for addressing behavioral concerns and improving school climate, thus offering a more inclusive environment for all children (Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (c)(5)(F), 2004).

PBIS is mentioned within IDEA several times (e.g., Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (c)(5)(F), § 1414(d)(3)(B)(i), § 1415(k)(1)(F)(i), § 1415(k)(1)(D), § 1454(a)(3)(B)(iii)(I), § 1464(a)(6)(D) & (f)(2)(A)(iv)(I), § 1464(b)(2)(H), and § 1483(1)(C & D, 2004). While IDEA does not specifically mandate that PBIS must be utilized for all situations involving behavioral issues, Congress was definite in stating that PBIS should be considered whenever children's behavior impedes learning (Individuals With Disabilities Education Act, 20 U.S.C. § 1414 (d)(3)(B)(i), 2004).

As a whole systems approach, PBIS is also referred to as schoolwide positive behavioral interventions and supports (SW-PBIS). The acronyms SW-PBIS, PBIS, and PBS are considered interchangeable. For the purposes of this

study, PBIS was used to unilaterally represent all forms of positive behavioral interventions and supports.

The United States Department of Education's Office of Special Education Programs (OSEP) has established a National Technical Assistance Center on PBIS offering online support for PBIS initiatives. This website at www.pbis.org provides technical assistance for implementing, evaluating, and providing professional development on creating and sustaining PBIS systems. The Technical Assistance Center on PBIS is a primary source for finding empirical information and current research data on PBIS.

The Technical Assistance Center on PBIS describes PBIS as a multi-tiered, systems approach to providing preventative strategies and behavioral interventions to individuals, small groups, and whole groups across both broad range and targeted environments. PBIS is grounded in the principles of Applied Behavioral Analysis and began gaining popularity in the late 1980's as a less punitive way to address discipline issues. PBIS is an approach, not a curriculum or program. The hallmark of PBIS is that it can be used along a continuum of placements, services, and settings to enhance social, behavioral, academic, and functional life skills (Algozzine et al., 2010).

In 2010, the Technical Assistance Center on PBIS published three blueprints that provide specific guidelines to states, district, and individual schools on PBIS implementation, evaluation, and professional development. These documents were developed by researchers in the field of PBIS and

provide evidence-based information that can be a helpful tool in maintaining the fidelity of implementation.

Organizational supports are needed to effectively implement PBIS systems. The Technical Assistance Center on PBIS (Algozzine et al., 2010) suggests leadership support, collaborative team approach, on-going professional development, universal screeners, continuous progress monitoring, and data driven decision making as essential components of an effective PBIS system. These organizational supports will be described more specifically further within Chapters I and II.

For this study, the researcher explored SEA leadership capacity as it relates to scaling up efforts and the implementation of PBIS systems within schools across the nation. A similar study by Horner et al. (2014) addressed scaling up efforts among seven states with established success in PBIS implementation. Horner et al. (2014) sought to identify key variables essential for implementing PBIS at a level of social significance. Social significance is achieved when 60% of the overall system's members are implementing the protocol with fidelity (Fixsen, 2013). Social significance indicated that PBIS systems had been taken to scale within a state.

Spring boarding off the Horner et al. (2014) study, the researcher invited representatives from SEAs in all 50 states plus the District of Columbia to provide information on PBIS initiatives within their states. The purpose of this study was to explore the national status of PBIS scaling up efforts using data collected on leadership capacity and implementation of PBIS systems. The researcher

referred to research provided by the Technical Assistance Center on PBIS (Algozzine et al., 2010) and the Horner et al. (2014) study for defining standards of PBIS implementation and variables of leadership capacity. Additionally, the researcher used the Fixsen (2013) 60% rule for identifying scaling up success within a state. To measure percentage of implementation across each state, the researcher referred to data collected by Dr. Horner in collaboration with the Technical Assistance Center on PBIS. The data identify number of schools within each state considered to be implementing PBIS with fidelity as reported bi-annually by PBIS Coordinators from each state plus the District of Columbia. Fidelity of implementation was determined by PBIS Coordinators. The researcher assumed that each state's report of fidelity was estimated accurately because the information obtained is data reported bi-annually to Dr. Horner on behalf of the Technical Assistance Center on PBIS. The researcher's ability to report other information related to fidelity of implementation was limited to information collected from self-reports of participants who completed the study's survey.

Scaling up refers to efforts across the state to increase PBIS implementation to a level of social significance. For the purposes of this study, when 60% or more of the schools within the state have implemented PBIS, as reported by state level PBIS Coordinators or archival data, the assumption was that the state is implementing PBIS at a measure of social significance.

Leadership capacity refers to the extent and methods in which the SEA provides support to LEAs in their efforts to implement PBIS successfully. For the purposes of discussing state leadership capacity for implementing PBIS in this

study, the researcher used categories of capacity identified as training capacity, coaching capacity, evaluation, and behavioral expertise (Horner et al., 2014).

Implementation elements have been outlined and defined in previous research (Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005; Horner et al., 2014; Sugai, Horner, & Lewis, 2009). For the purposes of this study, the researcher used implementation elements identified as funding, visibility, political support, and policy (Sugai et al., 2009). These elements, at the local level, coupled with the above-noted categories of leadership capacity at the state level, are discussed in depth within the Implementation Blueprint published by the Technical Assistance Center on PBIS (Algozzine et al., 2010).

A framework for implementing statewide evidence-based programs has been described to include these implementation stages; exploration, installation, initial implementation, and full implementation (Fixsen et al., 2005). Additionally, implementation drivers were identified as: competency, organization, and leadership (Fixsen et al., 2013). According to Fixsen et al. (2013), both implementation stages and drivers are necessary for taking a program to scale. Effective interventions are a moot point without effective implementation of an evidence-based practice. Improved outcomes can only be achieved when evidence-based interventions are effectively implemented (Fixsen et al., 2013). Taking the assertion by Fixsen et al. (2013) into account, the researcher investigated standards (i.e., elements, stages, and drivers) of PBIS implementation as an essential component to statewide scaling up success. The researcher considered these standards in accordance with variables of

leadership capacity and the percentage of schools implementing PBIS within as a means for determining which states had taken PBIS to scale.

Background

The researcher discusses federal regulations for the education of children with disabilities and the foundations of positive behavioral interventions and supports within this section. Components within IDEA (2004) that link mandated services for children with disabilities to evidence-based practices regarding behavioral support are explored.

Individual with Disabilities Education Improvement Act of 2004

The overarching goal of IDEA is to prevent the exclusion of children with disabilities from receiving educational services strictly because of their disabilities (Crockett & Yell, 2008), and to outline guidelines for acceptable practices that will encourage successful educational experiences for all children (Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (d)(1)(A), 2004). In fact, written directly into the law, Congress states the following:

Disability is a natural part of the human experience and in no way diminishes the right of individuals to participate in or contribute to society. Improving educational results for children with disabilities is an essential element of our national policy of ensuring equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities (Individuals With Disabilities Education Act, 20 U.S.C. § 1400 A (c)(1), 2004).

In drafting IDEA, Congress noted that implementation of services for children with disabilities has suffered due to low expectations and a lack of focus on scientifically based programming that would improve teaching methods and increase learning opportunities (Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (c)(4), 2004). The government's findings became the heart of IDEA's purpose and guided specific provisions within the Act. Listed within IDEA (Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (c)(5), 2004), specific findings refer to improving the effectiveness of educating children with disabilities by utilizing past research and experience. Key components within these findings are:

(a) children with disabilities need, to the maximum extent appropriate, opportunities to learn alongside non-disabled children in a general education classroom with the general education curriculum, (b) parental involvement should be strengthened and supported, (c) community resources and other service agencies should work collaboratively with schools, (d) children should be provided special education support inside the general classroom, (e) personnel preparation and in-services should involve intensive training at all levels to ensure high quality support, (f) positive behavioral interventions and supports, along with whole school initiatives and other scientifically based programs, should be used to address behavioral and academic needs, specifically with reading and early intervention, (g) paperwork reduction endeavors and resources to facilitate positive teaching and educational results should be initiated, and

(h) there should be an emphasis on maximizing technology in order to improve accessibility to children with disabilities (Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (c)(5)(A-H), 2004).

In addition, congress conveyed purposes for the law, which are directly connected to the findings. IDEA was drafted to safeguard a free appropriate public education (FAPE) for all children with disabilities. Through regulations and guidelines, the specific intent of IDEA is to (a) protect the rights of children with disabilities and their parents, (b) assist all agencies in providing an appropriate education to all children with disabilities, (c) support early intervention services, (d) provide the framework and incentive for high-quality services through the provision of necessary tools and intensive trainings for all personnel and parents, and (d) to ensure the effectiveness of these efforts through a system of assessment and evaluation (Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (d), 2004).

One main focus within IDEA is the importance of providing children with disabilities opportunities to learn alongside their non-disabled peers. In order to facilitate this, LEAs must provide educational services to students within settings that allow all children, including children with disabilities, access to a free appropriate public education (FAPE) within their least restrictive environment (LRE) (Individuals With Disabilities Education Act, 20 U.S.C. § 1412 (a)(1) & (a)(5)(A), 2004).

Least Restrictive Environment

Throughout IDEA, congress noted that children with disabilities should be served, to the maximum extent appropriate, in the general education classroom. As stated in the above paragraphs, the philosophy of IDEA legislation is that children with disabilities can find greater success when afforded maximum opportunity to be educated with the general education curriculum alongside their non-disabled peers and inside the general education classroom (Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (c)(5)(A) and (D), 2004).

Least restrictive environment (LRE) describes the placement setting in which children with disabilities can be offered the maximum opportunity to learn alongside non-disabled peers while also receiving educational supports and services to promote learning and functional growth. Each LEA must offer a continuum of placement options to meet the needs of all children served, however, Congress expressed through IDEA, and language within the federal regulations reiterates, that children with disabilities should be served with their non-disabled peers whenever possible (Individuals With Disabilities Education Act, 20 U.S.C. § 1412 (a)(5), 2004). The SEA is responsible for monitoring LEAs to ensure LRE is optimized. Funding for educational services can be partially dependent upon the LEAs ability to justify that LRE is provided to each child with a disability. Within IDEA, LRE is addressed as it pertains to state eligibility for funding based on policy and procedure:

To the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care

facilities, are educated with children who are not disabled, and special classes, separate schooling, or other removal of children with disabilities from the regular educational environment occurs only when the nature or severity of the disability of a child is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily (Individuals With Disabilities Education Act, 20 U.S.C. § 1412 (a)(5)(A), 2004).

This specification made it clear that children with disabilities should be included in the general education classroom whenever possible and that SEAs should monitor the use of LRE within all school districts. While LRE is not specifically defined under IDEA, 20 U.S.C. § 1401 (2004), the above paragraph conveys the meaning of LRE as inclusion of children with disabilities in the general education setting to the maximum extent possible.

The efficacy of practices utilized in providing educational services for children with disabilities in the general education classroom has been studied by educational researchers for over 30 years (Artiles, Kozleski, Dorn, & Christensen, 2006). In the 1980s, studies began to promote attention to the individualized needs of diverse populations of students being served in the general education classroom and the paradigm shift to collaborative teaching among special educators and general educators (Bauwens, Hourcade, & Friend, 1989; Wang, Reynolds, & Walberg, 1986; Will, 1986). Terms like *inclusion or inclusive education* and *co-teaching or collaborative teaching* became widely used in

discussions about methods for supporting children with disabilities in the general education classroom (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010).

Successful inclusion of children with disabilities in the general education classroom requires collaboration among highly qualified personnel with specialized skills and knowledge about the curriculum plus a keen understanding of characteristics of disabilities and student learning preferences. Collaborative teaching allows the expertise of both the general education and special education teachers to enhance the learning experiences of all children in diverse classrooms. Professional development in collaborative methods and a deeper understanding of supporting children with disabilities in the general education classroom are ongoing needs that should be addressed (Friend et al., 2010).

A key factor in making decisions about LRE is the declaration within IDEA and the federal regulations that children with disabilities cannot be removed from services in general education if the school has failed to provide needed modifications to the general education curriculum (Education, 34 C.F.R. § 300.116(e); Individuals With Disabilities Education Act, 20 U.S.C. § 1412(a)(5), 2004). Failure to properly provide professional development and support to all personnel involved in a child's education, both academically and behaviorally, could constitute a failure to provide appropriate supplemental services within the general education classroom and lead to the violation of LRE. Both IDEA and the federal regulations require SEAs and LEAs to ensure all personnel are properly prepared to provide services to children with disabilities and to safeguard the

provision of FAPE within the LRE (Individuals With Disabilities Education Act, 20 U.S.C. § 1413(a)(3) & 1412(a)(5), 2004).

Personnel Preparation

Provisions outlined within IDEA take a problem-solving approach to serving children with disabilities and places greater emphasis on using scientific methods and interventions to increase positive student outcomes within the LRE (Prassee, 2006). The language within IDEA specifically denotes that educators must be provided intensive professional development to understand with proficiency how to use scientific approaches that will improve academic and functional success for children with disabilities (Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (c)(5)(E), 2004).

Ten years after the final reauthorization of IDEA, research indicates there is still a gap between teacher knowledge of evidence based methods for serving children with disabilities and specialized in-services to support instructional efficacy of those methods (Chitiyo & Wheeler, 2009; Crockett & Yell, 2008; Gable, Tonelson, Sheth, Wilson, & Park, 2012). Providing access to the general education curriculum requires both general education and special education teacher to have knowledge about the individualized needs of children being served, procedures for providing intervention services to at risk children, and the laws regarding services provided to children with disabilities (Yell & Walker, 2010). Congress addresses this concern in IDEA by expressing the need for high-quality, intensive, pre-service preparation and professional development for all personnel who work with children with disabilities in

order to ensure that such personnel have the skills and knowledge necessary to improve the academic achievement and functional performance of children with disabilities, including the use of scientifically based instructional practices, to the maximum extent possible (Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (c)(5)(G), 2004).

In 34 C.F.R. § 300.119 and § 300.156, federal regulations mandate that SEAs incur the responsibility of monitoring and teaching educators about their responsibilities of implementing LRE. Also mandated is SEA assurance that educators are properly qualified to serve children with disabilities. All personnel, including related services and paraprofessionals, who provide support to children with disabilities, must have the necessary qualifications to implement appropriate educational services. These qualifications must be set, maintained, and monitored by the SEA, following IDEA guidelines and federal regulations set forth under section 34 C.F.R. § 300.156. Each LEA is responsible for ensuring all personnel within its district are qualified, based on SEA guidelines which should mimic federal regulations and IDEA mandates, and must report adherence to these guidelines as required by the governing SEA (Education, 34 C.F.R. § 300.207, 2006).

The requirements for appropriate education and professional development of all personnel includes a need for expertise not only in academic content areas and instructional methods, but also behavior management and social development. Federal regulation 34 C.F.R. § 300.226 (b)(1) outlines professional development for early intervention services and specifically states that staff must

be taught to carry out both academic and behavioral interventions and evaluations that are grounded in scientifically based research. Additionally, 34 C.F.R. § 300.118 (b)(2)(i)(A) specifies intensive classroom-focused professional development for teachers entering the profession through an alternate route. Under the findings section of IDEA, Congress expresses a concern for the child's academic achievement and functional performance by stating a need for educator training in both areas (Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (c)(5)(E), 2004).

When considering a child's academic, behavioral, and functional level in order to determine placement, LEAs must develop an Individualized Education Program (IEP) specifically written for that child with disabilities. An IEP team must include both general education and special education personnel who are knowledgeable of the child's disabilities, the child's overall level of performance, and services available to support the academic, behavioral, and functional success of the child (Education, 34 C.F.R. § 300.116, 2006). Professionals involved with developing an IEP must be well educated in the IEP process, as this becomes a legal document, which drives provision of all services to the child with disabilities.

Individualized Education Program (IEP)

In order for LRE to be assured for all children with disabilities, a continuum of services and placements should be available at all levels of the educational system (Individuals With Disabilities Education Act, 20 U.S.C. § 1412(a)(5), 2004). Decisions about services for individual children with disabilities are made

during a team meeting where a legal document called the Individualized Education Program (IEP) is developed (Individuals With Disabilities Education Act, 20 U.S.C. § 1412, §1414, 2004). The determination of placement for a child with disabilities should be made during the IEP team meeting and should involve input and support from all members of the IEP team. Essential to the development of an IEP is participation by the general education teacher. The general education teacher's input about academic and behavioral services should be based on knowledge and expertise in the general education setting (Education, 34 C.F.R. § 300.324 (a)(3) and (b)(3), 2006).

One important part of developing an IEP is having an understanding about the characteristics of the child's disabilities and recognizing what type of behaviors might be present that would impede the child's educational success. IEP teams are required to address any impeding behaviors of children with disabilities that could devalue learning opportunities in the classroom. Federal regulation 34 C.F.R. § 300.324 (a)(2)(i) addresses this concern by stipulating that Positive Behavioral Interventions and Supports (PBIS), along with other strategies, must be considered. Additionally, federal regulation 34 C.F.R. § 300.324 (a)(3) directs general education teachers to participate in the determination of which PBIS or behavioral strategies will be utilized and which supplemental services or program modifications will be provided. In order to effectively participate in the IEP process, general educators must have an understanding of PBIS or other scientifically based behavioral support methods.

Positive Behavioral Interventions and Support

Essential to LRE adherence, LEAs must be prepared to address impeding behaviors from children with disabilities in the general education classroom and provide such children with appropriate support and interventions (Education, 34 C.F.R. § 300.116(e), 2006). IDEA and the Federal Regulations require that educators are appropriately trained in both academic and behavioral strategies that are based on research and have a scientific foundation (Education, 34 C.F.R. § 300.207, § 300.119 and 300.156, 2006; Individuals With Disabilities Education Act, 20 U.S.C. § 1412 and § 1413, 2004).

As previously discussed, one scientifically based method for addressing behavior is Positive Behavioral Interventions and Supports (PBIS). PBIS is the only specifically mentioned behavioral protocol written into IDEA under Congressional findings to enhance the effectiveness of education to children with disabilities (Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (c)(5)(F), 2004). Therefore, public schools have been compelled to utilize the elements of PBIS as part of their schoolwide discipline and incentive plan.

In addition to the schoolwide components of PBIS that facilitate support to all children, educators who teach children with disabilities are instructed to incorporate individualized components of PBIS into the IEP process. When developing or revising services to children with impeding behavioral concerns, special educators should consider PBIS and, if need be, conduct a functional behavior assessment (FBA), then include a behavior intervention plan (BIP) in the written IEP (Education, 34 C.F.R. § 300.530 (d)(1)(ii); (f)(1)(i) and (ii), §

300.324 (a)(2)(i) and (3)(i), 2006; Individuals With Disabilities Education Act, 20 U.S.C. § 1415, 2004). The denotation of *consider PBIS* originally appeared in the 1997 version of IDEA. The word *consider* signifies that IEP team members should discuss PBIS during the IEP meeting. The team is not required to use PBIS, only to consider it. However, IDEA appears to suggest that PBIS is the preferred method for addressing impeding behaviors (Turnbull et al., 2000).

When children with disabilities face disciplinary actions due to behavior violations, federal regulations stipulate conducting an FBA and implementing a BIP to help safeguard against the behavior's reoccurrence (Education, 34 C.F.R. § 300.530 (d)(1)(ii), 2006). Furthermore, in determining the reasons for observed misbehavior, the LEA must decide whether failure to appropriately implement the IEP was a factor. The placement of children with disabilities cannot be changed if the IEP was not followed properly. Therefore, it is important for the IEP team to fully understand how to provide all services, including behavioral services, and to maintain data that can support appropriate IEP implementation. If it is determined that misbehavior is due to a manifestation of the child's disability, an FBA must be conducted and BIP implemented or revised (Education, 34 C.F.R. § 300.530 (e)(1)(ii) and (f)(1)). Determination of manifestation is described under 34 C.F.R. 300.530 (e) as having a "direct and substantial relationship to the child's disability" or "the LEAs failure to implement the IEP". The development of an FBA and implementation of a BIP are considered tier three services of a PBIS system (Algozzine et al., 2010).

Statement of the Problem

There is a plethora of research on PBIS with regard to implementation, evaluation, and perceptions of effectiveness at the local level. A review of the literature also found a number of studies on professional development and PBIS or educator knowledge about PBIS. Furthermore, information can be found on the use of FBAs and BIPs in schools as an individualized PBIS protocol. However, the researcher uncovered a gap in scientifically based studies addressing SEA attention to PBIS. Specifically, only a few studies regarding state level supports for implementing PBIS or scaling up efforts were found (Bradshaw & Pas, 2011; Bradshaw et al., 2012; Childs, Kincaid, & George, 2010; Gage et al., 2014; Horner et al., 2014; Killu, Weber, Derby, & Barretto, 2006; Landers, Courtade, & Ryndak, 2012; Shannon, Daly, Malatchi, Kvarfordt, & Yoder, 2001). Within IDEA, Congress calls for SEAs to monitor the implementation of scientifically-based programming, provide technical support and professional development to educators, and allocate funding to LEAs regarding the delivery of scientifically based services. Little is known about PBIS implementation at the national level because there are only a few studies addressing the issue of SEAs taking PBIS to scale. SEA capacity to support PBIS is an important issue not only because PBIS is an evidence-based behavioral intervention method, but also because taking PBIS systems to scale falls in line with SEA support and monitoring requirements under IDEA.

Horner et al. (2014) identified the status of leadership capacity on PBIS within seven surveyed states; however, the study cannot be generalized to the

entire population of SEAs because only states with noted success in establishing PBIS systems were reviewed. Furthermore, the authors of that study reported their findings as descriptive only, not inferring a causal relationship. Horner et al. (2014) suggested that future research could be derived from the results of their study, which identified variables that were consistent among all seven states.

According to the Technical Assistance Center on PBIS, every state should have a state level PBIS Coordinator to assist schools and districts with implementing PBIS initiatives. However, the website simply lists these persons as points of contact and little or no information could be found regarding specific duties of the position. The SEA makes the determination of how a PBIS Coordinator will be utilized for their individual state. There is no mandate regarding specific duties of a PBIS Coordinator.

Purpose of the Study

The purpose of this study was to describe the national status of scaling up efforts and SEA leadership capacity on implementing PBIS by reporting the following: (a) the states that are currently taking PBIS implementation to scale, as evidenced by 60% or more of the schools within the state effectively implementing PBIS; (b) the current status of implementation standards, or elements of implementation, at the local level across a state by scoring each element using a 5-point scale; and (c) the current status of SEA capacity to take PBIS to scale by scoring variables of leadership capacity using a 5-point scale identifying establishment stage, as reported by State level PBIS Coordinators or other designated SEA representatives across the United States of America.

Research Questions

1. For each state, what is the percentage of schools considered implementing PBIS, according to the state's self-reported evaluation results?
2. What is the average status of implementation standards within schools across each state?
3. What is each SEAs overall score for variables of PBIS state level leadership capacity?
4. Which states could be considered taking PBIS implementation to scale, as evidenced by: at least 60% of schools implementing PBIS, at least 80% score for variables of leadership capacity, and at least 80% score for standards of implementation?

Definitions

The terms in the research questions were defined theoretically and operationally as follows:

1. *Average*: A measure of central tendency, the mean, for a set of numbers representing how many schools are implementing PBIS.
2. *Level*: The category in which a standard or variable falls, based on results gathered from a national survey using the SPILS instrument. Persons holding the title of state level PBIS Coordinator, or a designated SEA representative from each state, determine their state's level for each standard or variable listed on the SPILS instrument. The participant completed the SPILS instrument based on data collected at

the state level and / or professional observation, knowledge about the state's PBIS endeavors, and experience in the field of PBIS. For the purposes of this study, levels describing *standards of the PBIS implementation* are as follows: (0) none, (1) struggling, (2) fair, (3) emerging, (4) good, and (5) excellent. Levels describing *variables of state leadership capacity* are the same as the standards levels, but also encompass stages of establishment listed as: (0) not addressed, (1) and (2) Exploration stage of establishment, (3) Installation stage of establishment, (4) Initial Implementation stage of establishment, and (5) Full Implementation established and operational.

3. *Percentage of schools implementing PBIS*: Derived from archival data regarding number of K-12 public schools operating within the United States of America and number of schools implementing PBIS across America. Additionally, some information regarding percentage of schools implementing PBIS was collected through survey method, utilizing the SPILS instrument. This information was converted to a percentage score by dividing the number of schools reported as implementing PBIS within each state by the total number of schools operating within each state.
4. *Standards of the PBIS implementation*: A list of standards identified by the Horner et al. (2014) study, describing key features of the PBIS implementation process. The standards are as follows: (a) leadership / administrative support and commitment to PBIS, (b) collaborative PBIS

team developed and functioning effectively, (c) knowledge and training of full staff on PBIS, (d) development of PBIS policy and procedures at multiple tiers, (e) use of data driven evaluations and decision making, (f) student and staff “buy in” to the use of PBIS, and (g) appropriate funding and expenditures related to PBIS. Level of implementation of the standards was scored using a 6-point scale for each standard. An overall score (0-35), adding the scores for each standard, was given to signify the level at which the state is operating with regard to the standards.

5. *State level PBIS Coordinator: Representatives of each state* considered the most knowledgeable authority on PBIS for the state they represent. Names of each state coordinator are located on the Technical Assistance Center on PBIS’s website at pbis.org.
6. *Variables of state leadership capacity on PBIS: A list of variables of state leadership capacity on PBIS from the Horner et al. (2014) study,* which described how seven states scaled up state capacity in the PBIS implementation process. The state level variables are as follows: (a) administrative support, (b) technical capacity in training, coaching, and behavioral expertise, (c) demonstrations of impact, and (d) evaluation systems. Each variable contains specific descriptive questions about leadership capacity within the state. State level PBIS Coordinators used the stages of establishment and levels scoring categories to identify state capacity at each variable. The researcher determined an

overall level of SEA leadership capacity score by totaling PBIS Coordinator responses to the descriptive questions under each category. The total possible points for leadership capacity was 100.

Delimitations

This study was delimited to data previously collected or published by other researchers or agencies and to survey data collected from the SPILS form completed by PBIS representatives from each state within the United States of America. The researcher limited the scope of this study to information regarding PBIS implementation and state level capacity. The researcher only gathered data pertinent to items listed on the SPILS instrument. Prong one of the SPILS form could be completed using archival data or through participant response. Prongs two and three of the SPILS form required participant response for completion unless the researcher could find the precise answer to each stem through perusing state PBIS websites. Prong four of the study was completed based on the answers to prongs one through three of the SPILS form.

There is no mandate requiring specific duties of state level PBIS Coordinator for each state, therefore, not all coordinators monitor and collect the same information regarding PBIS implementation. Since PBIS Coordinators were a primary source from which survey information was received, especially for prongs two and three of the survey, the study was also delimited to the responses of these persons and their roles as state level PBIS Coordinators. Except for prong one of the study where archival data could be used, the researcher relied on responses from completed SPILS forms to determine

results. The SPILS forms were provided to each state's PBIS Coordinator via email and the U.S. Postal Service. However, the researcher also attempted to complete SPILS forms by perusing state PBIS websites for information that corresponded exactly with stems under each prong of the SPILS form. If the researcher could not explicitly complete the SPILS form using information found on state PBIS websites, only completed SPILS forms that were returned by PBIS Coordinators were included within the results.

The information available for this study was time sensitive and narrowly focused, therefore limiting the scope of generalizability. Furthermore, because this study primarily relied on data and information provided by persons with specialized skills or duties relevant to the researcher's focus, responses and results should be considered specific to this study and might be inappropriate for generalization.

Assumptions

It was assumed that the published data used for this study is valid and representative of the population from which it was gathered. It was also assumed that state level PBIS Coordinators, or other state level representatives and educational officials, provided accurate data and information within their responses on the SPILS form. Finally, it was assumed that persons completing the SPILS instrument did so honestly, professionally, and in a timely manner.

Justification

Conducting a study exploring SEA leadership capacity on PBIS adds to the field of research providing valuable information about scaling up efforts in the

area of behavioral support. As previously discussed, IDEA is the governing legislation that mandates how children with disabilities should receive educational services within public school settings. According to Congressional findings written within IDEA, one of the essential components found to improve educational effectiveness for children with disabilities is PBIS (Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (c)(5)(F), 2004). The language of IDEA encourages and, in some cases, compels educators to consider the use of PBIS when addressing the needs of children who present impeding behaviors. Furthermore, IDEA mandates require that SEAs monitor the actions of LEAs and provide support through technical training and professional development to ensure all personnel can appropriately serve children with disabilities (Education, 34 C.F.R. § 300.118 (b)(2)(i)(A), 2006; Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (c)(5)(E), 2004).

Federal Regulations following IDEA mandates require all children to be served in their LRE and forbids the removal of children from the general education classroom due to lack of educator knowledge or modifications to the curriculum (Education, 34 C.F.R. § 300.116(e), 2006; Individuals With Disabilities Education Act, 20 U.S.C. § 1412(a)(5), 2004). When considering placement for a child with disabilities, the IEP team must refer to Education, 34 C.F.R. § 300.116 (e), which reads as follows: “A child with a disability is not removed from education in age-appropriate regular classrooms solely because of needed modifications in the general education curriculum.” This means that educators who are ill-equipped to provide appropriate behavioral services to children with

disabilities in their classrooms, and schools that have not properly enforced the implementation of PBIS services cannot legally remove children with impeding behaviors from the general education setting. This is another reason it is important for SEAs to monitor PBIS services and provide professional development on behavioral interventions and supports.

According to the 2012 study by Forness and Kim, the prevalence of students with emotional behavior disorders being educated in the general education classroom is about 20%. This figure included children with a special education ruling plus children with behavioral disorders that did not meet the eligibility criteria under IDEA and children who have not yet been given a special education ruling. It is important to note that research indicates large portions of children with emotional disabilities never receive services for behavioral issues and often remain unidentified and ineligible for special support or special education services (Atkins, Hoagwood, Kutash, & Seidman, 2010). All children, even those with impeding behaviors, have a right to a free appropriate public education in their least restrictive environment.

Assuming that the 20% prevalence rate for children with emotional or behavioral issues in the general classroom has validity, it is imperative that SEAs address the issue of behavior in schools and monitor program effectiveness. Educators in general education classrooms must be prepared to meet the individualized needs of all children. If large portions of children with impeding behaviors are not receiving appropriate services, SEAs have a duty to enforce IDEA and the federal regulations, assuring FAPE and LRE for all children with

disabilities (Individuals With Disabilities Education Act, 20 U.S.C. § 1412 (a)(1) and (a)(5)(A), 34 C.F.R. 300.120, 2004). However, because there is a gap in the literature addressing SEA leadership capacity on PBIS, it is not clear if SEA enforcement of IDEA regulations related to PBIS is happening.

PBIS is an evidence-based method shown to be effective in addressing behavioral concerns and promoting successful learning experiences for all students (Sugai & Horner, 1999). Furthermore, PBIS is the only behavioral approach mentioned within IDEA. Knowing this, it would seem imperative that PBIS initiatives are fully supported by SEAs and given the utmost attention to ensure that all educators understand the implementation process and are committed to implementing PBIS with fidelity. Again, because there is a gap in this area of research, it is unknown if SEA focus on PBIS is flourishing or floundering. Additionally, it is unknown if SEA leadership capacity level affects individual schools' level of PBIS implementation.

Finally, this study addresses a need for national research on PBIS implementation and SEA leadership capacity. Without this information, policy makers and stakeholders cannot be effective change agents toward the inclusion of behavioral data as an essential element of educational reform. At the national level, educators need to know which states are finding success with PBIS implementation and what they are doing differently to afford that success. Furthermore, data is needed to measure SEA compliance with monitoring mandates regarding the consideration of PBIS within schools. This study adds

valuable information to the small pool of research attempting to answer questions about state guidance on PBIS implementation.

CHAPTER II

REVIEW OF THE LITERATURE

In this section, the researcher reviewed the empirical foundations, conceptual and theoretical frameworks, and related topics applicable to an investigation of the problem, SEA leadership capacity and PBIS implementation scale up efforts across The United States of America. The researcher discussed behavioral theory as commonly used in educational systems by tracing the roots of positive behavioral interventions and supports from Skinner's operant conditioning of the early 1900s and applied behavioral analysis as outlined by Baer, Wolf, and Risley (1968) in the late 20th century. The researcher followed the development of a theoretical and conceptual base for stages of implementation and scaling up efforts as described by Fixsen (2013) and Sugai et al. (2009). Leadership capacity was explored through the works of Fullan (2003) as he conducted research on leadership for change within educational settings and described ten components crucial for creating effective leadership capacity across districts.

The purpose of this literature review was to provide a foundational basis for the researcher's current study by highlighting what has already been done within the field and whether there are currently gaps requiring further exploration. An exhaustive search for articles and other primary source materials addressing SEA leadership capacity and PBIS implementation scale-up efforts was conducted via internet and in person using the articles database and materials found within Cook Library at the University of Southern Mississippi. Electronic

database searches were conducted using Academic Search Premier, CINAHL, EBSCOhost Electronic Journals Service, ERIC, Education Source, Primary Source, PsycARTICLES, Psychology and Behavioral Sciences Collection, PsycINFO, SAGE Premier Journals, and Teacher Reference Center. The researcher used key terms such as the following to assist with conducting a search for related articles: leadership capacity and PBIS, PBIS implementation, SEA and PBIS, scale up state-wide implementation, scaling-up PBIS, state and positive behavioral interventions and supports, PBIS elements, Scaling-up stages, PBIS, leadership capacity, behaviorism, applied behavior analysis, and Skinner. This is not an exhaustive list of key terms used for searches; however, the above list represents the scope of the subject matter searched.

For articles related to studies on PBIS, leadership capacity, and scaling-up efforts, the researcher limited the search to the last 30 years, mainly focusing on articles written since 2004, the year of the final reauthorization of IDEA. The researcher did consider older articles because IDEA referenced in its findings that research from the last 30 years provided information on the efficacy of PBIS. Additionally, the researcher referenced older articles when discussing the theoretical foundations of PBIS, leadership capacity, and scaling-up efforts.

Background

Congress first identified PBIS within IDEA 1997 as the favored preventive and intervention strategy for addressing student behaviors that impede learning. An emphasis on the use of PBIS was reiterated with Congress' reauthorization of IDEA in 2004. Specifically stated within the findings section, Congress noted that

30 years of scientific research lead to the decision that PBIS was an effective, evidence based, preferred strategy for improving the learning outcomes for children with behavior challenges. Noted researchers throughout the 1990's, and early 2000's provided support for Congress' findings on the positive potential of PBIS for addressing behavioral change of individuals or specifically identified groups. However, since the reauthorization of IDEA (2004), researchers on PBIS have shifted a focus to conceptually defining PBIS through whole-school initiatives, multi-tiered systems, and procedures that are effective for all settings, all behaviors, and all students.

By 2010, the federal government had established, through the Office of Special Education Programs, a technical assistance center on PBIS. Prominent researchers in the field of PBIS developed blueprints for implementation, evaluation, and professional development on PBIS which can be located on the Technical Assistance Center on PBIS' website at pbis.org. PBIS elements, components, or standards were identified within these PBIS resources which are based on several decades of research (Algozzine et al., 2010).

Theoretical and Conceptual Foundations

Positive Behavioral Interventions and Supports

Positive behavioral interventions and supports is considered an applied science with roots grounded in Behaviorism's Operant Conditioning Theory. Toward the end of the twentieth century, researchers like Carr et al. (1999), Koegel, Koegel, and Dunlap (1996), Sugai and Horner (1999) began defining PBIS as a systems approach for addressing behavioral change and improving

quality of life through the expansion of behavioral skills (functional/adaptive, academic, and social) acquisition and by redesigning environments to promote and/or be more conducive to eliciting desired behavioral results from an individual. Within the past twenty years, research has moved to a whole systems approach with multi-leveled tiers to address the various needs of the system as a whole (tier 1), small groups of individuals with similar behavioral needs (tier 2), and intensive individualized approaches for persons who's needs were not met at the other tiers (tier 3) (Algozzine et al., 2010).

PBIS was developed from three major areas of focus in educational reform over the past few decades as follows: (a) applied behavioral analysis, which stems from Behaviorist Theory; (b) the advancement of the inclusion movement, which has gained attention because of Congressional findings and legislation addressed in IDEA; and (c) increased attention to person-centered values as paramount to developing appropriate learning environments (Carr et al. 2002).

Behaviorist theory. *Behavior* is defined as a subject's interaction with the environment. More specifically, Skinner (1938) explained that behavior is observable and functional, should be directly studied, and is not contingent on internal causes. Skinner described what has become known as the three-term contingency of behavior. In education today, this is known as the ABCs of behavior: (a) antecedent, (b) behavior, and (c) consequence. According to the Technical Assistance Center on PBIS (2010), PBIS systems use this "three-term contingency" when determining the function of behavior. Skinner believed that

specific responses are functionally related to the environmental antecedents and consequences present. In 1953, Skinner, in *Science and Human Behavior*, discussed the consequences of behavior in terms of rewards and punishment. According to the text, the likelihood of behaviors being repeated is contingent upon environmental consequences inflicted upon the being as a result of performing the behavior. If the subject considered the consequence as rewarding, the behavior is more likely to reoccur than if the environmental response was felt as punishing.

Skinner (1953) credited the works of E.L. Thorndike in the late 1800's for producing influential results on conducting experiments about behavioral consequences. Thorndike coined the term *Law of Effect* to describe how behaviors can become "stamped in" relative to the consequences that follow. Behavioral processes can be described quantitatively using Thorndike's "learning curve" approach.

Skinner (1953) wrote that Thorndike's *Law of Effect* emphasized the concept of probability of response (PoR). Other terms commonly used to mean PoR are tendency and predisposition. The concept of PoR focuses on identifying variables that increase the likelihood, or probability, that a behavior will occur. PoR does not imply causation, only probability. Researchers often utilize frequency data to characterize behaviors and make predictions about the probability of similar behaviors occurring in the future. Skinner (1953) noted that prior to characterizing behaviors, it must be assumed that the subject can perform and repeat the specified activity and that interference from other

behaviors is not an issue. Furthermore, Skinner pointed out the importance of clearly defining the conditions under which the behavior of interest is being observed. Skinner (1953) considered these three standards (performance, interference, and defining conditions) necessary for characterizing behaviors that would lead to predictions about PoR.

Operant and respondent conditioning. Skinner defined the term *operant* as “a class of behaviors,” “described in physical terms,” that “operate upon the environment to generate consequences”. A reinforcer acts to influence a behavior. The term *conditioning* refers to “the strengthening of behavior which results from reinforcement” (Skinner, 1953, p. 65).

Skinner (1953) made a key point by stating the following:

Conditioning of an organism can only occur if (1) a reinforcer accompanies another stimulus (respondent conditioning) or (2) follows upon an organism’s own behavior (operant conditioning). Any event which does neither has no effect in changing a probability of response. (p. 65).

This assertion by Skinner is the conceptual foundation of PBIS.

Behavior analysis. The field of Behavior Analysis (BA) formally developed around 1958 when the *Journal of Experimental Analysis of Behavior* was introduced. This journal identifies and discusses the foundational principles of BA and is still published today. Ten years later, in 1968, the *Journal of Applied Behavior Analysis* was published. Behavioral researchers began clearly defining the differences between traditional Psychology and the tenants of BA. These differences necessitated a branching off of BA from traditional Psychology.

However, not until the last few decades have leaders with the Association of Psychological Sciences recognized the impact of BA as a discipline (Madden, 2013).

Behavior Analysis may still be considered under the umbrella of Psychology; however, key differences separate the two. Psychologists focus on internal or mental processes such as the mind, the psyche, the self, feelings, emotions, and thoughts. The science of BA focuses on behavior but considers the continuity between what can be observed (behavior) and private events (thinking, feeling). Additionally, within BA, making predictions about behavior or attempts to control and shape behavior is limited to the individual, not groups. Behavioral researchers contend that behavior can be environmentally explained and that the study of behavior is an applied science, occurring in natural settings rather than within a laboratory. Research findings in the field of BA must have a practical purpose rather than just a goal of adding to the theoretical framework. (Fisher, Piazza, & Roane, 2011, Madden, 2013).

There are three branches of Behavior Analysis: (a) Behaviorism, (b) Experimental Analysis of Behavior, and (c) Applied Behavior Analysis (ABA). Behaviorism is grounded in philosophical viewpoints while experimental analysis seeks to explain behavior through the identification of basic principles and processes. ABA uses basic principles and processes to solve problems considered of social importance. PBIS is derived from ABA.

Applied behavior analysis. ABA derived from the principles of B.F. Skinner's operant conditioning. A seminal article on ABA was written by Baer et

al. (1968) and published in the introductory issue of the *Journal of Applied Behavior Analysis*. The Baer et al. (1968) article laid the foundation for future research and application of the principles of ABA. Within the article, the researchers explained the analytic behavioral approach. The process involves applying behavioral principles in an attempt to change behavior. Additionally, an evaluation of the change in behavior is needed to determine if and how the process itself may have affected the change. In other words, did the behavior change occur because of the applied principles or because of the process?

Baer et al. (1968) departed from the standards of basic research, completed within the sterile laboratory, with the goal of explaining and expanding support for the scientific method of applied research. The applied research method not only seeks to determine what controls a specific behavior, but also which variables work to improve that behavior. With applied research, the intent is to look at socially important behaviors and seek to improve those behaviors within the setting for which the behaviors usually occur. This type of research is often difficult to validate because the scientific process of manipulating behaviors occurring in a natural environment is not always accepted.

One major contribution the Baer et al. (1968) article gave to the field of applied science was the identification and definition of the seven components of applied behavior analysis: (a) applied, (b) behavioral, (c) analytic, (d) technological, (e) conceptually systematic, (f) effective, and (g) generality. These components are the foundation for essential elements later identified within PBIS.

Applied. Using applied methods in research denotes that the problem being studied is of importance, not for its potential contribution to theory, but rather because some portion of society is interested in the problem and finds it socially significant. Applied behavioral research emphasizes a close relationship among the individual, the behavior, and the stimuli of interest (Baer et al., 1968).

Behavioral. Applied research looks at how a person can be motivated to act or perform a task in an effective manner. It is focused on how a subject demonstrates ability “to do” the behavior of interest. Precise measurement of behavior can be difficult but is required in order to quantify and scientifically study the problem. Applied researchers often find it taxing to maintain the integrity of their endeavors and must strive to achieve reliability. For example, Baer et al. (1968) noted that behavioral changes could be due to changes in the recorder’s observation methods, assessment, or perception rather than actual behavioral changes of subject being studied. Researchers must account for situations that could devalue the fidelity of their study and they must apply procedures that lessen the likelihood of such situations occurring.

Analytic. Baer et al. (1968) pointed out an important difference between studies done in laboratories and those conducted in natural settings. Replication can easily be achieved within a laboratory; however, it is a more difficult construct in applied research. The analysis of a behavior indicates that the researcher has control over the behavioral change. In applied settings, two experimental designs are commonly used to achieve control reliability: the reversal technique and the multiple-baseline technique.

The reversal technique involves measuring a behavior over time to determine stability of the behavior, then applying a variable that could produce a change in the behavior. Over time, the variable is presented and removed to determine if the variable elicits a behavioral change in the subject. The reversal technique is often dependent upon the social setting in which it is applied and might not always be feasible because of that setting. For example, it is not always possible to apply and remove a particular variable within a school setting. Furthermore, outside reinforcers may overtake the significance of the original variable being implemented.

The multiple baseline technique is a desirable choice for settings where the reversal technique has not produced effective results or is not a feasible technique to employ. School settings might be an example of an environment where multiple baseline procedures would be more productive at eliciting desired results than the reversal technique. With multiple baseline, the recorder observes and measures a number of responses and establishes a baseline over time (Baer et al., 1968). A variable is then added, and data is collected regarding changes in one behavior. This procedure continues with the other behaviors in an effort to provide evidence that the variable is effective.

Evaluation of these two methods is highly reliant upon judgment calls and therefore the techniques lend themselves to being more qualitative in nature. However, statistical analysis is sometimes applied, when suitability can be determined. An importance of these two techniques is that they both are

appropriate for the standards of replication, which adds value to solving a researcher's problem of reliability.

When the Baer et al. (1968) article was written, the researchers noted that these two techniques, the reversal and the multiple baseline techniques, had many variations and that many more variations should develop over time, improving the practice, importance, and believability of the scientific techniques related to behavioral change.

Technological. In applied behavioral analysis, technological refers to the process of describing, identifying, and defining all of the steps, procedures, or "ingredients" involved with a particular technique or behavioral application. The test for determining if a technique is technological involves consideration of this question: Can another similarly trained person, using the information provided within the description of a behavioral application, replicate the technique and produce equivalent results? Baer et al. (1968) emphasize that all possible contingencies for a procedure must be considered and described in detail.

Conceptual Systems. Technological descriptions must be relevant to behavioral principles and, over time, these procedures should systematically develop into disciplines rather than remain, as Baer et al. (1968) noted, "a collection of tricks" to rely upon here and there. Fisher et al. (2011) stated that conceptual systems derive from scientific practices which have been empirically validated by years of replication demonstrating effectiveness.

Effective: With behavioral analysis, the intent is to determine if specific procedures are "effective" in soliciting behavioral change that is considered

socially important. Data is evaluated more often through observational methods rather than statistical analysis (Baer et al., 1968; Fisher, Kelley, & Lomas, 2003). A technique could pass the test for statistical significance and fail under the definition of what constitutes socially important behavioral change with practical value (Baer et al., 1968; Fisher et al., 2011). Again, Baer et al. (1968) noted that in applied research, concern is not focused on the theoretical significance of a technique or discipline, but rather on “its power in altering behavior enough to be socially important”. Further, the researchers contend that in order to determine effectiveness, the question to ask is, “how much did that behavior need to be changed?” Baer et al. (1968) recognized that this is not a scientific question, however, the researchers also noted that practicality is an essential element in determining effectiveness of techniques geared toward socially important behavior change.

Generality. In applied behavior analysis, generality means that a behavior change is durable over time, across environments, and appears within other related behaviors. Generality is not automatically achieved simply because a behavior change has occurred. Baer et al. (1968) explicitly stated the importance of using techniques that encourage and maintain generality. The researchers felt it imperative to stress attention to generalizing behaviors and repeated evaluation of systems to ensure generality is sustained.

Leadership Capacity

Writings on leadership capacity in educational systems have been heavily focused around the research of Michael Fullan (2003) and his work related to

systems change. In describing the historical evolution of educational reform, Fullan (2003) stated that the 1970's were a time of confusion because educators were uninformed about external ideas. Teachers within their classrooms were considered islands and information did not easily flow across or through those classrooms. In the 1980s, educational standards began to emerge and systems drew focus on goal setting; however, the key elements missing were the capacity and resources needed to accomplish goals and standards. The 1990s saw a shift toward research focused policymaking and attempts to develop best practice methods based on research findings. Information began to reach the classrooms and research-based teaching emerged. In the 2000s, a focus on educational reform was elevated as professionals began to take ownership roles and lead initiatives toward systems change. Over the last twenty years, educational reform has been deeply rooted in research findings on leadership capacity for systems change and sustainability.

In 2004, Fullan, Bertani, and Quinn described ten components of effective leadership for sustained reform at the public school district level. The researchers felt all ten components were essential for success in large-scale systems change and improvement. The findings were based on results from studies conducted internationally in Canada, United States, and England. The researchers did not indicate within the article whether or not they conducted the studies themselves. However, the researchers considered the findings important because all districts studied successfully maintained district level reform with effective leadership using all ten identified crucial components.

The ten components are:

(1) conceptualization – understanding the underlying mechanisms of the vision and having insights on bringing the vision to fruition; (2) collective moral purpose – a united goal with system-wide buy-in and support; (3) structurally sound and appropriately aligned – having the right people doing the right things in the right place at the right time with the right resources; (4) capacity building –developing district level leaders who will take the program to the next level; (5) lateral capacity building – uniformly developing strong leaders across schools within the district; (6) ongoing learning – professional development, training, and resources that continually enhance the knowledge base and skills of the leaders and organizational members; (7) productive conflict –balancing differences and decisions in a manner that positively serves the organizational vision; (8) creating and maintaining a culture demanding of trust, integrity, respect, personal regard, and competence among all members; (9) external partnerships – developing and maintaining relationships with community stakeholders; and (10) focused financial investments – understanding the appropriate allocation of resources, redirecting resources as needed, and maintaining the confidence of agencies responsible for funding organizational endeavors (Fullan et al., 2004).

While Fullan et al. (2004) described ten components for leading district wide or whole systems reform; Fullan (2009) combined those components into five key elements for strengthening leadership capacity at the individual level.

Fullan's 2009 discussion of leadership capacity identified the following five core leadership capacities: goal setting, priorities and resources alignment, cultures to promote collaborative learning, use of data, and using feedback as an evaluative tool for improving processes. Within these core elements, Fullan (2009) explained how leaders should set directions, lead programming, secure accountability, build relationships, develop the organization, and groom the people involved with the organization.

Sustainability refers to a system's ability to maintain implemented changes and improvements over an extended period of time. A study by Williams (2009) pointed out that leadership capacity is the key component to success in sustaining systems change. One of the most important characteristics of a leader is the ability to groom others for auxiliary leadership roles and the ability to inspire those leaders in a manner that fluidly maintains the integrity of the system and the system's goal (Lambert & Association for Supervision and Curriculum Development, 2003; Ramsey, 2005; Williams, 2009).

Results of the Williams (2009) study described the perceptions of teachers and principle interns regarding leadership capacity in various areas of school functions. The study involved surveying 12 teachers and 11 principle interns at different K-12 schools. Williams discussed findings on leadership characteristics for sustaining school improvement as:

Broad-based skillful participation in the work of leadership, inquiry-based use of information to inform shared decisions and practices, roles and responsibilities that reflect broad involvement and collaboration, reflective

practice and innovation as a norm, and high student achievement (Williams, 2009, p.37).

Williams suggested that broadening perceptions about leadership is necessary to sustainability for systems change.

Waldron and McLeskey (2010) discussed collaboration as essential to school reform. The facilitation of successful collaboration is dependent upon strong, effective leadership. Leaders should clearly express the goal of school change and use information to promote empowerment, ownership, and knowledge among members of the team in order to increase collaborative endeavors. Additionally, leaders must be the example by leading change through a team approach. The researchers also stated that data-driven decision-making is essential to determine school capacity to evoke the change desired.

Professional development is another key area discussed by Waldron and McLeskey (2010). The researchers pointed out that the promotion and provision of strong, ongoing professional development are essential to keeping staff engaged and effective.

The importance of effective leadership no longer rests fully on the shoulders of administrators. Because of the collaborative nature of school reform or systems change, leadership roles and responsibilities are also required of other key personnel within the school, like counselors, coaches, interventionist, team leaders, and even classroom teachers (Mangin, 2007). However, it is still the principal administrator who must possess the leadership capacity to facilitate effective collaboration and leadership among staff (Waldron & McLeskey, 2010).

One key goal of an effective leader is to create specialized teams within the school that are specifically focused on important issues and that collaborate with other teams to develop and implement policies and procedures. Fostering leadership within these teams is essential to an administrator's capacity to lead because the magnitude of systems change endeavors often requires delegation of segmented duties and collaborative decision making (Fullan, 2009; Mangin, 2007; Waldron & McLeskey, 2010).

Based on the results of studies and writings by the aforementioned researchers, essential components of leadership capacity for systems change call for administrative support that fosters collaborative team endeavors, ongoing professional development, financial provision and appropriate allocation of crucial resources, and data driven evaluation and decision-making.

Taking Systems to Scale

Scaling-up efforts grew out of the transformation from the past approaches of "letting it happen" to the current standards of practice, "making it happen" (Fullan, 2009). Researchers have gone beyond simply publishing findings and have now focused more closely on implementation and sustainability. Scaling up refers to that point at which socially significant benefits are produced by the critical mass (Fixsen et al., 2009). While no precise definition of scaling up was noted within Fixsen et al. (2005) or Fixsen et al. (2009), Fixsen and colleagues appraised a 60% threshold as a scale-up measure. In order for an initiative to be considered taken to scale, at least 60% of all entities within a system utilizing the

initiative have implemented the interventions with fidelity, and have assessed positive outcomes (Fixsen et al., 2005).

The State Implementation and Scale-up of Evidence-based Practices Center (SISEP) was founded in 2007 at the University of North Carolina and is funded by the United States Department of Education's Office of Special Education Programs. SISEP is an external support to SEAs on implementation capacity for systems change and scaling up endeavors concerning evidence-based programs. Between 2007 and 2010, the Technical Assistance Center on PBIS developed change theory regarding statewide initiatives linked to student outcomes, conducted and aggregated research related to implementation capacity, and initiated support to states regarding scaling up efforts. The Technical Assistance Center on PBIS website remains an active source for educators to find support related to scaling-up implementation of PBIS.

The SISEP website outlines the stages and drivers that must be present in scaling-up implementation capacity. The stages of implementation include exploration, installation, initial implementation, and full implementation. The implementation drivers are competency, organization, and leadership (Fixsen, 2013; Fixsen et al., 2005; Fixsen et al., 2009). In 2014, Horner et al. utilized these stages along with the essential elements of PBIS implementation as outlined by Sugai et al. (2009) for research related to scaling-up of PBIS across seven states with implementation success.

Review of Related Studies

A study published by Horner et al. (2014) discusses identification of key variables essential for scaling-up schoolwide PBIS implementation in seven states. In discussing the process of implementing schoolwide PBIS, the researchers stated that several years are needed to fully establish an effective systematic framework for providing behavioral supports designed as interventions and preventative strategies at the district and school capacity level. Sugai et al. (2009) noted that schoolwide PBIS focuses on whole school initiatives, uses multi-tier methods for student support, offers systematic delivery of services to promote fidelity and sustainability, and requires data-driven decision making for evaluation and revision of practices or services. A two to three year cycle of systematic implementation practices is required to bring schoolwide PBIS to a level of social significance (Sugai et al., 2009).

Participants of the Horner et al. (2014) study were selected in 2010 based on results from information regarding PBIS implementation provided to the Technical Assistance Center on PBIS by state level PBIS Coordinators. Data from 10 states indicated that at least 500 schools within each reporting state were implementing PBIS. PBIS Coordinators from seven of those 10 states agreed to participate in the study by completing a survey instrument between the years of 2010-2011. The survey instrument, State Implementation and Scaling Survey (SISS) (Horner et al., 2010), was developed as a matrix using Fixsen et al. (2005) stages of implementation and the PBIS Implementation Blueprint (2010) core elements of implementation model.

Using descriptive charting of data collected from the seven participating states, Horner et al. (2014) generated information on number of schools from each state that were implementing schoolwide PBIS each year, but not information on the fidelity of the implementation. The researchers also used a frequency chart to look at each state's reported timeline for the stages of implementation and used narrative data from respondents to discuss shifts in implementation and scale-up success. The researchers identified themes based on the data collected and confirmed these themes with participants in follow-up phone interviews.

Results of the Horner et al. (2014) study revealed several themes regarding scaling-up efforts and implementation stages for schoolwide PBIS among the seven participating states. First, there was no common thread among the states for a timeframe on PBIS implementation stages. Second, the notion of an entire state proceeding uniformly through the implementation stages, in a linear fashion, was not achieved because various parts of the overall system (individual schools or districts) were at different implementation stages during the statewide process. Information received from SEA representatives reflected perceptions of state level policy makers rather than an overall description of LEAs within the state. Third, implementation shifts began after an SEA documented at least 100-200 schools executing schoolwide PBIS with a capacity to sustain training, coaching, and evaluation procedures at the local level. Once this happened, schools were able to shift from external sources to internal supports and realized more viable means of implementing and sustaining PBIS

locally. As the shifts within schools began to occur, statewide scaling-up was more achievable.

The Horner et al. (2014) study also uncovered the following three themes that suggested a need for future research endeavors or discussion:

(1) establishing schools that implement schoolwide PBIS with positive student outcomes requires SEA support in the areas of advocacy, funding, and training, (2) modification of coordinated efforts in training, coaching, and evaluation of PBIS implementation is required to take the initiative to scale, and (3) in order to take PBIS implementation to scale, states needed to solidify establishment of (a) administrative support, (b) technical capacity at local levels, (c) 100-200 schools demonstrating fidelity and PBIS impact, and (d) systems of evaluation. (pp. 19-22)

Another study investigating schoolwide PBIS and scaling-up efforts (Gage et al., 2014) focused specifically on funding of evidence-based frameworks. The researchers explored state level funding procedures related to the implementation and sustaining of PBIS with the purpose of providing information useful in developing scaling-up practices.

The Gage et al. (2014) study conducted research using data collected from nine states currently considered implementing PBIS systematically. All states participating in the study met criteria for the presence of a knowledgeable, informative, and actively involved state level PBIS Coordinator, schoolwide PBIS implementation in at least 30% of schools within the state by 2011, and at least

five years actively collaborating with the Technical Assistance Center (Gage et al., 2014).

The researchers surveyed representatives from the nine states using a self-created instrument that focused questions on SEA methods, sources, or processes of funding PBIS and descriptions of lessons learned regarding best practices for funding the implementation of an evidence-based framework. There were three sections to the PBIS funding survey that included questions related to (a) sources of funding, (b) process of funding, and (c) influence of funding decisions.

Under the “influence of funding decisions” section, researchers asked respondents to rank eight variables that were hypothesized to influence the manner in which funding decisions were made. The researchers asked respondents to rank the level of effect each variable had on influencing decisions about funding PBIS endeavors using a scale from *none* to *significant*. The eight variables were as follows: (a) LEA defined needs, (b) schoolwide PBIS presentations, (c) results of research, (d) policy at State level, (e) policy at Federal level, (f) colleague recommendations, (g) unfavorable results from existing data analysis, and (h) other states’ experiences.

Of the eight variables listed above, results of the survey indicated that need defined by LEA, presentations on schoolwide PBIS, and results of research had the most significant impact on SEAs decisions about initial PBIS implementation funding. The variable state and federal policy had the lowest impact regarding SEA funding habits. The other variables had some impact.

Similarly, the same three variables had significant impact on decisions related to expanding funding for schoolwide PBIS after initial implementation. However, dissatisfaction with outcome data also had significant impact at this phase.

Results of the Gage et al. (2014) survey were coded and then the research team followed-up with phone interviews to check for reliability and validity as well as develop a more comprehensive description of funding for SW-PBIS within each state. This helped the researchers refine the information gathered on the surveys. Similar to the previously discussed Horner et al. (2014) study, descriptive statistics were used to assess survey responses. Additionally, a thematic analysis was used to categorize all qualitative data collected through phone interviews and narrative sections of the survey.

Gage et al. (2014) were able to uncover several themes within the study's results, however, for the purposes of this dissertation, the researcher focused the theme related to considering influences on funding of PBIS implementation scale-up processes. According to the researchers, when 30-40% of the schools within a state were implementing PBIS, it was considered that scaling-up had occurred within that state. Gage et al. (2014) were interested in exploring SEA processes for increasing and sustaining funding throughout state level scaling-up of PBIS implementation. Additionally, the researchers wanted to investigate how SEAs made decisions about funding PBIS implementation endeavors. For instance, which data and criteria did state level officials assess for decision-making purposes related to the funding of PBIS scaling-up processes?

Respondents from the nine states participating in the Gage et al. (2014) study reported four criteria as important in determining funding needs for schoolwide PBIS implementation scale-up processes. First, most states used the Schoolwide Evaluation Tool (SET) or the Benchmark of Quality (BOQ) as a measurement for fidelity of implementation. The SET is a self-assessment instrument developed by noted PBIS researchers, Horner et al. (2004). The BOQ is a similar instrument also developed by noted PBIS researchers, Cohen, Kincaid, and Childs (2007). Both of these instruments, the SET and the BOQ, are used to evaluate schoolwide PBIS implementation fidelity. Second, all states considered data collected regarding in school suspensions (ISS) and out of school suspensions (OSS). Similar to ISS and OSS data, the third criteria reported by all states involved data on referrals to the office (ODRs). Finally, data from online systems that track and analyze data related to behavior, the Schoolwide Information System (SWIS) and PBIS Assessment, were used by many of the states reporting within the Gage et al. (2014) study.

The Gage et al. (2014) study uncovered four themes related to funding PBIS implementation. Funding and decision making about PBIS scaling up efforts, for the most part, originated and grew from state level special education agencies. Success of these PBIS endeavors relied heavily on data-driven decisions and the diverse use of funding dollars. Finally, sustaining scale-up efforts were enhanced by the development of state level policy related to PBIS implementation. These themes complimented the themes of the Horner et al.

(2014) study and reiterated the importance of systematic, purposeful SEA involvement in PBIS scale-up efforts.

In 2011, Bradshaw and Pas published their investigation of Maryland's statewide PBIS scale up initiative. The purpose of the study was to describe processes conducted by the state of Maryland on scaling up PBIS implementation and to evaluate the contextual factors related to implementation at the school or district level. Training on PBIS implementation and adoption of the PBIS process were the two main factors considered within the study.

The researchers referred to the Adelman and Taylor (1997) framework for implementation scale-up processes, which was used by Maryland to guide their statewide PBIS scale up efforts. This model, named a "diffusion model" by Adelman and Taylor, includes four stages or phases of program implementation: (a) creating readiness, (b) initial implementation, (c) institutionalization, and (d) ongoing evolution.

During phase one, creating readiness, entities should focus on measuring and fostering community/stakeholder buy-in and support. Additionally, evaluation of system's culture and organizational structure must be gauged in order to enact needed change. During this stage, the school or district must consider need for reallocation of resources, time, staff, and materials, as well as funding sources for all of the above (Adelman & Taylor, 1997).

Phase two involved rolling out the initial implementation, in stages, with leadership support and guidance. During this phase, ongoing trainings were provided, problem-solving teams were developed, and coaches, acting as local

level experts, provided day-to-day support and motivation (Adelman & Taylor, 1997).

In phase three, ownership of the initiative takes place, and a sustainable systems change develops. Leadership shifts from external support to internalized or localized roles within the system itself and the systems change initiative is maintained through a circular pattern of implementation, evaluation, and revision (Adelman & Taylor, 1997).

The final phase, phase four, takes sustainability to the next level by emphasizing continued development and integration, ongoing evaluations and program evolution, and data based decision making. This phase focuses on capacity building (Adelman & Taylor, 1997).

In the Bradshaw and Pas (2011) study, the researchers referred to publically reported results collected with an instrument called the Implementation Phases Inventory (IPI), developed in 2009 by Bradshaw, Debnam, Koth, and Leaf. Maryland schools used the IPI twice a year as their data collection tool to evaluate implementation of schoolwide PBIS across the 44 key elements. The researchers also used other publically accessible data on suspensions and academic performance as part of the study. The study looked at school training on PBIS, school adoption of PBIS, and the quality of PBIS implementation within schools. Noted limitations of the study included the fact that the researchers only looked at elementary schools over a particular time period. A more comprehensive study that encompassed high schools and collected data over an extended timeframe might yield different results.

The researchers, Bradshaw and Pas (2011), found that the Adelman and Taylor (1997) model was used in more than half the schools throughout Maryland and appeared to be a well-received process. One observation, however, was that the process was not linear. The researchers noted the process was circular and dipped back into early stages as needed. Additionally, evaluation was essential in all phases and was ongoing throughout the entire process.

Results of the Bradshaw and Pas (2011) study suggested that lower performing schools embraced the PBIS model more readily than higher performing schools. The study indicated schools with higher suspension rates and higher student mobility scores were in correlation with higher rates of training, adopting, and implementing PBIS programming. The researchers noted these results suggest that lower performing schools appear to seek training in PBIS as one method of school improvement.

Mathews, McIntosh, Frank, and May (2014) studied predictors of sustained fidelity of PBIS implementation. After a review of the literature, Mathews and colleagues (2014) identified the following variables as essential to PBIS implementation fidelity and sustainability: (1) staff buy-in, (2) administrative support, (3) knowledge, skill, or training of implementers, (5) teaming, (6) data usage, and (7) continued or ongoing professional development or technical training. The researchers used existing measures of the above-mentioned variables to predict how sustained fidelity is achieved and how student outcomes are affected within schools across the nation. The existing measures used were the PBIS Self-Assessment Survey (Sugai, Horner, & Todd, 2003), the BoQ

(Kincaid, Childs, & George, 2005), and office discipline referrals (ODRs). The PBIS Self-Assessment Survey (PBIS-SAS) is an implementation assessment instrument similar to the BOQ and SET, two instruments described in earlier paragraphs. The researchers looked at data from 261 participating schools over a timespan between school years 2006-2007 and 2009-2010.

Results of the study suggested that there was sustained PBIS implementation by 2009-2010 within most participating schools. The PBIS-SAS was found to be an adequate predictor of sustained implementation. Strongest areas of importance in sustained implementation of PBIS were the classroom teacher and setting, reinforcement of expectations and positive behaviors, matching instruction to the abilities of students, and support through access to assistance and recommendations.

CHAPTER III

METHODOLOGY

In this chapter, the researcher detailed the research design and methodology for the study, purpose of the study, and research questions. A description of participants, instruments, procedures, and data analysis are presented.

As discussed in Chapter I, mandates within IDEA and C.F.R. 300 stipulate that schools should consider the use of PBIS as an intervention for children with impeding behaviors and as a school-wide prevention model. SEAs are charged with the responsibility of developing their own regulations, based on the IDEA and C.F.R. 300 mandates. Additionally, SEAs must monitor activities within LEAs to assure PBIS is being considered and professional development has been provided to all school personnel. However, the federal government allows the individual states to determine what level of specific guidance on PBIS is appropriate. The capacity of individual SEAs to provide leadership on PBIS implementation still fluctuates even though blueprints on PBIS implementation, evaluation, and professional development are provided on the Technical Assistance Center's website.

The purpose of this study was to describe the national status of scaling up efforts and SEA leadership capacity on implementing PBIS. The researcher reported on data received from state level PBIS Coordinators, or other PBIS representatives from each SEA, and analyzed the data to present information on the prevalence of schools implementing PBIS systems, the average status of

implementation standards for each state, SEA scores on variables of PBIS leadership capacity, and the percentage of states currently taking PBIS implementation to scale across the nation.

Research Design and Data Analysis

The researcher utilized descriptive techniques to account results of a survey given to PBIS Coordinators acting on behalf of the participants (SEAs from each state across the nation plus the District of Columbia) to report on the status of PBIS implementation scale-up and leadership capacity within each represented state. The researcher considered the SEA or the state as the actual participant and used the terms “SEA” and/or “state” interchangeably. The term PBIS Coordinator is used to signify the person (respondent) representing each SEA by responding to the survey.

In prong one of the study, the researcher used archival data collected by experts in the field of PBIS and/or representatives of SEAs to determine the percentage of schools within each state currently considered implementing PBIS. All states reporting 60% or higher for PBIS implementation are considered to have met the criteria for reaching a level of social significance (Fixsen et al., 2005; Fixsen et al., 2009).

To determine percentage of schools within a state considered implementing PBIS, the researcher first gathered archival data using one or more of the following methods: perusing PBIS websites for demographical information regarding PBIS implementation; correspondence with experts in the field (i.e. Dr. Robert Horner) who also collect data on PBIS implementation, and referring to

websites that report census data on public schools in America (i.e. The National Center for Educational Statistics, NCES). After gathering information on the number of schools implementing PBIS across the nation, the researcher calculated a percentage of schools implementing PBIS within each state. This was done by dividing the total number of schools implementing PBIS within a state by the overall number of schools operating within that state, as reported by NCES in the most recent 2012 census.

The focus of prong two is to determine the current status of PBIS implementation standards for each state as reported by the PBIS Coordinator on prong two of the SPILS form. Participants were asked to rate their perceptions of how schools within each state are performing on each of the standards of PBIS implementation. There are seven standards listed under prong two. Using a 6-point rating scale, participants rated each standard between zero and 5 points. A score of zero means none, 1 means struggling, 2 means fair, 3 means emerging, 4 means good, and 5 means excellent. The highest possible score for prong two equals 35 points. This score was calculated by adding together the total points marked for the seven standards. Once the points were added together, the resulting number became that state's overall score for prong two. When that score was converted to a percentage, the percentage became that state's "overall percentage" for standards of PBIS implementation. The researcher was interested in identifying which states reported a rate of at least 80% (28 or more points) for overall percentage on standards of PBIS implementation.

To determine each state's score and overall percentage on prong two, the researcher provided completed SPILS forms to a data analyst who input the information into SPSS for analysis. Utilizing the Descriptives and Mean programs within SPSS.23, the analyst converted raw data into a percentage, using mean as the measure of central tendency. In addition to the overall mean score for prong two of the SPILS form, the analyst also used Frequencies within SPSS.23 to calculate a frequency chart for each implementation standard based on how it was scored. The researcher converted frequency data into a table to show a rating score for each standard by states.

During prong three of the study, the researcher sought to identify which states scored at or above 80% on variables for PBIS state leadership capacity. The researcher utilized the same procedures as described in prong two. Participants were asked to score state level leadership on PBIS implementation by completing prong three of the SPILS form. There are 20 variables of leadership capacity listed in prong three. Participants scored prong three using the same zero to five rating scale described in prong two. The maximum score possible for prong three equals 100 points. Therefore, the researcher was interested in states with an overall score of 80 points or higher in prong three. To determine an overall percentage on leadership capacity for each state, the same methods used in prong two were used in prong three. The researcher provided the completed SPILS forms to the same data analyst who input the information into SPSS.23 for analysis. Utilizing the Descriptives and Mean programs within SPSS.23, the analyst converted raw data into a percentage, using mean as the

measure of central tendency. In addition to the overall mean score for prong three of the SPILS form; the analyst also used Frequencies within SPSS.23 to calculate a frequency chart for each variable of leadership capacity based on how it was scored. The researcher converted frequency data into a table to show a rating score for each variable by states.

Prong four of the study involved determining which states could be considered taking PBIS implementation to scale, as evidenced by the following: (a) at least 60% of the schools within the state are considered implementing PBIS with fidelity, (b) a score of at least 80% on PBIS standards of implementation status, and (c) a score of at least 80% on state leadership capacity on PBIS implementation. The researcher provided information gathered in prongs one through three to the behavior analyst for aggregation based on the above noted criteria. The analyst used a simple charting system to display the results of prong four. Participating states are labeled on the y axis and each prong's number (1-4) was labeled on the x axis. If a state scored 60% or higher on prong one, that state received one point which is marked on the chart under the number one. Similarly, if a state scored 80% or higher on prong two, that state received one point which was marked on the chart under the number two. Finally, if a state scored 80% or higher on prong three, that state receives one point which was marked on the chart under the number three. Once prongs one through three were marked on the chart, the analyst added each state's points to determine if that state had earned all three points. The total number of points earned was listed under the column numbered four. Each state that earned three

points was considered as having taken PBIS implementation to scale. The researcher converted the analyst's chart into a bar graph that listed each participating state's scores for prongs one through three.

During the data collection phase, which is 30 days long, the researcher also perused PBIS websites seeking additional information regarding PBIS implementation and SEA leadership capacity across America. The researcher used a SPILS form as a template for determining which information was related to the study. If information found on a website appeared representative of components of the study (i.e., pertaining to percentage of schools implementing PBIS, standards of PBIS implementation, or variables of leadership capacity), the researcher attempted to validate that information through personal contact with a PBIS Coordinator or comparison to information reported by Dr. Horner, pbis.org, and nces.ed.org. For information regarding standards of PBIS implementation or variables of leadership capacity, data found on websites had to meet the exact criteria for measurability as found within prongs two and three of the SPILS form. For information regarding taking PBIS implementation to scale, the researcher must have been able to locate data on a website that clearly addressed prongs one, two, and three of the SPILS form.

Perusing PBIS websites for additional information regarding implementation standards and variables of leadership capacity, prongs two and three of the SPILS form, was considered an auxiliary component to the study and could be excluded from the results of the study due to lack of information found that meets the criteria for measurability as outlined on the SPILS form. In order

for data found on websites to be included within the results of the study, the information had to meet criteria of the information requested on the SPILS form. No website information for prong four was reported as part of the results of this study unless the researcher was able to locate data regarding prongs one through three that meet the criteria for measurability as outlined on the SPILS form because those data are essential to the results of prong four.

If the researcher discovered information about a state, other than demographical information that would fall under prong one of the study, but could not contact a PBIS representative to validate the data and provide consent to include the data within the study, the information was not included within the results of this study. However, in chapter five, the researcher elected to discuss some of the information found within perused websites even though that data wasn't calculated into the results of this study.

Additionally, inter-rater reliability was addressed by having the data analyst conduct the same procedures for perusing PBIS websites and comparing results of both investigators' collected information. The researcher wanted a reliability coefficient of at least 90% because it was imperative that both observers scored components on the SPILS forms for each site perused in an almost identical manner to avoid arbitrary data. For prongs two and three of the SPILS form, the observers (i.e., the researcher and the analyst) were not determining a score, but rather reporting a score. The score, if present at all, would have already been rated by the state and published on the website. If the observers did not identically report scores on the SPILS form for each website

perused, a lack of reliability would be assumed because the observers were unable to agree that they were looking at the same results. Perusing state PBIS websites was a supplementary step to the study and did not have any influence on results derived directly from PBIS Coordinators' completion of the SPILS form. The researcher reserved the right to discard this portion of the study and only consider results of completed SPILS forms that were submitted by PBIS Coordinators.

Participants

Surveys were gathered from state level PBIS Coordinators and/or representatives from SEAs who elected to participate in the study by returning a completed SPILS form within the set time frame of 30 days. A complete list of SEAs can be found at the US Department of Education's *Education Resource Organizations Directory* website (See Appendix C) and a list of PBIS Coordinators can be found on the website for the National Technical Assistance Center on PBIS (see Appendix D).

There were 51 potential participants for this study, SEAs for each of the 50 states within the United States of America plus the District of Columbia. For the purposes of this study, the terms SEA and state were used interchangeably. Likewise, the PBIS Coordinator was considered the representative for the state and may have been referred to as participant, respondent, or representative interchangeable.

SEA and PBIS websites were also perused for information related to this study. However, any information found must meet the measurability criteria for each prong of the SPILS form or it will not be included in the results of the study.

PBIS Coordinators or representatives from each state were invited via email to participate in the study. The researcher also utilized the U. S. Postal Service and attempted personal phone calls to solicit responses from participants. Additionally, some SEAs referred the researcher to outside sources used to collect, analyze, or report behavioral data. When this was the case, the researcher used information from those agency websites or representatives and cataloged the information under the appropriate state label (i.e. two digit postal code for each state). Anonymity or confidentiality of the reporting SEA was not an issue because the data used in this study was archival and accessible to the general public. Participants in this study were labeled using the two-letter postal abbreviation code for the state represented.

Instrumentation

The researcher used the State PBIS Implementation and Leadership Survey (SPILS) form to collect quantitative data on PBIS implementation and state level leadership capacity. Completion of the SPILS form was solicited to state level PBIS Coordinators in each of the 50 states within the United States of America, plus the District of Columbia. The SPILS instrument contains components similar to The State Implementation and Scaling Survey (SISS) (Horner et al., 2010) used in a previous study on the scaling up of PBIS in seven states considered to be implementing effective practices. However, while the

SISS was used to identify common variables impacting the implementation and scaling up among seven states with noted PBIS success, the purpose of the SPILS instrument was to identify which states across the nation are taking PBIS implementation to scale. The variables, noted within the SISS as essential components to leadership capacity and scaling up PBIS implementation, were also visible on the SPILS form as partial criteria for determining that states have taken PBIS implementation to scale.

The SPILS form's reliability to measure level of leadership capacity and scaling up efforts in PBIS was validated by sending the SPILS to PBIS professionals or SEA representatives considered to have extensive knowledge on PBIS and components of leadership capacity. Recipients were asked to provide feedback, based on their perceptions of the form's validity. At least 80% of the participants scored the form "valid". Only one person added notes suggesting alterations to the survey. The researcher considered these alterations and accordingly made edits to the original form. Prior to conducting this validity check, the researcher obtained written affirmation from The Institutional Review Board (IRB) at The University of Southern Mississippi confirming IRB approval was not required for the validity check procedure. However, IRB approval for the study was secured prior to initiating data collection.

Procedures

First, the researcher developed an email address bank of state level PBIS Coordinators from the United States Department of Education's Office of Special Education Programs Technical Assistance Center on PBIS. A list of names,

addresses, and other contact information was copied from the Technical Center's website at pbis.org (See Appendix D).

Next, the researcher sent a SPILS form, via email, to representatives of each state and the District of Columbia. Attached to the survey, the researcher included a letter of consent which also explained the form completion process. A 10 day response timeframe was requested. The actual data collection period was 30 days long to allow the researcher time for multiple attempts at receiving responses. As responses were received, the researcher marked the participating state off the list and printed out a hard copy of the completed SPILS form. The researcher moved the electronic version of the SPILS form to a computer file labeled "completed forms" and places the hard copy of the SPILS form in a folder marked "completed forms" which was filed in a cabinet.

Seven days after the first email, a follow-up reminder email was sent, with another copy of the SPILS form attached, to all potential participants who had not yet responded. Fourteen days after the original email was sent, a second reminder email was sent to any remaining potential participants who had still not responded. A total of three email requests were sent to potential participants between the first and twenty-first days of the survey period.

During days 15 through 21 of the survey time frame, the researcher sent SPILS forms to all remaining potential participants via the United States Postal Service. Only one mailing was conducted via postal service. The researcher attempted to personally contact any potential participants who did not respond to the request for information. This attempt was made via phone call to PBIS

Coordinators. Between days 15 and 30, the researcher made at least two phone call attempts for each participant not having returned a SPILS form.

On day 22, the survey solicitation period ended and the researcher forwarded all completed SPILS forms to the data analyst to begin data input as described in the research design section above. Any SPILS forms received within the fourth week were also forwarded to the analyst and included in the results, however, as of day 30, the survey collection period closed and no more received responses were included within this study.

During the data collection period, the researcher also perused state PBIS websites and communicated via email with PBIS experts (i.e., Dr. Robert Horner) to gather demographical information about PBIS implementation. While perusing PBIS websites, in addition to demographical information, the researcher might have searched for information about individual states that is directly related to one of the four prongs of the SPILS form. The researcher used a SPILS form as a template for determining which information was related to the study. This means the researcher looked for information that fit precisely into one of the prongs on the form and could be measured according to the rating categories listed on the form.

If information found on a website appeared representative of components of the study (i.e., pertaining to percentage of schools implementing PBIS, standards of PBIS implementation, or variables of leadership capacity) as outlined by the SPILS form, the researcher marked a SPILS form for that state, then attempted to validate the information through personal contact with a PBIS

Coordinator or comparison to information reported by Dr. Horner, pbis.org, and nces.ed.org. The researcher uses email and / or phone call attempts to contact representatives for any state with information on a website that meets the criteria for measurability found on the SPILS form. If, after two attempts through email and one attempt via telephone, the researcher was unable to validate and obtain consent to use the information, that state's information was excluded from prongs two, three, and four of the study's results. However, information gathered for prong one of the study may be used because that information is primarily demographical and has been officially reported to other researchers or government agencies for the purpose of conducting analytical tests and / or being publically representative of the state. Information needed to complete prong one of the study is not based on a rating scale whereas information for the other three prongs is determined by a rating. Using a rating scale makes information for prongs two, three, and four more subjective in nature. A test for reliability is necessary, unless the data was provided to the researcher directly from the state's representative through completion of a SPILS form.

Reliability was addressed by having a data analyst conduct the same procedures for perusing PBIS websites and comparing results of both observers' collected information. Complete details regarding interrater reliability were outlined in the Data Analysis section of this chapter.

No confidential information was gathered within the SPILS form; therefore, anonymity or confidentiality was not an issue. States were identified using a two letter postal code. Participation in the survey was voluntary and representatives

wishing not to provide the requested information about their state were not included in prongs two, three, or four of the study. Information regarding prong one of the study was demographic in nature and could be located online via previous reports to government agencies. Therefore, consent was not needed to include information about prong one in the study. Upon completing this study, the researcher archived the SPILS forms and other information derived from the survey. The researcher may utilize this information for future studies regarding PBIS implementation and scaling up efforts.

Summary

The researcher employed descriptive methods to determine results of a completed survey form, the SPILS form. Representatives from each of the 50 states plus the District of Columbia were asked to provide responses regarding percentage of schools implementing PBIS, standards of PBIS implementation, and variables of state leadership capacity on PBIS. The researcher used SPSS.23 to calculate average scores using the mean as a measure of central tendency and conducted additional descriptive tests in order to report about PBIS implementation across America. The researcher also gathered data from other researchers via email and perused related websites to collect information pertinent to the four prongs of the SPILS instrument. A check for reliability was conducted by having a data analyst repeat the researcher's procedures for perusing PBIS websites.

CHAPTER IV

RESULTS

In describing the results of the study, the following factors were examined: percentage of schools implementing PBIS within each state, status of PBIS implementation standards and leadership capacity within each state, and which states could be considered taking PBIS implementation to scale. Descriptive information for each research question and statistical results used are outlined in this chapter. Participants for this study were each of the 50 states within United States of America plus the District of Columbia as represented by a PBIS Coordinator who voluntarily elected to participate in the study by completing the SPILS form. Twenty percent of the 51 potential participants returned completed forms. Therefore, $n = 10$. The participants provided data representative of the PBIS endeavors associated with the State Education Agency (SEA) for each state. For the purposes of this study, the researcher used the terms *SEA* and *state* interchangeably and labeled the participants by the two digit postal code for each state. The PBIS Coordinators were also referred to as representatives, respondents, or participants.

Potential participants for this study were identified as coordinators of PBIS endeavors for each state through the Technical Assistance Center on PBS website at pbis.org and via email correspondences with persons at state education agencies who suggested the names of experts on PBIS for their state. Information about each state, such as demographics and previously collected data on PBIS, was obtained from the National Center for Education Statistics

(NCES) website at nces.ed.gov, the Office of Special Education Programs Technical Assistant Center on Positive Behavior Support website at pbis.org, and through personal email correspondence with Dr. Robert Horner, a researcher in the field of PBIS. The Statistical Program for Social Sciences (SPSS) 23.0 was used to analyze data using descriptive analyses. Mean was the measure of central tendency used to represent percentage in prongs two and three of the SPILS form results. The researcher engaged the services of a data analyst to input information, aggregate data, and peruse state websites as a measure for inter-rater reliability.

Data Analysis

Information and data for this study were collected from participants who completed the SPILS survey form. Additionally, the researcher collected demographical data found on the nces.ed.gov website regarding number of public schools by state and as a whole nation. The researcher utilized the Technical Assistance Center's website at pbis.org to identify individual states with PBIS websites and to gather the names and email addresses of PBIS Coordinators for each state. The researcher solicited information for this study via email and attempted to contact some PBIS Coordinators using the US Postal Service or via phone conversations. Emails were sent to potential participants three different times in seven day intervals between days one and 21 of the survey period. One postal service mail out was conducted during the third week of the survey period. The researcher attempted to reach potential participants by telephone on two occasions. Seventeen email responses were received from

participants. No responses were received from the 24 surveys mailed to potential participants via the U.S. Postal Service. One phone call response was received, however, the caller was not a participant and only phoned to inform the researcher that the coordinator position for that state was currently unoccupied or vacant. Dr. Robert Horner, a researcher in the field of PBIS, provided previously collected data regarding number of K-12 public schools across the nation implementing PBIS between 2011 and 2015. This public information is collected bi-annually and was provided to the researcher via direct email correspondence with Dr. Horner.

The total number of potential participants solicited for this study equaled 51 (each SEA or state plus the District of Columbia). Twenty percent of those potential participants responded by completing the SPILS form ($n = 10$). According to the Technical Assistance Center on PBIS's website at pbis.org, 61% of the 51 potential participants ($n = 31$) have state websites dedicated to providing information related to PBIS. Demographical data was obtained from Dr. Horner and the National Center for Educational Statistics for 100% of the 51 potential participants. The researcher corresponded by other means (email, phone, or postal service) with 35% of the 51 potential participants as follows: 17 email, one phone call, and zero postal service correspondences between the researcher and potential participants (see Table 1).

For prong one of the study, determining the percentage of schools implementing PBIS within each state, the number of participants was $n = 51$. For prongs two, three, and four of the study, only potential participants who returned

a completed SPILS form were considered participating in the study, $n = 10$. Refer to the paragraphs below regarding inter-rater reliability for further explanation as to why certain data from websites were excluded from the results of this study.

Table 1

Various methods from which the researcher may have gathered data.

	SPILS	State / PBIS Website	nces.ed.gov/ pbis.org	Correspondence			Horner Data
				Email	Phone	Postal	
AL		X	X				X
AK			X				X
AZ	X	X	X	X			X
AR		X	X				X
CA		X	X				X
CO		X	X	X			X
CT	X		X	X			X
DE		X	X	X			X
DC			X				X
FL		X	X				X
GA			X				X
HI			X				X
ID		X	X				X
IL		X	X				X
IN			X				X
IA			X				X
KS			X				X
KY	X	X	X	X			X
LA		X	X		X		X
ME	X	X	X	X			X
MD		X	X				X
MA			X				X
MI		X	X				X
MN		X	X				X
MS	X	X	X	X			X
MO		X	X	X			X

Table 1 (continued).

	SPILS	State / PBIS Website	nces.ed.gov/ pbis.org	Correspondence Email Email Email			Horner Data
MT			X				X
NE			X				X
NV		X	X				X
NH		X	X	X			X
NJ		X	X				X
NM			X				X
NY	X	X	X	X			X
NC		X	X	X			X
ND	X		X	X			X
OH			X				X
OK			X				X
OR		X	X				X
PA	X	X	X	X			X
RI		X	X				X
SC			X				X
SD			X				X
TN		X	X	X			X
TX		X	X				X
UT		X	X				X
VT			X				X
VA		X	X	X			X
WA	X	X	X	X			X
WV			X				X
WI	X	X	X	X			X
WY			X				X
TOTAL #	10	31	51	17	1	0	51
TOTAL %	20%	61%	100%	33%	2%	0%	100%

Note: Total # and total % refers to the total (by number or percentage) of responses received via the specified method.

For the column labeled State PBIS Website, the total refers websites available for the researcher to peruse for information regarding PBIS implementation.

SPILS forms were received via email in the following manner: week one, two responses; week two, zero responses; week three, eight responses; week four, zero responses. Email reminders were sent to each PBIS Coordinator at the beginning of weeks one, two, and three. During week four, the researcher delivered the completed SPILS forms to the data analyst for aggregation. No additional forms were received during week four (see Table 2).

Table 2

Timeframe for receiving completed SPILS forms

Week	Number Returned Forms
1	2
2	0
3	8
4	0

According to the Technical Assistance Center on PBIS's website at pbis.org, approximately 31 states have PBIS related websites. During the data collection period of days seven through 21, the researcher randomly selected 15 of the state PBIS websites and attempted to collect additional data related to scaling up of PBIS implementation by utilizing the SPILS form components as measurement criteria. In order to establish inter-rater reliability, the data analyst also perused 10 of the 15 websites analyzed by the researcher. SPILS forms were completed by the researcher and the data analyst for any state's website

having criteria that matched the prongs (two through four) and rating scales of the SPILS form precisely. Both observers, the researcher and the data analyst, agreed that in all but one of the examined state PBIS websites, the data published could not be matched exactly to the information needed to complete a SPILS form. Therefore, the researcher excluded state PBIS website data from the study's results. The researcher limited the results to the completed SPILS forms that were returned by participants, plus information derived directly from Dr. Horner's demographical data on PBIS implementation and the NCES demographical data regarding number of K-12 public schools operating in America. The researcher noted in Chapter III that state PBIS website data may be excluded from the study due to lack of inter-rater reliability or failure to obtain consent (see Table 3).

Demographic Data. How is PBIS implementation monitored and maintained within your state? The total number of potential participants solicited for the study was 51 (each SEA or state plus the District of Columbia). Data collected from the 10 participants who completed the demographical section of the SPILS ($n = 10$; 20%) revealed that four states have full time PBIS staff employed by the SEA (SEA), four states have PBIS representatives contracted through other agencies (OA), and two states have no dedicated PBIS staff members or consultants charged with coordinating PBIS endeavors (None). Additionally, email correspondence between the researcher and PBIS representatives at several states that did not complete the SPILS form uncovered four states that currently have other means for monitoring and maintaining PBIS

data (Other). These other methods were not specified to the researcher. The pbis.org website indicated that each state should be assigned a PBIS Coordinator. However, seven states currently have vacant PBIS Coordinator positions listed on the pbis.org website (Vacant). Twenty-one of the 51 potential participants solicited for this study did not respond to this question (NR) (see Figure 1).

Table 3

Inter-rater Reliability Check. State PBIS website search for data matching SPILS form criteria

States with PBIS websites					Primary Researcher Search			Data analyst Search		Agreed Components Found
AL	AZ	AR	CA	CO	AL	AR	TX	CA	IL	
DE	FL	ID	IL	IN	CA	MD		LA	MD	MD
KY	LA	ME	MD	MI	FL	IL		NV	NJ	
MN	MS	MO	NV	NH	LA	MI		NC	RI	
NJ	NY	NC	OR	PA	MO	NV		TN	TX	
RI	TN	TX	UT	WA	NJ	NC				
WI					RI	TN				

Note: Thirty-one states have PBIS websites (column one). The researcher randomly selected 50% ($n = 15$) of those sites to peruse for data that would answer the questions listed in prongs two, three, and four of the SPILS form (column two). As a test for inter-rater reliability, the data analyst attempted to peruse ten of the sites the researcher had also perused (column three). One site was considered by both observers as containing the components for meeting the criteria of measurability on the SPILS form (column four).

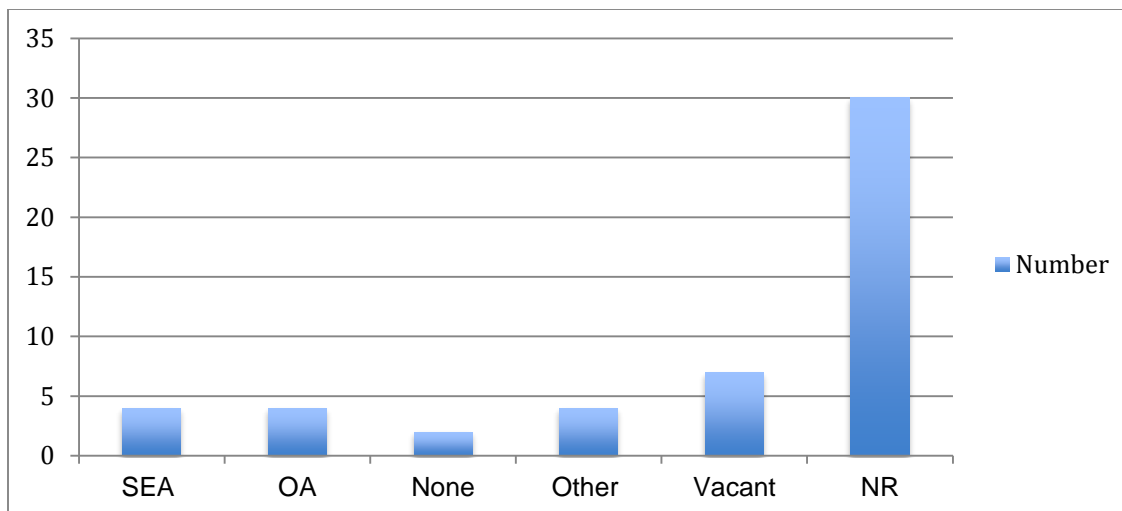


Figure 1. Monitoring and Maintaining PBIS Implementation within States. This illustration depicts how SEAs oversee PBIS. SEA indicates that a person working for the education agency oversees PBIS, OA indicates that another agency oversees PBIS, NONE means that no one is designated to oversee PBIS, OTHER means someone other than the SEA or OA manages PBIS, VACANT means the position of PBIS Coordinator is currently unoccupied, and NR indicates that the state did not respond to this question.

How many public schools are listed within the United States of America and what percentage of those schools currently implement PBIS? According to data on the nces.ed.gov website, there are 98,328 K-12 public schools operating within America. This 2012 census count is the most current statistic available and is representative of the number of K-12 public schools considered to be operating within the United States of America. This count will be considered accurate until the next census count is completed. Results of Dr. Horner's data collection yielded 11,542 schools measuring PBIS fidelity between August 2013 and July 2014. The percentage of schools in America with PBIS systems in place equals 12% ($n = 11,542$; 12%).

Prong one. For each state, what is the percentage of schools considered to be implementing PBIS with fidelity according to the state's self-reported evaluation results?

Data analysis for research question one. The answer to question one was determined by gathering previously published data regarding the number of K-12 public schools operating within each state and the number of schools that were reported as implementing PBIS within each state. This information was obtained from the NCES website at nces.ed.org and from Dr. Horner via email correspondence. The data were not connected with the state PBIS website searches that have been excluded from the study. Ten of the 51 potential participants completed SPILS forms in which this question was answered as part of prong one. The results of those completed forms corresponded with the data received from Dr. Horner. For this question, data from all 51 of the potential participants were included in the results of the study. Refer to Chapters III and IV for further discussion regarding inclusion and exclusion criteria for data.

An average score was derived using SPSS.23 descriptives, mean. The percentage score represents the number of schools reported as implementing PBIS within the state divided by the number of K-12 public schools operating within the state. The researcher determined that PBIS implementation within states could be categorized as follows:

1. Seventeen states reported 0-10%.
2. Fifteen states reported between 11-20%.
3. Five states reported 21-30%.

4. Seven states reported 31-40%.
5. Two states reported 41-50%.
6. Two states reported 51-60%.
7. Three states reported 61-70% of their schools currently implement PBIS.

The determination of implementing with fidelity was made by individual states through the self-reporting of this information to Dr. Horner on a biannual basis. However, the Technical Assistance Center on PBS does provide blueprints and guidance on implementation of PBIS and it is assumed that SEAs are actually adhering to these research-based methods as reported (see Figures 2 and 3).

According to Dr. Horner's data on number of schools implementing PBIS, 46 of the 51 participants for prong one reported that < 50% of the schools within their state were implementing PBIS. In other words, more than half the schools in 90% of the states within America do not utilize PBIS systems to promote positive behavioral expectations. Additionally, 32 of those 46 states report < 20% of their schools are implementing PBIS.

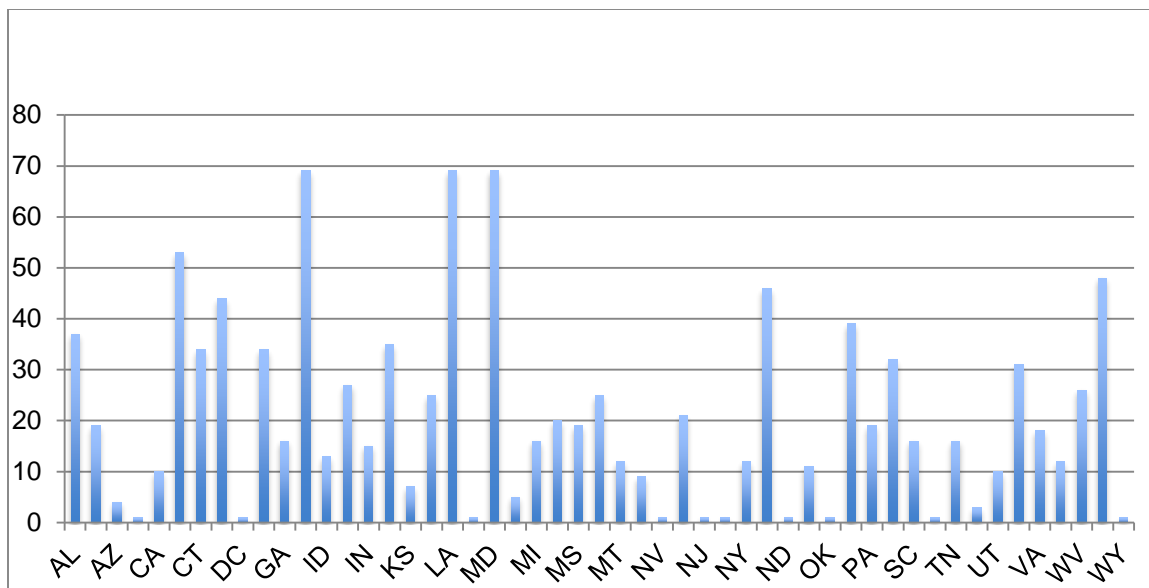


Figure 2. Percentage of schools implementing PBIS within each state as calculated using data from Dr. Horner and the NCES website.

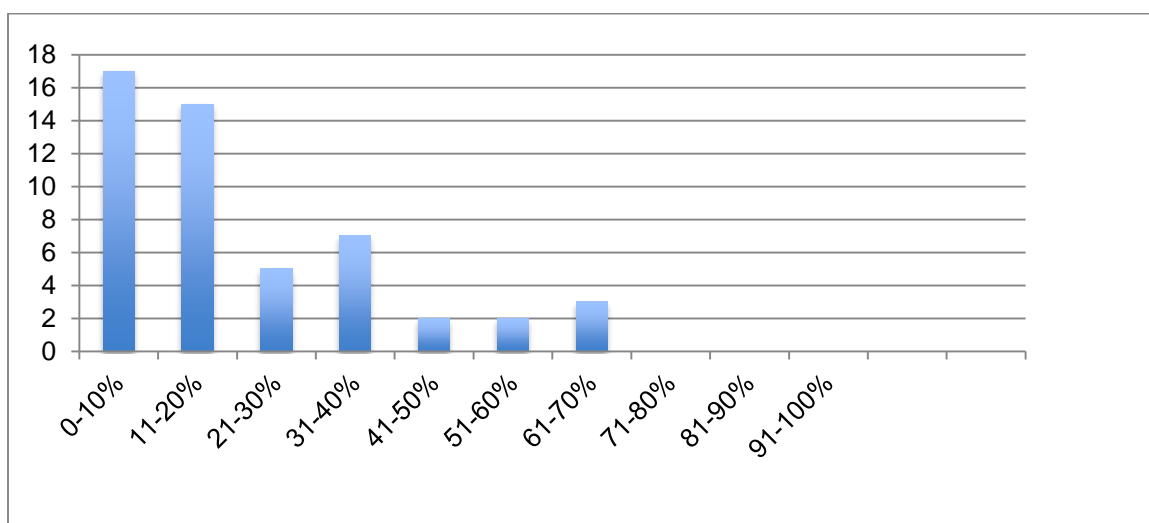


Figure 3. The number of states within each percentage category considered to be implementing PBIS based on data from Dr. Horner and the NCES website.

Prong two. What is the average (mean score) for status of implementation standards within schools across each state?

Data analysis for research question two. Participants were emailed a survey form, the SPILS, and asked to score implementation status by responding

to seven questions regarding standards of PBIS implementation within schools across their states. There were seven questions in prong two and each question could be rated between zero and five points. A total of 35 points could have been earned for this prong of the SPILS form. The researcher converted raw scores into averages using the mean as a measure of central tendency. Eight states responded to this portion of the SPILS form and indicated the following average scores for implementation standards: AZ (0%), CT (51%), KY (80%), NY (0%), ND (0%), PA (46%), WA (46%), and ME (0%). WI responded with data for this section that was not usable because the representative marked the survey incorrectly and the researcher could not determine which responses were intended. The eight states that appropriately answered prong two of the SPILS form equal 15% of the 51 overall possible participants and 80% of the 10 participants who actually completed and returned a SPILS form to the researcher (see Figure 4).

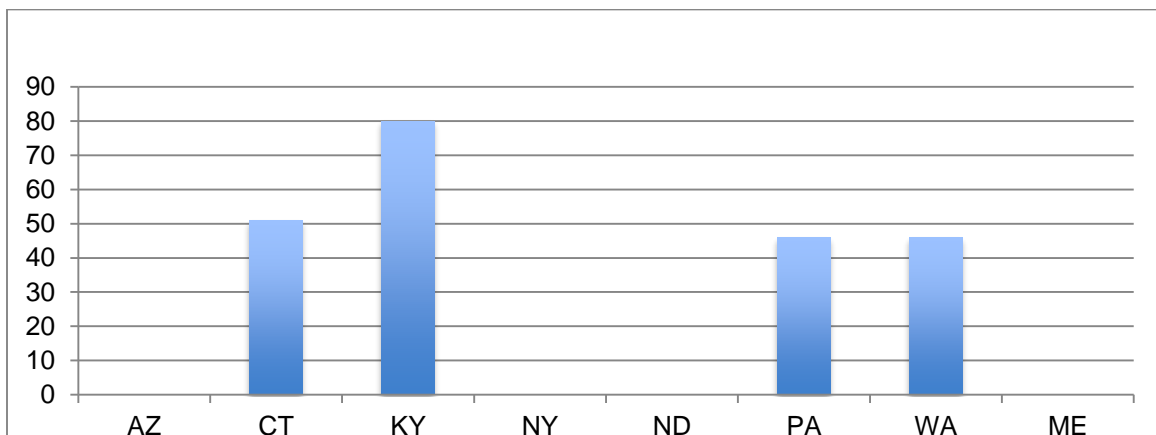


Figure 4. The percentage score for standards of implementation status by state based on information from prong two of the SPILS form.

In addition to determining the overall mean score for standards of PBIS implementation, the researcher broke down the standards and listed how states scored themselves for each standard (see Table 4).

Table 4

Display of states' self-reporting on implementation status for each standard as derived from prong two of the SPILS form.

	0 None	1 Struggling	2 Fair	3 Emerging	4 Good	5 Excellent
a) Leadership / Administrative support and commitment to PBIS	ME NY AZ ND			WA CT	KY PA	
b) Collaborative PBIS Team developed & functioning effectively	ME NY AZ ND		PA	WA CT	KY	
c) Knowledge / Training of FULL staff on PBIS	ME NY AZ ND		WA CT PA		KY	
d) Development of PBIS policy & procedures a multiple tiers	ME NY AZ ND	WA	CT PA		KY	
e) Use of data-driven evaluations & decision making	ME NY AZ ND		WA PA	CT	KY	
f) Student and staff "buy-in" to the use of PBIS	ME NY AZ ND		PA	WA CT	KY	
g) Appropriate funding and expenditures related to PBIS	ME NY WA AZ ND		CT PA		KY	

Prong three. What is each SEAs overall score for variables of PBIS state level leadership capacity?

Data analysis for research question three. Information for question three was collected from eight states completing the SPILS form for this prong. Two of the 10 overall participants who returned a completed SPILS form did not answer questions in prong three. Participants were asked to score their states leadership capacity on PBIS by scoring responses to 20 questions. Each question could be scored according to a rating scale with a point value between zero and 5 points. One-hundred total points were possible for this prong. The researcher converted raw scores into percentages by using a mean score as the measure of central tendency. Using the results derived from descriptives in SPSS.23, the researcher labeled the mean as a percentage score on prong three of the SPILS form, variables of state level leadership capacity on PBIS, as follows: AZ 13%, CT 67%, KY 53%, NY 80%, ND 55%, PA 92%, WA 9%, and WI 92% (see Figure 5).

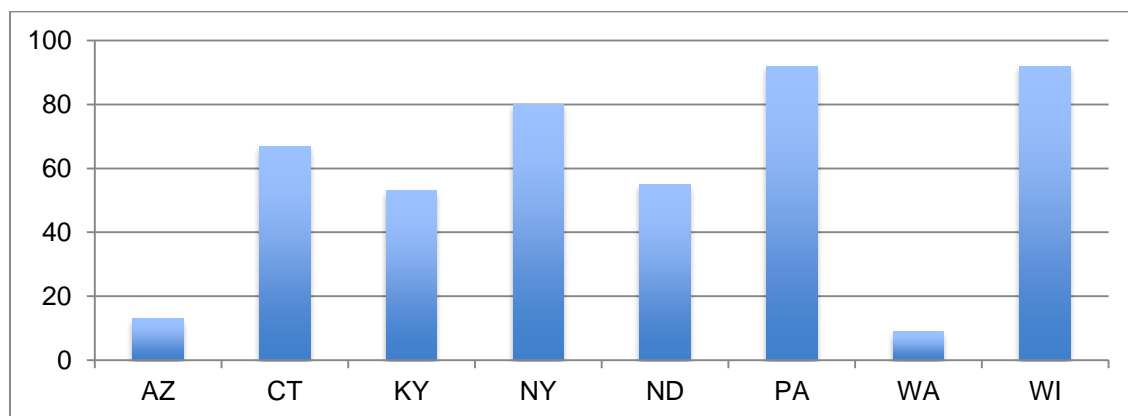


Figure 5. Percentage scores for variables of state level leadership capacity by state as reported under prong three of the SPILS form.

The researcher also broke down the scores and listed how states rated themselves for each variable of leadership capacity (see Table 5).

Table 5

State scores for individual variables of leadership capacity as reported under prong three of the SPILS form.

	0 NO Not Addressed	1 Struggling Exploration	2 Fair	3 Emerging Installation	4 Good Initial Implementation	5 Excellent Full Implementation
I. State level Administrative Support						
	0	1	2	3	4	5
1.					AZ WA	KY WI PA ND CT NY
2.					AZ ND WA	CT KY WI NY PA
3.					WA	KY ND AZ CT PA NY WI
4.					NY	ND WA CT AZ PA KY WI
5.					AZ ND WA	CT KY NY PA WI
6.					AZ WA	ND CT KY PA NY WI
7.					AZ	KY WA CT NY PA ND WI
8.					AZ ND	KY WA CT NY PA WI

Table 5 (continued).

II. Training, Coaching, and Behavioral Expertise		0	1	2	3	4	5
9.	Are there state level PBIS training initiatives in place?	WA			AZ ND		PA CT KY NY WI
10.	Does the state ensure that there are trainers at the local level (district or regional) with PBIS knowledge and the ability to train others?	AZ	WA		CT	KY ND	PA NY WI
11.	Does the state ensure that there are knowledgeable coaches at the school level to support PBIS endeavors within individual schools?	WA	AZ			CT KY NY ND WI	PA
12.	Does the state provide support from professionals with behavioral expertise for PBIS endeavors at Tier 2 & 3 throughout the state?	AZ WA		KY	PA	CT ND	NY WI
13.	Does the state address the use of behavioral experts (i.e. behavior specialists or psychologists) at the school or district level?	AZ		KY WA	ND	PA NY	CT WI
14.	Does the state offer trainings and ongoing support to schools or districts with regard to data collection procedures and PBIS?	AZ WA			CT KY	PA ND	NY WI
15.	Does the state offer trainings and ongoing support to schools or districts with regard to decision-making based on PBIS data?	AZ WA			KY	PA CT ND	NY WI

Table 5 (continued).

III. Demonstrations of Impact		0	1	2	3	4	5
16.	Did the state roll out PBIS initiatives with pilot demonstrations in a small percentage of schools first?	AZ WA			CT WI		PA KY NY
17.	Does the state verify fidelity, impact, and cost-effectiveness of PBIS implementation (among school-wide teams)?	WA		AZ CT KY		WI	PA NY
IV. Evaluation Systems		0	1	2	3	4	5
18.	Does the state have an evaluation system for assessing PBIS use and benefit to students?	KY WA	AZ		CT NY WI		PA
19.	Does the state have an evaluation system that gauges school-wide teams use of data to make ongoing improvements?	KY WA	AZ		CT NY	WI	PA
20.	Does the state use data from schools, districts, and professional development endeavors to make decisions about PBIS needs and exemplars?	AZ WA				CT KY NY	PA WI

Prong four. Which states could be considered taking PBIS implementation to scale as evidenced by: > 60% of schools implementing PBIS, at least an 80% score for variables of leadership capacity and at least an 80% score for standards of implementation?

Data analysis for research question number 4. To answer question 4, the researcher utilized data derived from responses reported within the first three prongs of this study. In prong one, data from all 51 of the potential participants were considered because the information reported was archival data provided by Dr. Horner and the NCES website on educational statistics. It was not necessary

for the participants to have completed a SPILS form for prong one of the study. In order for a state to meet the first criteria under prong four, at least 60% of the schools within that state needed to be implementing PBIS. According to data derived from prong one of the study, only three of the 51 participants reported 60% or more of their schools implementing PBIS: HI, LA, and MD. However, those three states did not respond to the SPILS survey request; therefore, no further results pertaining to this study can be drawn from HI, LA, or MD. The researcher is unable to determine within the scope of this study whether or not these three states have taken PBIS implementation to scale. Futile attempts were made by the researcher to contact representatives of these three states, and reviews of PBIS websites were considered inconclusive. According to the Technical Assistance Center on PBIS, LA does not currently have a person maintaining the position PBIS Coordinator and HI does not have an active PBIS website that could be located. No response from any of these states, HI, LA, or MD, was obtained after multiple requests for information. While MD did not respond to repeated requests for data regarding PBIS implementation, the researcher was able to find pertinent information on the Maryland PBIS website and via a previous research study (Horner et al., 2014). The information found did answer several of the questions asked on the SPILS survey. Both the researcher and the data analyst concurred that Maryland's website contained valid information regarding PBIS implementation standards and leadership capacity within the state. If the researcher had not made a decision to unilaterally exclude state PBIS website data due to lack of interrater reliability and consent to

participate, Maryland may have met the criteria for taking PBIS implementation to scale. However, Maryland was not included in the results of this study because a representative did not complete a SPILS form.

To reiterate, Maryland's website data was excluded from the results of this study because the researcher elected to exclude data from the websites of states that did not submit a SPILS form completed by the state's PBIS representative. The researcher determined that inter-rater reliability was not sufficient and neither the researcher nor the data analyst could agree that any state other than MD had the needed data displayed. Criteria for measurability meant that both the researcher and the analyst could locate the appropriate information on a website and could complete a SPILS form using the same method of scoring as found within each prong of the form. Therefore, the researcher dismissed all data gathered solely by state PBIS website search and did not include said data in the results of this study.

Considering only information received from states in which a representative completed the SPILS form, the researcher was able to make the following notations: KY reported that 25% of its schools are currently implementing PBIS and scored 80% for standards of PBIS implementation. However, KY only scored 53% on state level leadership capacity. CT reported that 34% of its schools are currently implementing PBIS, scored 51% for standards of PBIS implementation, and scored 67% on state level leadership capacity. Other states that responded to the SPILS form reported scores, % schools, % standards, % leadership capacity, as follows: NY (12%, n/a, 80%),

PA (19%, 46%, 92%), WA (12%, 46%, 9%), and WI (48%, n/a, 92%). ME reported they had no statewide system in place, as did AZ. However, AZ reported data as follows: (4%, 0%, 13%) (see Figure 6).

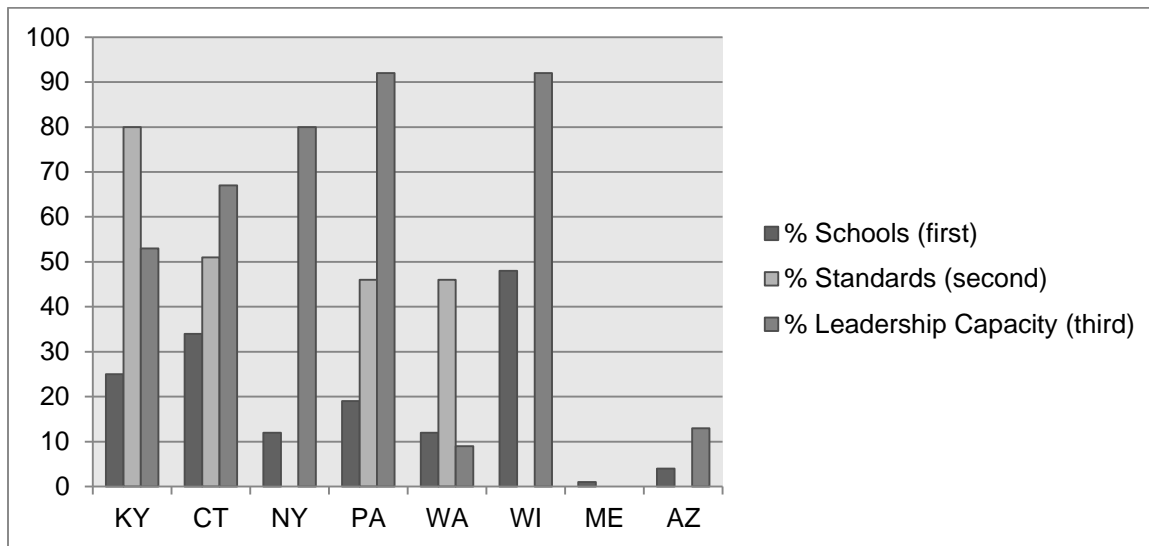


Figure 6. Results of states' status regarding taking PBIS implementation to scale as determined by completion of the SPILS form.

Summary

Chapter IV provides a description of results from this study on PBIS Implementation and Leadership Capacity across each state within the United States of America. Percentages of schools implementing PBIS, scores on standards of implementation, and scores on state level leadership capacity were analyzed descriptively to determine which states are currently taking PBIS implementation to scale. The researcher provides results of the data analysis for the four research questions, using descriptive analysis procedures.

CHAPTER V

SUMMARY AND CONCLUSIONS

In Chapter V, the researcher presents a summary of the research study and conclusions drawn from the analysis of data. This chapter also includes a discussion of noted conclusions, limitations of the study, and future directions for additional research endeavors.

This study focused on PBIS implementation and state level PBIS leadership capacity across the United States of America. In conducting a review of the literature, the researcher found that most published research concentrated on implementation at the local level and that very few studies reported on how individual states were managing and monitoring PBIS implementation.

One particular study of interest to the researcher was the Horner et al. (2014) study in which the authors analyzed PBIS implementation elements and leadership capacity of seven states with noted success. The Horner et al. (2014) study uncovered the following three themes suggesting a need for future studies:

(1) establishing schools that implement SW-PBIS with positive student outcomes requires states support through the provision of “strong advocacy, modest initiative funding, and indigenous training capacity to launch SW-PBIS implementation,” (2) modification of coordinated efforts in training, coaching, and evaluation of SW-PBIS implementation is required to take the initiative to scale, and (3) in order to take SW-PBIS implementation to scale, states needed to solidify establishment of (a) administrative support, (b) technical capacity at local levels, (c) 100-200

schools demonstrating fidelity and SW-PBIS impact, and (d) systems of evaluation (Horner et al., 2014).

The researcher utilized these themes as a template to develop the current study. Specifically, the researcher wanted to uncover which states currently reported (a) at least 60% of their schools implementing PBIS, (b) at least 80% score on standards of PBIS implementation, (c) at least 80% score on variables of state level leadership capacity, and (d) taking PBIS implementation to scale.

While the Horner et al. (2014) study focused on the number of schools implementing PBIS within each state, this researcher decided to use the percentage of schools implementing PBIS within each state. The assumption was that percentages would place all states on a more level playing field, regardless of the overall number of schools within each state. For example, according to Dr. Horner's data on number of schools implementing PBIS, MI reported that approximately 600 out of 3,600 schools were implementing PBIS. This amounts to around 16% of the schools within the state of Michigan implementing PBIS. In SC, only 200 of the 1,254 schools are implementing PBIS, but South Carolina also has an approximate 16% implementation rate. Likewise, PA has 600 out of 3,200 schools implementing PBIS, so their percentage is around 19%. AK only has 522 total schools, but approximately 100 of them are implementing PBIS. This amounts to 19% of the schools in Alaska implementing PBIS, just like Pennsylvania. If total number of schools implementing PBIS was used instead of percentages, it would appear that MI was a far more successful PBIS state than SC and that PA was dwarfing AK on PBIS implementation. The

Horner et al. (2014) study used a survey method similar to this study in order to gather information from participating states regarding PBIS implementation. The participating states reported information back to the researchers by returning a completed survey.

In addition to describing national status regarding the percentages of schools currently implementing PBIS within each state, the researcher was interested in gaining knowledge about state level leadership capacity and standards of implementation related to PBIS across the nation. The overall purpose of this study was to describe the national status of scaling up efforts on implementing PBIS across the United States of America. The researcher felt this was an important topic for two main reasons:

1. Mandates within IDEA require SEAs to monitor school districts and provide technical assistance in both academics and behavior, noting that positive behavioral interventions and supports should be considered.
2. A 2012 study by Forness and Kim identified the prevalence of students with emotional behavior disorders at about 20% in America.

Discussion

In prong one of the data analysis, the researcher wanted to find out what percentage of schools within each state currently implements PBIS. Previous studies focused on the number of schools within each state and considered states with 500 or more schools implementing PBIS as obtaining scale. However, smaller states might never achieve this status, so this researcher attempted to

level the playing field by looking directly at the percentage of schools implementing PBIS.

Even though not all 51 participants returned a completed SPILS form, the researcher was able to complete prong one of the study by using previously published data about PBIS implementation and the total number of public schools in America. This information fit within the scope of the study because the researcher accounted for utilizing additional websites to gather data. Table 6 below ranks each state according to the percentage of schools currently implementing PBIS.

Based on data obtained from Dr. Horner, 14 states currently have over 500 schools implementing PBIS (FL, NC, IL, WI, MD, LA, CO, CA, MO, AL, MI, NY, PA, AND OR). This may appear to indicate that these states are successfully implementing PBIS at a level of social significance. However, of these 14 states, only eight of them are in the top 10 for percentage of schools implementing PBIS. Furthermore, HI is not listed in the top fourteen because it only has 200 schools implementing PBIS. With that said, HI is ranked in first place by percentage because it only has a total of 288 schools and 200 of those schools implement PBIS. This leads the researcher to believe some of the smaller states are experiencing greater success with scaling-up efforts. Additionally, some states have been supporting the implementation of PBIS for over eleven years but still have not reached the 60% benchmark needed as one point to denote scaling-up had occurred. Fixsen et al. (2009) noted that a system needs at least 60% of its members implementing a specific protocol before achieving a level of social

significance. It appears that states are having a difficult time developing PBIS initiatives to a level of social significance.

Table 6

Ranking of states based on percentage of schools implementing PBIS

1. MD, LA, HI (69%)	17. MN (20%)
2. CO (53%)	18. MS, AK, PA (19%)
3. WI (48%)	19. VA (18%)
4. NC (46%)	20. TN, SC, MI, GA (16%)
5. DE (44%)	21. IN (15%)
6. OR (39%)	22. ID (13%)
7. AL (37%)	23. MT, NY, WA (12%)
8. IA (35%)	24. OH (11%)
9. FL, CT (34%)	25. CA, UT (10%)
10. RI (32%)	26. NE (9%)
11. VT (31%)	27. KS (7%)
12. MO (29%)	28. MA (5%)
13. IL (27%)	29. AZ (4%)
14. WV (26%)	30. TX (3%)
15. KY (25%)	31. WY, SD, OK, ND, NM, NJ, NV, ME, DE, AR (1%)

Further investigation is needed to explore why SEAs are having difficulty with increasing the percentages of schools implementing PBIS across each state. For example, in 2011, Texas reported that approximately 375 schools were implementing PBIS. In 2014, that number had not increased. A number of states

reported a decrease in the number of schools implementing PBIS. The scope of this study did not include a comparison of PBIS implementation across years. However, based on the findings of this study, it would be interesting to look further at this point. Perhaps conclusions can be drawn as to why states are not progressing closer to scaling up of PBIS implementation and whether or not there is a sustainability issue hindering success.

For prong two of the data analysis, the researcher was interested in determining which states are currently reporting standards of implementation scores of 80% or higher, based on results of the SPILS survey form scoring components of PBIS implementation. The researcher asked PBIS representatives of the 51 potential participants (50 states plus the District of Columbia) to determine the average status of implementation based on the following standards: (a) leadership/administrative support and commitment to PBIS, (b) collaborative PBIS team developed and functioning effectively, (c) knowledge/training for full staff on PBIS concepts, (d) development of PBIS policy and procedures at multiple tiers, (e) use of data-based evaluations and decision making, (f) student and staff buy-in to the use of PBIS, and (g) appropriate funding and expenditures related to PBIS. The potential participants were asked to score each component using a 6-point scale (0-5) representing a continuum from *no standard present* to *excellent standard present* (see Table 4 in Chapter IV).

The results of prong two were not favorable to suggest successful scaling-up practices of PBIS implementation across the nation. Only one state, KY,

reported a score of 80% or higher. This could be indicative of the fact that some states report they are struggling to formally organize a state level monitoring system or that PBIS endeavors within many states are contracted out and are loosely maintained, according to responses on the SPILS form. Additionally, the SPILS completion rate was 20%. It would be difficult to generalize results for this section because of the low response rate; however, email correspondence with representatives of states not completing the survey also indicated this data may not be available. Several respondents reported that this data is not collected within their state or that accurate answers could not be given because no one person maintains this data. Based on the responses that were received and the researcher's additional investigation of PBIS websites, it could be concluded that one reason this element of PBIS has not been investigated more is because not enough states have organized data collection systems in place for PBIS. Other factors inhibiting the status of implementation standards could be lack of staff trained and dedicated to PBIS endeavors or poor funding initiatives related to PBIS.

Table 4 shows how the participants scored their states for each category. Using this data, the researcher is able to note that seven out of eight states scored fair, struggling, or none for standard C (knowledge and training of full staff on PBIS). This would support the researcher's assumption that staffing issues inhibit the success of PBIS implementation. Additionally, five out of eight states reported no funding for PBIS implementation within schools across their state.

Lack of funding could be a definite sign that PBIS implementation is not a priority within the state or the schools for which this data was describing.

Prong three of the data analysis yielded very similar results to prong two, as far as response rates and generalization is concerned. Again, the researcher was asking participants to rate their state's performance using a 6-point scale. The focus of this stem was state level leadership capacity on PBIS. Eight states completed this section of the SPILS form. ME and TN responded with "no data", marked all zeros, or left this section completely blank and added a note "we do not collect this information". NY, PA, and WI all scored themselves above 80% for leadership capacity. FL, NC, and MO did not complete the SPILS form, however, their PBIS website contained information reflective of scores above 80% as well. The researcher found it interesting that these states scored high on leadership capacity but lower on standards of implementation and percentage of schools actually implementing PBIS. Conclusions could be drawn that while the states believe that they have organized systems of leadership in place, this leadership capacity is not effectively influencing school success or focus on implementing PBIS. There appears to be lost connection between variables of leadership capacity and the status of PBIS standards of implementation.

Several states were able to provide information on leadership capacity, but noted they do not collect information broken down by category regarding each of the standards. According to information listed on pbis.org and some state websites, school districts that implement PBIS may utilize self-assessment tools like the BoQ, SET, or TFI, which allow individual schools to grade themselves for

effectiveness and fidelity of PBIS implementation. Schools report their scores back to the state for ranking. However, based on information collected by the researcher via state PBIS websites, states do not breakdown the results of these assessments or aggregate data by specific standards. Instead, states use overall scores on each assessment to make determinations like naming “model” schools or placing schools into categories like gold, silver, or bronze. Many of these practices are designed to follow suggested procedures outlined in the PBIS Blueprints, which can be found on the Technical Assistance Center’s website. Again, while the researcher considered the information found on state PBIS websites as a point of discussion, data collected from those sites were not included within the final results of this study.

The Variables of Leadership Capacity prong of the SPILS form was divided into four sub-sections (administrative support, technical support, impact, and evaluation) with a total of twenty question stems (see Table 5 in Chapter IV). An evaluation of the responses uncovered areas of strengths and weaknesses as reported by the participating states. The researcher found it interesting that technical support received the highest ratings and the lowest ratings were spread among administrative support, impact, and evaluation. This data could suggest that states are offering training opportunities from behavioral experts, but are not advancing PBIS endeavors with administrative support or using evaluation techniques to make data-driven decisions about the implementation process and sustainability.

The purpose of prong four was to identify which states could be considered as having taken PBIS implementation to scale as evidenced by the following: (a) at least 60% of the schools within the state considered implementing PBIS with fidelity, (b) a score of at least 80% on PBIS standards of implementation status, and (c) a score of at least 80% on state leadership capacity on PBIS implementation. Unfortunately, based on the above criteria, the researcher had to determine that no states within the United States of America are currently taking PBIS implementation to scale. In fact, some states appear to have leveled off in their PBIS endeavors, and some have begun to back slide, reporting fewer schools implementing PBIS in 2014 than were implementing it in 2011. As a nation, only 12% of the schools across America are currently implementing PBIS. Data collected for this study appears to indicate that only three states, LA, HI, and MD, are currently reporting over 60% of their schools implementing PBIS. However, none of these states participated in this study by completing the SPILS form and only one of these states, MD, has PBIS website that contained data relative to the focus of this study.

The researcher was unable to identify any state as “considered to be taking PBIS implementation to scale” because no state scored a three on the final prong of the study, based on the above listed criteria (see Figure 6 in Chapter IV).

Limitations

The researcher acknowledges the following limitations of this study:

1. The SPILS is a self-reported assessment instrument that attempts to

collect data regarding state wide implementation of PBIS, however, responses were largely based on the knowledge of the person representing each state; therefore data could be biased, limiting the accuracy.

2. Participants may not have understood the question stems on the SPILS form or may not have known how to respond, and this could have accounted for the large number of missing responses in sections two and three.
3. Difficulty in connecting with representatives from each state may have been contributed to the fact that many state PBIS representatives are educators and were otherwise engaged during the survey period. Most SEAs do not employ full time PBIS staff but rather contract out the responsibilities or collaborate with universities through grant funding.
4. Some SEAs do not have a person assigned to represent them on PBIS endeavors; therefore it was difficult to obtain accurate data from those states and the researcher had to rely on archival data or information posted on PBIS websites. This information was almost exclusively limited to demographic data.

Recommendations for Future Research

After conducting this study, the researcher discovered several gaps where more information is needed to better understand and promote PBIS systems across public schools in America. The scope of this study only provided information about the current status of PBIS implementation and did not delve

into causal factors contributing to the successes or failures of PBIS endeavors. However, some of the data collected for this study did provide a platform from which the researcher is suggesting further investigation.

Future research endeavors should be considered in the following areas:

1. Compare and contrast state level PBIS initiatives within states yielding the highest and lowest percentages of schools implementing PBIS, with the purpose of determining factors that influence success and failure in implementing and sustaining PBIS systems.
2. Investigate individual standards of PBIS implementation and how states are evaluating school performance in each area, with the purpose of finding out which standards require additional support for implementation success.
3. Evaluate state level response to needs assessments regarding standards of PBIS implementation as reported by schools and districts, with the purpose of explaining how this data is utilized for effectiveness by states and how the data contributes to decision making on PBIS initiatives at the state level.
4. Conduct research that delves deeper into how states are addressing each of the 20 variables for PBIS state leadership capacity in all four variable sections (administrative support, technical support, impact, evaluation), with the purpose of explaining how the data contributes to decision making on leadership capacity at the state level.

Summary

The researcher discusses conclusions drawn from the results of data analysis, limitations of the study, and made future researcher recommendations within this chapter. This study investigated SEA leadership capacity and scaling up efforts related to PBIS implementation across the United States of America. The small number of completed SPILS forms returned, difficulty pin-pointing specific PBIS representatives within some states, and a lack of evidence that SEAs are evaluating schools on standards of PBIS implementation were limiting factors. However, these limitations play key roles in helping the researcher describe the current status of PBIS leadership capacity and scaling-up efforts across the country. Through this study, the researcher discovered that system-wide full-scale implementation of PBIS was not measured within any state and that further research should be initiated to uncover where states are hindered in this process.

APPENDIX A

INSTITUTIONAL REVIEW BOARD NOTICE OF COMMITTEE ACTION



INSTITUTIONAL REVIEW BOARD
 118 College Drive #5147 | Hattiesburg, MS 39406-0001
 Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional.review.board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
 Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 15072101
 PROJECT TITLE: National Survey on Leadership Capacity and Scaling - Up PBIS Implementation
 PROJECT TYPE: New Project
 RESEARCHER(S): Julie Lowery
 COLLEGE/DIVISION: College of Education and Psychology
 DEPARTMENT: Curriculum, Instruction & Special Education
 FUNDING AGENCY/SPONSOR: N/A
 IRB COMMITTEE ACTION: Exempt Review Approval
 PERIOD OF APPROVAL: 08/06/2015 to 08/05/2016
Lawrence A. Hosman, Ph.D.
Institutional Review Board

APPENDIX B

SPILS FORM WITH INTRODUCTORY AND CONSENT LETTER

State PBIS Implementation & Leadership Survey (SPILS)

State Name:		2 letter State Abbreviation:	
SEA website address:		Date Completed:	
Name / Title of completer:		Completer's Phone #:	
Completer email:		State's PBIS website:	

How is PBIS implementation monitored and maintained within your state?	SEA staff member or full time equivalent is specifically dedicated to PBIS endeavors	Outside agency / University acting as PBIS Coordinator is contracted	No specific person, entity, or delegation of this duty	Other:

• **State Demographics on K-12 Public Schools and Districts:**

Data Reporting Year:	Total # Schools within the state:

1. Demographics on Statewide PBIS Implementation:

Most recently collected two years' data regarding schools considered to be "implementing PBIS with fidelity", as evidenced by the BoQ, SET, TFI, or other fidelity instrument and in accordance with state procedures for PBIS implementation:

School Years	Overall Total NUMBER (#) of schools Implementing PBIS	Overall Total PERCENTAGE (%) of schools Implementing PBIS	% High Schools	% Middle Schools	% Elementary Schools	% Other

How is fidelity of implementation determined within your state? <small>Key: BoQ =Benchmarks of Quality, SET = School-wide Evaluation Tool, TFI = Tiered Fidelity Inventory</small>	Use of BoQ	Use of SET	Use of TFI	Other:

2. Standards of PBIS Implementation:

For each of the following standards, what is the average PBIS implementation status for schools across your state?

	0 None	1 Struggling	2 Fair	3 Emerging	4 Good	5 Excellent
<small>Mark X under the appropriate rating:</small>						
e) Leadership / Administrative support and commitment to PBIS						
f) Collaborative PBIS Team developed & functioning effectively						
g) Knowledge / Training of FULL staff on PBIS concepts						

h)	Development of PBIS policy & procedures a multiple tiers					
i)	Use of data-based evaluations & decision making					
j)	Student and staff “buy-in” to the use of PBIS					
k)	Appropriate funding and expenditures related to PBIS					

3. Variables for PBIS State Leadership Capacity

For each of the following variables of leadership capacity, what is the establishment level your state agency (SEA) is currently operating within?

Key:

0	1	2	3	4	5
NO	Struggling	Fair	Emerging	Good	YES / Excellent
Not Addressed	Exploration Stages of Establishment		Installation Stages of Establishment	Initial Implementation Stages of Establishment	Full Implementation Established & Operational

Mark X under the appropriate establishment level:

I. State level Administrative Support

		Establishment Level					
		0	1	2	3	4	5
1.	Does the state have a written policy in place that supports the importance of student social behavior?						
2.	Does the state have a written policy specifically addressing the implementation of PBIS?						
3.	Does the state have targeted funding for PBIS?						
4.	Is there a state level leadership team in place to support PBIS implementation endeavors?						
5.	Does the state report / make visible information about what is happening with PBIS (local, state, national level)?						
6.	Does the state provide resources and current research on the impact of PBIS or PBIS related topics?						
7.	Does the state provide reports on behavioral data?						
8.	Does the state report / make visible PBIS implementation and evaluation data?						

II. Technical Capacity in Training, Coaching, and Behavioral Expertise

		Establishment Level					
		0	1	2	3	4	5
9.	Are there state level PBIS training initiatives in place?						
10.	Does the state ensure that there are trainers at the local level (district or regional) with PBIS knowledge and the ability to train others?						
11.	Does the state ensure that there are knowledgeable coaches at the school level to support PBIS endeavors within individual schools?						
12.	Does the state provide support from professionals with behavioral expertise for PBIS endeavors at Tier 2 & 3 throughout the state?						
13.	Does the state address the use of behavioral experts (i.e. behavior specialists or psychologists) at the school or district level?						
14.	Does the state offer trainings and ongoing support to schools or districts with regard to data collection procedures and PBIS?						
15.	Does the state offer trainings and ongoing support to schools or districts with regard to decision-making based on PBIS data?						
		0	1	2	3	4	5

III. Demonstrations of Impact		Establishment Level					
		0	1	2	3	4	5
16.	Did the state roll out PBIS initiatives with pilot demonstrations in a small percentage of schools first?						
17.	Does the state verify fidelity, impact, and cost-effectiveness of PBIS implementation (among school-wide teams)?						

IV. Evaluation Systems		Establishment Level					
		0	1	2	3	4	5
18.	Does the state have an evaluation system for assessing PBIS use and benefit to students?						
19.	Does the state have an evaluation system that gauges school-wide teams use of data to make ongoing improvements?						
20.	Does the state use data from schools, districts, and professional development endeavors to make decisions about PBIS needs and exemplars?						

APPENDIX C

LIST OF SEAs

Alaska

Web site: [Alaska Department of Education](#)
801 West 10th Street
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Phone: (907) 465-2800
Send Email to: [Shirley J. Holloway, Alaska State Commissioner of Education](#)
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Alabama

Web site: [Alabama Department of Education](#)
50 North Ripley Street
P.O. Box 302101
Montgomery, Alabama 36130-2101
Phone: (334) 242-9700
Send Email to: [Dr. Ed Richardson, Alabama State Superintendent of Education](#)
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Arizona

Web site: [Arizona Department of Education](#)
1535 West Jefferson Street
Phoenix, Arizona 85007
Phone: (602) 542-3111
Hotline: (800) 352-4558
Send Email to: [Lisa Graham Keegan, Arizona State Superintendent of Public Instruction](#)
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Arkansas

Web site: [Arkansas Department of Education](#)
#4 Capitol Mall
Little Rock, AR 72201
Phone: (501) 682-4475
Raymond Joseph Simon, Director Arkansas State Department of Education
[Back to the Top](#)

California

Web site: [California Department of Education](#)
721 Capitol Mall
P.O. Box 944272
Sacramento, CA 94244-2720
State Superintendent of Public Instruction, Delaine Eastin
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Colorado

Web site: [Colorado Department of Education](#)
201 East Colfax Avenue
Denver, CO 80201
Phone: (303) 866-6646 FAX: (303) 866-6938
Send Email to: [State Board of Education William J. Moloney, Colorado State Commissioner of Education](#)
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Connecticut

Web site: [Connecticut Department of Education](#)
165 Capitol Avenue
Hartford, CT 06106
Phone: (860) 566-5497
Send Email to: [Theodore S. Sergi, Commissioner, Connecticut State Department of Education](#)
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Delaware

Web site: [Delaware Department of Education](#)
John Townsend Building
P. O. Box 1402
Dover, DE 19903

Send Email to: [Education Commissioner: Pascal D. Forgione](#)
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District of Columbia

Web site: [District of Columbia Public Schools Board of Education](#)
 415 12th Street, N.W., 12th floor
 Washington, D.C. 20004-1994
 Phone: (202) 724-4289
 Wilma Harvey, President
[Back to the Top](#)

Florida

Web site: [Florida Department of Education](#)
 Turlington Building (TUR), PL-08 Capitol
 325 West Gaines Street
 Tallahassee, Florida 32399-0400
 Phone: (904) 487-1785
 Send Email to: [Frank T. Brogan, Education Commissioner](#)
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Georgia

Web site: [Georgia Department of Education](#)
 2066 Twin Towers East
 Atlanta, Georgia 30334-5001
 Phone: (404) 656-2800
 Send Email to: [Mrs. Linda C. Schrenko, State Superintendent of Schools](#)
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Idaho

Web site: [Idaho Department of Education](#)
 P.O. Box 83720
 Boise ID 83720-0027
 Phone: (208) 332.6800
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Illinois

Web site: [Illinois State Board of Education](#)
 100 N. 1st Street
 Springfield IL, 62777
 Phone: (217) 782-4648
[Robert Mandeville, Interim State Superintendent](#)
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Indiana

Web site: [Indiana Department of Education](#)
 Room 229, State House
 Indianapolis, Indiana, 46204
 Phone: (317) 232-0808 Fax: (317) 233-6326
 Send Email to: [Dr. Suellen Reed, Superintendent of Public Instruction](#)
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Iowa

Web site: [Iowa Department of Education](#)
 Grimes State Office Building
 Des Moines, Iowa 50319-0146
 Phone: (515) 281-5294 FAX: (515) 242-5988
 Send Email to: [Ted Stilwill, Director \(515\) 281-3436](#)
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Kansas

Web site: [Kansas State Department of Education](#)
 120 S.E. 10th Street
 Topeka, KS 66612-1182
 Phone: (785) 296-3201
 Send Email to: [Andy Tompkins, Commissioner](#)
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Kentucky

Web site: [Kentucky Department of Education](#)
 500 Mero Street
 Frankfort, KY 40601
 Phone: (502) 564-3141 FAX: (502) 564-5680
 Dr. Wilmer S. Cody, Commissioner
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Louisiana

Web site: [Louisiana Department of Education](#)
 P.O. Box 94064
 Capitol Station
 Baton Rouge, LA 70804-9064
 Cecil Picard, State Superintendent
[Louisiana State Board of Elementary and Secondary Education Member Directory](#)
 Send Email to: [E-Mail Louisiana State Board](#)
 Phone: (504) 342-5840 FAX (504) 342-5843
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Massachusetts

Web site: [Massachusetts Department of Education](#)
 350 Main Street
 Malden, MA 02148-5023
 Phone: (781) 388-3300
 David Driscoll, Interim Commissioner
[Massachusetts Board of Education Directory](#)
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Maryland

Web site: [Maryland State Department of Education](#)
 Attention: Editorial Board
 200 West Baltimore Street
 Baltimore, Maryland 21201
 Phone: 1-888-246-0016
[State Board of Education Directory](#)
 Nancy S. Grasmick, Superintendent (410) 767-0462
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Maine

Web site: [Maine Department of Education](#)
 23 State House Station
 Augusta, ME 04333
 Phone: (207) 287-5114
 Send Email to: [J. Duke Albanese, Commissioner](#)
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Michigan

Web site: [Michigan Department of Education](#)
 608 West Allegan Street
 Hannah Building
 Lansing, MI 48933
 Superintendent Thomas D. Watkins, Jr., Superintendent of Public Instruction
 (517) 373-3354
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Minnesota

Web site: [Minnesota Department of Children, Families and Learning](#)
 Capitol Square building,
 550 Cedar Street,
 St. Paul, Minnesota 55101
 Information: (612) 296-6104
 Send Email to: [Robert J. Wedl, Commissioner of CFL](#)
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Missouri

Web site: [Missouri Department of Elementary and Secondary Education](#)
 P.O. Box 480
 Jefferson City, Missouri 65102-0480
 Phone: (573) 751-4446

Send Email to: [Robert E. Bartman, Commissioner](#)
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Mississippi

Web site: [Mississippi Department of Education](#)
P.O. Box 771
Jackson, MS 39205
Office: (601) 359-3513
Send Email to: [Richard L. Thompson, State Superintendent](#)
[Mississippi Board of Education Directory](#)
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Montana

Web site: [Montana Office of Public Instruction](#)
P.O. Box 202501
Helena, Montana 59620-2501
Phone: (406) 444-3095
State Superintendent, Nancy Keenan
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North Carolina

Web site: [North Carolina Department of Public Instruction](#)
Education Building
301 N. Wilmington Street
Raleigh, NC 27601-2825
[North Carolina State Board of Education Administrators](#)
Send Email to: [E-Mail State Board of Education](#)
Jane Worsham, Executive Director (919) 715-1318
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North Dakota

Web site: [North Dakota Department of Public Instruction](#)
600 East Boulevard Ave
Bismarck, ND 58505-0440
Phone: (701) 328-2260 Fax: (701) 328-2461 or (701) 328-4770
Send Email to: [Dr. Wayne G. Sanstead, State Superintendent](#)
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Nebraska

Web site: [Nebraska Department of Education](#)
310 Centennial Mall South
P.O. Box 94987
Lincoln, NE 68509-4987
Phone: (402) 471-2295 (Switchboard) FAX: (402) 471-0117
[Nebraska State Board of Education Directory](#)
Send Email to: [Douglas D. Christensen, Commissioner of Education](#) (402) 471-5020
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New Hampshire

Web site: [New Hampshire Department of Education](#)
State Office Park South
101 Pleasant Street
Concord, NH 03301-3860
Main Number: (603) 271-3494 Fax: (603) 271-1953
TDD Access Relay NH: (800) 735-2964
[New Hampshire State Board of Education Directory](#)
Email: [John M. Lewis, Chairman](#)
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New Jersey

Web site: [New Jersey Department of Education](#)
Office of the Commissioner
100 River View Executive Plaza
CN 500
Trenton, NJ 08625
Phone: (609) 292-4469 Fax (609) 777-4099
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New Mexico

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Michael J. Davis, State Superintendent
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300 Don Gaspar #220
Santa Fe, NM 87501-2786
Phone: (505) 827-6516 Fax: (505) 827-6696
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Nevada

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700 East Fifth Street
Carson City, NV 89701
Phone: (702) 687-9200
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New York

Web site: [New York State Department of Education](#)
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Education Building
Albany, New York 12234
[New York State Board of Regents Directory](#)
Send Email to: [Richard P. Mills, Commissioner \(518\) 474-5844](#)
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Ohio

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65 South Front Street
Columbus, Ohio 43215
General information: (614) 466-3641 General fax: (614) 752-3956
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Oklahoma

Web site: [Oklahoma State Department of Education](#)
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Oklahoma City, Oklahoma 73105-4599
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[Oklahoma State Board of Education](#)
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Salem, OR 97310-0203
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[Oregon State Board of Education members \(no addresses\)](#)
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Pennsylvania

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Harrisburg, Pennsylvania 17126-0333
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Rhode Island

Web site: [Rhode Island Department of Education](#)
255 Westminster Street
Providence, Rhode Island 02903
Phone: (401) 222-4600 Fax: (401) 351-7874 Individuals using TDD call Relay RI at 1-800-745-5555

Peter McWalters, Commissioner

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South Carolina

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APPENDIX D

LIST OF PBIS COORDINATORS

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REFERENCES

- Adelman, H. S., & Taylor, L. (1997). Toward a scale-up model for replicating new approaches to schooling. *Journal of Educational & Psychological Consultation, 8*(2), 197.
- Algozzine, B., Horner, R. H., Sugai, G., Barrett, S., Dickey, C. R., Eber, L., Kincaid, D., et al. (2010). Evaluation blueprint for school-wide positive behavior support. Eugene, OR: *National Technical Assistance Center on Positive Behavioral Interventions and Supports*. Retrieved from www.pbis.org.
- Artiles, A. J., Kozleski, E. B., Dorn, S., & Christensen, C. (2006). Chapter 3: Learning in inclusive education research re-mediating theory and methods with a transformative agenda. *Review of Research in Education, 30*(1), 65-108.
- Atkins, M. S., Hoagwood, K. E., Kutash, K., & Seidman, E. (2010). Toward the integration of education and mental health in schools. *Administration and Policy in Mental Health and Mental Health Services Research, 37*(1-2), 40-47. doi:10.1007/s10488-010-0299-7
- Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis, 1*(1), 91-97. doi:10.1901/jaba.1968.1-91
- Bauwens, J., Hourcade, J. J., & Friend, M. 1. (1989). Cooperative teaching: A model for general and special education integration. *Remedial & Special Education, 10*, 17-22. doi:10.1177/074193258901000205

- Bradshaw, C. P., Debnam, K., Koth, C. W., & Leaf, P. (2009). Preliminary validation of the implementation phases inventory for assessing fidelity of schoolwide positive behavior supports. *Journal of Positive Behavior Interventions, 11*(3), 145-160.
- Bradshaw, C. P., & Pas, E. T. (2011). A statewide scale up of positive behavioral interventions and supports: A description of the development of systems of support and analysis of adoption and implementation. *School Psychology Review, 40*(4), 530.
- Bradshaw, C. P., Pas, E. T., Bloom, J., Barrett, S., Hershfeldt, P., Alexander, A., & Leaf, P. J. (2012). A state-wide partnership to promote safe and supportive schools: The PBIS Maryland initiative. *Administration and Policy in Mental Health and Mental Health Services Research, 39*(4), 225-237. doi:10.1007/s10488-011-0384-6
- Carr, E. G., Dunlap, G., Horner, R. H., Koegel, R. L., Turnbull, A. P., Sailor, W., & ... Fox, L. (2002). Positive behavior support: Evolution of an applied science. *Journal of Positive Behavior Interventions, 4*(1), 4.
- Carr, E. G., Horner, R. H., Turnbull, A. P., Marquis, J. G., McLaughlin, D. M., McAtee, M. L., & ... Braddock, D. (1999). *Positive behavior support for people with developmental disabilities: A research synthesis*. Washington, DC: American Association on Mental Retardation.
- Childs, K. E., Kincaid, D., & George, H. P. (2010). A model for statewide evaluation of a universal positive behavior support initiative. *Journal of*

Positive Behavior Interventions, 12(4), 198-210.

doi:10.1177/1098300709340699

Chitiyo, M., & Wheeler, J. J. (2009). Challenges faced by school teachers in implementing positive behavior support in their school systems. *Remedial & Special Education*, 30(1), 58-63.

Cohen, R., Kincaid, D., & Childs, K. E. (2007). Measuring school-wide positive behavior support implementation: Development and validation of the benchmarks of quality. *Journal of Positive Behavior Interventions*, 9(4), 203-213. doi:10.1177/10983007070090040301

Crockett, J. B., & Yell, M. L. (2008). Without data all we have are assumptions: revisiting the meaning of a free appropriate public education. *Journal of Law & Education*, 37(3), 381-392.

Fisher, W. W., Kelley, M. E., & Lomas, J. E. (2003). Visual aids and structured criteria for improving visual inspection and interpretation of single-case designs. *Journal of Applied Behavior Analysis*, 36(3), 387-406.
doi:10.1901/jaba.2003.36-387

Fisher, W. W., Piazza, C. C., & Roane, H. S. (2011). *Handbook of applied behavior analysis*. New York, NY: Guilford Publications.

Fixsen, D., (2013). Statewide implementation of evidence-based programs. *Exceptional Children*, 79(2), 213-230.

Fixsen, D., Blase, K. A., Horner, R., & Sugai, G. (2009, February). Scaling up evidence-based practices in education. *Scaling-up Brief. Number 1*.

Chapel Hill, NC: The University of North Carolina, FPG, SISEP. Retrieved from www.scalingup.org.

Fixsen, D., Naoom, S., Blasé, K. A., Friedman, R. M., & Wallace, F. (2005).

Implementation research: A synthesis of the literature. Tampa: University of South Florida, Louis de la Parte Florida Mental Health Institute, *The National Implementation Research Network. (FMHI Publication #231)*, 11, 247-266.

Forness, S. R. & Kim, J.(2012). Prevalence of students with ebd: Impact on general education. *Beyond Behavior*, 21(2), 3-10.

Friend, M., Cook, L., Hurley-Chamberlain, D., & Shamberger, C. (2010). Co-

Teaching: An illustration of the complexity of collaboration in special education. *Journal Of Educational & Psychological Consultation*, 20(1), 9-27. doi:10.1080/10474410903535380

Fullan, M. (2003). We need lots of leaders. *TES: Times Educational Supplement*, (4540), 21.

Fullan, M. M. (2009). Large-scale reform comes of age. *Journal of Educational Change*, 10(2/3), 101-113. doi:10.1007/s10833-009-9108-z

Fullan, M., Bertani, A., & Quinn, J. (2004). New lessons for districtwide reform. *Educational Leadership*, 61(7), 42-46.

Gable, R. A., Tonelson, S. W., Sheth, M., Wilson, C., & Park, K. L. (2012).

Importance, usage, and preparedness to implement evidence-based practices for students with emotional disabilities: A comparison of

knowledge and skills of special education and general education teachers.

Education & Treatment of Children, 35(4), 499-519.

Gage, N. A., Freeman, J., Horner, R. H., Sugai, G., Lewis, T. J., & Strickland-

Cohen, K. (2014). Funding support for school-wide positive behavioral

interventions and support implementation and scale-up: A descriptive

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doi:10.1177/1044207313488943

Horner, R. H., Kincaid, D., Sugai, G., Lewis, T., Eber, L., Barrett, S., & ...

Johnson, N. (2014). Scaling up school-wide positive behavioral

interventions and supports: Experiences of seven states with documented

success. *Journal of Positive Behavior Interventions*, 16(4), 197-208.

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 support. *Journal of Positive*

Behavior Interventions, 6(1), 3-12.

Individuals with Disabilities Education Improvement Act of 2004, 20 U.S.C. §

1400 et seq. (2006).

Killu, K., Weber, K. P., Derby, K. M., & Barretto, A. (2006). Behavior intervention

planning and implementation of positive behavioral support plans: An

examination of states' adherence to standards for practice. *Journal of*

Positive Behavior Interventions, 8(4), 195-200.

doi:10.1177/10983007060080040201

- Kincaid, D., Childs, K., & George, H. (2010). School-wide benchmarks of quality (revised). Unpublished instrument. USF, Tampa, Florida.
- Koegel, L. K., Koegel, R. L., & Dunlap, G. (1996). *Positive behavioral support: Including people with difficult behavior in the community*. Baltimore, MD: Paul H Brookes Publishing.
- Lambert, L. & Association for Supervision and Curriculum Development, A. V. (2003). *Leadership Capacity for Lasting School Improvement*. Alexandria, VA: ASCD Publications. Retrieved from www.ascd.org.
- Landers, E., Courtade, G., & Ryndak, D. (2012). Including students with severe disabilities in school-wide positive behavioral interventions and supports: perceptions of state coordinators. *Research & Practice for Persons with Severe Disabilities, 37*(1), 1-8.
- Madden, G. J. (2013). Go forth and be variable. *The Behavior Analyst, 36*(1), 137-143.
- Mangin, M. M. (2007). Facilitating elementary principals' support for instructional teacher leadership. *Educational Administration Quarterly, 43*(3), 319-357. doi:10.1177/0013161X07299438
- Mathews, S., McIntosh, K., Frank, J., & May, S. (2014). Critical features predicting sustained implementation of school-wide positive behavior support. *Journal of Positive Behavior Interventions, 16*(3), 168-178.
- National Center for Educational Statistics. (2012). State education data profiles. Retrieved from www.nces.ed.gov.
- No Child Left Behind Act of 2001, P.L. 107-110, 115 Stat. 1425.

- Prasse, D. P. (2006). Legal supports for problem-solving systems. *Remedial & Special Education, 27*(1), 7-15.
- Ramsey, R. D. (2005). *What matters most for school leaders: 25 reminders of what is really important*. Thousand Oaks, CA: Corwin Press.
- Shannon, P., Daly, D. C., Malatchi, A., Kvarfordt, C., & Yoder, T. (2001). Capacity for statewide implementation of positive behavior supports: a needs assessment strategy. *Journal of Positive Behavior Interventions, 3*(2), 95.
- Skinner, B. F. (1938). *The behavior of organisms: an experimental analysis*. Oxford, UK: Appleton-Century.
- Skinner, B. F. (1953). *Science and human behavior*. Oxford, UK: Macmillan.
- Skinner, B. F. (1969). *Contingencies of reinforcement*. East Norwalk, CT: Appleton-Century-Crofts.
- Sugai, G., & Horner, R. H. (1999). Discipline and behavioral support: Preferred processes and practices. *Effective School Practices, 17*(4), 10-22.
- Sugai, G., Horner, R. H., & Lewis, T. (2009). *School-wide positive behavior support implementers' blueprint and self-assessment*. Eugene, OR: University of Oregon, OSEP TA-Center on Positive Behavioral Interventions and Supports.
- Sugai, G., Horner, R. H., & Todd, A. W. (2003). *Effective behavior support self-assessment survey 2.0*. Eugene, OR: Educational and Community Supports. Available from <http://www.pbis.org>.

- Turnbull III, H. R., Wilcox, B. L., Stowe, M., Raper, C., Hedges, L. P., & Dunlap, G. (2000). Public policy foundations for positive behavioral interventions, strategies, and supports. *Journal of Positive Behavior Interventions, 2*(4), 218.
- Waldron, N. L., & McLeskey, J. (2010). Establishing a collaborative school culture through comprehensive school reform. *Journal of Educational & Psychological Consultation, 20*(1), 58-74.
doi:10.1080/10474410903535364
- Wang, M. C., Reynolds, M. C., & Walberg, H. J. (1986). Rethinking special education. *Educational Leadership, 44*(1), 26.
- Will, M. (1986). Educating children with learning problems: A shared responsibility. *Exceptional Children, 52*, 411-415.
- Williams, H. (2009). Leadership capacity: A key to sustaining lasting improvement. *Education, 130*(1), 30-41.
- Yell, M. L., & Walker, D. W. (2010). The legal basis of response to intervention: analysis and implications. *Exceptionality, 18*(3), 124-137.
doi:10.1080/09362835.2010.491741

