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Preparing Preservice Teachers to Use Positive Behavior Supports in General Education Classrooms

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PREPARING PRE-SERVICE TEACHERS TO USE

POSITIVE BEHAVIOR SUPPORTS

IN GENERAL EDUCATION CLASSROOMS

by

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Abstract

Recent changes in legislation regarding students with disabilities have increasingly placed these children in general education classrooms, frequently with teachers who have not had adequate training to teach them. Teachers who have received inadequate preparation for this inclusive educational environment often resort to punitive and/or exclusionary practices to address the behavioral issues that arise with these students rather than employing research-based practices and pro-active strategies to teach appropriate behaviors. One key factor that teachers need to consider is the function of the problem behavior. It is essential to identify the function of the behavior in order to recognize what maintains the behavior. This study will assess the effect of providing instruction in developing specific strategies to address problem behaviors for general education pre-service teachers during their student teaching internship. The outcomes suggest (a) an increase in pre-service teacher use of positive behavior supports to help students learn more appropriate classroom behaviors, and (b) a decrease in students' problem behaviors demonstrated within the classroom. Prior to the direct instruction workshops, students who engaged in inappropriate attention – seeking behaviors were provided attention, which frequently strengthened the inappropriate behaviors. After the intervention workshop, pre-service teachers were focused on ignoring inappropriate behaviors and reinforcing students when they engage in appropriate classroom behaviors, resulting in a decrease in student talk-outs and an increase in the number of students raising hands.

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ACKNOWLEDGEMENTS

Within each of us there lies a pearl, unrefined, indistinguishable from the dirt and debris of our lives. It truly is a gifted teacher who can help us to see the opportunity to refine this pearl, scrape away at the garbage and expose the smooth, shiny surface lying in wait. The process of learning the art of research is costly. The time and energy spent cannot begin to equate with the inestimable value found in understanding the process. Six years ago, I had the honor of meeting such an excellent teacher, whose quest for excellence conditioned me to strive and struggle to hone my skills to learn the art of research. I know I am not easy to teach. Dr. Philip Belfiore, your conversational style of teaching, your steadfast expressionless stare made me re-center, time and again to get back at it until I understood. You have inspired me, challenged me, and patiently nudged me to polish a little more. I am so very indebted. I'll be completely white-haired before I can repay.

Bob, like refinishing a valuable antique, I know the years ahead will be finer, and more precious because we have done this together. My own words fall short of defining the depth of my gratitude, but James beckons that the crown of life is yours because you have persevered under this trial with me. To my children, Joshua, Carrie and Rachel, without whom, I surely would have given it up, I have watched the mantle of adulthood fall upon each of you as I have wrangled with this precious costly burden. I have so enjoyed observing your senses develop, and I have drawn strength from you in so many ways. Your sense of social justice, your sense of dignity, and your sense of humor have

helped me "keep it between the ditches". You are my heroes, and I am absolutely awed and excited for the years ahead.

CHAPTER I: INTRODUCTION

The revision of the Individuals with Disabilities Education Act (IDEA) in 1997

has significantly changed the expectations placed upon the teacher in the general

education classroom. While the law provides an excellent educational opportunity for

students with exceptional learning needs, it places significantly more responsibility upon

the general education classroom teacher to attempt to meet those needs. Gartin and

Murdick (2001) report most teachers in general educational classroom settings have been

provided with only limited training and exposure to students with learning differences.

As a result, teachers often resort to punitive and/or exclusionary practices to address the

challenging issues that arise with these students (Gartin & Murdick, 2001). Therefore, it

seems necessary to explore the progression of special education laws and the

development of pre-service teacher training in response to special education laws.

Historical Perspective on the Laws Requiring the Use of Positive Behavior Supports

A discussion of the changes in legislation for providing educational services to

individuals identified with disabilities will provide an historical outline of the current

conditions of education. Prior to 1975, individuals who were identified as having

disabilities that required special educational services were often provided with only

limited educational opportunities. In a landmark ruling by the 94th U.S. Congress, the

Education for All Handicapped Children Act (EHA) of 1975 became law (PL 94-142).

With the passage of this law, all public schools were required to provide every child with

a free and appropriate public education (FAPE), regardless of the severity of the

disability. This ruling ensured that every child was entitled to a written individualized

educational plan (IEP) in the least restrictive environment (LRE) which includes due process rights ("History of IDEA", n.d.).

Twenty-two years later, further revisions to EHA, now identified as the Individuals with Disabilities Education Act (IDEA), suggested significant changes. The revisions, approved by Congress in 1997 as Public Law 105-17 (IDEA 1997) placed further stipulations upon public schools to include students with disabilities in regular education classrooms with non-disabled children. Additional requirements resulting from IDEA 1997 include the provision of strategies and support programs using positive rather than negative measures to help shape student behaviors. As required by IDEA 1997 and further supported in IDEA 2004, schools may not use aversive or punitive measures only, they must also provide positive behavioral supports to students identified for special education services, in order to prepare them for independent adult life.

The implementation of IDEA 1997, as with all Acts of Congress is delegated to the Code of Federal Regulations (CFR). The responsibilities of the CFR include interpreting the law, discussing each point of the law and further explaining it ("History of IDEA", n.d.). Each state is then responsible to establish and publish these regulations. In the state of Pennsylvania, regulations are defined by the Pennsylvania Department of Education as Chapter 14, Special Education Services and Programs ("Regulations of the", 2001). Individual school districts may provide professional development and training for staff to meet all Federal requirements for IDEA, including the use of positive behavior supports.

Training is made available from the Pennsylvania Department of Education. Professional development training is provided regionally, and it is available through the Internet at http://www.pattan.k12.pa.us. The website is maintained by the Pennsylvania Department of Education for training and technical assistance. Funding for such training is often left to the discretion of the local school districts. The use of positive behavior supports, though mandated by the federal regulation is often not identified as a top priority by districts attempting to align with state standards and the No Child Left Behind Act (NCLB), part of the Elementary and Secondary Education Act (ESEA).

Requirements placed upon school districts for compliance to NCLB include providing standardized assessment data for the performance of all students, attendance records, credentials of all faculty members and their certification areas. These requirements for compliance have commanded the attention of school districts, leaving the professional development needed for implementing the use of positive behavior supports largely unaddressed. This has not changed the expectations or placement decisions resultant of IDEA 1997 and IDEA 2004 regarding the use of positive interventions to assist students in learning more appropriate behaviors in the classroom.

<div align="center">Concept of Positive Behavior Supports</div>

The term Positive Behavior Supports (PBS) has its roots in applied behavioral analysis, where it was first used to improve the treatment and care of individuals with severe handicaps. PBS, as it is used today, has a nebulous meaning, especially among general education teachers (Carr, Dunlap, Horner, Koegel, Turnbull, Sailor et al., 2002). The term encompasses the following four interrelated components that should be present

in order to be effective: (a) systems change activities, (b) environmental alterations activities, (c) skill instruction activities, and (d) behavioral consequence activities (Farmer, Farmer, & Gut, 1999; Turnbull, Wilcox, Stowe, & Turnbull, 2001). Its intended purpose is to provide a link between research findings and the learning environment in which students with atypical learning needs often struggle for success.

Statement of Purpose

The revisions in the IDEA 1997, and again in 2004, clearly indicate that the general education teacher should be included in the team as the Individualized Educational Plan (IEP) is developed for the students. This implies the need for general educators to be knowledgeable in the use of PBS (Gartin & Murdick, 2001). General education teachers face the challenge of coping with special problems while being responsible to teach classes of 20 to 40 students, usually with little, if any, training in strategies or techniques for doing so (Brophy, 2003).

Need for General Education Teachers to Understand Positive Behavior Supports

The use of PBS as an effective method of assessing and planning for these students provides classroom teachers with an effective tool for working with students. PBS improves the quality of a student's education by including the following facets of a team based approach: (a) all persons who have regular contact with the student, including teachers, parents, and supportive services from within the community (indirect observations); (b) an ecological evaluation of the learning environment (direct observations); (c) identification of the student's strengths (person-centered planning); and (d) identification of areas of need (Safran & Oswald, 2003).

Because this is a relatively new technology, and significant revisions to the IDEA continue to be made, many teacher preparation programs have not undergone adjustments to provide training in classroom management practices that include the use of PBS (Turnbull et al, 2001). Pre-service training programs often rely upon traditional methods of managing problem students by providing unpleasant consequences for inappropriate behaviors (Gartin & Murdick, 2001). The use of such consequent strategies is often ineffective, frequently providing the student with the attention or escape (s)he is seeking, therein positively reinforcing the undesirable behavior (Gartin & Murdick, 2001).

General classroom teachers unwittingly maintain or increase inappropriate behaviors when they reinforce these behaviors. This may be a direct result of teachers not being trained in principles of applied behavior analysis, specifically in functional behavior assessments and behavior intervention planning.

Need for General Educators to Teach More Appropriate Replacement Behaviors

The intention of PBS is to instruct students to use appropriate skills to achieve the same outcome as the inappropriate skills they have been using. In order for general education classroom teachers to accomplish this, they need to conduct a functional behavioral assessment of the student to identify the root cause or function of the behavior, and plan useful behavioral interventions to cultivate the appropriate behaviors in the student. The impact of teacher's use of this technology reaches the whole classroom as the aberrant behaviors frequently disrupt the entire class.

In the past, teachers have referred children with challenging behaviors to special classrooms. IDEA suggests the practice of inclusion whenever possible, compelling

general education teachers and schools to develop skills in managing a classroom with more than punitive techniques. A Summer, 2000 report from the Office of Special Education Programs (OSEP) Center on Positive Behavioral Interventions and Supports indicates an overall lack of methodology for identifying, adopting, and sustaining the use of research-validated practices in the classroom. In other words, there currently exists a chasm between best research and practical application of this new technology (Sugai, Horner, Dunlap, Hienenman, Lewis, Nelson, et al., 2000), resulting in a weak service delivery system.

One possible solution to the inconsistent application of the technology of PBS would be to provide direct instruction to pre-service general education teachers as part of their student teaching internship in the use of functional assessments and behavioral intervention plans as classroom management tools. By providing adequate training during pre-service experiences, future general education teachers can more effectively increase instructional time for every student in the classroom (Weigle, 1997). Teachers must understand the basic principles of PBS in order to employ them in pre-corrective and/or pro-active strategies. This would suggest pre-service training in applied behavior analysis for general education teachers.

Weigle (1997) reports a decrease in the overall quality of teaching because of an increase in time and effort teachers spend ineffectively managing classroom behaviors as a direct result of inclusionary practices. Many general education teachers continue to utilize consequential and/or punitive measures to manage their classroom, rather than develop positive, pre-correction strategies. These punitive practices cause a ripple effect

to the behaviors of other students in the classroom, and ultimately may result in diminishing the overall success of practices of inclusion (Weigle, 1997). When pre-service teacher training does not provide the practical knowledge to recognize and implement effective positive behavioral intervention plans, the practice of inclusive education will continue to struggle to become effective. Until teachers are trained in effective employment of PBS, students with learning differences will reap the negative consequences of punishment and humiliation while other students in general education settings experience loss of classroom instructional time, all resultant of inadequate pre-service teacher training (Weigle, 1997). Many teachers who are currently in the field have been practicing for many years without an understanding of inclusive practices, or the use of PBS. The gap that exists between the expectations and training has multiple facets. For the purpose of this study, the focus will be upon preparing pre-service teachers to use PBS in general education classrooms.

When environmental changes are made to the general education classroom and training is provided for the general education teacher, students who have been identified as at-risk for more restrictive educational placements can become quite successful in the general education classroom (Kennedy, Long, Jolivette, Jung-Chang, & Thompson, 2001). The placement of challenging students in the least restrictive environment (LRE) of the general education classroom can be a successful experience for these students. If the classroom teacher is trained and prepared to meet student's needs without compromising the needs of the other students in the classroom, then the general education classroom may serve as the LRE for these students.

Current Practices With Positive Behavior Supports in General Education Settings

Kennedy et al. (2001) explored the process of collaborating within a school based team of support personnel to facilitate inclusion of students who demonstrate behavioral issues in general education classrooms. In the study, the general education teacher conducted an assessment that focused upon the student's strengths, identifying the function(s) of aberrant behaviors, and providing pre-correction strategies to help the student learn more appropriate behaviors as well as teaching the student self-monitoring strategies. The aim of this study was to (a) identify if students who engage in challenging behaviors in general educational settings could benefit from the use of positive behavior supports, and (b) to test whether person-centered planning could be effectively embedded within PBS (Kennedy et al., 2001). Person-centered planning can take into account the broad scope of personal characteristics, interests and abilities that need to be considered when planning positive behavior supports. This would imply the tailoring of the PBS plan to target each student's specific needs. The person-centered planning encompasses the following four steps: (a) a group meeting of general education teachers, special education teachers, school administrator, related service personnel, and the authors of the study, (b) individual interviews with the student's primary educators, (c) collection of direct observation data on student's problem behavior(s), and (d) subsequent meetings to analyze data and plan positive supports (Kennedy et al., 2001).

The results of the study by Kennedy et al. (2001) revealed a reduction in acting out behaviors of students in general education settings when support plans were team-developed with integrity for the student, indicating the successful use of person-centered

planning. General education teachers were the primary support providers for implementing the PBS plans (Kennedy et al., 2001). In addition, the development of successful PBS interventions for students indicated the potential to decrease the number of student referrals for special education services (Sprague, Walker, Golly, White, Myers & Shannon, 2001). The Kennedy study echoes Gartin and Murdick's position to appropriately train teachers more in the use of PBS so they are better able to provide those supports to students in general classroom settings (Gartin & Murdick, 2001).

It is necessary to transition from the current classroom practice of removing children who demonstrate problem behaviors in the classroom to provide training the general education classroom teacher for conducting a functional analysis of the problem behaviors and developing effective intervention strategies (Bambara, 2002). This is implied in the No Child Left Behind Act, which calls for every student to be proficient in academics standards. Students cannot improve their academic skills if they are not actively engaged in the learning process. PBS interventions that are collaboratively designed to prevent problem behaviors and concurrently teach appropriate behaviors result in a durable change for the individual child, but also provide a positive learning environment for the entire classroom (Safran & Oswald, 2003). Changes in school culture that impact student behavioral expectations in positive ways must begin by changing the preparation and understanding of teachers as they enter the profession. Since the expectation implicit in IDEA 1997, and affirmed in 2004, is that teachers and other professionals in the field should be competent to conduct functional assessments and develop hypotheses and interventions from the results of these assessments, then

providing training for this technology must become standardized in pre-service programs (Gartin & Murdick, 2001).

According to a study done through the University of Oregon Institute on Violence and Destructive Behavior, (Sprague, et al., 2001), teachers and school personnel have a history of applying simple, generalized solutions to complex student behaviors, resulting in common failure of meaningful outcomes. This is largely the result of mismatched and indirect intervention strategies. Teachers are often frustrated and resort to punishments, detentions, verbal reprimands and expulsions, all of which may result in increases in problem behaviors (Sprague et al., 2001).   Sugai, Sprague, et al., (2000) report that 59% of the discipline referrals can be tracked to 5% of the student population. Clearly, the few students who are acting out in the classroom have a significant impact on the learning of other students in the class. Moreover, the teacher's effective instruction is compromised. Teachers continue to dismiss students from instruction when they act out, possibly indirectly providing positive reinforcement for the problem behaviors by allowing the student to escape an unpleasant situation.

The Commonwealth of Pennsylvania recently settled a lengthy class action lawsuit filed against the Commonwealth for non-compliance to the IDEA requirement of providing supportive services to students identified for special educational services in the least restrictive environment. The Gaskins, Corr, Forte, Koneski, Luckenbill, McCann, Noe, Rainey, Royer, Sabree, Wintering, Zimenoff vs. Commonwealth of Pennsylvania, Department of Education case (Pennsylvania Department of Education, 2005, 94 CV 4048) reports the failure of the Pennsylvania Department of Education to provide a free

and appropriate public education to school-age students with disabilities, or failure to provide the necessary supportive services required by IDEA for full inclusion in a regular education classroom. The settlement, reached in December, 2004, implies that school districts need to provide on-site training and other forms of technical assistance to build local capacity in inclusive settings. One significant outcome of this litigation is the recognition by the Pennsylvania Department of Education for the need to provide professional development in the use of appropriate classroom management skills for including students with disabilities in general education settings. This outcome is being supported by PDE funded training and technical assistance to districts to implement research-based practices (Pennsylvania Department of Education, 2005). Changes in pre-service training would also serve to further strengthen educational programs. Greenwood and Maheady, (1997) suggest changes in student performance as a method of evaluating the efficacy of pre-service teacher training. Through training pre-service teachers in specific skills, and through research to evaluate these strategies, the effectiveness of pre-service programs can be evaluated by measuring student outcomes (Greenwood & Maheady, 1997).

Need to Understand the Connection Between the Use of Functional Analysis

and Positive Behavioral Intervention

Effective teaching requires awareness of the individual needs of each student in the classroom. For example, Iwata, Dorsey, Slifer, Bauman & Richman, (1982) discuss the function of student acting out behavior may be reinforced through extrinsic sources; students will behave in various ways to obtain attention, to avoid tasks, or for sensory

stimulation. From this 1982 research, Iwata et al. concluded it is of critical importance to identify the function of a student's behavior first, in order to recognize what events are maintaining the behavior(s).

Teachers must gain competence in how to determine the function of a student's problem behaviors, and how to provide effective interventions. For example, in a study by Weigle (1997) teachers were presented with functional analysis information about a particular classroom scenario. The results revealed that teachers were unable to identify which interventions would be effective and which would exacerbate the situation (Weigle, 1997). This suggests a need for pre-service teacher training to include practical understanding of both the assessment and planning for PBS.

The term functional assessment connotes the identification of antecedent and consequent events that occur contiguously to the behavior (Knoster, 2000; Lennox & Miltenberger, 1989). A functional analysis, which refers to the systematic manipulation of variables antecedent and subsequent to the behavior, is a critical continuation of the assessment process, thus providing a link between assessment and effective intervention plans. By identifying the environmental variables in relation to the behaviors, teachers can learn to arrange more acceptable variables that meet the same function for the child. Without identifying the function, teachers often provide reinforcement for the inappropriate behavior, therein maintaining it (Iwata et al., 1982).

Conducting a successful functional assessment encompasses the following three common facets: (a) informant or indirect methods, which involve interviews of the student and persons who work closely with the student, (b) direct naturalistic

observations, or data collection of student's behaviors, as well as permanent products and (c) experimental analysis, wherein variables are manipulated to determine the exact function of a student's behavior in response to changing variables (Knoster, 2000; Lalli, Browder, Mace & Brown, 1983). In a school climate where any misbehavior is regarded as an occasion for exclusion, it is imperative that educators become highly competent in conducting functional behavioral assessments and developing effective intervention plans (Scott & Nelson, 1999).

Admittedly, there are other factors, including limitations of time and resources that impede a teacher's ability to conduct a functional assessment. However, there appears to be an underlying lack of basic knowledge in the process on the part of school personnel. When teachers respond to a student's aberrant behaviors without analyzing the possible causes of the behaviors, the results are riddled with risks, not the least of which is ineffective treatment of the behavior(s), (Lennox & Miltenberger, 1989). In contrast, when teachers have been trained to observe problem behaviors in natural environments and conduct functional analysis to verify the conditions in which problem behavior(s) occur, they have been successful in developing individualized interventions that effectively have been used to reduce the frequency of problem behaviors (Lalli, Browder, Mace, & Brown, 1983). Currently, there has been only limited research evaluating the practice of training teachers to conduct functional analysis, although a much larger body of literature has evaluated training teachers in the use of behavior-analytic methods (Moore, Edwards, Sterling-Turner, Riley, DuBard, & McGeorge,

2002). Much of the research on functional analysis has been done in clinical settings rather than in classrooms settings.

An essential component in the provision of positive behavior supports to students with behavior problems is the development of effective behavior intervention plans. After a thorough functional analysis has been conducted, the teacher must use assessment data to design intervention strategies to teach appropriate replacement behaviors that serve the same function as the aberrant behavior for the student. If the teacher doesn't have the training in the skills to recognize, assess and intervene appropriately, the student (a) does not receive adequate instruction and (b) may receive reinforcement for inappropriate behaviors.

Need for Applying Research to Improve Classroom Practices

While many of the intervention strategies vary in their impact upon individual students, there appear to be clusters of skills that are common among teachers who are fluent in developing an effective learning environment to engage every student in the learning process. It is incumbent upon pre-service teacher training programs to develop these pro-active strategies to maximize learning and minimize classroom management problems (DePry & Sugai, 2002). By training teachers to ignore unwanted behaviors while reinforcing alternate, more appropriate behaviors, general education teachers can effectively provide positive support for academic and social skill development in the classroom. Through the use of functional analysis and intervention strategies based on differential reinforcement of alternate behaviors (DRA), Lalli et al., (1983) reported teachers were able to teach students socially acceptable behaviors to obtain the

reinforcers previously attained by the problem behaviors. Decreases in problem

behaviors were directly associated with increases in newly acquired acceptable

behaviors.

One of the reasons PBS appears to be successful may be the natural context in

which observations and interventions take place. The environment in which the problem

behavior occurs is evaluated, and identified variables are manipulated to improve the

academic progress of the student(s). Emphasis is placed upon positively meeting the

needs of the whole child in a scientific, yet collaborative manner. The use of a

differential reinforcer of alternate behavior (DRA) has shown success in teaching

students to learn new, more appropriate behaviors (Lalli, et al., 1983). In order for this

science to be effective, teachers must be trained to accurately assess the function of

behaviors. One key dimension in furthering the development and implementation of PBS

in schools lies in training teachers to not only conduct effective assessments, but also to

use the assessment information to build intervention plans and design effective learning

environments (Horner, 2000).

The accountability for much of the planning and preparation for PBS rests upon

the general classroom teacher. The teacher's observation of the operant function of a

student's behavior has a significant impact on how the student performs in an educational

setting (Kozub, 2002). In a recent study done measuring the pre-service physical

education teachers' perceptions of challenging behaviors of students identified with

severe disabilities, the results suggest an inverse correlation. The more familiar the

teachers were with students' behaviors, the less they identified the behaviors as an

attempt to challenge the teacher (Kozub, 2002). Implicit in these findings is the idea that when teachers look for the function of the problem behavior, and plan to help students learn more appropriate behaviors, they do not take a defensive posture of assuming the student is challenging them. Rather they use the functional analysis data to indicate the student's lack of skill and develop intervention strategies to teach the student alternate, more appropriate ways to behave.

It is critically important for the general classroom teacher to be competently trained in classroom management practices and positive behavior supports as well as curriculum and instructional techniques. Being a participant in the planning process for the student requires specific training in these skills. One key factor that teachers need to recognize is the function of the problem behavior. (e.g., If a student is reading two grade levels behind, and he acts out at the begin of each science class, which predictably results in his being sent to the office, he is successful at avoiding the embarrassment of his weak reading skills.) In this situation, by identifying the function of escaping the instruction, the teacher can more capably meet the student's instructional needs.

Student teaching internship provides an opportunity to measure the effect of providing instruction in functional assessment and developing specific strategies in a practical environment. Specifically, a study conducted to teach pre-service teachers to assess problem behaviors and develop intervention strategies to help students learn more appropriate behaviors would demonstrate a viable link between research and classroom practices. The proposed research question is: (what are the effects of providing pre-service teacher candidates with knowledge to assess and employ PBS techniques for

students demonstrating inappropriate behaviors in general education classrooms?).

CHAPTER II: REVIEW OF RELATED LITERATURE

The following is a comprehensive review of the research on positive behavior supports, (PBS), and the use of PBS in general education classroom settings, organized into three main topics: (a) the history of positive behavior supports, (b) a review of current research and practices in the field of education in response to IDEA 1997 and (c) pre-service teacher training programs as they relate to positive behavior supports. The development of PBS arises out of the progression of the behavioral science in the 1970's and 1980's to address the needs of individuals whose severe disabilities had previously kept them institutionalized or isolated. As the Individuals with Disabilities Education Act (IDEA), then called EHA, first became law in 1975. The change was largely resultant of increased awareness of civil liberties and a quest to improve the quality of life for every American. The technology of PBS used to assess and provide educational plans began to improve. Educators and professionals began to seek non-aversive methods of shaping behaviors. The use of positive procedures to manage severe and challenging behaviors in a community setting began to develop in response to some practices of behavior modification that were neither ethical nor effective (Horner, Dunlap, Koegel, Carr, Sailor, Anderson et al., 1990). Prior to IDEA, which required the recognition that individuals with severe disabilities were entitled to fair and humane treatment, very minimal consideration was given to the provision of ethical treatment to individuals with severe disabilities (Singer, Gert, & Koegel, 1999).

History of Positive Behavior Supports

The practice of developing effective intervention plans begins with accurately assessing the behavior of concern. Prior to the use of PBS, the only treatments that have been consistently effective in treating severe behavior problems were based on punishments and/or aversive stimulations (Iwata, Dorsey, Slifer, Bauman, & Richardson, 1982).   The first comprehensive, standardized methodology for identifying the operant functions of problem behavior(s) was identified by Iwata, et al., (1982), to analyze the environment-behavior interactions maintaining self-injurious behaviors (Mace, 1994). From the seminal research study conducted by Iwata, et al., (1982), the effect of antecedent and consequent events on an individual's behavior began to include an evaluation of environmental factors. Iwata, et al., (1982), identified different purposes for which individuals responded to stimuli in the environment, and the resultant functions of the behavior.

Although Iwata et al.'s 1982 research was conducted in a clinical setting, under very controlled conditions, the results have yielded greater understanding of the variation of individual's function of problem behavior, a concept which can be applied in many settings, including classrooms. By identifying the different conditions under which behavior occurs, teachers can arrange the environment by reinforcing appropriate behaviors, rather than rewarding inappropriate behaviors. (For example: Teachers can learn to use planned ignoring to avoid providing positive reinforcement for attention seeking behaviors, such as talking-out in class, and then provide positive reinforcement to the alternate, more appropriate behavior of raising his hand to comment.)   Many of the

studies done by Iwata and his colleagues placed emphasis upon the manipulation of environmental variables to determine the function of the aberrant behavior. This technology of clinically measuring responses of environment variables has come to be known as functional analysis.

Iwata et al.'s (1982) study has led researchers and clinicians alike to greater understanding of the value of a functional analysis. In addition to Iwata et al.'s functional analysis of analog conditions, this assessment has since expanded to include the following three components: (a) indirect methods of assessment, such as interviews and rating scales of behaviors; (b) direct methods of observation in which specific data are collected on the behavior of concern in relation to antecedent and consequent conditions; [i.e., scatter plot or observation and recording of antecedents, behavior of concern and resultant consequences (ABC)]; and (c) experimental analysis in which the specific hypothesized operant function of a behavior of concern is isolated, then antecedent and consequent variables are manipulated to analyze the function of the behavior (e.g. Iwata's methodology) (Mace, 1994).

Horner (2000) states problem behaviors become irrelevant, inefficient and ineffective when classroom environments are managed effectively. Designing the environment to enhance the learning of the individuals is a foundational concept to PBS. The realization that teachers and clinicians could identify and determine specific causes for behaviors within the environment, manipulate those variables, and affect a positive outcome for the individual has moved the field of PBS beyond treatment for profound and severe handicaps. This has opened opportunities for individuals with many other

types of disabilities. It has also helped pave the opportunity for including students with manageable levels of problem behaviors in what has come to be defined as the least restrictive environment.

Applied behavior analysis, the branch of behavioral science used in applied or authentic settings, supports the underlying principles on which PBS is founded. The use of behavior assessment to determine the function of the behavior of concern drives the intervention plan (Mace, 1994). Previously, blanket intervention plans, a "one size fits all" approach were effective for a few, but left many individuals with severe handicaps frustrated as they were not given the opportunity to learn many skills they needed. Now, intervention plans or treatments can be matched to the specific function of the aberrant behavior, in one or two ways; (a) intervention can serve to weaken the maintaining response-reinforcer relationship, or (b) replace the aberrant behavior with a more appropriate behavior that serves the same function (Mace, 1994). The use of a differential reinforcer of alternate behavior (DRA) serves to accomplish both tasks.

The core of PBS represents the integration of a systems perspective within behavioral science, practical intervention strategies, and social values, (Horner et al., 1990). PBS provides individual and systemic solutions in response to IDEA 1997, which requires schools to provide positive interventions through both academic and social environments for students with behavioral problems (Sugai & Horner, 2002). The use of this approach provides positive opportunities for students to gain skills and understanding, where previous responses offered only aversive or punitive consequences with limited opportunity for overcoming the student's skill deficits.

While these are all excellent ambitions, Horner & Sugai (2003) caution that this science continues to evolve. Practitioners must remember that this is a science, implying PBS must contain a pronounced measurability and support to minimize the risk of treatment plans becoming watered-down into immeasurable elements. To be effective, PBS must remain true to the roots of applied behavior analysis, addressing measurable behaviors. Horner cautions that there has been a tendency to include anger management training and social skill development, both worthy interventions, but not easily measured (Horner & Sugai, 2003).

An additional word of caution comes from a meta-analysis considering the external validity of PBS. Because the technology of PBS was born out of the need to provide alternative treatments for individuals with severe disabilities, it may present significant limitations for use in classroom settings and offer only weak generalizability to other settings (Gresham, Quinn, & Restori, 1999; Nelson, Roberts, Mathur, & Rutherford, 1999). Some of this prudence may be the result of practices of classroom teachers poorly trained in the use of applied behavior analysis, or the result of poorly designed interventions plan. The concerns are worthy of consideration, if only to keep PBS closely aligned to its roots within the behavioral sciences. This is yet another suggestion that the greater issue of concern may be one of training and implementation, not a lack of appropriateness of the PBS technology.

One genuine concern expressed by many researchers in the field rests in the need for systematic training for teachers in the use of PBS (Doggett, Edwards, Moore, Tingstrom & Wilczynski, 2001; Iwata, Wallace, Kahng, Lindberg, Roscoe, Conners et

al., 2000; Lalli, et al., 1983; Lalli & Goh, 1993). Unless general education teachers are given consistent, well defined training in the use of PBS, the science could weaken, and classroom inclusion of individuals with special needs may ultimately erode. If general education teachers are ineffective at managing students with learning differences in the classroom, those students cannot be maintained in general classrooms.

The field of PBS, though relatively new, has already developed several centralized bodies of research. The next section will discuss the findings of these researchers, as related to the federal legislation regarding the use of PBS in response to IDEA 1997 and IDEA 2004.

Review of Current Research and Practices Addressing PBS in Response to IDEA 1997

A discussion of the current practices regarding the use of positive behavior supports must begin with definitions of the legislation to which these practices are being applied. The Individuals with Disabilities Act was issued by Congress in response to two groups of students; those children with disabilities who were entirely excluded from the educational system, and those children whose disabilities allowed them only limited access to public education ("History of IDEA", n.d.). Outcomes of this initial piece of Congressional legislation include the following four purposes; (a) to assure every child the right to a free and appropriate education which meets the individual child's needs, (b) to assure that the rights of individual children with disabilities (and their parents) are protected, (c) to provide assistance to schools for the education of students with disabilities, and (d) to assess and assure the effectiveness of efforts to educate all children with disabilities (n.d.). A significant factor in the provision of these educational services

is the emphasis placed upon providing education in the least restrictive environment in which the child is able to function. PL 94-142, the initial legislation of IDEA suggested but did not define the "least restrictive environment", nor "inclusion".

Twenty-two years later, further scrutiny to the Individuals with Disabilities Education Act (IDEA) resulted in significant revisions. These revisions, approved by Congress in 1997, as Public Law 105-17 (IDEA 1997) placed further stipulations upon public schools to include students with disabilities in regular education classrooms with non-disabled children. Other requirements resulting from IDEA 1997 and further supported in IDEA 2004 include the provision of strategies and support programs using positive rather than negative measures to help shape student behaviors.

IDEA 1997 appears to have created a "rebuttable presumption", a continuance of the analogy used in a court of law, which favors the construction of Individual Education Plans (IEPs) which include positive behavior supports as a presumption for effective treatment planning (to teach students with disabilities more appropriate behaviors) unless there is evidence that punitive measures are more effective. This logic is consistent with the practices of U.S. criminal courts wherein individuals are presumed innocent unless proven guilty. The use of positive behavior supports has been documented to be a highly effective means of helping students to receive an education in the least restrictive environment possible for the student. The U.S. Department of Education explains, "…school officials have powerful incentives to implement positive behavioral interventions, strategies and supports whenever behavior interferes with the important

teaching and learning activities of school; 64 Fed. Reg. 12,620 (1999)" as cited by Turnbull, Wilcox, Stowe, and Turnbull, (2001).

The effective use of PBS can be accomplished on three levels within the school setting. The first, broadest level, referred to as universal planning, is meted out through school-wide implementation of practices and procedures which every teacher in the building is using provides a very helpful framework for students to learn to consistently apply the same rules and expectations throughout the school (Sugai, Sprague & Walker, 2000). Trainings for school-wide use of PBS are carried out through professional development conducted on site to equip all professionals in the school with the standardized understanding of how school-wide strategies are implemented.

The implementation of school-wide plans requires a systems change on the part of the schools. Many districts have successfully implemented such plans and provided in-service training for teaching staff. There are still far more schools that have yet to consider such a systems change as possible. The result of school-wide planning for PBS is a stable environment for inclusionary educational practices because students can be expected to follow the same standardized rules and procedures throughout the entire school. The systemic perspective provides support for the student to learn new skills and to become a successful student in school. Without such supports, these students often struggle in their attempts to learn several different sets of rules which are not consistent, and they fail to develop the appropriate problem solving skills for success in the classroom environment.

The second level, setting specific practices, such as rules for using the classroom, playground, or cafeteria, has also shown to be effective when properly planned and consistently applied (Lewis, Colvin & Sugai, 2000). Gartin and Murdick (2001) suggest that pre-service and in-service trainings for the use of class-wide PBS must include an understanding of PBS intervention strategies that help students learn appropriate behaviors to replace problem behaviors. This study indicates that schools most often engage in managing behaviors in a more traditional manner which focuses upon the provision of unpleasant consequences, rather than the prevention of such behaviors (Gartin and Murdick, 2001). When classroom teachers are trained in the use of preventative strategies and educative interventions to help students develop appropriate skills, and the use of consequences to manage behaviors, then students' needs are met. Therefore the function of problem behaviors in the classroom no longer is demonstrated (George, Harrower, & Knoster, 2003; Knoster & Kincaid, 1999).

The third level of intervention strategy for use in schools includes planning and developing a positive behavior support plans for individual students, commonly referred to as wraparound services (Eber, Sugai, Smith & Scott, 2002; Kennedy et al, 2001). This third level, when used properly, can help the student who is identified (or at risk of being identified) as having emotional or behavioral disabilities to learn to successfully develop alternative, more socially acceptable skills and remain in a general educational placement. The use of PBS has shown significant improvement in the ability of students to manage their own behaviors, to gain new skills and to communicate in more

appropriate ways when PBS, more specifically, when pre-correction strategies are utilized by classroom teachers (DePry & Sugai, 2002).

Many studies have been done to indicate that providing specific training to teachers and staff members in the use of universal (school-wide) supports can enhance the efficacy of a teacher's ability to develop and implement PBS (Lewis, Colvin, & Sugai, 2000; Smith & Heflin, 2001; Sugai, Horner, Dunlap, Hieneman, Lewis, Nelson, et al., 2000; Taylor-Greene, Brown, Nelson, Longton, Gassman, Cohen et al., 1997).

Collectively, the results of these studies indicate that the general education teacher plays a pivotal role in the assessment and intervention phases of this process. These studies would further suggest that additional training to understand the history of IDEA and applied behavior analysis would be vital for teachers in general education classrooms. For the purpose of this study, intervention strategies employed on an individual level, in general educational classroom settings will be implemented.
Pre-service Teacher Training as Related to PBS in General Education Classroom Settings

According to a report for the Pennsylvania State Education Association (PSEA), three of four students with disabilities spend at least 40% of their school day in general education classes. Across the United States, nearly every general education classroom includes students with disabilities. When surveyed, general education classroom teachers indicate they are not receiving the support and training they want and need to deal with the classroom effects of IDEA 1997 (Hammond & Ingalls, 2003; Henning & Mitchell, 2002; McLeskey, Hoppey, Williamson, & Rentz, 2004). Teachers indicate the need for more training in instructional strategies, classroom management techniques, testing

accommodations and skills for successfully participating in IEP teams (Hammond &

Ingalls, 2003; Henning & Mitchell, 2002; PSEA Professional Learning Exchange, March

2003). When professionals in the field are expressing this level of concern for the need

to improve their understanding of practices on inclusion and positive behavior supports,

it can be concluded that pre-service training programs are not providing sufficient

preparation and training for the use of PBS.

Morgan, Whorton, and Willets (2000) observed pre-service teacher preparation

using methods of applied behavior analysis which indicated positive results in the use of

PBS. The setting in this study used peer-mediation techniques to learn eight specific

teaching strategies of applied behavior analysis, which included instruction and weekly

assessment to evaluate the outcome of the peer-tutoring. Participants were able to

successfully apply their newly acquired skills during field experiences.

Kozub (2002) conducted a study involving pre-service physical education

teachers' use of applied behavior analysis. The pre-service teachers were divided into

three groups. One of the groups received specific training in applied behavior analysis

through direct instruction and an instruction manual. The second group received

exposure to the challenging students, and the third group was a control group with no

exposure to challenging students or instruction. Results in this preliminary study suggest

little difference in perception of students between the experimental group and the group

receiving exposure to challenging students only, indicating very minimal use of applied

behavior analysis principles (Kozub, 2002). The group using a direct instruction method

was able to recognize the function of the challenging behaviors of students more

accurately as they interacted with them. Neither the control group nor the group that received only the exposure to challenging students was very successful at identifying the function of student's problem behaviors. This appears to indicate that providing specific instruction during pre-service internship is an effective method of training teachers in the assessment and intervention of PBS.

The role of the general education teacher is essential in a school-based collaboration team to provide positive behavior supports for students who are at risk of placement into special education classroom. The classroom teacher is responsible for the coordination of the team, including other teachers and school staff, parents, and any special service personnel (Safran & Oswald, 2003). The classroom teacher is also the individual who will most likely conduct assessments, develop interventions and experience and measure most of the educational gains of the student (Safran & Oswald, 2003).

Although it is understood that the classroom teacher is not trained in special education, nor is he or she expected to develop the Individualized Educational Plan for students who are identified for special education services, IDEA 1997 states that it is the responsibility of the classroom teacher to provide a free and appropriate education for every child in the classroom. Often this includes students whose special needs have not been identified, as well as whose needs are not quite severe enough to warrant placement outside of the general educational setting. Henning and Mitchell (2002) state 90% of secondary education teachers reported having students with learning disabilities in their

classroom, and 90% of the same group indicate that undergraduate training did not prepare them adequately to teach students with disabilities.

Connection between Use of PBS and Impact of No Child Left Behind Act

Teacher training programs have come under scrutiny with the passage of another piece of federal legislation, the No Child Left Behind Act, part of ESEA. Teachers must demonstrate that they are highly qualified and competent to teach. Student academic performance is the measure being used to demonstrate this competency. Unless teachers are trained in the use of PBS, students who have limited skills, both academic and behavioral skills, can engage in behaviors to short-circuit the academic instruction necessary to demonstrate competency on the standardized assessments measuring both student and teacher efficacy. It is imperative that teachers have adequate training in the use of these federally mandated practices in order to provide the free and appropriate education which is rightfully due every child in every classroom in the United States. Sugai, Sprague, Horner and Walker (2000) conducted a year-long study which suggested that 5% of the student body was responsible for 59% of the office referrals in a given year. This implies that providing training to general education teachers in positive behavior supports would help reach this 5% of the population and at the same time help facilitate the operation of the general education classroom in a more efficient manner for all students. In the standards-based, assessment-driven classroom environment in which every child is being tested for academic competency, general education teachers cannot afford to lose instructional time because a few students are being disruptive. These circumstances are presently far too costly to be overlooked.

General education teachers are being evaluated on their performance of their students' ability to demonstrate what they have learned. This pressure provides one more indication of the need for the use of PBS in general education classrooms. By adeptly identifying aberrant behaviors and reinforcing more appropriate alternate behaviors, teachers can improve the learning environment for the entire class. More frequently however, when teachers lack the skills to use positive behavior supports, students are being punished or referred to the principal for more punitive disciplinary action (Sugai, Sprague, Horner and Walker, 2000). This action also results in removal of the student from the learning environment. A secondary result of this teacher behavior is the unrecoverable loss of instructional time for the student, as well as other students in the class who wait while the teacher's attention is focused upon the problem behavior.

Analysis of Literature Addressing the Use of PBS in General Education Settings

The re-authorization of IDEA requiring the use of PBS has been in existence since 1997. Contemplation of how that law is affecting the function of general education classrooms and the evidence presented from research conducted in those general education classrooms appears to suggest considerable reason to pursue more appropriate technologies to help general education teachers more successfully participate in positive behavior supports.

There are many effective models of classroom management, but many of those models are not aligned with PBS or IDEA 1997 or IDEA 2004. Teachers are trained to maintain order, not to provide positive, individualized reinforcements to students. Because the concept of positive behavior supports has not been formally used in the

classroom until recently, very few teacher-training programs seem to provide specific training in PBS for general classroom teachers.

A major criticism of the scientific approach of PBS arises when acknowledging that there are very few documented examples of effective PBS being practiced in general education settings, (Doggett, et al., 2001). This is an indication that an insufficient amount of research has been done in measuring the training of pre-service teachers to use PBS. Very often, problem behaviors in students are maintained by teacher attention (Doggett et al., 2001), often the direct result of the teacher's limited training and limited professional experience in the classroom.

In sharp contrast to the technology of PBS, the use of negative reinforcement is one method frequently practiced by teachers to manage behaviors in the classroom, (Gunther & Coutinho, 1997). Students (particularly those identified with emotional and/or behavioral issues) utilize escape and avoidance behaviors to control variables within their learning environment. When the teacher responds to a student's problem behavior by the use of time-out, if escape is what the student is seeking, the student often will repeat the problem behavior. The time-out provides escape. The teacher's perceived function of the use of time-out as a punisher is actually reinforcing the student's behavior (therein, the behavior is likely to increase). The student may continue to engage in escape motivated behaviors because the student's perceived function of the time-out is to escape the task (s)he is being asked to complete. Unless teachers are trained in identifying the function of the behaviors, these students continue to maintain these behaviors in conflict with opportunities to learn.

DePry and Sugai (2002) conducted a study examining the functional relationship between the use of a teacher-training program and the resultant decrease in minor behavioral incidents in a general education classroom as a result of teachers learning pre-correction strategies. Teachers often spend inordinate amounts of time responding to minor incidents that interfere with instruction but are otherwise insignificant (DePry & Sugai, 2002). By providing teachers with effective strategies to engage every student in the learning process, student time on task increases, and behavioral issues decrease proportionately.

Limitations in Pre-service Teacher Training Programs Indicate a Need for PBS Training

In response to changes in federal legislation, educators have begun to acknowledge the use of PBS to promote more successful practices of inclusive education. Teachers' ability to manage or control the classroom environment is considered both one of teachers' greatest challenges and greatest deficits in their training (Weigle, 1997). When teachers are unable to effectively manage the classroom, the quality of instruction provided is compromised. It will require continuing changes in the field of education, both in the pre-service and in-service training to provide teachers with effective strategies to employ more positive methods of changing problem behaviors in the classroom (Turnbull et al, 2001). Many pre-service teaching training programs provide courses in principles of applied behavior analysis. The practice of employing these principles during the student teaching internship would help pre-service teachers prepare to teach in inclusive settings.

Summary

There is significant evidence that successful changes in student behaviors can be attained in general education classroom settings through the use of PBS (Horner, 2000). When teachers effectively utilize PBS to help students with disabilities to learn appropriate skills, it is more likely that these students are able to receive their education in general education classrooms. It took an act of Congress to effectively change educational practices in public schools to include the provision of a free and appropriate public education for every child in the United States, including children with disabilities. Seven years have passed since the passage of revisions to the bill PL-105-17/ IDEA 1997. Millions of children have received educational services since then, yet in spite of the evidence indicating the positive effects of inclusionary practices of education, pre-service teacher programs do not appear to be offering a standardized method of providing effective training for professional educators in the use of PBS.

Summary of Specific Research Related to Research Question

Iwata et al., (1982) discuss the practical use of functional analysis in identifying the conditions under which aberrant behavior occurs. Lalli & Goh (1993) conducted field studies in public school settings teaching classroom teachers to conduct an analysis of the operant function of problem behaviors in the classroom and to implement interventions to decrease problem behaviors while concurrently increasing more appropriate behaviors. Considerable additional research has been conducted indicating the positive effects of training teachers to use functional analysis and behavioral intervention strategies to improve student behaviors in the classroom (Carr and Durand,

1985; Lohrmann-O'Rourke, Knoster, & Llewllyn, 1999; Moore, et al., 2002; Sugai et al., 2000; Wallace, Doney, Mintz-Resudek, & Tarbox, 2004). This research suggests that training teachers to recognize the function of a student's aberrant behavior and to teach a more appropriate replacement behavior (DRA) can be very successful for both the student and the classroom community.

Discussion of Specific Strategies Related to Research Question

Horner has conducted extensive research on methods teachers use to address problem behaviors in the classroom (Horner et al., 1990; Horner, 2000; Horner & Sugai, 2002). Safran and Oswald (2003) discuss the efficacy of using archival data and assessment data in planning intervention strategies for problem behaviors in schools. Carr et al., (2002) discuss the use of PBS in redesigning the environment to be more successful for students. Buyusse, Sparkman, and Wesley (2003) examine a community of practice model in which they discuss the role of the general education teacher in collaborating in the planning and implementation of special education services. To make it possible for the general education teacher to play an active role, additional training is required. Weigle (1997) indicates pre-service teacher training programs are not providing positive intervention strategies in their programs and as a result, most general education teachers resort to punitive measures to control problem behaviors in the classroom.

IDEA 1997 and IDEA 2004 both strongly recommend that general education teachers employ positive interventions, rather than the more traditional punitive means of changing problem behaviors of students. This is current federal legislation, and schools

are required to comply with these regulations. One obvious solution to the problem would be to provide specific training in the use of positive behavior supports to pre-service teachers while they are participating in their internship phase of the teacher preparation program. Would the provision of this specific training improve the learning within the general education classroom setting?

CHAPTER THREE: METHODOLOGY

Purpose

The term Positive Behavior Supports (PBS) has its roots in applied behavioral analysis, where it was first used to improve the treatment and care of individuals with severe disabilities (Carr et al., 2002). PBS, as it is used today has a nebulous meaning, especially among general education teachers. The term encompasses the following four interrelated components that should be present in order for PBS to be effective: (a) systems change activities, (b) environmental alterations activities, (c) skill instruction activities, and (d) behavioral consequences activities, (Farmer, Farmer, & Gut, 1999; Turnbull, Wilcox, Stowe, & Turnbull, 2001). This study was designed to measure teacher – student interactions focusing particularly upon teacher use of (c) skill instruction activities, and (d) behavioral consequences activities.

PBS offers a practical technology for teachers to use to develop behavioral fluency and expertise as they learn to manipulate the environmental variables within the ecology of the classroom, providing a learning environment in which every student can succeed.   The Individuals with Disabilities Education Act (IDEA) requires that general education teachers are competent in using this new technology, and pre-service teacher training programs need to provide both the instruction and opportunities to practice successful inclusion in order to attain the levels of mastery required by other federally mandated laws, such as the No Child Left Behind Act. Clearly, if teachers aren't trained to provide effective instruction to every student in their classroom, attaining these

federally mandated high standards continues to be a task of overwhelming, frustrating proportion.

The use of PBS is critical for helping students develop skills for independence. PBS presents a systems-orientation by viewing the individual student as one participant in an ecological context where the interaction within the environment determines the outcome (Carr, 1997). The emphasis in PBS is upon (a) determining the function of the problem behavior, and (b) changing the environmental factors that may serve as triggers for the problem behavior. By manipulating environmental factors, a teacher can render the problem behaviors irrelevant, inefficient, or ineffective (Horner, 2000). The supposition is not that the individuals are defective or broken and thus in need of punishers, but rather that they experience the world around them in different ways (Horner, 2000). Kennedy, Long, Jolivette, Cox, Jung-Chang, & Thompson (2001), state when teachers are trained to recognize these differences they can plan pro-active strategies to address the problem, rather than attack or punish the child. The result of this training is improved student behavior, gains in student academic performance, and a more effective classroom learning environment for every student (Kennedy et al., 2001). Without effective training and use of PBS strategies, there may be a tendency for general classroom teachers to become overly simplistic about the learning process, erroneously assigning blanket interventions and ineffective treatment strategies to students in the name of PBS (Horner, 2000).

Pre-service teaching programs for general education teachers often rely upon traditional methods of managing problem students by providing unpleasant consequences

for inappropriate behaviors (Gartin & Murdick, 2001). The use of such consequent strategies is often ineffective, frequently providing the student with the attention or escape (s)he is seeking, therein positively or negatively reinforcing the undesirable behavior (Gartin & Murdick, 2001). General classroom teachers may unwittingly maintain or increase inappropriate behaviors when they reinforce these behaviors, a direct result of a lack of training in principles of applied behavior analysis, specifically in functional behavior assessments and behavior intervention planning. For example: Jimmy acts out at the start of reading class every day, and his behavior is followed by daily exclusionary time-out, consequently Jimmy increases acting out behaviors before reading class. Inadvertently, the teacher is negatively reinforcing this behavior. Upon assessment, we observe that Jimmy is reading two grade levels below the rest of the class, and Jimmy is avoiding admitting his problems in reading by getting himself dismissed from class. When the teacher conducts an analysis of the problem, an effective solution can be planned; Jimmy is given the instructional support he needs, he gains the necessary skills and no longer needs to act out inappropriately.

The intention of PBS is to instruct students to use appropriate skills to achieve the same outcome as the inappropriate skills they have been using. In order for general education classroom teachers to accomplish this, they need to conduct a functional behavioral assessment to identify the root cause or function of the behavior and plan useful behavioral interventions to cultivate skills for students to use more appropriate behaviors (Artesani & Mallar, 1998). The impact of a teacher's use of this methodology reaches the entire classroom as the aberrant behaviors frequently disrupt the entire class.

In the case of Jimmy's acting out behavior, a functional assessment would indicate he is trying to escape the instruction for which he lacks the requisite skills to participate.

Extensive research has been done indicating success in training teachers to develop effective intervention strategies for classroom use (DePry & Sugai, 2002; Iwata, et al., 2000; Lalli, Browder, Mace & Brown, 1983; Lalli & Goh, 1993; Lohrmann-O'Rourke, Knoster & Llewellyn, 1999; Moore et al., 2002). One such intervention strategy that has been effective is to ignore problem behaviors while concurrently providing positive reinforcement for the more appropriate alternate behavior. By providing differential reinforcement of alternate behaviors (DRA), teachers can help students learn to make choices that enhance or improve their learning and/or do not interfere with the learning needs of others in the general education classroom.

Many researchers have used a DRA procedure to provide positive behavior supports in classroom settings (Artesani & Mallar, 1998; Lalli et al., 1983; Lalli & Goh, 1993; Meyer, 1999). The use of DRA is effective because reinforcement is provided for the alternate behavior, thus weakening the condition in which the targeted behavior is maintained. Concurrently, the problem behavior is placed on extinction (i.e. ignoring) to reduce its occurrence. The selection of the alternate behavior is determined by assessing the function of the targeted inappropriate behavior, and providing a replacement alternate behavior which can serve the same function in a more appropriate manner (Alberto & Troutman, 2003). By teaching the student a more appropriate behavior through positive reinforcement, the student will also learn to generalize these newly acquired skills across other settings. Providing direct instruction to pre-service teachers in the use of DRA

assists students who demonstrate problem behaviors in the classroom with opportunities to learn more appropriate behaviors. The use of DRA has two facets; reinforcing the occurrence of a behavior that is an alternative to the problem behavior while placing the problem behavior on extinction (Alberto & Troutman, 2003). This provides students with increased opportunities for success in classroom settings, because they are neither repeatedly gaining positive reinforcement for inappropriate behaviors, nor being punished for lacking appropriate behaviors. A deliberate, calculated approach to teaching the desired behavior helps students increase their use of appropriate alternate behaviors.

There is substantial evidence indicating that the teacher must effectively identify the function of the inappropriate behavior and select an intervention strategy that reinforces the same function (Lohrman-O'Rourke et al., 1999; Meyer, 1999; Moore et al., 2002). The selection of the alternate behavior must be specific to the function and context of the problem behavior, as a given behavior can serve different functions within different environments for the same student. For example, Lalli et al. (1983) successfully demonstrated the use of DRA in a study conducted in a classroom setting to train teachers to recognize the operant function of inappropriate play behaviors and to teach students more appropriate, functionally equivalent play behaviors. In this study, pre-service teachers were able to successfully teach students to use more socially acceptable behaviors to obtain the reinforcers previously produced by the targeted problem behaviors (Lalli et al., 1983).

Continuing with the example of Jimmy, until an assessment is conducted on him, and he is provided with alternate, more appropriate methods of responding, Jimmy will continue to act out in class, allowing him to escape the adverse condition. General education teachers need to be trained in this process in order to successfully provide free and appropriate public education to special education students who are mainstreamed into general education classrooms (Warren, Edmonson, Griggs, Lassen, McCarl, Turnbull, & Sailor, 2003). Without appropriate training, the future of inclusive education faces jeopardy as a result of its ineffectiveness (Weigle, 1997).

Methodology

Rationale

Single subject research is the most common method of research used in special education studies since the study of individual learning differences often are addressed with methods used in the field of experimental psychology (Barlow & Hersen, 1984). The unique feature of these designs is the capacity to use the single case study to conduct experimental investigations (Kazdin, 1982). Single subject research does present limitations, such as limitations in generalizability due to the small sample size. However, as Kazdin notes single case studies offer the potential to explore the effects of treatment by systematically applying selectively planned interventions to individual or small groups.

Participants

Seven undergraduate (senior) student teachers in general education programs (either elementary or secondary level certification programs) participated in this study

during the second six-week placement of their student teaching internship. All participating pre-service teachers have had only a brief introduction to the use of positive behavior supports of approximately six hours of instruction in Educational Psychology course during their junior year of the teacher preparation program.

The author conducted the training in PBS for this study in workshops with pairs of pre-service teachers. The workshops, which were thirty to forty-five minutes in length, were held at the College. Workshop content included basic instruction in principles of applied behavior analysis, and a brief introduction to the use of a motivational assessment scale (MAS) developed by Durand & Crimmins (1992). The workshop also included discussion of IDEA principles and requirements for general education teachers, as well as discussion on the Gaskins et al v. PDE settlement. In addition, during this workshop, pre-service teachers received instruction in how to create a behavior intervention plan to address the identified aberrant behavior, and an explanation of the use of the Observational Data Sheet (included in Appendix A).

Participating pre-service teachers were asked to discuss performance of target students in their student teaching placement classroom during the intervention workshop. As target problem behaviors were identified in students, each participating pre-service teacher was given direct instruction on how to respond to specific target behaviors that occur in the classroom where the participant was student teaching. Each pair of participants practiced ignoring problem behaviors, responding to appropriate behaviors and providing corrective feedback during the single direct instruction workshop.

The researcher continued to collect direct observation data using the Observational Data Sheet to measure the pre-service teacher's ability to ignore (i.e. place on extinction) inappropriate behaviors and to reinforce appropriate student behaviors (i.e. DRA). Pre-service teachers' performance was charted daily, and during intervention, shown and discussed with the pre-service teacher at the weekly follow-up meetings. After the initial workshop, pre-service teachers met with the researcher once per week to discuss results based on the direct observations in the classrooms.

Human Subjects Procedures

The full proposal for this research was submitted separately to the Institutional Review Boards of both Duquesne University and Mercyhurst College. Upon approval from both Review Boards, informed consent was obtained from each of the participants. In addition, informed consent was obtained from the classroom teacher in whose room the study took place, as well as the principal at each school.

Individual student behaviors served only as antecedents to discriminative stimuli which occasion the pre-service teacher's response to provide positive reinforcement to the alternate behavior (Alberto & Troutman, 2003). No names or data were collected on individual students. See Observational Data Sheet (Appendix A).

Setting

The study took place in three school districts located in urban and suburban settings in north-eastern United States. Participants were placed in elementary and high school general education classrooms with an average class size of 25 students. Information about which students have been identified with Individualized Educational

Plans (IEPs) was disclosed to the pre-service teacher before the study began. Data were

collected in this natural setting in the general education classrooms where the participants

performed their student teaching internships. The researcher was not the evaluator for

the participants' student teaching internship. The instructional activities which occurred

during the observations ranged from very structured environments such as direct

instruction or lecture to very unstructured environments such as cooperative learning

groups and independent seat work. A use of percentage of opportunities of pre-service

teacher response was effective for attaining a mean of student behaviors across various

instructional settings.

Instruction in the use of PBS was done (a) at the College were the workshop was

held with pairs of pre-service teachers, and (b) at each school a site where individual

weekly meeting were held. A compilation of documents provided by the Pennsylvania

Department of Education (obtained from the PA Department of Education website) and

Alberto & Troutman's (2003) model for employing a differential reinforcer of an

alternate behavior (DRA) were used during the workshops and weekly meetings.

Definition of Target Behavior (Dependent Measures)

DRA has two distinct components; (a) providing positive reinforcers for alternate

appropriate behaviors and (b) ignoring (placing on extinction) the target problem

behavior. Therefore, the primary dependent variable was the percentage of pre-service

teacher's verbal responses to student behaviors. Student behaviors served as antecedents

to pre-service teacher's verbal response. Two forms of teacher verbal response were

measured (a) the percentage of opportunities the pre-service teacher responded to

student's target problem behavior and (b) the percentage of opportunities the pre-service teacher responded to student's alternate appropriate behavior. Specifically, student's targeted problem behaviors are defined as (a) talking-out without teacher consent and (b) out-of-seat behaviors during instruction of quiet independent seat work. The alternate behaviors were defined as (a) student raising hand silently and waiting for pre-service teacher to call upon him before speaking and (b) student remaining in seat during instructional time.

There were four possible responses from pre-service teachers: ignoring appropriate student behaviors, ignoring inappropriate student behaviors, attending to appropriate student behaviors or attending to inappropriate student behaviors. The pre-service teacher's response of ignoring inappropriate behaviors, denoted on the Observational Data Sheet as (-), was defined as no teacher response within a ten second latency (ignoring) at the end of a student's talking-out or out-of-seat behavior (Mace & Belfiore, 1990). The pre-service teacher's response to alternate behavior was defined as positive verbal attention within a10-s latency at the end of alternate behavior. The pre-service teacher's response of attention to target problem behavior was defined as positive verbal response within 10-s immediately following the behavior, denoted as (+). Pre-service teacher's response of ignoring alternate student behaviors were defined as a non-occurrence of teacher response within a10-s latency to (a) student raising hand silently, or (b) student remaining in seat during instructional time.

Secondary dependent measure was a count of teacher corrective feedback (see *Table* 3). Gunter & Coutinho (1997) suggest that the use of instructional interactions

such as corrective feedback to assist students in learning the appropriate alternate behaviors will significantly improve student compliance. The use of corrective feedback can include identifying the student's error, allowing wait time for the student to respond, and prompting the student with desired response. Corrective feedback for talking-out was defined as pre-service teacher's verbal response to pupil's talking-out after 10-s latency period. (e.g.: "Remember, Joe, we raise our hand before we speak out in class.") Corrective feedback for out-of-seat behavior was defined as pre-service teacher's verbal response to pupil's return to his seat. For example: "All students are expected to raise their hands when they have something to say. Josh, good job raising in your hand." In addition, a frequency count of the target problem behaviors and alternate appropriate behaviors exhibited by classrooms of students was also tabulated.

Two responses were counted on the Observational Data Sheet as correct responses: (a) the pre-service teacher's ignoring (-) problem behavior for ten seconds, then providing corrective feedback ($\sqrt{}$), (b) or the pre-service teacher's response of calling on students for raising hands, thus providing positive reinforcement for using the appropriate behavior, thus employing the DRA technique. All other combinations were scored as incorrect.

Experimental Design

The use of a multiple baseline across pre-service teachers provides a strong design for use with instructional interventions, since it is difficult to unlearn the intervention and return to baseline phase to indicate the effect of the intervention and experimental control. This design is effective in ruling out maturation, history and other

confounding factors that could account for change in the dependent measure (Cuvo, 1979) because comparisons can be drawn across multiple AB phases of the study. Both within and across subject comparisons are made between baseline (A) and intervention (B). Within-subject comparisons are A to B for each participant. Across subject comparisons are A to B across the seven participants. Because of this flexibility, multiple baseline design is very well suited for instructional development and the analysis of intervention effects (Strain & Shores, 1979). Because of the multiple comparisons there is no need to return to baseline.

Using the multiple baseline design, baseline data were collected across individuals until a stable baseline, indicating an absence of trend was reached. The researcher began intervention sequentially across individuals, one pair at a time. When intervention phase was implemented for the first pair of subjects, baseline data collection continued for the remaining participants. Intervention began on the second pair of subjects when the first subject shows a trend in the desired direction as indicated by three consecutive data points (Alberto & Troutman, 2003). Data was recorded on the dependent variables simultaneously for each individual, until all individuals were receiving the same intervention(s).

Experimental Control

Experimental control was established in a multiple baseline design by sequential introduction of the independent variable across each data series (Horner, Carr, Halle, McGee, Odom & Woolery, 2005). Experimental control was demonstrated by establishing a co-variation between changes in behavior patterns within and across data

series in three or more different series of data across three or more different data points. This ensured that the changes which occurred were the result of the defined intervention, not other extraneous variables. During the study, the pre-service teacher did not change any other classroom management strategies or manipulate any other environmental factors such as seating or classroom procedures which might confound the study.

Across subject comparisons were made across paired participants. The use of an extended baseline phase in the second and third pairs of participants (sessions 4 - 7) shows a comparison between participants B (Theresa and Charlotte) and C (Phyllis, Mina and Lauren) remaining in baseline while the first pair A (Regina and Serena, sessions 4-7) are in intervention phase. The continued baseline phase of subject C (sessions 8 -11) permitted additional comparisons between intervention phase of subject A and B (sessions 8-11), and baseline phase of subject C.

Data Collection / Assessment Procedures

The researcher observed the behaviors of students in classrooms of the seven participants in the study Monday through Friday. In an effort to keep the study arbitrary, participants did not know which time of the day the researcher was coming. The researcher conducted direct observation of interactions between the pre-service teacher and the students using the Observational Data Sheet (See Appendix 1). The observation sessions were twenty minutes long. The results of these observations were discussed with the pre-service teacher during the intervention workshop following baseline for each pre-service teacher, and in weekly follow-up sessions.

Two sets of data were collected as the pre-service teacher responded to problem behaviors. The first, a percentage of the number of times the teacher provided verbal responses to (a) the alternate, appropriate behavior, and (b) the target problem behavior were compared to the total number of opportunities a teacher had to respond to student behaviors.   A second set of data were collected on class-wide performance. A mean frequency count of number of times students engaged in identified target behaviors (talking-out and getting out-of-seat) and alternate behaviors (raising hand or staying in-seat). Initial observations of student out-of-seat behaviors indicated such a low occurrence of this target behavior, that was it did not yield a high enough count of a problem to merit the use of DRA in the intervention workshop. The researcher determined it difficult to provide direct instruction in ignoring the non-occurrence of a behavior, or to provide reinforcement for a well established behavior of remaining in seat. After several weeks of very low occurrence of out-of-seat behavior, the researcher discontinued recording direct observations of out-of-seat behaviors, and began focusing upon the talk-out and hand raising behaviors exclusively.

The Observational Data Sheet includes nine columns. The first column indicates the occurrence of a behavioral incident. Columns 2/3 and 6/7 identify the two alternate behaviors and the two targeted behaviors; in seat/out-of seat (Col. 2/3) and hand-raising/talking-out (Col. 6/7). Observer identified the specific behavior occurring by marking one of these columns. Columns 4 and 8 recorded the teacher's response to the respective behavior. Observer marked (+) if the pre-service teacher provided attention to the behavior. Observer marked (-) if the behavior was ignored. Columns 5 and 9

represented corrective feedback, and were marked with a (√) if pre-service teacher's verbal response was a redirection to the student's problem behavior, or (n) if no corrective feedback was given. For example, if Jimmy talked out four times, and the teacher provided attention each of the four times, four behavioral incidents were circled in Column 7 on the Observational Data Sheet. Four (+) were noted in the teacher's response in Column 8. If Jimmy talked out four times and the teacher ignored Jimmy, within 10 seconds two of four times and provides attention two of four times, four behavioral incidents were circled in Column 7 and two (+) attention and two (-) ignoring were recorded. If the pre-service teacher provided corrective feedback as a verbal prompt, (√) was recorded in Column 9. (See Appendix A.) These data were collected and monitored by the researcher, a graduate student and then discussed with the pre-service teacher during intervention phase.

Reliability and Integrity Procedures

Data were collected by the researcher and two graduate students trained to use the Observational Data Sheet. Training for these graduate students was done in a workshop, recording direct observations in response to a video recording of classroom behaviors. To ensure reliability in the data collection for the study, during workshop training, scores were compared and discussed. Training continued until each graduate student's scores reached 90% agreement with the researcher's scores for three consecutive observations.

Simultaneous observations were calculated to establish a coefficient of inter-observer agreement of 96%. For example; if the researcher recorded 15 behavioral incidents and the graduate student records 14 incidents, inter-observer agreement would

be 14/15, or 93%. Inter-observer agreement data were collected for 30% of sessions

across conditions and teachers.   Observational sessions were 20 minutes long, and

occurred at various time of the day four to five times per week.

Procedural integrity was collected to verify that the same intervention procedures

were followed by the researcher throughout data collection. Components of the

workshops and weekly meetings measured for procedural integrity included an (a)

explanation of functional behavioral assessment, (b) discussion of behavioral

consequences, (c) discussion of PBS and IDEA, (d) discussion on the Gaskins' vs.

Pennsylvania Department of Education case law settlement, (e) discussion of effective

use of positive reinforcers, (f) discussion of the Observational Data Sheet, (g) instruction

in the use of DRA, (h) suggestions for specific incidental occurrences of behaviors in the

pre-service teacher's classroom, and (i) practice in responding to reinforce appropriate

behaviors.   Data were collected by a third party on 30% of sessions for the intervention

workshops and post-workshop weekly meetings by a trained observer who attended those

sessions. Procedural integrity was 100% across all sessions.

Social Validity

Social validity of the study was measured by having all participating pre-service

teachers complete a brief five question survey at the end of the study. The questions

served to further provide validity for the necessity of the study. A sample of the survey is

included in Appendix D.   Data from this survey was tabulated in a chart in *Table* 2.

Procedures:

    Baseline procedures: During baseline condition, data were collected on the teacher's verbal response to the occurrence of students' behavior. Baseline data were collected for four consecutive 20 minute sessions for the first pair of participants, Regina and Serena, before intervention began. The other five participants remain in baseline phase until a trend was observed as a result of the intervention in the first pair of participants. The second pair of participants, Theresa and Charlotte, began intervention after seven baseline observation sessions. The third group of participants, Phyllis, Mina and Lauren, remained in baseline for eleven sessions before attending the intervention workshop. Data were collected on the number of times the pre-service teacher provided feedback (attending or ignoring) to pupils demonstrating the alternate or target behavior(s).

    Intervention Procedures: After baseline was established, interventions began with the first pair of participants, Regina and Serena. The intervention included two facets; (a) a direct instruction workshop and (b) individual meetings with the pre-service teachers after direct observation.

    Following baseline, intervention began as pairs of participants received direct instruction in the use of Positive Behavior Supports. Specific training in the use intervention strategies of a DRA in response to the identified problem behavior of student talk-outs provided participants with tools for managing inappropriate behaviors effectively. During the one hour direct instruction workshop session, participants discussed techniques in giving attention, ignoring behaviors, and using corrective

feedback and then practiced those procedures. (e.g.: When Joe talks out, pre-service teacher ignores Joe, then provides corrective feedback to Joe (after a 10-s latency) by acknowledging his appropriate behavior. When Joe raises his hand, pre-service teacher verbally reinforces Joe by stating, "Good job raising your hand, Joe.") Modeling and direct instruction were used during the workshop to train pre-service teachers in the use of DRA technique until pre-service teachers could demonstrate these skills with 90% accuracy.

Following the initial intervention workshop, weekly meetings (fifteen to thirty minutes in length) were held with individual participants to review progress throughout the pre-service teachers' remaining student teaching experience. Specific concerns with the use of DRA were addressed in these meetings. Feedback on the pre-service teachers' use of DRA was provided during these individual sessions.

CHAPTER FOUR: RESULTS

Results showed pre-service teachers were able to use positive behavior supports, specifically the DRA technique to reduce the number of talk-outs while increasing the number of times students in the classroom raised their hand to get the pre-service teacher's attention. *Figure 1* shows the changes in pre-service teacher behaviors between baseline and intervention phases across participants in the study.

Pre-service Teacher Behavior

Observations of pre-service teacher behavior during baseline indicate limited ability to manage student behaviors. Pre-service teachers were equally ineffective at ignoring student talk-outs and recognizing and reinforcing students' behavior of raising hands. *Table 1* shows mean for baseline observations for each pre-service teacher's correct responses to student behaviors were: Regina, 1%, (range of 2-5%), Serena, 19%, (range of 13-25%), Theresa, 10%, (range of 2-17%), Charlotte, 6%, (range of 2-16%), Phyllis, 32%, (range of 15-75&), Mina, 19%, (range of 10-20%), and Lauren, 31%, (range of 2-94%) respectively. Following the intervention workshop, pre-service teachers were able to ignore talk-outs and give positive reinforcers effectively for hand raising. Post-intervention observation data indicate mean percentage for each pre-service teacher's correct responses to student behaviors were: Regina, 52%, (range of 31-70%), Serena, 50%, (range of 11-80%), Theresa, 52%, (range of 13-73%), Charlotte, 63%, (range of 24-85%), Phyllis, 78%, (range of 60-91%), Mina, 70%, (range of 27-84%), and Lauren, 78%, (range of 57-100%) respectively. Most pre-service teachers demonstrated consistent gains in the use of DRA and equally steady gains in ignoring inappropriate

behaviors. See *Figure 1* for more details.

Table 1.

Mean Percentage of Correct Responses

	Regina	Serena	Theresa	Charlotte	Phyllis	Mina	Lauren
Baseline	1%	19%	10%	6%	32%	19%	31%
Intervention	52%	50%	52%	63%	78%	70%	78%

Figure 1. Percentage of pre-service teacher correct response to student problem behaviors.

Student Behavior

Data collection during baseline indicate high levels of student talk-outs, mean of 17.5, (range of 11 to 25) and low levels of student hand raising, mean of 6.8, (range of 1 to 16) to obtain teacher attention across all participating pre-service teachers. As seen in *Figure 2*, after the intervention workshop and weekly follow up sessions, students' talk-outs dropped, mean of 7.2, (range of 7-9), while students' hand raising, mean of 11.4, (range of 4-18) increased across all classrooms observed. As a result of the pre-service teacher's feedback during post-intervention sessions, the students generally seemed to respond in the classroom with more appropriate behaviors. Please refer to *Table 2*.

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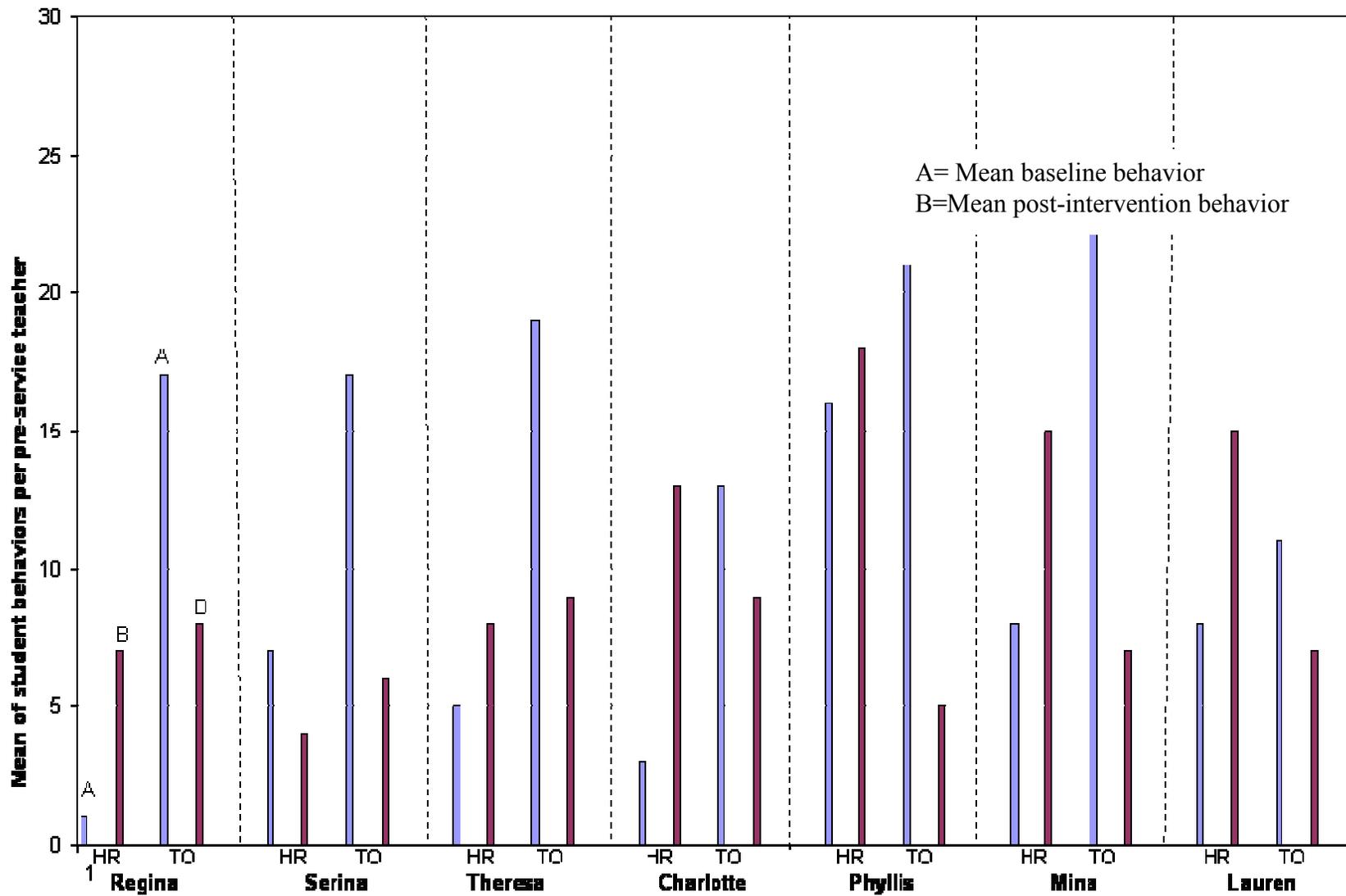
Figure 2. Mean of student behaviors per pre-service teacher.

Table 2.

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Mean Frequency of Student Behaviors

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	Hand-raising		Talk-outs	
	Pre	Post	Pre	Post
Regina	1	7	17	8
Serena	7	4	17	6
Theresa	5	8	19	9
Charlotte	3	13	13	9
Phyllis	16	18	21	5
Mina	8	15	25	7
Lauren	8	15	11	7
	Mean =6.8	Mean=11.4	Mean=17.5	Mean=7.2

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Social Validity

The student teaching experience can be overwhelming to the pre-service teacher. Each participant verbally indicated to the researcher an appreciation for the corrective feedback they were receiving as a result of participation in the study. A summary of pre-service teachers' responses to the five question survey is provided in *Table 3*. Common

responses indicate a general validation for the study, as pre-service teachers felt they gained skill in managing student behaviors as a result of participating in the study. Question two, which asked if the pre-service teacher found it difficult to remember to ignore the problem behavior while reinforcing the desired behavior showed the broadest range across participants. A mean of 3, (range 2 to 5) indicates this may have been the most challenging aspect of the study to the pre-service teachers. Other responses seem to indicate the pre-service teachers' gains in the use of DRA and their intentions to use what they learned in their own classrooms.

Table 3.

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Social Validity Survey Results

Participant	Question 1	Question 2	Question 3	Question 4	Question 5
A	5	4	4	5	4
B	4	3	5	5	4
C	5	5	5	5	4
D	4	2	3	5	4
E	5	3	5	5	4
F	5	2	5	5	4
Totals	27	19	27	30	24
Average	4.5	3	4.5	5	4

Horner et al., (2005) suggests that a study may be considered socially valid if it occurs at a meaningful period of time. Anecdotal comments from each of the participants indicated participation in this study was able to provide them with relevant, useful information at a time when it was very meaningful to them. On a larger scale, the timeliness of providing training to general education teachers in effective strategies for addressing problem behaviors continues to be identified (Warren et al., 2003).

Discussion

Pre-service teachers lack the skills to recognize problem student behaviors and respond effectively. Consequently, they spend an inordinate amount of time addressing problem behaviors and overcoming obstacles to instruction. Ample research has been done (e.g.: Gartin & Murdick, 2001, Kennedy, 1999) to suggest that classroom management techniques established during student teaching experience often become repeated during a teacher's professional career. Given that the student teaching experience may in fact serve to establish patterns of behavior for teaching that are likely to continue, providing accurate feedback to the pre-service teacher that assists in establishing effective management strategies appears to be valuable (Scheeler & Lee, 2002). The purpose of this study was to measure the effect of providing direct instruction in the use of DRA technology to pre-service teachers during their student teaching internship.

Pre-service Teacher Behaviors

This study examined the effect of training pre-service teachers to use a DRA technique to assist students to learn appropriate classroom behavior. The results of this study indicate that the use of DRA and combining planned ignoring of talk-outs was very effective for improving student behaviors in the classroom of pre-service teachers. During baseline, pre-service teachers responded to students' talk-outs and hand-raising without discernment. They were equally weak at recognizing and attending to the desired behaviors and ignoring the problem behaviors, therein providing inconsistent reinforcement for both behaviors.

After baseline data indicated the pattern of behaviors, pre-service teachers met in a one-hour workshop to (a) discuss these patterns, (b) recognize the laws governing special education, (c) identify specific strategies they could use to help students learn more appropriate ways of responding, and (d) practice using those strategies. Each pre-service teacher met individually with the researcher weekly after the intervention workshop for follow-up session. Those sessions included a review of the Observational Data Sheets and specific discussion on student behaviors within their classroom. The results of the intervention showed a marked improvement for each individual pre-service teacher's ability to deliver DRA.

Student Behaviors

The benefit of a change in teacher behavior is insignificant unless there is a measurable positive impact upon student behaviors (Scheeler & Lee, 2002). During baseline phase for each participant, student talk-outs in each pre-service teacher's classroom were being attended to by the pre-service teacher. Reinforced behaviors are strengthened, whether accidentally reinforced or intentionally reinforced (Alberto & Troutman, 2003). Across all participants during baseline, direct observations indicated high levels of student talk-out behavior. Conversely, behaviors which are not deliberately reinforced tend to remain weak or inconsistent. Student hand raising behaviors were inconsistently reinforced across all participants' classroom, resulting in only low levels of that behavior during the baseline phases.

After the intervention workshop, students in all classrooms appeared to respond to the pre-service teacher's expectations for hand-raising. Consequently, student talk-outs

began to decline as pre-service teachers used planned ignoring, corrective feedback and reinforcers for hand raising. The results suggest students respond favorably to pre-service teacher's expectations, and student behaviors can easily be changed when pre-service teachers employ a DRA technique to attain desired student behaviors.

<div align="center">Implications</div>

Current regulations (e.g. IDEA 1997) for treatment of students with special educational needs has legislated provision of educational services in general education settings whenever possible. For most students with IEPs, the implication includes participation in general education settings for at least some of the school day. Current practices in preparing pre-service general education teachers indicate only minimal training in either special education strategies or classroom management techniques (Gartin & Murdick, 1999, Warren et al., 2003, Weigle, 1997). Without specific training in PBS techniques, general education teachers are likely to over simplify problem behaviors and utilize blanket intervention or management strategies (Horner, 2000).

The recent case law settlement in Pennsylvania (Pennsylvania Department of Education, 2005, 94 CV 4048) provides significant impetus for revising the pre-service teacher preparation program to include specific training in both the special education laws and the implementation of educational services including techniques to teach students to demonstrate the expected behaviors. The use of traditional methods of punishing and/or isolating students for problem behaviors seems to no longer be a feasible option. In response to the IDEA legislation and recent case law litigation against the Pennsylvania Department of Education, general education teachers are expected to

enter their field prepared to manage the classroom, which more and more frequently contain a heterogeneous grouping of students.

The results of this study suggest that with only a minimal investment of time, general education pre-service teachers can be trained in the use of DRA to increase their ability to effectively manage student behaviors in the classroom.   The findings from this study indicate that pre-service teachers responded very well to direct instruction at a time when it was very relevant to issues they were facing daily in the classroom. Because the data were able to show the pre-service teachers' specific patterns, the teachers were able to focus their responses to students on the specific strategies of planned ignoring, corrective feedback and positive reinforcement to specific student behaviors; and they were able to observe immediate changes in student behaviors. The opportunity to develop effective techniques during the student teaching internship had both immediate and potentially long term effects for these participants.

<p style="text-align:center;">Limitations</p>

The limitations of this study must be considered when reviewing the results; several limitations must be addressed. First, the study was conducted during the second six-week placement for student teachers; therein the limitation of the length of this brief study resulted in an inability for the pre-service teachers to enter into a maintenance phase once they demonstrated mastery in the use of DRA.

During intervention, pre-service teachers were in the acquisition phase of learning to use positive behavior support. Because these skills were newly acquired, pre-service teachers did not have the opportunity within the six-weeks of the study to attempt a

maintenance phase. The brevity of the student teaching term disallowed any opportunities for maintenance as the students completed the student teaching placement and were no longer in the classrooms. Consequently, no post-intervention data were able to be collected on pre-service teacher's maintenance of acquired behaviors.

Second, some of the participants faced philosophical differences in classroom management styles with their cooperating teacher who was evaluating them. Consequently, they felt their attempts to implement some of the strategies were stifled. In a classroom environment in which they were not being evaluated for their performance, these prospective teachers might have been able to demonstrate higher rates of response to problem student behaviors. However, even with this limitation, all participants did demonstrate marked improvements from baseline to intervention phase.

Third, the research design presents limitations. One such limitation within the multiple baseline design exists for the participants who remain in an extended baseline phase. Phyllis began to show a slight improvement in her performance by the end of the third week of baseline observations. Conversely, the extended baseline seemed to cause frustration for Mina at times, as she was aware of the daily observations, and her own shortcoming to manage the classroom, yet was not given any insights or direction until the intervention phase began after 11 baseline sessions.

Although there were seven participants in the study, this should be considered a small sample size. A replication of the study, where it could be conducted for a longer period of time might add validity to the finding of this study.

Future Research

There is a large body of research addressing changes in pre-service teacher training. A limited amount of research in the use of PBS in schools seems to indicate promising potential for further studies. Inclusive educational practices continue to beckon changes in teacher education programs. This study could be replicated during student teaching internships to broaden the base of identified practices to improve the skills of general education teachers. Horner et al (2005) suggest replicating the effects of a single subject study across multiple studies. Therefore, future research could focus on the classrooms of novice general education teachers. Future studies could include measuring student performance, as suggested by Greenwood & Maheady (1997). Such a study would overcome the time constraints of student teaching, and would provide further data on the needs of teachers in general education settings where inclusive practices are frequently utilized.

Summary

Although there are limitations to this study, the results of this initial investigation of providing direct instruction to pre-service teachers during student teaching does seem to suggest that the student teaching internship is an opportune occasion to teach general education pre-service teachers some of the techniques that have been successfully employed by special education teachers for years. Teachers in inclusive general education classrooms need to understand both the special education laws, and the techniques to manage inclusive classrooms (Warren et al., 2003).

Perhaps a more significant outcome of the entire study was the use of PBS with the pre-service teachers by modeling the use of positive behavior supports to them. The use of PBS suggests beginning with an assessment of the student's strengths, and an assessment of needs (Carr et al, 2002).

An informal functional assessment was done by the author, including interviews with the teacher and direct observations of student behaviors. This information served to support the use of DRA for the pre-service teacher's response to class-wide problem student behaviors. Horner (2000) identifies three levels at which positive behavior supports can be implemented. This study focused upon teacher behaviors at the classroom level to provide positive behavior supports. To be effective for managing individual problem student behaviors in a classroom setting, a more focused use of a DRA would require a more comprehensive functional assessment.

This study identified classroom management strategies these pre-service teachers did not possess in their skill set. Specifically, they did not know how to use DRA to shape student behaviors effectively. The researcher was able to confer with participants individually, to help them develop their strengths within the classroom, while refining their skills for shaping student behaviors. Through modeling and direct instruction, both common techniques teachers use in developing positive behavior support plans with students, the researcher was able to demonstrate and document new teacher behaviors of providing corrective feedback and positive reinforcers for appropriate student behaviors while decreasing the inappropriate teacher behaviors of reinforcing talk-outs and ignoring hand raising. It will probably be a slow progression until such PBS techniques become

ubiquitous within pre-service teacher training programs. However, the climate is right

for considering such changes as essential preparations for general educators.

References

Alberto, P., & Troutman, A. (2003). *Applied behavior analysis for teachers*, (6th ed.).

Upper Saddle River, NJ: Pearson Merrill Prentice

Artesani, A. & Mallar, L., (1998) Positive behavior supports in general education

settings: Combining person-centered planning and functional analysis.

Intervention in School and Clinic 34, 33-39.

Barlow, D. H., & Hersen, M., (1984). Single Case Experimental Designs (2nd ed.).

Boston: Allyn & Bacon.

Bambara, L. (2002). Are you a behaviorist or a bonder? *Journal of Positive Behavioral

Interventions, 4,* 17-20.

Brophy, J., (2003). *Teaching problem students*. New York: Guilford Press.

Buyusse, V., Sparkman, K. L., & Wesley, P.W., (2003). Communities of practice:

Connecting what we know with what we do. *Exceptional Children, 69,* 263-277.

Carr, E. G., & Durand, V. M., (1985). Reducing behavior problems through functional

communication training. *Journal of Applied Behavior Analysis 18*, 111-126.

Carr, E. G. (1997)., Invited Commentary: The evolution of applied behavior analysis

into positive behavior support. *Journal of the Association for Persons with Severe

Handicaps 22*, 208-209.

Carr, E. G., Dunlap, G., Horner, R., Koegel, R., Turnbull, A., Sailor, W., Anderson, J.,

Albin, R., Koegel, L., & Fox, L., (2002). Positive behavior support: Evolution of

an applied science. *Journal of Positive Behavior interventions 4*, 4-16.

Cuvo, A., (1979). Multiple-baseline design in instructional research: Pitfalls of

measurement and procedural advantages. *American Journal of Mental Deficiency 84*, 219-228.

De Pry, R. L., & Sugai, G., (2002). The effect of active supervision and pre-correction on minor behavioral incidents in sixth grade general education classroom. *Journal of Behavioral Education 11*, 255-267.

Doggett, R. A., Edwards, R. P., Moore, J. W., Tingstrom, D. H., & Wilczynski, S. M., (2001). An approach to functional assessment in general education classroom settings. *School Psychology Review, 30,* 313-328.

Durand, V. M., & Crimmins, D. B., (1992). *Motivation assessment scale administration guide*. Topeka, KS: Monaco & Associates.

Eber, L., Sugai, G., Smith, C., & Scott, T., (2002). Wraparound and positive behavioral interventions and supports in the schools. *Journal of Emotional & Behavioral Disorders, 10*, 171-181.

Farmer, T., Farmer, E., Gut, D., (1999). Implications of social development research for aggressive youth with EBD. *Journal of Emotional & Behavior Disorders 7*, 130-137.

Gartin, B., & Murdick, N., (2001). A new IDEA mandate: The use of functional assessment of behavior and positive behavior supports. *Remedial and Special Education 22,* 344-349.

George, H. P., Harrower, J.K., & Knoster, T., (2003). School-wide prevention and early intervention: A process for establishing a system of school-wide behavior support. *Preventing School Failure, 47* (4), 170-176.

Greenwood, C. R. & Maheady, L., (1997) Measurable change in student performance: Forgotten standard in teacher preparation? *Teacher Education and Special Education 20* (3), 265-275.

Gresham, F. M., Quinn, M. M., & Restori, A., (1999). Methodological issues in functional analysis: Generalizability to other disability groups. *Behavior Disorders, 24,* 180-182.

Gunther, P. L., & Coutinho, M. J., (1997). Negative reinforcement in classrooms: What we're beginning to learn. *Teacher Education and Special Education, 20* (3), 249-264.

Hammond, H., & Ingalls, L., (2003). Teachers' attitudes toward inclusion: Survey results from elementary school teachers in three southwest rural school districts. *Rural Special Education Quarterly, 22*(2), 24-31.

Henning, M. B., & Mitchell, L. C., (2002). Preparing for inclusion. *Child Study Journal, 32* (1) 19-29.

Horner, R., Dunlap, G., Koegel, R., Carr, E. G., Sailor, W., Anderson, J., Albin, R. W., & O'Neill, R. E., (1990). Toward a technology of nonaversive behavior support. *Journal of the Association for Persons with Severe Handicaps, 15,* 125-132.

Horner, R., (2000). Positive behavior supports. *Focus on Autism and Other Developmental Disabilities*, *15*, 97-105.

Horner, R., & Sugai, G., (2003). Behavior function: Staying close to what we know. *Positive Behavior Supports Newsletter, 1* (1) Retrieved July 6, 2004, from

http://www.pbis.org/news/v1i1/PBISNEWSLETTER.htm#Function

Horner, R., Carr, E., Halle, J. McGee, G. Odom, S., & Wolery, M., (2005) Use of single
    subject research to identify evidence-based practice in special education.
    Exceptional Children, 71. 165-179.

Individuals with Disabilities Education Act Amendments of 1997, 20 U.S.C. §1401 et
    seq. (1997)

Iwata, B. A., Dorsey, M. F., Slifer, K. J., Bauman, K.E., & Richman, G. S., (1982).
    Toward a functional analysis of self-injury. *Analysis and Intervention in*
    Developmental Disabilities, 2, 3-20.

Iwata, B. A., Wallace, M. D., Kahng, S. W., Lindberg, J. S., Roscoe, E. M., Conners, J.,
    et al., (2000). Skill acquisition in the implementation of functional analysis
    methodology. *Journal of Applied Behavior Analysis 33,* 181-194.

Kazdin, A. E., (1982). Single-Case Research Designs Methods for Clinical and Applied
    Settings. New York: Oxford University Press.

Kennedy, C., Long, T., Jolivette, K., Jung-Chang, T., & Thompson, T., (2001).
    Facilitating general education participation of students with behavior problems by
    linking positive behavior supports and person-centered planning. *Journal of*
    Emotional & Behavioral Disorders 9, 161-172.

Kennedy, M. M, (1999). The role of preservice teacher education. In Darling-
    Hammond, L., & Sykes, G. (Eds.).(1991) Teaching as the learning profession:
    Handbook of teaching and policy, (pp.54-86). San Francisco: Jossey-Bass.

Knoster, T. P., (2000). Practical application of functional behavioral assessment in

schools. *Journal of Association for Persons with Severe Handicaps, 25,* 201-211.

Knoster, T. P., & Kincaid, D., (1999). Effective school practice in educating students with challenging behavior. *The Association for Persons with Severe Handicaps Newsletter, 25* (11), 8-11.

Kozub, F. (2002) Perceptions of challenging behavior by pre-service physical educators: A preliminary study. *Physical Educator, 59*, 104-113.

Lalli, J. S., Browder, D. M., Mace, F. C., & Brown, D. K., (1983). Teacher use of descriptive analysis data to implement interventions to decrease students' problem behaviors*. Journal of Applied Behavior Analysis 2,* 227-238.

Lalli, J. S., & Goh, H. L., (1993). Naturalistic Observations in Community Settings. In Communicative Alternatives to Challenging Behavior 3, 11-39. Baltimore: Brookes Publishing.

Lennox, D. B., & Miltenberger, R. G., (1989). Conducting a functional assessment of problem behavior in applied settings. *Journal of Association for Persons with Severe Handicaps, 14,* 304-311.

Lewis, T. J., Colvin, G., & Sugai, G. (2000). The effects of pre-correction and active supervision on recess behavior of elementary students. *Education and Treatment of Children, 23*, 109-121.

Lohrman-O'Rourke, S., Knoster, T., & Llewellyn, G., (1999). Screening for understanding: An initial line of inquiry for school-based settings. *Journal of Positive Behavioral Interventions 1,* 35-42.

Mace, F., & Belfiore, P., (1990). Behavioral momentum in the treatment of escape-
motivated stereotypy. *Journal of Applied Behavior Analysis 23,* 507-514.

McLeskey, J., Hoppey, D., Williamson, P., & Rentz, T., (2004). Is inclusion an illusion?
An examination of national and state trends toward the education of students with
learning disabilities in general education classrooms. *Learning Disabilities
Research & Practice, 19* (2), 109-115.

Meyer, K., (1999). Functional analysis and treatment of problem children exhibited by
elementary school children. *Journal of Applied Behavior Analysis 32*, 229-232.

Morgan, R., Whorton, J., & Willets, J., (2000). Use of peer mediation to develop
instructional behavior in pre-service teachers. *College Student Journal*, *34*, 146-
155.

Moore, J. W., Edwards, R. P. Sterling-Turner, H. E., Riley, J., DuBard, M., & McGeorge,
A., (2002). Teacher acquisition of functional analysis methodology. *Journal of
Applied Behavior Analysis 35,* 73-77.

Nelson, J. R., Roberts, M. L., Mathur, S. R., & Rutherford, R. B., (1999). Has public
policy exceeded our knowledge base? A review of the literature of the functional
behavioral assessment literature. *Behavior Disorders, 24,* 169-179.

Pennsylvania Department of Education, (2005). Notice of proposed settlement of class
action lawsuit Gaskins V. Pennsylvania Department of Education, May 10,
2005. Bureau of Special Education: retrieved June 9, 2005 from
http://www.pde.state.pa.us/special_edu/cwp/view.asp?a=177&q=112759

Safran, S. P., & Oswald, K., (2003). Positive behavior supports: Can schools reshape

disciplinary practices? *Exceptional Children*, *69*, 361-373.

Scheeler, M. C., & Lee, D. (2002). Using technology to deliver immediate corrective

feedback to pre-service teachers. *Journal of Behavioral Education*, 11, 231-242.

Scott, T. M., & Nelson, C. M., (1999). Using functional behavioral assessment to develop

effective intervention plans: Practical classroom applications. *Journal of Positive

Behavior Interventions, 1,* 242-251.

Singer, G. H., Gert, B., & Koegel, R. L., (1999). A moral framework for analyzing the

controversy over aversive behavioral interventions for people with severe mental

retardation. *Journal of Positive Behavioral Interventions, 1*, 88-100.

Smith, M., & Heflin, L.J., (2001). Supporting positive behavior in public schools: An

intervention program in Georgia, *Journal of Positive Interventions*, *3*, 39-47.

Sprague, J. R., Walker, H. M., Golly, A., White, K., Myers, D., & Shannon, T., (2001).

Translating research into effective practice: The effects of a universal staff and

student intervention on indicators of discipline and school safety. *Education and

Treatment of Children, 24,* 495-511.

Strain, P., & Shores, R., (1979). Additional comments on multiple-baseline designs in

instructional research. *American Journal of Mental Deficiency 84*, 229-234.

Sugai, G., & Horner, R. H., (2002). What is positive behavior support? *Journal of

Emotional & Behavioral Disorders, 10,* 130-136.

Sugai, G., Horner, R. H., Dunlap, G., Hieneman, M., Lewis, T. J., Nelson, C. M., Scott,

T., Liaupsin, C., Sailor, W., Turnbull, A. P., Turnbull, H. R. III, Wickham, D.,

Wilcox, B., & Ruef, M., (2000). Applying positive behavior support and

functional assessment in schools. *Journal of Positive Behavioral Interventions 2,* 131-143.

Sugai, G., Sprague, J. R., Horner, R. H., & Walker, H. M., (2000). Preventing school violence: The use of office discipline referrals to assess and monitor school-wide discipline interventions. *Journal of Emotional and Behavior Disorders, 8*, 94-102.

Taylor-Greene, S., Brown, D., Nelson, L., Longton, J., Gassman, T., Cohen, J., Schwartz, J., Horner, R., Sugai, G., & Hall, S., (1997). School-wide behavior support: Starting the year off right. *Journal of Behavioral Education, 7*, 99-112.

Turnbull, H. R., Wilcox, B. L., Stowe, M. & Turnbull, A. P., (2001). IDEA requirements for the use of PBS: gGuidelines for responsible agencies. *Journal of Positive Behavioral Interventions 3,* 11-18.

United States Office of Special Education Programs, (no date). History: Twenty-five years of progress in educating children with disabilities through IDEA. Retrieved on October 24, 2004 from http://www.ed.gov/policy/speced/leg/idea/history.html

Wallace, M. D., Doney, J. K., Mintz-Resudek, C. M., & Tarbox, R. S., (2004). Training educators to implement functional analyses. *Journal of Applied Behavior Analysis, 37*, 89-92.

Warren, J., Edmonson, H., Griggs, P., Lassen, S., McCart, A., Turnbull, A., Sailor, W., (2003). Urban applications of school-wide positive behavior support: Critical issues and lessons learned. *Journal of Positive Behavior Interventions 5,* 80-91.

Weigle, K. L., (1997). Positive behavior support as a model for promoting educational inclusion. *Journal of the Association for Persons with Severe Handicaps 22,* 36-

48.

Table Captions

Table 1. Comparison of mean of correct responses per pre-service teacher.

Table 2. Mean frequency of student behaviors per pre-service teacher.

Table 3. Results of Social Validity Survey.

Figure Captions

Figure 1. Percentage of pre-service teacher behavior correct responses.

Figure 2. Mean of class-wide student behaviors in response to pre-service teacher

behavior

Appendix A

Sample of Observational Data Sheet

and Overview of Intervention Procedures

**Teaching Pre-Service Teachers to
Use Positive Behavior Supports
in General Education Settings**

Overview of Intervention

I. Baseline collection of data

II. After baseline is established, Intervention includes three components:
    A. Conduct individual workshops with pairs of pre-service teachers including the
        following topics:

        1. Explanation of Functional Behavioral Assessment process

        2. Discussion of Positive Behavior Supports and IDEA
            a.   discussion of reinforcing patterns of behavior
            b. discussion of function of behaviors
            c. discussion of need to teach alternate behaviors

        3. Discussion of Gaskins et al. Settlement and its implications for
            general education teachers

        4. Discuss positive reinforcements for behaviors, both problem
            (target) behaviors and alternate behaviors

        5. Discuss data collection sheet

        6. Instruction in the use of Differential Reinforcer of Alternate
            behaviors

        7. Practice responding to target behaviors to 95% accuracy

    B. Continue regular observations of pre-service teacher
        Follow each observation with a brief conference (5 minute)
        with pre-service
            teacher to allow for questions and feedback

    C. Meet with all pre-service teachers who are at intervention stage
        weekly for 15 minute review.

OBSERVATIONAL DATA SHEET

Pre-service Teacher name: _____ Date of observation: _____ Length of observation: _____

Directions: Circle the observed student behavior in the appropriate column. In the teacher response columns, mark (+) or (-) to indicate teacher's response to student behavior.

Student behavior	In Seat	Out of Seat	Teacher Response	Corrective feedback	Hand Raised	Talked Out	Teacher Response	Corrective feedback
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
Incident	IS	OS			HR	TO		
TOTALS	/	/	/		/	/	/	

Definition of student behaviors:

In Seat: Student is seated, facing instructor, feet on floor

Out of Seat: Student is 12" or more away from desk area

Hand Raised: Student raises hand in air to attract teacher's attention without saying anything

Talked Out: Student says something or makes noises to attract teacher's attention

Definition of teacher behaviors:

Attending: Teacher responds to student behavior (+)

Ignoring: Teacher ignores student behavior, waits 10 seconds before acknowledging student (-)

Corrective Feedback: Teacher provides redirection to student's inappropriate behavior. (√)

Appendix B

Sample Documents to Obtain Approval to Conduct Research

DUQUESNE UNIVERSITY

600 FORBES AVENUE ♦ PITTSBURGH, PA 15282

August, 2005

Dear _____,

       I am writing to request consent to study the classroom management techniques of _____, who is conducting his/her student teaching internship in a classroom in your school.   My observations are part of a study I am completing for my doctoral dissertation.

       I have chosen to study the topic of providing training in the use of positive behavior supports to pre-service teachers in general education classroom. As you are well aware, the increase in inclusionary practices has changed the dynamic of general education classrooms, yet we have not made great strides in providing professional development training in ways to manage these changes. By allowing me to observe student teaching in this building, you are helping us to better prepare future teachers for the teaching profession during their pre-service training. I am happy to provide you with additional information if you would like it. I will also provide you with a copy of the results of this study.   I am enclosing the data sheet I plan to use. Each observation will be 30 minutes in length, approximately four times per week.

       Please feel free to ask any questions you may have. Rest assured that this study will be conducted to guard the confidentiality of each member of each classroom I visit in your building. There will be no use of any individual's identity in any way. No data will be collected to indicate any specific students. I am strictly observing the pre-service student teacher's responses to problem behaviors. There will not be any documentation of individual names, room numbers or any other information that might otherwise be identifiable. Please be confident that you reserve the right to cease the study at any point in time, should you feel the need to discontinue the study in your school.

       I believe that research conducted in the classroom is extremely valuable, and I look forward to hearing from you to discuss specific arrangements I might make to include your classroom in this important study. Thank you in advance for your support.

Sincerely,

Ruth G. Auld
IDPEL Doctoral Candidate

DUQUESNE UNIVERSITY

600 FORBES AVENUE ♦ PITTSBURGH, PA 15282

August, 2005

Dear _____,

I am writing to request consent to study the classroom management techniques of _____, who is conducting his/her student teaching internship in your classroom. My observations are part of a study I am completing for my doctoral dissertation.

I have chosen to study the topic of providing training in the use of positive behavior supports to pre-service teachers in general education classroom. As you are well aware, the increase in inclusionary practices has changed the dynamic of general education classrooms, yet we have not made great strides in providing professional development training in ways to manage these changes. By allowing me to observe your student teacher, you are helping us to better prepare future teachers for the teaching profession during their pre-service training. I am happy to provide you with additional information if you would like it. I will also gladly provide you with a copy of the results of this study. Participation in the research will not impact the student teacher's grade, their standing or progress in the educational program.

I have already received consent for this study from your building administrator, as well as consent from the school district's administration. Please feel free to ask any questions you may have. Rest assured that this study will be conducted to guard the confidentiality of each member of your classroom. There will be no use of any individual's identity in any way. No data will be collected to indicate any specific students. I am strictly observing the pre-service student teacher's responses to problem behaviors. There will not be any documentation of your name, your room number or any other information that might otherwise be identifiable. Please be confident that you reserve the right to cease the study at any point in time, should you feel the need to discontinue the study in your classroom.

I believe that research conducted in the classroom is extremely valuable, and I look forward to hearing from you to discuss specific arrangements I might make to include your classroom in this important study. Thank you in advance for your support.

Sincerely.

Ruth G. Auld

IDPEL Doctoral Candidate

DUQUESNE UNIVERSITY

600 FORBES AVENUE ♦ PITTSBURGH, PA 15282

September 21, 2005
Proposal for conducting a research study at Harbor Creek High School
Researcher: Ruth G. Auld, Doctoral Candidate at Duquesne University

Purpose for the Study: Data collected from this study will explore the usefulness of providing training to pre-service general education teachers in the use of positive behavior supports, to assist in the efficacy of the practice of inclusion in schools.

Dates for the study:
During the Fall Session of Student Teaching for Mercyhurst Pre-Service Teachers, **effective as soon as possible, until November 15**.

Participants in the study:
Data will be collected on two Mercyhurst College Student Teachers

Observations will occur in general education classrooms:
Mr. Stepnowski   (Student Teacher: Xxxxx Xxxxx)
Mr Moneta   (Student Teacher: Xxxxx Xxxxxx)

Observations will occur during the same period each day, a time arranged between the researcher and the cooperating classroom teacher.

NO identifying characteristics on any Harbor Creek Students will be collected in the data.

The Data collection sheet identifies only the incident, and the student teacher's response to the incident.

A report of the study will be provided to Mr. Ed Zenewicz, each participating cooperating teacher at Harbor Creek High school upon completion of the study.

Expectations of Harbor Creek High School faculty, staff and students:
The researcher is solely responsible for the study being conducted, and will not make requests of any staff, faculty or student at Harbor Creek High School.

The information gathered in the study will be kept confidential, and no identification of Harbor Creek High School will be reported in the finding. Harbor Creek High School faculty and administration reserve the right to end the study at any time, should the need arise.

If additional questions or discussion is needed to understand the nature of the study, please contact Ruth Auld, work: 824-3370, home: 734-2853, cell: 720-7884.

Appendix C

Procedural Integrity Checks

Procedural Integrity Checksheet
for conducting individual workshops
with pairs of pre-service teachers

Discussion of the following topics:

Explanation of Functional Behavioral Assessment process

o Discuss behavioral consequences

o Discussion of Positive Behavior Supports and IDEA
    o discussion of reinforcing patterns of behavior
    o discussion of function of behaviors
    o discussion of need to teach alternate behaviors

o Discussion of Gaskins et al. Settlement and its implications for general education teachers

o Discuss positive reinforcements for behaviors, both problem (target) behaviors and alternate behaviors

o Discuss data collection sheet

o Instruction in the use of Differential Reinforcer of Alternate behaviors

o Suggestions for specific incidental occurrences in the classroom

o Practice appropriate responses to reinforce appropriate behaviors

o Questions?

Completed by: _____ Date:_____

Procedural Integrity Checksheet
for conducting individual weekly meetings after intervention
workshop pre-service teachers

Discussion of the following topics:

- o Discuss specific use of behavioral consequences

- o Discussion of function of behaviors

- o Discussion of need to teach alternate behaviors

- o Discuss positive reinforcements for behaviors, both problem (target) behaviors and alternate behaviors

- o Discuss data collection sheet results

- o Suggestions for specific incidental occurrences in the classroom

- o Questions?

Completed by: _____ Date:_____

Appendix D

Sample Social Validity Survey

Pre-Service Teacher / Positive Behavior Support Study
Participant Survey

Please answer the following questions to help us determine the usefulness of this study.

On a scale of 1 to 5, with 1 being not at all and 5 being very much so, please honestly answer the following questions. Do not identify yourself; we only need your answers. Thank you.

1. Are you comfortable reinforcing a student's appropriate behavior while ignoring the target behavior?   1 2 3 4 5

2. Did you find it was difficult to remember to focus on the behavior you want to increase?
                                                                          1 2 3 4 5

3. Do you feel you have gained a better understanding of why some students act out?
                                                                          1 2 3 4 5

4. Do you think you might use this technique in a classroom of your own?
                                                                          1 2 3 4 5

5. Overall, did you find the students responded to your corrective feedback favorably?
                                                                          1 2 3 4 5