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The Effects Of The Attainment Of Functional Assessment Skills By Preschool Teachers And Their Assistants On Students' Classr

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THE EFFECTS OF THE ATTAINMENT OF FUNCTIONAL ASSESSMENT SKILLS BY PRESCHOOL TEACHERS AND THEIR ASSISTANTS ON STUDENTS' CLASSROOM BEHAVIOR

by

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ABSTRACT

The purpose of this study was to examine the effects of teaching functional assessment skills to three Prekindergarten teachers and their teaching assistants. The effects were measured by examining the behavior of the teachers and assistants, as well as the behaviors of the students; before, during and after the delivery of three, two-hour functional assessment classes. The teaching staff videotaped themselves and their students during a regular class time, predetermined by the researcher and each teacher prior to the onset of baseline data collection, over an approximate nine-week period. The video was taken in twelve-minute segments every day. Later, the video was coded for specific behaviors. Although there were gains in appropriate intervention strategies from teachers and assistants during the intervention phase, the interventions generally peaked a week or two after the classes ended and gradually declined. Teacher skills were retained however, as most ratios of appropriate interventions maintained at higher rates than baseline. Relationships between student behavior and correct teacher interventions were established and maintained. The intervention resulted in changes in staff behavior, but results did not sustain at high levels over time. The realization that escape maintained some student behavior, and teaching skills to "test" for function, were likely the most important concepts for many of the participants. Further research should include adding a behavior coach to assist in shaping the teaching staffs' emerging skills and to provide a sounding board when developing specific student interventions.

This dissertation is dedicated to my family, especially my husband, Bob, for handling much of the minutia of daily living, and being so supportive when school had to be a priority. I also dedicate this to the staff and consumers of the Enterprises Adult Day Training program, for all the times when they respected my closed door and "handled" people, places and things.

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CHAPTER 1- INTRODUCTION

This study examines the results of professional development training for prekindergarten teachers and their assistants in which the participants learned how to execute functional assessments for their students. In addition, the staff learned four, functionally appropriate, basic behavioral interventions to address behavior challenges. The purpose was to give teachers and their assistants the skills to identify the function of their students' behavior, and effective, functionally based, behavioral interventions that focus on appropriate behavior.

Preschool Behavior

State-funded prekindergarten programs exist in more than 40 states and serve over 1 million preschoolers a year (Gilliam, 2005). Although most of these children thrive and go on to be successful in kindergarten, many have difficulties with their behaviors. For some, the behavior challenges are so pervasive that the children are expelled. Nationally, 6.67 four-year-old children per 1,000 are expelled from preschool for behavior challenges, nearly 3.2 times the rate for all K-12 students combined (Gilliam, 2005).

There is significant evidence indicating a strong relationship between preschoolers from low socioeconomic status (SES) households and increased behavior problems compared to the general population. Qi and Kaiser (2003), in their meta-analysis of preschool research, found that up to 30% of young children from low SES households were labeled as behaviorally challenged or disabled. According to Webster-Stratton and Hammond (1998), prevalence could be as high as 35%. Kaiser and Hancock

(2000), in a presentation at Head Start's National Research Conference, indicated that up to 39% of the preschool boys they studied in Head Start could be classified as having clinically-significant externalizing behaviors. However, many preschool teachers, including those working with at-risk children, are not receiving formal training in behavior management, nor do they learn how to teach appropriate social skills. Head Start teachers and administrators indicate that training to address behavior challenges is their greatest need (Webster-Stratton & Hammond, 1998).

Longitudinal studies commissioned by the Institutes of Mental Health show that antisocial behavior that begins in childhood, especially early childhood, will persist through adolescence and into adulthood for many children. In fact, they classify this population as children with "lifetime persistent" antisocial behaviors, as opposed to the "adolescent limited" classification of peers who experiment with antisocial behavior between late childhood and adulthood (NIMH, 2000).

Kaiser, Hancock, Cai, Foster, & Hester (2000) indicate that because many children from low SES homes have increased risk for behavior challenges and language delays a cycle emerges. They state that ineffective communication, leading to increased agitation and aggression, then progressing to peer avoidance/rejection, and ultimately culminating in increased behavior challenges, emerges as a reoccurring pattern. Unless the social skills deficits and antisocial behaviors are addressed, the child's self destructive behavior patterns will likely continue (Craig-Unkefer & Kaiser, 2002).

Also, Jimerson, Ferguson, Whipple, Anderson, & Dalton (2002), in their study on grade retention and student drop-out rates, found time and again through literature review

and examination, that antisocial and withdrawn behaviors, identified as problematic in preschool, were highly correlated with poor academic achievement in the 1st and 2nd grades. Withdrawn behaviors can often mask language delays and social skill deficits. Yet teachers do not always recognize the connection between withdrawn behaviors, aggressive behaviors, and language skill deficits (Nungesser & Watkins, 2005).

Overt and aggressive, or "externalizing behaviors", are often seen as challenging. However, persistent and pervasive skill deficits, particularly relating to social skills (Farmer & Bierman, 2002), following directions (Akshoomoff, 2002; Kemp & Carter, 2005), and attention to task (Kemp & Carter, 2002), are challenging behaviors as well.

Kemp and Carter (2002) examined 22 students with moderate disabilities who received an inclusive preschool intervention that focused on social skills, pre-academic skills and independence skills, the "basic survival" skills needed for kindergarten. Follow up contacts 18 months to five years later (child age at follow-up ranged from 7.25 years to 11.33 years) revealed that the students were still in an inclusive setting. Their playground free play consisted of interactions with typical peers of at least 50% of the time, and there was no measurable difference in teacher supervision time on the playground. Though not selected by peers as the most popular, the students rated as neutral or "liked" rather than "disliked" by peer report.

In a study of 754 first graders, Farmer and Bierman (2002) found that students who became aggressive-withdrawn in first grade often exhibited inattention and social skills deficits in kindergarten. Later, these children were 45% more likely to require

special education services by the third grade and approximately 60% were rejected socially, by peers, on a regular basis.

Staff Training

In the Concept Paper on the Identification of and Intervention with Challenging Behavior, adopted by the Council for Exceptional Children, Division of Early Childhood on October 4, 1999, Brault, Carta, Hemmeter, McElvoy, Neilsen, Rous, Smith, Strain, and Timm (1999) state:

> "Given the nature of most challenging behavior, we believe that there is a vast array of supplemental services that can be added to the home and early education environment to increase the likelihood that children will learn appropriate behavior. A variety of intervention strategies can be implemented with either formal or informal support. Services and strategies could include, but are not limited to: (a) designing environments and activities to prevent challenging behavior and to help all children develop appropriate behavior; (b) utilizing effective behavioral interventions that are positive and address both the form and function of a young child's challenging behavior; (c) adopting curricular modification and accommodation strategies designed to help young children learn behaviors appropriate to their settings; and (d) providing external consultation and technical assistance or additional staff support, e.g. with appropriately trained early childhood special educators. In addition, all professionals who work with children in implementing individualized education programs (IEPs) or

individualized family service plans (IFSPs) must have opportunities to acquire knowledge and skills necessary for effective implementation of prevention and intervention programs."

Despite the recommendations of the Division for Early Childhood, there is little focus on behavioral interventions in early childhood educator preparation.

Although there is variation in the requirements, preschool teaching personnel receive their credentials through one of three routes: national certification following classes from private child care associations/agencies, national certification following classes offered through community colleges (CPR, 2006), and two or four-year degrees from community colleges or universities (UCF-COE, 2005). When taken as a whole, classroom personnel preparation to address challenging behaviors can be sporadic and uneven. None of the programs listed include significant preparation in behavior management, especially for those students who exhibit more intensive or dangerous behaviors.

Another area of concern is that preschool teachers are typically assisted by paraprofessionals who receive little or no training before entering the classroom, despite the increasing educational role they play in the classroom (Pickett, Likins, & Wallace, 2003). Frequently all the training many paraprofessionals receive when they first enter the classroom consists of a brief introduction to special education before taking a student into the community, including a few handouts and a brief opportunity to shadow another paraprofessional On-the-job training is often the norm (Carroll, 2001).

Giancreco, Edelman and Broer (2003), indicate there are several areas of concern for paraprofessionals in the classroom. Aside from an overall lack of social reinforcement from teachers and administrators in regards to their position, responsibilities and pay; paraprofessional training, collaborative time and supervision with their teachers were cited as areas of deficit in the schools studied.

In their workbook, A Guide to Schoolwide Planning for Paraeducator Support, Giangreco, *et al.*, indicate that paraprofessionals should have training to match their specific classroom assignment, including ongoing training opportunities that support competencies in specific areas and the opportunity to earn CEUs or college credit for their training (Giangreco, Edelman, & Broer, 2001).

As a result of the inconsistency in teacher and paraprofessional training, particularly in the private sector, preschool-age children with poorly-formed social skills and behavior challenges are frequently paired with teachers and staff who are ill-prepared to meet their needs (Giangreco et al., 2001).

Functional Assessment

Functional analysis has been used for many years with individuals with disabilities (Risley, 2005; Wolf, Birnbrauer, Williams, & Lawler, 1965), but was most clearly defined and operationalized by Iwata, Dorsey, Slifer, Bauman and Richman (1982, 1994). Several have written about the process and procedures, or their effectiveness (Horner & Carr, 1997; Kinch, Lewis-Palmer, Hagan-Burke, & Sugai, 2001; Kohn, Parnes, & Rosman, 1979; Murdock, O'Neill, & Cunningham, 2005; Tobin, 2001).

In addition, Boyajian, DuPaul, Handler, Eckert, and McGoey (2001), Wilder and Atwell (2006), and Asmus, Vollmer and Borrero (2002), have demonstrated success with young children based on the use of functional assessment and functionally-based interventions.

Required by law ("IDEA," 1997; "IDEA," 1990) and IDEIA ("IDEIA," 2004) for students whose academic achievements are compromised by their behavior, the requirement of functional assessments is clear. However, there is a need for comprehensive training to conduct functional assessments. Since its inclusion in federal law, functional analysis and functional assessments have entered into the educational mainstream. The Positive Behavior Support movement, now in hundreds of schools nationally, utilizes school-wide positive interactions, supplemented by individual functional assessments and behavior programs for those students who require them, according to Scott, McIntyre, Liaupsin, Nelson, Conroy and Payne (2005).

While required, training in functional assessment has been difficult to achieve on a large scale. Van Acker, Boreson, Gable, and Potterton (2005) and Scott, et al. (2005) both reported non-significant results when they attempted to examine functional assessments and behavior implementation plans implemented with insufficient training. Iwata, Wallace, Kahng, Lindberg, Roscoe, Conners, Hanley, Thompson, & Worsdell (2000) however, had success under controlled conditions with a brief instruction of functional assessment with undergraduate students. For consistent outcomes, methodology must be refined in order to provide effective teacher and staff preparation.

Methods

The purpose of this study is to examine the effects of teaching functional assessment skills and specific behavioral interventions to classroom staff in preschool settings. The material to be used is a part of a larger curriculum; *Promoting the Social Emotional Competence of Young Children.* This curriculum was developed by The Center for Evidence-Based Practice: Young Children with Challenging Behavior and the Center on the Social and Emotional Foundations for Early Learning, and was funded by a joint grant from Head Start, The Child Care Bureau, and the Administration on Children, Youth, and Families, U.S. Department of Health and Human Services (CSEFEL, 2006). Hosted by the University of Illinois at Urbana-Champaign, the center is also partnered by the National Black Child Institute, the National Association for Bilingual Education, the Division for Early Childhood of the Council for Exceptional Children, National Association of Child Care Resource and Referral Agencies, and the National Association for the Education of Young Children.

Subjects of the study were teachers and teacher assistants in the classrooms of the children served in the Voluntary Prekindergarten Programs (VPK) and Exceptional Early Learning Programs (EELP) in a large school district in Florida. These preschool programs are available to all four-year-old children in the district (EELP is available to eligible three-year-olds as well). The elementary school used for this study was in an area that served a large number of children from low socio-economic households as determined by the percentage of children receiving free lunch. The factors to be examined included the staff's ability to complete the curriculum in functional assessment

and simple behavioral interventions, their ability to implement in the actual classroom setting; and the individual student behavior before, during and after the intervention.

The variability in personnel preparation for preschool teachers in the private sector resulted in this researcher utilizing VPK and EELP teachers and their teacher assistants from a local school district. Teachers in the VPK program and the EELP classrooms are hired as certified teachers (or have a valid three-year temporary or five-year professional certificate). All must have a four-year degree, and must have passed the K-6 Subject Area Exam (FLDOE, 2005).

At the time of the study, there were 127 VPK sites in the county in which the study was conducted. Of those, 19 were in elementary schools in the district. The others were in private day care centers. In addition, there were a total of 55 elementary schools in the district that had at least one EELP classroom.

The Research Questions:

1. Will teaching functional assessment skills and specific behavioral interventions to Prekindergarten classroom staff affect the children's aggressive, oppositional, self-injurious and attentive behavior?
2. Will teaching functional assessment skills and specific behavioral interventions to Prekindergarten classroom staff result in staff implementation of responses and interventions that relate to the function of the students' behavior?

The curriculum, *Promoting the Social and Emotional Competence of Young Children*, consists of five modules. This curriculum utilizes a manual, video clips, and PowerPoint presentations to prepare preschool teachers and their assistants to model appropriate behaviors. It provides instruction on how to increase the positive interactions within the preschool environment, how to recognize and encourage emerging pro-social behaviors and how to address common challenging behaviors (CSEFEL, 2006).

Described is a study using a single subject pre-post design in which this researcher presented a module of the curriculum to the teachers and the teacher assistants of preschoolers from low socio-economic backgrounds and/or children identified as having a disability. These staff, from an elementary school that was scheduled to adopt a partial inclusion model in their preschool classrooms in their current school year, were taught how to complete functional assessments and implement simple, specific behavioral interventions designed to decrease aggressive and oppositional behaviors from the students, while encouraging attentive behavior. Staff from four of the six classrooms receiving the class participated in this research project, although only data from three of the classrooms were usable. Classes were held at a location and time convenient to the teachers and assistants, during the school day, and substitute teachers were obtained to cover the classrooms.

Classroom data collection consisted of pre-selected, pre-defined behaviors common to the preschool population. This researcher provided a video camera for each classroom to video twelve minutes of structured activity time, identified by the teacher

prior to the start of the research project, during which there would be staff and student interactions and a high probability that the behaviors the teacher and assistant wanted to change would occur.

Videotaped Data Collection

Videotaping was used in this study as data collection was occurring in real classrooms, with multiple students, with staff and behavior combinations to be recorded. Observations included all, or most, of the classroom setting, and could include up to 18 students in the video frame. Seating arrangements varied from teacher-assigned seating to daily student seating selection, and the young students moved quickly and frequently during observed sessions. Videotaping allowed detailed data collection over several dimensions.

Baseline data collection for the classrooms commenced six days before the start of the first training session and continued for nine weeks. Data collection was to occur daily for the duration of the study. Videotaped data were later coded and transcribed in a quiet, controlled environment. The children's behavior was coded from the tapes in 30-second intervals using momentary time sampling (Cooper, Heron, & Heward, 1987). Behaviors occurring at the end of the 30-second interval were transcribed on coded data sheets. Once the data were transcribed, a second set of observers viewed the tape again to determine if the classroom staff (teacher, assistant, or both) implemented the proper intervention(s) for the student behavior(s). These were transcribed on a staff data sheet separate from the student behavior sheet. More than twenty percent of the data for each

phase, from each classroom, were randomly selected for Inter Observer Agreement (IOA) by different observers to assess for inter-rater reliability (Cooper et al., 1987). These observations were rated interval by interval and ranged from 75% to 100% inter-observer agreement (IOA) per session, but had to average 80% or more agreement across sessions (for both classroom and participant data), or the observations were discarded and the observations and IOA were repeated, after examining the data and video to determine why scores were inconsistent. All IOA averaged over 90%.

Definitions

Data

Observation data: Videotaped material measuring the children's behavior data and the participant's intervention data created by teachers and assistants during the pre-arranged activity each day,.

Participant data: Data collected as a part of the functional assessment instruction, such as work product used to evaluate competency in the skill areas.

Functional assessment: Functional assessments, for the purposes of this study, are observed antecedents, behaviors and consequences *without experimental manipulation* prior to behavioral intervention, as well as anecdotal records with ABC data included.

Functional analysis: behavioral observations with observed and *manipulated* antecedents and consequences, for the purpose of identifying variables that are most likely to maintain behaviors.

Behavioral Definitions

Aggressive behaviors: Behaviors exhibited by a child that involve antagonistic physical contact between the child and another child, the child and the staff, the child and an object, and the child hitting with or throwing an object. In addition, threatening gestures such as verbal threats, upraised hands (with or without objects, as if to hit or throw), within the aggressor's arms reach of the person the child is targeting, will also be considered aggressive behavior.

Attentive behaviors: An absence of the other defined behaviors, occurring when the child is in the correct area (or in the process of moving towards the correct area), and with the student's body oriented correctly in time and space following the teacher's/teacher assistant's directions (sitting, standing, or moving as directed by the teacher). The child is oriented towards the teacher or assistant, or engaged in the activity that is occurring at the time. The student does not have to be doing the activity correctly, but must have been attempting the activity, even if he is attempting to copy a classmate's on-task behavior.

Inattentive behaviors: Looking away from the teacher or assistant, and off-task. The student may be looking away with no other activity, may be engaged with an object unrelated to the lesson, may be attending to another student, or may be misusing materials.

Inconsequential behaviors: Behaviors that are age-typical that may be annoying, but are not harmful to self, others, property, or animals.

Oppositional behaviors: Refusing to engage in an activity the teacher or assistant has asked him to do. This includes saying or gesturing "no," refusing to respond to a request ("ignoring"), running or moving away from the staff to avoid the activity, or pulling, pushing, or destroying/disrupting materials in the area after being given a directive.

"Repeatedly": A behavior-consequence sequence occurring three or more times during videoed sessions or by participant documentation of occurrence, such as "That is the third time you have done that in the past five minutes."

Self-Injurious behaviors: Observed behaviors that are inflicted by the student on his own body that appear to break the skin; or that appear to be done with sufficient force to leave a red mark, swelling, or bruising over time.

Definitions of Behavioral Functions

Escape maintained behaviors: Behaviors initiated by the child that have the effect of stopping or delaying the child from engaging in an activity requested by the teacher or staff.

Attention maintained behaviors: Behaviors initiated by the child that consistently result in staff or peer attention.

Access to reinforcers: Behaviors initiated by the child that repeatedly result in access to a preferred item, activity, or environmental placement.

Automatically reinforced behaviors/pain attenuation: Behaviors initiated by the child that are repeatedly most strongly maintained by the act itself, and have little or no

reinforcing effect from escape, attention, access to items, or other activities. Examples may be rocking the upper torso while sitting or standing, repetitive hand movements, foot tapping, hitting his own head with his hand, or humming softly. Pain attenuation may involve the same behaviors, but may also include moaning, crying, or facial grimacing. Pain attenuation should also be suspected if the above behaviors are not typical for the child, or caregivers report they frequently occur when the child does not feel well.

Definitions of Intervention Strategies in Response to Behaviors

Access to Reinforcers: For challenging behaviors maintained by access to reinforcers, the child will be asked to engage in the behavior appropriate to access the reinforcer, and will be given the reinforcer, or a time when they can have the reinforcer, when they successfully request the reinforcer. The reinforcer will be withdrawn or withheld until the child engages in the behavior (or an approximation of the behavior, if it is an emerging skill) that is appropriate to gain access to the reinforcer. Praise/give attention for the correct asking behavior. When the reinforcer is not allowed, or belongs to someone else, the reinforcer will be withdrawn or withheld and the child will be re-directed to another activity and reinforcement will be provided for engaging in the appropriate activity.

Pivot: For inattention, or challenging behaviors maintained by attention, the strategy is to ignore/give minimal attention to the child who is inattentive or is engaging in the inconsequential challenging behavior, give attend to other, appropriately-behaving

children. Attention is immediately provided to the target child when the challenging behavior stops, or the child selects an appropriate activity or bid for attention. "I see you are _*indicate the behavior such as 'raising your hand' or 'asking nicely'*_" will also be added to reinforce the correct behavior to access attention.

Automatic Reinforcement: For challenging behaviors maintained by automatic reinforcement/pain attenuation, the child will be blocked, re-directed back into an appropriate activity, and reinforced when they begin engaging in the appropriate activity. For acute pain attenuation, i.e. the behavior is blocked, but if the child is in obvious distress, the appropriate first aid/illness procedures established by school policy will prevail. For example, if a child is hitting his ear, the behavior is blocked, and the teacher or assistant will obtain the appropriate medical attention for the child.

Escape: Block and re-direct to the task demand, or, if the child has left the area, return the child to the area to complete the task. Verbal reinforcement will be provided when they engage in the task ("Thank you for _Engaging in the task_"), periodically during the task ("You are doing great" or "You're almost done!"), and when they complete the task ("Thank you for _*completing the task*_"). Physical assistance, such as additional blocking and re-directing, hand over hand assistance, and actual assistance completing the task, could also be added, based on the ability of the child.

Safety takes precedence over any intervention. If children are engaging in behavior that is dangerous to them, others, or will result in property destruction, the first intervention must be to block the continuation of the behavior, followed by the functionally based intervention.

CHAPTER 2 - LITERATURE REVIEW

In this chapter, several areas of early childhood are addressed. Topics will include the history of several Early Childhood Programs and initiatives such as Head Start, Title I, the IDEA and IDEIA, and the formation of the Voluntary PreKindergarten (VPK) program in Florida. Also, the prevalence of behavior challenges in prekindergarten-age children, the current effects, and the potential long-term impact of their behavior on their educative options will be identified. Learning theory will be discussed, as will functional assessment and its role in behavioral interventions. Finally, staff qualifications, paraprofessionals, staff coaching, and videotaped data collection will be discussed.

History of Early Childhood Programs

Head Start

More than 40 states currently have state and federally supported preschool programs in place (Gilliam, 2005). One of the largest programs, Head Start, served more than 900,000 preschool children nationally in 2004 and has served over 22 million children since the program began in 1965. Nearly 13% of the children served in 2004 were identified as being disabled ("Florida Head Start," 2004). Nationally, of the children served by Head Start in 2004, 52% were four years old and 34% were three years old. Ethnicity was diverse, with Hispanic and Black children accounting for 31.2% and 31.1% of the population, respectively. White students account for 26.9% of the

children. American Indians, Asian, Pacific Islander and Multi-racial/other categories combined account for the other 10.8%. Numbers for 2006 were very similar, increasing by approximately 1,000 children served nationally. African-American children remained at 31.1% of the population served, White children increased to 35% of the population and Latino children increased to 32.9%. In the state of Florida, data indicate 35,530 children were served in the Head Start program ("Head Start program fact sheet," 2006).

Head Start began as a summer enrichment program through the Office of Economic Opportunity in 1965. Based on the recommendations of a panel of early education experts, it was developed to "break the cycle" of poverty, providing supports for disadvantaged young children's multiple needs for health, safety, emotional, social, and nutritional needs. Transferred to the Office of Child Development in the US Department of Health, Education and Welfare in 1969; it ultimately came to the Administration of Children, Youth and Families in the Department of Health and Human Services. Grants are awarded directly from the Administration to the local private, non-profit organizations and school systems throughout the country that govern the programs ("Head Start program fact sheet," 2006).

In Florida, Head Start was funded directly through the Health and Human Services Regional Office in Atlanta, Georgia. As of the time of this study, Florida had 46 locally-based private or public agencies, ranging from separate non-profit agencies, to public schools, to universities, that administer Head Start programming. The 46,000 children and their families were served through four programs: The Start Program,

serving three to five-year-olds from part-time to full-time days; Early Head Start, serving pregnant women and children from birth to age three; Migrant Head Start, serving children of agricultural workers from birth to age five; and American Indian Head Start, serving the children of Native American Tribes. As of the time of the study, Head Start was available in every county in Florida ("Florida Head Start," 2004).

Although by far the largest and most established of the preschool programs, Head Start indicated that staff preparation was a challenge. The largest training need identified by administrators and teachers is how to address the students' challenging behaviors (Webster-Stratton & Hammond, 1998).

The Title I Program

Another large program was initiated in 1965. The Title I program, a component of the Elementary and Secondary Education Act (ESEA). This program was intended to serve socio-economically disadvantaged children by increasing academic resources to the schools that served them. Funding was flexible, allowing school districts to allocate funding for enrichment programs such as tutoring, extended school days, and preschool programs, with the intent of closing the achievement gap between children with few economic resources and their more affluent peers. The No Child Left Behind Legislation of 2001 reauthorized the Title I program, and mandated increased accountability for all students through state-wide achievement testing, "highly qualified" teaching staff, and a national assessment of the Title I program by an independent evaluator. The Institute of Education Sciences was given the task of evaluating the program, with an interim report

in 2005, and a final report due in 2007 (USDoED, 2003). In 2004, the US Department of Education developed a manual: *Non-Regulatory Guidance*, designed to answer frequently asked questions regarding the use of Title I funding for preschool programs. The guidance manual indicates it is the goal of Title I preschool programming to narrow, and eventually close, the achievement gap between low socio-economically disadvantaged students and more prosperous students (USDoED, 2004).

Title I funding can be used to fund such programs as Even Start, a literacy program for preschoolers, older, literacy-delayed readers, and their literacy-challenged families that currently serves approximately 50,000 families. Even Start utilizes interactive literacy-based activities to increase reading skills for all members of the family. Another program, part of President Bush's *Good Start, Grow Smart* Early Childhood Initiative, is the Early Reading First program, designed to prepare young children to enter kindergarten with the literacy skills to prevent reading delays. Funding may also be used to fund professional development for teachers, therapists and paraprofessionals in schools that serve the most economically challenged students, increasing the capability of teaching personnel to have an impact on the learning outcomes in their students (USDoED, 2003).

Evolution of the IDEA for Young Children

In 1975, Congress approved legislation authorizing educational services to children from age five through age 21 called the Education for All Handicapped Children's Act ("EHA," 1975). This law guaranteed such things as free and appropriate

public education (FAPE), due process for educational disputes between schools and families, individualized education programs (IEPs), and least restrictive environments (LREs) in which education could be provided. For many, LRE equated to mainstreaming or inclusion, the opportunity for students with disabilities to participate in their educative process in regular education classrooms. In 1986, EHA was revised to include preschoolers (ages 3-5) with disabilities (Part B), and children from birth to 3 who were disabled, or considered developmentally delayed (Part H) ("EHA," 1986).

In 1990 the law was changed to the Individuals with Disabilities Education Act ("IDEA," 1990), and the EHA, with its amendments, was included, although Part H was renamed Part C. In 1997, the IDEA was revised to expand the use of the term "Developmental Delay" as a category for eligibility ("IDEA," 1997). In 2004, yet another amendment was passed, changing the title to the Individuals with Disabilities Education Improvement Act of 2004 ("IDEIA," 2004). This version allows states to offer parents the option of keeping their eligible child in the early intervention program until they start kindergarten. One of the primary reasons for this last change to the IDEA was the problems that arose related to transition from Part C to Part B.

When a child is admitted into the Part C program, the family is assigned a Service Coordinator. This person is responsible for arranging a meeting to develop an Individual Family Service Plan (IFSP), and to ensure all of the services and therapies deemed necessary are provided. In addition, the Service Coordinator is responsible for the transition meeting that is mandated to take place three to six months before the child reaches his third birthday, but IDEIA 2004 allows for the meeting to take place up to nine

months before the child's birthday if all parties agree. In most states the Part C is typically structured through a medical-model system, such as Children's Medical Services, sometimes using medical supplements from funding sources such as Medicaid. Enriched daycare services can be provided when available, but frequently therapists come to the home to provide intensive services. On the child's third birthday, the agency responsible for services changes to the state's Department of Education, through the Local Education Agency (LEA). Services offered under Part B are academically geared, typically with children attending preschool classes in a public school. Additional therapies, such as Occupational Therapy, Physical Therapy and Speech are offered in school, and may be reduced in duration or frequency, where previously the family might have received several hours of therapies and services in-home every week ("IDEIA," 2004). The child's goals change as well, and the document identifying the goals changes from an IFSP to an Individual Education Plan (IEP). The IEP is more child-focused, than family-support focused, and typically identifies services for the child only. Family supports, such as respite or parent training are not typically funded (USGAO, 2005).

Additionally, children who were eligible for services under Part C may not be eligible for services under Part B. For eligibility under Part B, children must have an identified disability or developmental delay, children who were enrolled in Part C as "At Risk", who are now meeting appropriate developmental milestones, may not be eligible for Part B and will likely be referred to other enrichment programs such as Head Start. Because the term "developmental delay" is subjective, and is determined differently from state to state (and may be interpreted differently from school district to school district), a

child may be eligible for continued services at age three in one district and not in another. Children with typical cognitive and physical development, but who have behavior challenges, could be identified as delayed in social or emotional development, an eligibility category recognized by Part C of the IDEA. But the states have flexibility in determining the criteria for social/emotional developmental delay and the level of delay necessary to be eligible for services ("IDEIA," 2004). Thus, children who may have received early intervention services who still require assistance may not be eligible for continued services. This determination should be made at, or prior to, the transition meeting three to nine months before the Part C eligibility expires (Lillie & Vakil, 2002). A hardship can occur when a child of the working poor is not eligible for Part B, and Head Start is not available. Families who cannot afford daycare may have to stop working, creating social, economic, and emotional stress within the family. According to Summers, Steeples, Peterson, Naig, McBride, Wall, Liebow, Swanson, and Stowitschek, it may leave the child and family in "limbo" until the child is old enough for kindergarten (2001).

Children with families who are not sophisticated enough to understand the system, whose primary language is other than English, or whose culture may dictate certain social structures, may be particularly vulnerable (Bruns & Fowler, 2001).

With IDEIA 2004, the family with an eligible child has the option of staying in Part C until kindergarten; however, the IFSP must identify services that are reflective of attainment of school readiness skills. In addition, families in Part C are to be provided

with annual notification of their right to choose between Part C and Part B, as well as the differences between the two.

The county in which this study took place has several Exceptional Early Learning Program (EELP) classrooms, in addition to the Voluntary PreKindergarten (VPK) program. These EELP classrooms serve three and four year olds identified as having a disability or a developmental delay in at least one area. The teachers in these classrooms are typically certified exceptional education teachers, and usually have one or two assistants in the classroom.

State-Funded Preschool

Some prekindergarten programs receive state funding that is given to the local education agency (LEA) and classes are provided in the local schools, some are funded by the state through local non-profit organizations, and some states may have combinations of LEAs, non-profit organizations, and private daycare centers with whom the LEA contracts. State-funded preschools exist in more than 40 states and serve over 1 million preschoolers a year (Gilliam, 2005).

In Florida, legislation for state funded preschool was passed in 2004 that provided free education for all four-year-olds in the state. Parents could choose if their child participated in the program, thus the program title: Voluntary Prekindergarten. The program, supervised by the Agency for Workforce Innovation, Office for Early Learning, is available to every child who will be four by September 1st of the school year they wish

to attend. The first year of the program, the 2005-2006 school year, approximately 96,000 four-year olds (43% of all Florida four-year-olds) were enrolled.

In the central Florida district participating in this study, prior to the VPK program, preschool programs housed in the elementary schools were limited to Exceptional Early Learning Programs (EELP) in 19 Title I elementary schools. Although there were a few "reverse-mainstreamed", typically developing children in the classes, most of the three and four-year-old students were identified as disabled or developmentally delayed and were funded through state funding mechanisms of IDEIA Part B. With the advent of VPK, students with disabilities can still be enrolled in the EELP program, but students whose only option was to attend an EELP program for services, now have a choice as to whether they attend school in the EELP or the VPK classrooms.

Both of these programs have a primary focus on academic and pre-academic skills, increasing the chances of curricular success. An ongoing difficulty, however, has been the issue of challenging behaviors. In the state of Florida, the Florida Department of Children and Families has had a mandatory requirement for the training of child care personnel working with preschoolers since 1985. Child care personnel are instructed in topics such as health and nutrition, child development, and reporting abuse and neglect. It was not until 1999 that a rudimentary behavior module was added to the curriculum (Flcctic, 2005), but this is insufficient for more challenging behaviors. As explained in the personnel preparation section later in the chapter, there is great discrepancy in the qualifications of the personnel in the preschool classrooms, another variable when examining behavioral outcomes. Many children are successful in preschool and go on to

success in kindergarten, but many have significant difficulties with their behaviors. For some, the behavior challenges are seen to be so pervasive that the child is expelled from preschool (Gilliam, 2005), beginning a trend with a long-term trajectory that will affect the child's ability to successfully complete their education (Campbell, 1991).

Occurrence of Challenging Behaviors

Challenging Behaviors in Preschool -Externalizing

Campbell, Pierce, March and Ewing (1994), studied four-year-old preschool boys who were identified as being active, inattentive and impulsive (N=69) and compared them to a control group of preschool boys without behavior challenges (N=43) in three settings; home, clinic, and preschool. They found that although there was some stabilization (reduction) of undesirable behaviors in the target group after two years, overall, most of these boys had significant behavior challenges at the age of six. The researchers postulate that the inattentive and impulsive behaviors are a result of a lack of self-regulation. Further, they assert that children, who fail to develop self-regulation, especially if they lack sufficient stable support in their life environments, are likely to continue, and possibly increase, engaging in the inappropriate behaviors into their elementary school years and beyond.

Research outcomes vary in relation to the estimated prevalence of children who meet criterion for diagnosis for behavioral disorders such as Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD) from the general population. Typically, they range from 7% to 20% across the population. However, prevalence may approach

33-35% for children from low SES and welfare families (Eyberg, 1992; Webster-Stratton & Hammond, 1998).

Children are often labeled as problematic based solely on a teacher's opinion, or misapplied discipline practices. In an examination of the analysis of a series of longitudinal outcomes of preschoolers with aggressive behaviors, Campbell (1991) found that over one half of the children continued to have behavior challenges well into school age. Of those, 67% met criterion for diagnoses for Oppositional Defiant Disorder, Attention Deficit Hyperactivity Disorder or Conduct Disorder at age nine. Kaiser and Hancock (2004), conducted a study of children in the Head Start program in which teachers utilized the Child Behavior Checklist (Kohn et al., 1979) to assess student behavior. Teachers rated 39% of their male students as having clinical-level externalizing behavior challenges.

These analyses are not without opponents, however. Farkas (2003), examined the Children of the National Longitudinal Study of Youth '79 Cohort from the report from the U.S. Department of Labor in 2000, the Infant Health and Development Project of 1990, and the Early Childhood Longitudinal Study Kindergarten Cohort from the report from the National Center for Education Statistics, 2002. He indicates potential flaws in teacher assessment of student ability as young children enter school, particularly children identified as minorities, as coming from low-income households or English as a Second Language learners (ESL). He states children identified as African-American, Latino, and Native American, on average, start school with fewer oral language, pre-reading, and pre-mathematics skills, than their White or Asian-American peers. These same minority

students also have less general knowledge and more identified behavior challenges than their White or Asian-America peers. However, he postulates that the assessments typically used, even those accepted as consistent and reliable instruments, are open to the interpretation and biases of the people giving the assessment, typically the teachers. In addition, overall biases from administrators and districts may result in overrepresentation from minority and economically disadvantaged populations when placing students in segregated school settings for students with behavior challenges.

Gilliam, in the 2003 and 2004 school years, conducted a phone survey of preschool lead teachers as a part of the National Prekindergarten Study. Parts of these data were used to determine the number of preschool children expelled from their programs that year. The study examined 4,812 state-funded programs. It was determined that nationally, 6.67 four-year-old children per 1,000 are expelled from preschool, nearly 3.2 times the rate for K-12 students combined. Males were more than five times more likely to be expelled, with race and age identified as correlates. Of the programs examined, Head Start-based and public school-based programs were least likely to expel, faith-based preschools were the most likely (Gilliam, 2005). Currently, the preschool expulsion rates have even been quoted in popular magazines (Fields-Meyer, Duffy, Kramer, Green, & Burleigh, 2005).

Dobbs, Arnold and Doctoroff (2004) conducted a study of 153 preschool students from eighteen preschool classrooms in the Springfield, Massachusetts area. Researchers examined the behavior of the students and the responses of the fifty teachers who also participated in the study. They discovered that overall, boys engaged in socially

unacceptable behaviors more frequently than girls, that girls received more positive interactions that boys and that socially unacceptable behaviors frequently resulted in commands unrelated to the behavior. Girls also appeared to have access to more rewards than boys. When the student data were reexamined by ethnicity, however, Hispanic and Caucasian children's data was consistent with the findings, but the data for African-American children were found to be significantly different. The African-American students had no appreciable difference in socially unacceptable behaviors by gender, nor was there a significant difference in the distribution of rewards by gender.

In 1997, Snyder, Horsch, and Childs conducted a research study in which they evaluated peer relationships and aggressive behavior in preschoolers considered at risk. All participants in the four classrooms were African-American, thirty-seven were male and thirty-five were female. Participants ranged in age from 4 years 1 month, to 5 years 2 months old. Sixty-four percent of the children were from homes in which their mother was head of household. All children were from families living in poverty. Thirty-one percent of the children's parents had not graduated from high school. The classroom teachers completed the Kohn Problem Checklist (1979) twice, once in October and once in December. The KPC is a checklist that examined the children's behavior along two scales; Apathy-Withdrawal and Anger-Defiance. This scale was used because it had been developed using inner city, African-American subjects much like the children in this study. The Anger-Defiance scale was utilized to categorize the children with aggressive behaviors. Utilizing a cut point of the 90th percentile over the test's norm (the 75th percentile of the sample), 12 boys and 11 girls were defined as aggressive, the rest of the

students (25 boys and 24 girls) were defined as non-aggressive. In examining peer relationships between all of the children Snyder, et al. (1997) found that all of the children displayed selectiveness in their peer relationships, regardless of how aggressive or passive they were. Aggressive children tended to seek out other aggressive children as peers, but relationships were more capricious. Peer social interactions from aggressive children were more likely to be rebuffed; on average they were not as "popular" as non aggressive children. Conflicts within social interactions with aggressive children were more frequent, more unstable, and more likely to escalate. Children who spent more than 30% of their free playtime with an aggressive peer showed increases in aggressive behavior from the initial October assessment and the December assessment. The non-aggressive child's behavior adapted to the more aggressive peer's. Smaller gains in aggressive behavior were also indicated when children spent 15-30% of free playtime with an aggressive child over the 3-month period. The researchers postulate that, in effect, large numbers of aggressive children in a classroom with non-aggressive children will likely increase the aggression behaviors of the non-aggressive children.

In 2005, McComas, Johnson and Symons conducted a study in which a convenience sample of 12 toddlers, aged 25-33 months (M= 29 months), were observed for aggressive and pro-social behaviors, as well as the responses from peers and teachers. All children were from the same classroom, and the adult: child ratio was 1:5. Data were taken in real time using observers with handheld computers and data collection software. Data were downloaded and analyzed with The Multi-Option Observation System for Experimental Studies (MOOSES). With 15-20 minute observations per child (300

minutes total), they ranked the children as “no or infrequent” aggression (5 children with a base rate of .004 aggressions per minute), occasional aggression (four students with a base rate of .06 aggressions /minute) and high aggression (3 students with a base rate of .16 aggressions/minute). They decided to group the “no and infrequent” aggressors and occasional aggressors together as low aggression giving an N=3 of High aggressors and N=9 for Low aggressors. Through analysis of the data, they determined that children considered high aggressors were less likely to receive positive responses from teachers when they made positive or neutral (appropriate) social bids for attention than the children considered low aggressors (Mccomas, Johnson, & Symons, 2005). This small study raises an interesting point regarding the way in which aggressive behavior can have an impact on teacher responsiveness to students, even when they later exhibit appropriate behavior. In addition, as the toddler becomes an elementary student, if appropriate behavior is not as likely to be reinforced, teacher attention may become contingent upon the shaped, challenging (aggressive) behavior.

Jimerson, Ferguson, Whipple, Anderson, & Dalton (2002), in their study on grade retention and later student drop-out rates, found time and again through literature review and examination, that antisocial and withdrawn behaviors, identified as problematic in preschool, were highly correlated with poor academic achievement in the 1st and 2nd grades.

The National Institute of Child Health and Human Development Early Child Care Research Network (ECCRN), engaged in an intellectual exchange in *Developmental Psychology* with Bracken (2005) regarding an article written by ECCRN (ECCRN,

2005b) called “Pathways to Reading: The Role of Oral Language in the Transition to Reading”, on the importance of oral language development. In their exchange, the ECCRN indicated that their findings suggest “… early comprehensive language skills are also directly related to first-grade reading competence. Examining early oral language from ages three years to 54 months and predicting to first-grade and third-grade, we found a direct link from oral skills to first grade reading skill that does not pass through the 54-month code skills.” (Bracken, 2005). This is important because classroom “behavior challenges” are frequently identified by overt, aggressive, disruptive behaviors. Yet, as the Nungesser & Watkins study (2005), the Craig-Unkefer & Kaiser (2002) study, and the National Institute of Health and Human Development Early Child Care dialog in *Developmental Psychology* (Bracken, 2005), have shown, language delays can be masked by “withdrawn” or “off task” behaviors and can be a factor in setting the stage for aggressive-type behaviors and academic delays. However many teachers do not recognize the connection. Remembering that challenging behaviors can be related to, or mask, a wide range of skill deficits can help in their identification and an effective intervention.

Craig-Unkefer and Kaiser (2002) identified a cycle of antisocial behavior in preschoolers, particularly those from low socio-economic status (SES). Because many children from low SES homes have increased risk for behavior challenges and language delays, they indicate a cycle of ineffective communication which leads to increased agitation/aggression, which leads to peer avoidance/rejection, and finally to increased behavior challenges. Unless the social skills deficits and antisocial behaviors are

addressed, they indicate the child's self-destructive behavior patterns will likely continue. In their study they taught preschoolers aged 3years 5 months to 3 years 11 months, how to plan their play, how to use effective conversational strategies, and how to evaluate the outcomes of the play session. The typically developing students, prior to selection as subjects, were assessed for language development and behavioral tendencies. Using the *Preschool Language Scale-3* (1992) subjects were found to score at least one standard deviation below norms in the receptive and expressive subscales. In addition, they were assessed for behavioral tendencies using the Child Behavior Checklist/2, Teacher Report (Achenbach, 1991). The students studied were identified as having borderline or clinical levels of withdrawn, aggressive, anxious, or non-compliant behaviors. These data classified the subjects as at-risk for language and/or behavioral challenges, based on the researcher's criteria. The six student subjects, all from the same childcare center, but from three different classes, were divided into three mixed gender dyads. These dyads were placed in a baseline condition with a play area set up for the study. Interventionists did not give feedback, but merely observed the verbal and play behavior of each dyad. The next phase involved coaching the children in cooperative play by prompting requests, suggestions for play activities/roles, and descriptive statements of activities while the children were engaging in play. The intervention sessions were for 20 minutes at a time, 3-4 days a week. The results showed that five out of six children increased inquiries and descriptive statements during peer play. In addition the number of words, the complexity of conversation skills and functional vocabulary were increased in all of the students. Though several verbal redirections were needed from interventionists (an

average of 25-30 per 20-minute session), child-initiated verbal redirection increased during the intervention as well. Behavior challenges were not seen, the researcher indicates this might be a function of the intervention, the plentiful play materials and/or the close adult supervision (Craig-Unkefer & Kaiser, 2002) .

Vaugn and his colleagues indicate that preschool aggression does not necessarily manifest into increased aggression as children progress through school (Vaugn, Vollenweider, Bost, Azria-Evans, & Snider, 2003). However, current practices in many preschools dictate suspension or expulsion for aggression (Gilliam, 2005), frequently without a clear definition for teachers to use, and without determining the function of the aggression. Preschoolers who simply wish to remain with caregivers instead of attending school could learn to engage in these socially unacceptable behaviors in order to be sent home.

The National Institutes of Mental Health indicate that the later the onset of antisocial behaviors, the less likely the behaviors will persist beyond adolescence. They identify adolescent limited behaviors as antisocial behaviors that have a late onset (late childhood or middle school). Individuals with life course persistent behaviors begin displaying antisocial behaviors in early childhood, and the behaviors persist well into adulthood. Life course persistent behavior is viewed as a form of pathology, adolescent limited is viewed as more of a "phase" (NIMH, 2000). They interconnect, however, as the authors of the NIMH report go on to state that adolescent limited antisocial behaviors are most often peer influenced. The life course persistent peers are able to influence the

adolescent limited individuals into antisocial behaviors, even if the peer influence is temporary.

Challenging Behaviors in Preschool –Skill Deficits

In 2005, Nungesser and Watkins investigated teacher perceptions regarding challenging behaviors in relation to children's social competency and age appropriate, effective communication. They conducted a survey of head preschool teachers in a mid-sized Midwestern community in which the teachers were asked 45 questions (both open and closed) in regards to challenging behavior. All were from either a Head Start program, one of 2 school system affiliated programs, or one of 2 private daycare centers. Closed-ended questions were primarily rating scales for the level of disruptiveness they attributed to particular behaviors. Open-ended questions were primarily demographic information, quantitative data such as frequencies of identified behaviors, and qualitative data, such as proposed correlation/causal relationships between behaviors and consequences. Results of the survey revealed that teachers were more concerned with aggressive/disruptive behaviors than socially withdrawn behaviors, that few teachers saw a relation between language (communication) deficits and challenging behaviors, and that teachers were far more likely to use reactive behavioral interventions (i.e.: time-out, response-cost, restraint) than proactive (i.e.: antecedent manipulation). Recommendations include training in the relationship between communication deficits and maladaptive behaviors, utilizing proactive strategies, and looking at the functions of challenging behaviors in order to better address them (Nungesser & Watkins, 2005).

Overt and aggressive behaviors are often seen as challenging, however persistent and pervasive skill deficits, particularly social skill deficits, are challenging behaviors as well. Kemp and Carter (2002) examined 22 students with moderate disabilities who received an inclusive preschool intervention that focused on social skills, pre-academic skills and independence skills. In their follow up contact 18 months to five years later (child age at follow up ranged from 7.25 years to 11.33 years old), they assessed the children on several constructs; Social interaction, social status (by individual peer report), and parent/teacher/principal ratings. For social interaction, the researchers used 20 second partial interval recording, and students were evaluated for the amount of time spent interacting (physically or verbally) with typical peers on the playground. Results indicated that there was more isolated play and less social interaction for the target children as compared to their typical peers, but they did interact an average of 50% of the time. Teacher interaction time on the playground revealed there was a moderate difference in teacher supervision time for the students with disabilities on the playground, however it was only 10% of the playground time, even for target students with behavior challenges. This seems to indicate the target students were able to access interactions with typical peers independently. Target students were not selected by peers as the most popular, though they were generally rated as neutral or "liked" rather than "disliked" by peer report, indicating a fairly high level of acceptance. Very few peers indicated a reciprocal friendship with a target student. Teachers and principals rated the students as liked, despite the lack of reciprocal friendships, and parents reported that their children were invited to peer birthday parties with their classmates, a rough indicator of the

generalization of acceptance beyond the school environment. Teachers rated the target children as higher in adult interaction skills, as compared to peer interaction skills or social status.

Later, Kemp and Carter (2005) conducted additional research with 33 preschool children with moderate disabilities in relation to "survival skills" needed for students with disabilities in inclusive settings. Teachers of these students were asked to identify basic necessary skills for classroom success. The most common responses were related to listening, responding and participating. Skills relating to independence and self-care skills, peer interaction skills, and compliance to tasks were also highly selected. More specifically, following teacher directions was the most frequently selected skill by the teachers and staying on-task for short periods was the second most popular. The researchers suggest that teachers working with mild and moderate preschool populations may want to focus on these skills as well as social skills in order to assist in facilitating student success in kindergarten.

The ability to attend to classroom activities, teacher instructions and self-selected activities, such as imaginative play, are also skills necessary for success in school. These skills are emerging in preschoolers between the ages of three and five years old (Farmer & Bierman, 2002), but are difficult to assess reliably until the child is approximately 4 ½ years old.

Campbell, Pierce, March, & Ewing (1994) conducted a study in which 69 preschool boys with challenges in attention, impulsivity and active behaviors (by teacher and parent report) were compared with 43 preschool boys without these challenges in

home, laboratory, and preschool settings. On average, there was a 2-month age difference between the behaviorally challenged group and the control group, with the control group being older. Socioeconomic status, age of parents, and birth order were almost identical between groups. The researchers found significant differences in the scores of attention, impulsivity and non-compliance between the groups. Two years later, when the individuals in the groups were approximately six years old, the behaviorally challenged students still had significant differences in the three areas from the control group.

In a study of 754 first graders, Farmer and Bierman (2002) found that students who became aggressive-withdrawn in first grade often exhibited inattention and social skills deficits in kindergarten. Later, these children identified as aggressive-withdrawn in first grade were 45% more likely to require special education services by the third grade. In addition, 60% of these students were socially rejected by their peers on a regular basis.

López, Menez, and Hernández-Guzmán acknowledge the body of research hypothesizing that attention to task in a school setting increases with age and may be a developmental stage. Nevertheless, because they utilized manned cameras to tape participants as they moved around the room, they were also able to examine behavioral sequences on the part of the teacher and preschool students that contributed to the inattentive behavior. Behaviors were classified as; Attending, Conversation, Observing, Play, Negative (physical or verbal aggression), Non-Social (behaviors not mediated by social attention such as self-stimulation and wandering), and "Other" (for behaviors that did not fit the other categories). They found that Attending behavior increased over time,

and seemed to be related to the students' ability to ignore distractions in the environment, however, behaviors in the Non-Social category did not appreciably decrease over time (López, Menez, & Hernández-Guzmán, 2005).

In summary, several themes emerge when examining preschool behavior challenges. First, preschool behavior challenges occur in all populations; however, prevalence appears to be significantly higher for children from low socio-economically disadvantaged (low SES) backgrounds, for children from certain minority groups, and for those children identified as having a disability. Second, boys are far more likely to be identified as having behavior challenges than girls. Third, some children with behavior challenges "outgrow" their inappropriate behaviors, but up to 50% do not. Of those identified as having behavior challenges that affect their success in first, second and third grade, most were identified as having behavior challenges in the preschool years. Fourth, communication deficits, "off task", and withdrawn behaviors are often overlooked as challenging behaviors by teachers, even though it may be indicative of the students' inability to comprehend material and/or may set the stage for academic challenges or future aggressive behaviors. Fifth, the age of onset of challenging behaviors, especially for typically-developing children, is important. Early-onset, persistent behavior challenges over a typically developing student's academic career are more pervasive and potentially dangerous than behavior challenges that begin in adolescence.

Preschool Intervention Theory and Processes

Many preschool programs rely on curricula that address social and emotional development. Many of these curricula are based on social learning theory, with elements of positive behavior supports, and behavior analysis.

Social Learning Theory

Bandura (1978), indicates the concepts of Social Learning are multi-dimensional. Observational learning occurs when behavior is observed, stored (as memories), then replicated at a later time. The replication does not always occur, however. This is a result of several cognitive processes that occur in conjunction with the observations, and are influenced by the observer's history with the environment. In order for behavior to be replicated, the observer requires sufficient cognitive ability to interpret the behavior, be engaged enough in the observation to commit the behavior to memory, and have the physical ability to reproduce the behavior. In addition, the observer's history with the consequences of the behavior will influence whether or not they perform the behavior. In other words, if the observer has knowledge that the consequences of the behavior are undesirable, they are less likely to replicate the behavior. Desirable consequences following a model's performance of a behavior may be sufficient impetus for the observer to attempt the initial replication of the behavior. However, their own performance of a behavior, and the experience of the consequence, will have a strong influence if the behavior is permanently incorporated into the individual's behavioral repertoire. Much of the current social skills training curricula are based on social

learning theory. Novel behaviors are modeled, the observer observes that the model received reinforcement for the behavior; the observer is given an opportunity to perform the behavior, and finally, is exposed to the reinforcer himself. Social learning theory is very effective with many learners, from young children to adults (Bandura, 1978). Individuals with limited cognitive ability may not benefit as fully as social learning does rely, to a certain extent, on the ability to "imagine" oneself in the role of the model

Behavior Analysis

Behavior Analysis utilizes operant conditioning to effect behavior change. Behavioral interventions are based on the function of an individual's behavior, or the "reason" the individual engages in the behavior. These "reasons" are categorized into four basic behavioral functions; attention, escape, access to reinforcers, and automatic reinforcement/pain attenuation. After conducting a functional assessment, a behavioral function is hypothesized, and an intervention is created specific to the behavior's function. Skill deficits are identified and addressed. Individuals who engage in maladaptive behaviors such as screaming or self-injury to access attention are taught skills to appropriately request attention, and are typically reinforced with the attention they seek.

Considered one of the most effective methods of behavior change for small children and individuals with cognitive limitations, behavior analysis is becoming more "mainstream" as it evolves to meet new challenges in education.

Positive Behavior Supports

According to Carr, et al (2002), the definition for Positive Behavior Supports (PBS) is "… an applied science that uses educational methods to expand an individual's behavioral repertoire and systems change methods to redesign an individual's living environment to first enhance the individual's quality of life and, second, to minimize his or her problem behavior." PBS is behavior analysis on a large-group scale. Like behavior analysis, PBS utilizes the function of behavior when used individually. PBS is used in many environments from small groups to statewide services for individuals with disabilities. First defined in 1990 (Horner, Dunlap, Koegel, Carr, Sailor, Anderson, Albin, & O'Neill, 1990), PBS has moved beyond interventions for individuals with disabilities and has found a sizable following in many school systems struggling with issues of violence and poor academic performance. Used in many school-wide positive behavior support systems nationwide, it allows for a systemic intervention that attempts to reinforce pro-social behaviors and academic achievement of all students, attempts to reinforce those who are struggling, and attempts to establish a structure for discipline for most behaviors seen in the schools. Although there are still 3%-5% of students who require the more individualized behavioral approaches of ABA, in limited studies reported thus far, the system shows promise in increasing positive school outcomes (Horner, Dunlap, Koegel, Carr, Sailor, Anderson, Albin, & O'Neill, 2005). A drawback to PBS is the dearth of empirical research demonstrating its effectiveness over time.

Preschool Curricula

Several curricula exist for preschool settings that are designed to increase social skills, reduce maladaptive behaviors, provide for generalization of skills into the home setting, and increase personal management skills. In a comparison by Joseph and Strain (2003), the following preschool curricula were compared for treatment fidelity, generalization and maintenance; social validity and acceptability of the interventions; replication across investigators, clinical groups and settings; efficacy across ethnicity and culture; and the level of said evidence.

The Social Emotional Intervention for At-Risk 4 Year-Olds (Denham & Burton, 1996) curriculum is an intensive preschool program designed to be used four days a week for 32 weeks. The foci are interpersonal skills, relationship skills, and the identification and regulation of emotion. The authors demonstrated treatment fidelity and efficacy across ethnic/cultural populations, however no other evaluation benchmarks were reached. Their evidence was not compelling because they did not use randomized sampling for their treatment groups and the condition assignments were known to all participants. This curriculum was given a low rating.

With *Al's Pals: Kids Making Healthy Choices* (Geller, 1999) the focus of the student curriculum is resilience to substance abuse and violence and is delivered in a creative-play format with songs, games, and puppets. There are 43, twenty-minute lessons. A large part of the curriculum is based on a very strong teacher training component that focuses on the effects of substance abuse and

violence on children's development. The research indicated treatment fidelity, acceptability of interventions, replication across investigators and settings, and efficacy across cultural/ethnic populations. The level of evidence was rated as medium, despite good results, because the teachers participating were hand-picked by site administrators, were more credentialed than the teachers in the control group, were the ones participating in the intervention and were taking the data, and there were no alternate/independent measures of student behavior change.

The *Dare to Be You* (Miller-Heyl, Macphee, & Fritz, 1998) curriculum has a strong parent-training component, with 30 hours of training and bi-annual, 12-hour follow-up training. The student foci are problem-solving, decision making, self-esteem, and taking responsibility for behavior. This curriculum had indices of treatment fidelity and maintenance, as well as evidence of efficacy across diverse groups; however it was given a low score for evidence as the teacher and childcare reports were self-report, no parent or child direct observations were done.

The *Living with a Purpose Self-Determination Program* (Serna, Nielson, & Forness, 1999) curriculum is a preschool program designed to be implemented twice a week, for three hours at a time, for twelve weeks. Role-play, social stories and participant reenactment are used to teach three skills; direction-following, sharing, and problem-solving. This is a skill-based curriculum, focusing on increasing adaptive skills and attention to tasks. This curriculum had

treatment fidelity and efficacy across diverse cultures, but scored low on evidence because of several limitations; teachers were highly skilled and were hand-picked, there were no implementation fidelity data, small sample sizes and a lack of randomization.

The *I Can Problem-Solve* (Shure, 2000) curriculum is a group format with games, discussions, and problem-solving role playing scenarios designed to teach students the consequences of behavior. Also a twelve-week intervention, this curriculum relies on hypothetical situations and reasoning skills to increase problem-solving skills and reduce challenging behavior. This curriculum had treatment generalization and maintenance, replication across investigators and settings, and evidence of efficacy across diverse cultures. It received a medium score for evidence due to the variability in results from diverse investigators.

The PALS: Developing Social Skills Through Language, Communication Skill Builders (Vaughn, Ridley, & Levine, 1986) is a curriculum with 50 interpersonal problem-solving lessons meant to be delivered 20 minutes a day, five days a week, for 10 weeks. This curriculum had treatment maintenance, replication across investigators and clinical groups, but was given a low rating for evidence due to small (and inadequately described) sample size, lack of generalization beyond the samples, and vague data collection techniques.

The *Incredible Years Child Training Program: Dinosaur School* (Webster-Stratton, 1990) was designed for small groups of preschoolers (5-6 participants) in a clinical setting This curriculum has 22, two-hour lessons that

teach interpersonal problem-solving and uses video modeling, role play, puppets and creative activities to teach the skills. This was the only curriculum with a high score for evidence. Although lacking in the social validity of the outcomes and replication across settings, the evidence is gathered from hundreds of participants in several studies with randomized groups, independent observers and numerous results from standardized measures. Unfortunately, the curriculum is designed to be implemented by a trained therapist, with small groups of children. It is not practical for a classroom environment at this time.

Despite the available curricula, and the stated efficacy of programs such as Dinosaur School, none of the curricula address behavior function. Many may attempt to interpret student behaviors, but none determine why students behave the way they do in the moment, or what the teacher or other support staff should do when certain behaviors occur. Preschool teachers have many tasks to complete, as do their assistants. There is a need for teachers and assistants to have the ability to understand what environmental conditions the student is attempting to access or avoid when undesirable behaviors occur, how to appropriately intervene, and how to evaluate the effectiveness of the intervention. This requires an assessment to determine the function of the student's behavior.

The History of Functional Assessment

Functional assessment and functional analysis have evolved in the field of Behavior Analysis. Functional analysis was first defined by B.F. Skinner as the

demonstration of “cause-and-effect relations” between the organism’s behavior and the environment (Skinner, 1953). This definition has evolved over the years, particularly in the field of behavior analysis, to mean a procedure in which the control over an organism’s behavior is gained and maintained by manipulating the environment in which the behavior occurs.

In the 1960’s and 1970’s, experimental and applied applications of functional analysis were expanded. Many researchers utilized functional analysis methodology to determine how to treat self-injurious behavior (Lovaas, Freitag, Gold, & Kassorla, 1965) , attention-maintained behavior (Wolf, Risley, & Mees, 1964), and escape-maintained behavior (Wolf et al., 1965).

In the 1980’s, the field was expanded further by the closer examination of the contexts in which behavior occurred, such as task demands (Carr & Newsom, 1985), and multiple functions of behavior (Durand & Crimmins, 1987). However, much of the continued progress was influenced by a seminal article that more closely defined and outlined what a functional analysis of behavior should look like (Iwata, B. A. et al., 1982). By the end of the decade, the National Institutes of Health recommended that individuals with developmental disabilities and severe behavior disorders receive treatment based on a pre-intervention functional assessment (NIH, 1989).

Also in this period, and continuing into the present, functional analysis and behavior interventions generalized into the schools. The Education for All Handicapped Children’s Act ("EHA," 1975), it’s amendments ("EHA," 1986), then the Individuals with Disabilities Education Act of 1990 ("IDEA," 1990), the amendments of 1997

("IDEA," 1997), and reauthorization as the Individuals with Disabilities Education Improvement Act ("IDEIA," 2004), placed increasing pressure on schools to include students with disabilities into general education classrooms. Behaviors that lead to exclusion of students from the general education classroom now require a functional assessment and a behavioral intervention based on those results.

Functional Assessment and Functional Analysis

Walsh, Smith and Taylor (2000), in their Council for Exceptional Children guide on IDEA regulations for preschoolers, indicate that the IDEA regulations regarding children with disabilities, which require that a functional assessment must be done if a child misses more than 10 days of school for disciplinary reasons, also applies to children who have not yet been identified. If parents express concerns about a possible disability, if they request assessment, or if the child is in the process of being assessed, the child with challenging behaviors should have a functional assessment *as if* he has already been identified as having a disability.

Currently many schools have systems-driven approaches to behavior management; certain behaviors result in specific consequences. In other words, consequences are based on the topography of the behavior (what it looks like) instead of the function (why the student engages in the behavior.) With many schools indicating a "zero tolerance" for aggression, children are often suspended for hitting, even those as young as four years old (Gilliam, 2005).

The problem with consequences that are systems-driven is that the consequences may not be related to the function the behavior serves and may frequently be reinforcing to the student. For instance, the four-year-old student who learns that hitting will result in a suspension may prefer to be home. Likewise, socially appropriate behavior may result in minimal attention, where whining and crying may allow increased access to adult attention and/or activities. Boyajian, et al, (2001) studied three preschoolers at risk for ADHD, who engaged in aggressive behaviors that were considered by teachers to be unmanageable. By conducting a functional assessment and implementing simple behavioral interventions, all three students' behaviors reduced to zero or near zero rates, regardless of whether the intervention was implemented by the teachers or the consultant.

Functional assessments are used more and more frequently for students without disabilities. Wilder, Chen, Atwell, Pritchard, Weinstein (2006), utilized functional assessment to determine why two typically-developing preschoolers had tantrums during classroom transitions. By using an FA it was determined that the children's' behavior was topographically similar, but had different functions. The tantrums were reduced in both students by developing strategies that addressed the function of each child's inappropriate behavior.

Longitudinal studies have shown that correctly-implemented behavior intervention plans (BIPs), based on technically correct functional behavior assessments (FBAs) are durable behavioral interventions (Kern, Gallagher, Starosta, Hickman, & George, 2006). In addition, teachers and staff can be trained to conduct FBAs and implement effective BIPs.

Iwata, *et al* (2000) conducted a study in which eleven undergraduate students were assessed for knowledge on how to conduct a functional assessment, and then were given a intervention consisting of reading materials, watching video that simulated the processes and procedures of conducting functional assessments, passing a written quiz, and receiving feedback on their applied performance during sessions. Results indicated the participants, who had a relatively high score before the intervention, achieved an accuracy performance of 95% or higher after the two-hour training intervention. This would seem to indicate that the length of the intervention may not have to be extensive, but the components must be appropriate.

There are drawbacks to the functional assessment training process, however. Van Acker, et al. (2005) conducted a study in Wisconsin following state-wide one and 2-day trainings in conducting functional behavior assessments (FBAs). Later, all school personnel statewide, involved in writing FBAs or behavior programs, were encouraged to send their programs to the researchers for a free review. Of the 54 usable programs, only 27 indicated more than three team members with significant training. However, significant training varied from classes in behavior analysis to a one-day FBA development seminar. Twenty of the FBA teams indicated little or no training, and seven indicated they had one or two team members with training. The team assessed the BIPs, and the results indicated a poor understanding of the functional assessment process, little connection between the FBA and the Behavior Intervention Plan (BIP), and little understanding of the on-going process of behavior program revision and follow-up required. Only 54% of the programs identified or reinforced positive behavioral

alternatives, 35% linked the function of the behavior to the BIP, and 34% planned to monitor the plan. Additionally, only one plan had generalization checks, and none of the plans examined BIP maintenance. Fully 79% of the BIPs had aversive consequences for undesirable behaviors, and 46% had *only* aversive procedures; meaning there were no reinforcing components for refraining from the challenging behaviors or exhibiting appropriate, functionally equivalent behaviors. Fully 64% of the BIPs continued, even when data indicated they were ineffective in changing the behavior.

Scott et al. (2005) also found serious difficulties with many behavior programs designed by staff with training in FBA and BIP. In their study, staff members from four elementary schools received training in functional assessment. They then became FBA facilitators for their respective schools. Of the 31 BIPs produced by the group, most of the programs did not take into account the function of the behavior when designing the BIPs and frequently selected discipline practices already in place in the school, even when those interventions were shown to be ineffective. FBAs were not used proactively; most were done only when behaviors had reached a crisis level. Even where antecedent manipulation and positive consequences were written and discussed in the team meetings, there was no evidence to suggest the proactive approaches were implemented.

Wright, Mayer, Cook, Crews, Kraemer, & Gale (2007), trained staff to perform functional assessments and author behavior intervention plans with students in California, they found significantly greater competency in those individuals who had received a "basic" class in functional assessment/behavior plan training with an additional three-hour training in the *Behavior Support Plan Quality Evaluation Guide* (BSP-QE). The

training for this guide, a rubric for quality behavior plans, included many opportunities to practice new skills, obtain trainer feedback, and receive group feedback/consultation. Utilizing this form allowed the participants to potentially critique their own programs, and those of teachers with whom they consult, to improve the efficacy of the student's behavior change plan.

Benedict, Horner, and Squires (2007), conducted a study in which consultation was provided to four preschools using a positive behavior supports model. A preliminary assessment indicated these classrooms were utilizing fewer than 60% of the critical features of the PBS program-wide practices utilized in their school district. Initially the consultant met with the classroom teacher and a team from the schools to discuss goals. Each Lead Teacher had the responsibility for forming and tracking goals. The team was given a packet of materials, and these materials were reviewed by the primary researcher in the meeting. Although the teachers were not given instruction in functional assessment at this time, PBS is based on data-driven interventions based on behavior function. The researcher returned several times following the initial consultation to provide feedback on the teacher's implementation of the three critical features from the packet: classroom materials, transitions, and classroom routines. The researchers examined teacher implementation data, based on the three categories, and the resultant student maladaptive behavior data. The maladaptive behaviors were identified as; leaving the area without permission, vocal disruption, aggression, environmental destruction, and self-injurious behavior. The teachers increased their effective implementation of the critical features,

however, a relationship between teacher behavior and student classroom behavior could not be determined due to low rates of maladaptive student behavior.

Clearly, the law indicates that school personnel, including teachers and teaching assistants, need to conduct or provide information for functional assessments. Just as clear, is that brief workshops and seminars provide widely varying results in preparing staff for this important task.

The Functional Assessment Curriculum

The materials used in this study are a part of a larger curriculum; *Promoting the Social Emotional Competence of Young Children.* This curriculum was developed by the Center on the Social and Emotional Foundations for Early Learning, funded by a joint grant from Head Start, The Child Care Bureau, and the Administration on Children, Youth, and Families, U.S. Department of Health and Human Services (CSEFEL, 2006). The center, a multi-university, multi-agency consortium, is comprised of the University of Illinois at Urbana-Champaign, the University of Colorado at Denver, the University of Connecticut, the University of South Florida, the Education Development Center, Inc., Vanderbilt University, and the Tennessee Voices for Children. Other partners in the project are the National Black Child Development Institute, the National Association for Bilingual Education, the Division for Early Childhood of the Council for Exceptional Children, the National Association of the Child Care Resource and Referral Agencies, and the National Association for the Education of Young Children.

The curriculum was developed in response to a national need to develop culture-neutral strategies for preschool children with challenging behaviors that would mesh with many of the preschool curricula used nationally. This curriculum is based on the foundations of behavior analysis and positive behavior supports. Because the curriculum was developed through the above agencies, the curriculum is free and is available on the CSEFEL website. In its entirety it is intended as a 30-hour, multi-day workshop for preschool personnel, and includes modules on building relationships and supportive environments, social emotional teaching strategies, individualized interventions, and leadership strategies, in addition to the functional assessment section utilized for this study (CSEFEL, 2006). Because the curriculum incorporates many of the same principals, concepts and strategies as many of the preschool curricula used locally and nationally, those components were not taught. Only the functional assessment component, unique to the *Promoting the Social Emotional Competence of Young Children* curricula, was examined.

Coaching and Feedback

The use of coaching and feedback during the training process is well established in the field of behavior analysis (BACB, 2008) and teacher education (USDoED, 2008), but its adoption in professional development in the education setting is only now becoming more widespread.

Smith, Daunic and Taylor (2007) indicate that when implementing training in schools for research fidelity practices, feedback from the trainer/consultants is critical to ensure the attainment of skills.

The implementation of effective school-wide Positive Behavior Interventions and Supports (PBIS) is challenging. Bradshaw, Reinke, Brown, Bevans, & Leaf (2008), in an effort to better utilize behavior support coaches and other supports, discovered that several schools may have some components of the PBIS system in place prior to the school officially adopting the process. They indicate that by assessing schools for PBS-type systems before a school starts the training process they are better able to utilize the behavior support coaches, targeting them to the areas in which the school requires the additional training and staff feedback.

As stated earlier, Benedict, et al. (Benedict et al., 2007) found that feedback from the researcher to the teacher implementing Positive Behavior Implementation Support (PBIS) strategies in the classroom was a strong component of correct implementation of the PBIS system.

Lipton and Wellman (2007) indicate that successful, lasting improvement to teaching practices requires a three-pronged approach from mentors, professional development specialists, and other resource professionals: coaching, consultation and collaboration. Coaching is a direct method of obtaining information and giving instructions and performance feedback. Consultation involves giving assistance in the form of clarifying the challenges, leading to, or giving several choices of, possible

contributing factors, and then allowing the teacher to determine which choice is likely to be the most applicable. Collaboration is a give and take exchange where the teachers use their knowledge of their classrooms and their teaching experiences and the consultants add their observations and knowledge to problem-solve. They also indicate that optimally, the person assisting the teacher should form an emotionally safe environment, establish clear goals, and use multiple methods for giving and receiving information.

Simkins, Coldwell, Caillau, Finlayson, & Morgan (2006), updating the mentoring process in school leadership in Great Britain, determined that mentoring was a term best suited to describe the overall program of *Leading from the Middle*, their school leadership program; however, individual coaching was needed to enhance specific skills. They indicated: "… coaches would help participants clarify their roles as leaders, recognize their strengths and weaknesses, and provide feedback on their performance." On a three point Lickert scale with ratings of Very Significant, Of Some Significance, and Not Significant, twenty-four percent of coaches rated feedback as Very Significant to the leadership program, fifty-five percent indicated it was Of Some Significance, and only eighteen percent indicated it was Not Significant. Approximately fifty-five percent of the leadership participants also ranked feedback as an important component to the process.

Variability in Preschool Personnel Preparation

Requirements for preschool teachers are constant across the nation; however, personnel preparation varies greatly. Preschool teacher's education can range from a

high school diploma, with specific child development training, to a Master's degree in early childhood education, or beyond.

Head Start

Nationally, Head Start requires a Child Development Associate (CDA) credential, and 50% of the teachers in a given program must have an Associates, Baccalaureate, or advanced degree in early childhood education or a degree in a related field with experience teaching preschool children (CPR, 2006). Most states have similar minimum requirements, and some may have higher standards as a preference. The state of Florida has these same requirements, for Head Start and for public and private preschool programs ("BCC," 2006), except for the First Start program, which requires an early childhood or elementary education four-year degree, with no substitutions (UCF-COE, 2005).

Child Development Associate

A CDA is a credential from the Council for Professional Recognition, a non-profit organization created to improve the status and standards of early childhood personnel. The credential, established in 1971 and funded by the US Department of Health and Human Services, Administration on Children, Youth and Families, has been awarded to over 150,000 recipients to date. Since 1986 the Council for Professional Recognition has administered the credential, they currently receive over 10,000 applications for assessment each year. At this time, 46 states and the District of Columbia recognize the

CDA Certificate as a credential that allows individuals to work with preschool children. The CDA credential is competency based and requires detailed observations by an advisor prior to obtaining the certification (CPR, 2006).

The Child Development Associate credential is recognized nationally as a credential that allows the person to teach preschoolers, despite the lack of a college degree. The CDA credential relies on observed behaviors recorded on a checklist by an experienced advisor. In central Florida, CDA preparation classes are offered through the local Child Care Association and the community colleges. The classes through the community colleges are freshman-level, as evidenced by the 1000-level classes, and are taught by a Master's or Ph.D.-level instructor. A typical course sequence for the CDA credential through the community colleges consists of Introduction to Early Childhood Education, Conflict Resolution in Early Childhood Education and Early Childhood Curriculum ("BCC," 2006). Each class is a three-credit class, for a total certification requirement of 9 credit hours, or 135 clock hours. Candidates are also required to have 480 hours of experience with children aged five or younger in the past five years in order to apply for certification.

The CDA equivalency program is administered through the local Child Care Association. Requirements include candidate possession of a high school diploma or GED, a minimum of 480 hours of experience working with children 5 years old or younger in the previous five years, have 120 hours of formal training, and either has completed, or is in the process of completing, the state-required, 40-hour, Child Care Worker's course. The Child Care Association instructor is identified as qualified to teach

the class by both education and experience, neither of which is identified in the class information webpage. Recently credentialed with the International Association of Continuing Education and Training (IACET), it seems the *processes* of CEU administration and training are certified, not the content. There is no minimum standard of education for the learning program planner; IACET indicates he or she should be competent in the content matter, understand the learning program's purpose and learning outcomes, and have knowledge and skill in instructional methods and learning processes (IACET, 2005). The instructor may be someone different than the program planner.

In both the community college and the child care association paths to certification the candidate must demonstrate knowledge in several domains, including typical child development, general knowledge of disabilities, and basic learning strategies. However, according to both courses of study, and the Council for Professional Regulation, participants are not required to know how to comprehensively address behavioral challenges comprehensively ("BCC," 2006). Because of the differences in requirements to teach the classes between the community college and the child care association, there is an implicit awareness that the level of instruction for the CDA credential may be compromised.

Associates of Science in Early Childhood Education

In addition to the CDA classes at the local community colleges, it is possible to add an additional 27 credit hours to obtain a Child Development Early Education Certificate. This 36-credit hour credential allows the individual to work in early

childhood and preschool programs in the school system. A Master's level instructor teaches classes. All of these classes may also be applied to the 63-credit hour Associate of Science degree in Early Childhood Education. The local community college also offers classes for certification in Montessori Specialization as electives in the A.S. degree ("BCC," 2006).

Baccalaureate in Child Development

University preparation of preschool personnel varies from state to state and program to program. Most baccalaureate programs require classes in childhood development, early literacy and mathematics, social development and some require at least one class in behavior management. Locally, the university offers a bachelor's degree in Early Childhood Education. After obtaining an associate's degree in general education or early childhood education, undergraduate students are required to complete more than 60 credit hours (over 900 clock hours) of classes covering pedagogy, child development, mathematics, reading, literacy development, health and safety, and art. The students also have an internship requirement (UCF-COE, 2005). The program is monitored by the National Council for Accreditation of Teacher Education (NCATE).

The range of qualifications between a preschool teacher with a CDA from a local agency, a CDA or certificate from a local college, a teacher with an associate's degree and a teacher with a bachelor's or master's degree in early childhood education from an accredited university is vast. Whitebook and colleagues (2003) determined through an analysis of peer-reviewed research articles, that more education equates into better

outcomes for children, and that preschool students whose teachers had bachelor's degrees did better in preschool and into their elementary education than students whose teachers had an associate's degree or other credential.

Instructional Assistants

An area often overlooked is that of the instructional assistant staff, frequently referred to as teaching assistants, paraprofessionals, or simply, paras. Paraprofessionals are most typically trained on the job, and have little formal education working with young children (Pickett et al., 2003).

Para-educators are engaging in more sophisticated classroom tasks than they used to. Frequently paras are leading student educational activities designed by the teacher, and may be implementing individual behavioral programs (Wallace, Shin, Bartholomay, & Stahl, 2001). Giangreco (2002) details a three-year program in which para-educators and their supervisors are prepared to work in schools. Programs such as these are rare, but given the requirements of No Child Left Behind (NCLB), programs are becoming more available ("NCLB," 2002).

NCLB has in its language the requirement that para-educators must have an associate's degree from an institute of higher learning, or be able to pass an examination that demonstrates competency in reading, writing, and math. As of the date of implementation, 2002, only about 50% of school systems were in compliance, with urban areas more likely to have qualified paras than rural school systems (PEER, 2006).

Using paras in the classroom has some criticisms. There are several concerns, especially when using paras as one-on-ones or as support to a select few students identified as having a disability. First, in the case of one-to-one paras, the person with the most student contact has the least amount of teaching preparation (Giangreco, Yuan, Mckenzie, Cameron, & Fialka, 2005). Second, hiring and retaining paras is difficult because of pay and perceived lack of respect for the job they do (Giangreco & Broer, 2005). Third, functional feedback and opportunities for professional development are typically limited. Fourth, intensive support for one or two students with disabilities may foster dependence and may lead to social exclusion by removing the student from the day-to-day details of the classroom (Giangreco & Broer, 2005).

Another challenge with paraprofessionals is the role of the teacher supervising them. Neophyte teachers may have paras that have far more classroom experience than they. Age differences and different cultural viewpoints can also make supervising a para very challenging for the teacher. Teachers and paras indicate that cooperative planning time is infrequent, appropriate feedback if difficult to give and receive, and that formal para training is almost non-existent, but teamwork is clearly indicated as a necessary state in the classroom (Wallace et al., 2001).

Echoed by Giancreco, Edelman and Broer (2001), they indicate there are several areas of concern for paraprofessionals in the classroom. Aside from an overall lack of social reinforcement from teachers and administrators in regards to their position, responsibilities and pay; paraprofessional training, collaborative time and supervision with their teachers were cited as areas of deficit in the schools studied. In their

workbook, *A Guide to Schoolwide Planning for Paraeducator Support*, Giangreco, *et al.* (2003) indicate that paraprofessionals should have training to match their specific classroom assignment. In addition, they point out the need for ongoing training opportunities that support more advanced competencies, specifically mentioning supporting students with challenging behaviors. They also state that paras should have the opportunity to earn CEUs or college credit for their advanced training.

Video Data Collection

Data collection can be done in a variety of ways in the classroom. Researchers and their compatriots can collect the data, or data can be collected by the teaching staff or school supervisory staff. All methods have their strengths and weaknesses.

Videotaped data creates a permanent product that can be viewed several times to assure data are accurate, and more data can be gathered from busy environments. Video data can present a forced view; raters have the exact same vantage point, reducing some inter-observer errors that result from different vantage points and distractions when observing in a classroom. Videotaped data can be edited to smaller, more manageable periods for data coding. Graff, Green, and Libby (1998) taped several 15-minute sessions with a young child with multiple disabilities over more than two years. Data sessions were divided into 15-second intervals for data coding purposes. Because the videos were divided into such brief intervals, rates of change for eleven different behaviors could be accurately monitored.

Videotaping allows the researcher to view data in-situ, in a more naturalistic setting, and allows repeated viewings for observer training, according to López, Menez, and Hernández-Guzmán (2005). Observers can remain unobtrusive and even out of sight when data collection is done with a video camera, reducing or eliminating observer effects. Videotaping data allow the researcher to participate in the implementation of an intervention, and then observe and code the data later. Conversely, video may enable a researcher to obtain data from videos taped by others, or video from previous research that has become a longitudinal study.

Pepler, Craig and Roberts (1998) , while studying the aggressive and non-aggressive behavior of preschoolers, utilized cameras set up in classrooms overlooking the playground and added microphones to children of focus to better understand the verbal interactions during free play. Some data were limited as the audio was unreliable during a portion of the study; however, many behavioral sequences were readily seen due to the ability to view the behaviors repeatedly, if necessary.

CHAPTER 3 - METHODOLOGY

Design

This study examined the effects of teaching functional assessment skills to Prekindergarten teacher/teacher assistant dyads. This project utilized a pre/post design. Because the group actually participating in the direct intervention was small, and the student sample consisted of approximately forty students, data are presented in a single subject format. The single subject design allows a detailed examination of the raw data, to better determine the efficacy of the intervention.

The Research Questions:

1. Will teaching functional assessment skills and specific behavioral interventions to Prekindergarten classroom staff affect the children's aggressive, oppositional, self-injurious and attentive behavior?

2. Will teaching functional assessment skills and specific behavioral interventions to Prekindergarten classroom staff result in staff implementation of responses and interventions that relate to the function of the students' behavior?

This study examined the effects of the presentation of a set of skills that were delivered in three, two-hour classes to teachers and their assistants, and the resulting effects on the students' behavior in the participant's classrooms. Participants had time to process, reflect and practice the skills learned, before adding additional information.

Homework, in the form of functional assessments for their students, was given to practice the skills. Staff were instructed to work as a team, to better capture the behaviors of the students, as they may work with the students in similar ways, but teachers and assistants have very different responsibilities. It was hypothesized that this partnership would allow for behavioral observations observed by one or the other, as well as increasing the probability for co-observed behaviors, potentially increasing the validity of the functional assessments.

The Participants

All six teacher/teacher assistant teams from the six preschool classrooms in the elementary school were required to take the functional assessment class as a preparation for the inclusion model that was scheduled to take place during their current school year. Three of the participating classrooms were Exceptional Education Learning Program (EELP) classrooms, containing students with identified disabilities, students with developmental delays, or those considered at-risk for smooth integration in the typical classroom. Two of the classrooms had up to eight students between the ages of three and five years old with one teacher and one teacher assistant. One classroom had up to eight students with one teacher, one teaching assistant and one 1:1 assistant for a single child.

The other three classrooms were Voluntary Prekindergarten (VPK) classrooms, and contained up to eighteen typically developing children between the ages of four and five, with a teacher and one teaching assistant. The classes taught by this researcher were mandatory, yet the research portion of the project, examining the effects of the classes on

teacher, assistant, and student behaviors, was voluntary. Data collection was done by videotaping in the classroom for brief periods every day. Of the six teachers and seven assistants, four teachers and three assistants agreed to be videotaped. The three teacher/assistant dyads from the three VPK classrooms, and one EELP teacher agreed to participate, however, one teacher and assistant dyad's data could not be used due to a lack of baseline data. Data from two of the VPK classrooms and the one EELP classroom were used. All three teachers were experienced teachers, and all had taught, or been a teaching assistant in, exceptional education preschool classrooms during their careers. One VPK teacher and one EELP teacher had Master's degrees in Exceptional Education, with Bachelor's degrees in Elementary Education; one VPK teacher had a Bachelor's degree in Early Childhood Education and was seeking National Teacher Certification.

The teacher assistant in Classroom 2 had an Associate's degree and her CDA certification. She had been working with infants and preschoolers for 11 years, in addition to working with older students for several years. The assistant in Classroom 1 had taken the paraprofessional equivalence test, accepted by the school system in lieu of an Associate's degree. She had been working with children, prekindergarten through grade 6, in general education and exceptional education classrooms, for 36 years as of the time of the study.

Participation was voluntary for the students as well; only one student's parent did not allow her child's participation, and one parent did not return the consent form. There were students and staff for whom English was a second language, but all of the

participants in this group spoke Spanish as their language of origin. The consent forms for these students and staff were translated into Spanish. Although the parent who did not return the form was not fluent in English, a Spanish-speaking teaching assistant contacted the parent to review the consent and to answer any questions. As the researcher was in the classrooms to give information to staff, obtain consent forms, and set up cameras the individual students were asked if this researcher could videotape them, stating "Your teacher is going to videotape you and your classmates for several weeks while you are doing your work, will that be OK?." Several were excited and asked if this researcher was going to be taping "just them." This researcher indicated that the teacher and assistant would be taping, and that everyone in the classroom would be videotaped, except for those who chose not to be. All students indicated assent to the videotaping.

This study, conducted in a Title I school in a large Central Florida school district, had incorporated inclusive practices in their K-6 classrooms, but had not yet utilized these practices in their Prekindergarten classrooms. A sudden decision by the school system resulted in a mandate that the school adopt inclusion practices in the Voluntary Prekindergarten (VPK) and Exceptional Education Learning Program (EELP) classrooms at the beginning of the second semester of the current school year, rather than the following year, as originally planned. In an effort to assist teachers with the transition, the EELP program coordinator arranged assistance from the Florida Inclusion Network (FIN) and sought training in behavioral interventions, as several teachers within the county had expressed concern addressing behaviors that exceeded what they considered "age typical."

Identified as Title I, the school scored favorably on the state school rating process for the previous year and was rated an "A" school. The school, selected by the program coordinator, was one of the first schools to do VPK and EELP inclusion because they were familiar with inclusion, and the principal was supportive of the process. This school, considered a stable school, had no crises in the VPK or EELP classrooms, aside from a few isolated students, at the time the study began.

The primary researcher was seeking teacher and teacher assistant volunteers from VPK and EELP programs to participate in research on a functional assessment module from a curriculum developed by the Center on the Social and Emotional Foundations for Early Learning, once housed at the University if Illinois at Urbana-Champaign, now located at Vanderbilt University. The full curriculum, *Promoting Social and Emotional Competence in Infants and Young Children*, is a thirty-hour class designed for Head Start providers, private day care programs, and other programs that serve young children. The portion of the curriculum used for this study was module 3a, *Individualized Intensive Interventions: Determining the Meaning of Challenging Behavior*, the module that provides information on functional assessment. Even though the curriculum is based on best practices, there was no research on the curriculum, or its components, at the time of this study. Therefore, only one module was selected in an effort to begin to build a body of research specific to the curriculum.

The functional assessment module was chosen as it was hypothesized that this specific set of skills would result in the most lasting change for the teachers, and as a result, the students. The previous modules addressed relationship building with the

preschoolers and identified teaching methods to promote social competence in their students, the following module addressed creating a behavior plan, and the last module addressed leadership strategies to effect system changes to promote social and emotional competence. Because the modules before the functional assessment module were strategies, or variation on strategies, that many preschool teachers have received in the past, and because the following module, creating a behavior plan, was dependent on the functional assessment information, the functional assessment module seemed the best module to be taught as a stand-alone intervention.

Because learning how to identify the function of student behavior has a limited value unless applied to change behavior, the teachers and assistants learned four simple, functionally appropriate interventions to use to affect the students' undesired behavior. Only four interventions were taught because allowing the teachers to choose from a larger menu, as would happen if module 3b were taught at the same time, could result in teachers implementing interventions prematurely, based on face validity, rather than behavior function. Keeping the interventions specific and simple allowed the participants to see the effects of their interventions clearly and allowed the researcher to determine if the interventions were matched to the function of the students' behavior.

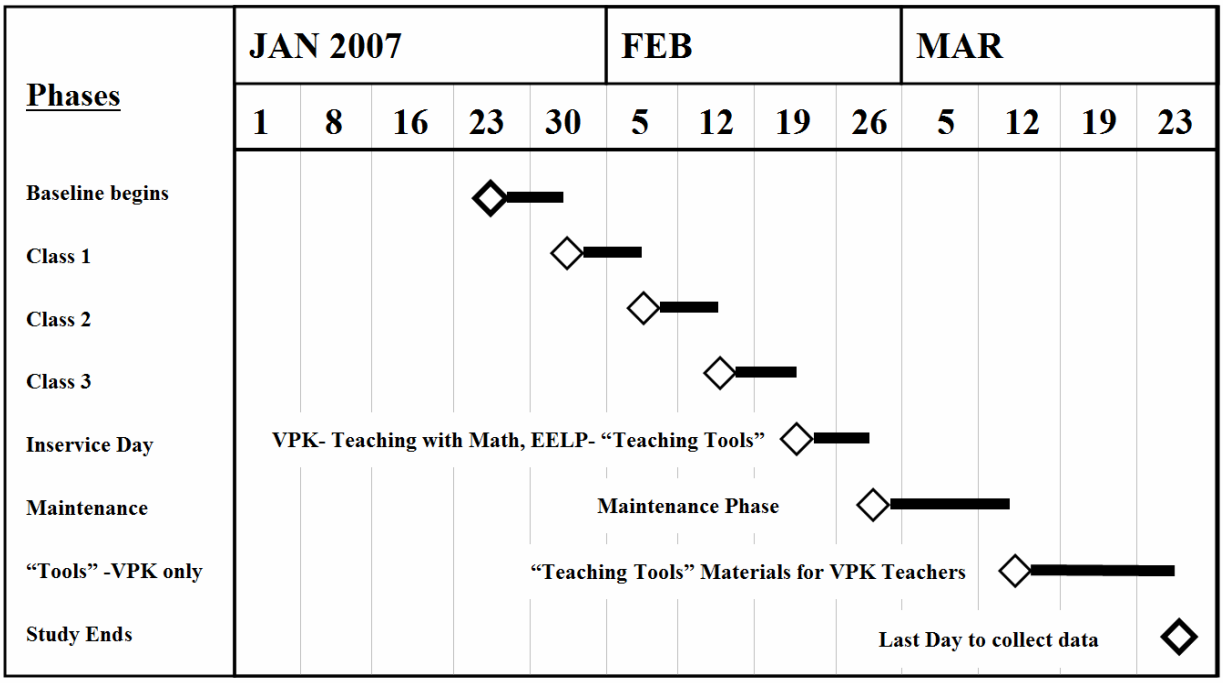


Figure 3: 1. Timeline of the study by phases.

Condition/Phase Changes

There were seven conditions, or phases, of this study. The first phase was "Baseline", in which teachers and assistants had six possible days in which to take data. One classroom had two data days, one had four, and one had five.

The "Class 1" phase started the day after the first functional assessment (FA) class because the videotaping for that day took place before the class sessions. Therefore, the day after each FA class would be the first data collection opportunity. This phase ended on the day of the second FA class.

The "Class 2" phase began the day after the second FA class and ended the day of the third FA class.

The “Class 3” phase started the day of the third FA class and ended on the inservice day.

Each of the phases that included the functional assessment classes was approximately one week long, so the “Inservice” phase following the inservice day was one week long as well. The VPK teacher training that took place on the inservice day was called “Cooking with Math” and was unrelated to either the functional assessment classes or the inclusion process. Assistants did not attend any inservice training.

For two of the three classrooms, from the day after the inservice day, until three weeks later, is the “Maintenance” phase of the study. Neither the teachers, nor assistants attended official trainings during this time.

The “Tools” phase began when the inservice materials from the “Teaching Tools” inservice were given to the VPK teachers. This phase ended two weeks later, at the end of the study. Because the EELP teacher received the “Tools” materials on the inservice day, Classroom 3 does not have a “Tools” phase, but instead has a five-week “Maintenance” phase.

The first functional assessment class was on a Tuesday, therefore, the first day of the “Class 1” phase began on a Wednesday. All subsequent intervention days and material distribution days were Mondays, so the first possible day of data for each phase after “Class 1” was a Tuesday.

The Research Protocol

This study was modified to maximize the beneficial aspects of working in a school setting, while allowing for the constraints on time and resources that are invariably found in such a setting.

First, the primary researcher obtained permission from the school system's research department. Originally, the study was designed as a single subject, multiple-baseline across subjects study. However, the EELP coordinator was in need of training for preschool behavior that could be arranged to start as soon as teachers came back from winter break the following month. Though the original study would need to be modified to a pre-post design, other factors, such as paid substitutes, and a classroom meeting space close to the classrooms to teach the functional assessment classes, were benefits that appeared to make the study less stressful for the participants. In addition, because the participants were receiving the professional development over several weeks, and were required to produce permanent products like the functional assessments, the teachers received inservice points.

The principal was informed of the proposed inclusion process two days before the winter break, and the principal, teachers, and assistants were informed of the proposed research project the next day, one day before winter break. They were, understandably, taken aback, but gracious under the circumstances. An IRB was obtained and the researcher met briefly with the participants before the winter break. After the break, consent forms for the teachers, assistants and students were generated, the student forms were also translated into Spanish as a few students were from families where Spanish was

the primary language. Teachers distributed the forms to parents and collected them from the students. A few staff used Spanish as their primary language; they indicated they preferred their release form in English. As a result, this researcher reviewed the consent form with every staff person, unless she refused the review.

The researcher met with the principal and the participants during the first week after the winter break. The principal was supportive of the research; the teachers expressed concern about the professional development they would be receiving from the Florida Inclusion Network (FIN) and the functional assessment classes from this researcher. They said that they were overwhelmed, and some indicated resentment that they were required to take the functional assessment classes. The assistants, who would be receiving professional development from this researcher, but not FIN, were a little leery, but indicated some excitement and willingness to participate in the class. For several weeks into the study most of the teachers and assistants thought this researcher had arranged for the inclusion mandate in order to do the research project at their school. It was all the more remarkable that of the six teachers and seven assistants taking the classes, four teachers and three assistants agreed to participate in the study, fully aware that the functional assessment classes were mandatory, but videotaping in their classroom was not.

After the class schedule was determined, the school arranged for substitute teachers and indicated the classroom space this researcher would use for the functional assessment classes. The classroom had an LCD projector and screen, reducing the equipment the researcher was required to bring. The curriculum was presented using

PowerPoint and video clips, as well as lecturing; the presentation materials were stored on the researcher's laptop. The curriculum itself was free from the website of the Center on the Social and Emotional Foundations for Early Learning. The printing of the curriculum for the participants was donated by the Florida Inclusion Network.

The researcher met with each teacher who consented to participate in the study to discuss the student behaviors they would be interested in changing. The researcher indicated the requirements: The camera needed to be in an area that could be videotaped every day, taping needed to be during the same activity each day, it needed to be during a time when the teacher and assistant would be interacting with the students, and it needed to be during a time when the behaviors the teacher identified would be likely to occur. Although not required, the researcher indicated it would be best if the camera could remain in the same place for the duration of the study.

Videotaping was selected as the best method due to scheduling overlaps between classrooms, availability of staff, and teacher autonomy. The teachers participating indicated they would operate the cameras themselves for the duration of the study.

Two of the teachers decided on small group time and two decided on circle time as their chosen activity to video tape. This information, along with the camera and tripod numbers, were recorded on a video protocol sheet for each teacher. The protocol sheet also indicated how to operate the camera step-by-step. Each teacher was given a copy of the video protocol sheet, and the researcher kept a copy.

This researcher borrowed digital video cameras (using DV tapes) and tripods to use in the classrooms. All cameras were the same make and model. The researcher set

up cameras and tripods; the teachers and assistants were instructed in their use and were reminded to look at the Video Protocol sheet if they needed prompts. In addition, this researcher provided an alarm clock to each classroom, set to approximately twenty minutes before the taping was to begin. This was to prompt the staff to make sure the camera was ready and working, and to make sure there was sufficient tape left for the 12-minute session. Teachers could set the alarm clock for a different time if it assisted them in taking the data. This researcher also provided a mechanical kitchen timer and staff were instructed to se the timer for 12 minutes when they started taping so they would know when to stop the camera. They were informed they could let the tape run if they needed to, but only the first 12 minutes would be used. This researcher went into each classroom 2-3 times each week to check the tapes, replace them as needed, and ask if there were any problems taping. An extra blank tape was left with each teacher in case it was needed, staff also replaced tapes as needed. In the third week of data collection (after baseline) this researcher made step-by-step color PowerPoint handouts with instructions on the camera operation and how to change the digital tapes. This was in response to a staff who did not switch out a tape because she was not confident in her ability to do it. The instructions used photos, taken by this researcher, of each step of the processes, using the same camera model used in the classrooms. The handouts were then printed front and back, laminated with heavy film, and hole-punched to produce a two-page camera operation resource that was attached to the camera tripods in each participating classroom.

The functional assessment classes were offered twice a day on class days. The three classes were conducted approximately one week apart. Specific class protocols are given in more detail later in the chapter. Teachers and assistants were required to complete a functional assessment together, and one each independently.

One week after the completion of the classes, the teachers attended workshops through the countywide inservice day. The VPK teachers attended "Cooking with Math", the EELP teachers attended "Teaching Tools." Three weeks after the inservice, the VPK teachers received the "Teaching Tools" materials, inclusive of the completed make-n-take materials. A more detailed description of the materials is outlined later in the chapter.

Data collection continued after baseline, through the Class 1, Class 2, and Class 3 phases, through the inservice, maintenance, and "Tools" phases. Videotaping encompassed approximately nine weeks.

After data collection was completed the cameras were collected from the classrooms and the researcher began processing the video to prepare it for data coding, this process is detailed further in this chapter.

Data coders were trained in the data coding process, and coding began. After a few modifications to the process, data coding, also described in more detail later in the chapter, was completed for the student and teaching staff data.

Data Collection

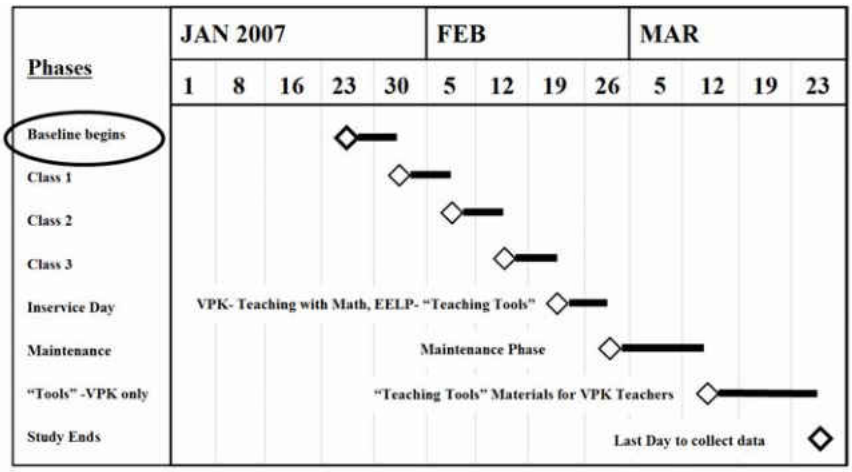


Figure 3: 2. Baseline begins – Duration: 6 days.

Baseline Data

Classroom behavioral data for the three VPK teacher/teacher assistant dyads and the single EELP teacher were scheduled approximately five times a week for twelve minutes during an initial six-day baseline timeframe. The timeframe was limited as the teachers and assistants were receiving additional supports, unrelated to the study, in connection with the inclusion process. These supports, in the form of three training sessions from the Florida Inclusion Network during the two weeks prior to the intervention, may have elevated the baseline scores for the participants. The baseline data collection and the three functional assessment classes were scheduled between the final inclusion workshop and the countywide inservice day scheduled the following month. Baseline data collection was variable from classroom to classroom. Despite detailed instruction on camera operation, the alarm clock and the timer, teachers

sometimes forgot, were absent, or had other challenges that prevented 100% compliance. Baseline data for the classrooms whose data were used for the study varied from two twelve-minute segments to five twelve-minute segments. One teacher did not do the baseline data collection, therefore, subsequent classroom data could not be used.

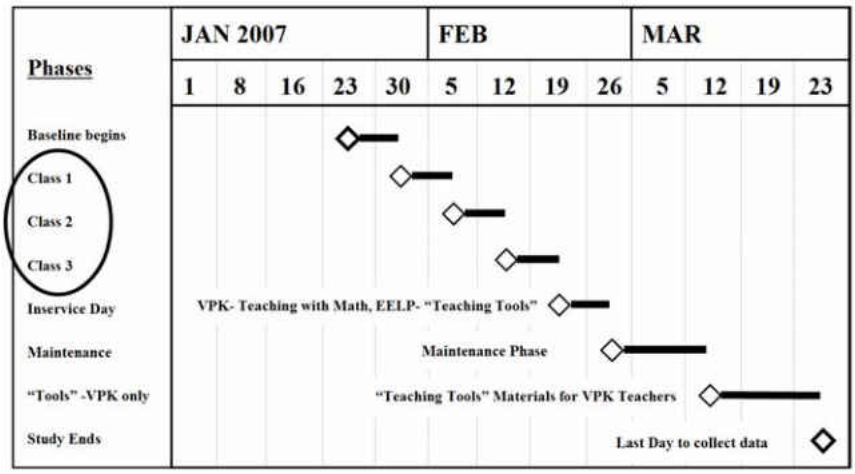


Figure 3: 3. Functional assessment classes begin.
Class 1 phase = 4 days, Class 2 phase = 5 days, Class 3 phase = 5 days.

Data Collection during Functional Assessment Classes

The teacher/teacher assistant dyads/triads in the elementary school were given a six-hour class, divided into three, two-hour sections, presented one week apart, in which specific functional assessment skills and four simple interventions to implement in response to behaviors from the appropriate functional class were presented. The functional assessment and intervention skills were competency-based; participants were required to complete a Functional Assessment correctly to pass the class. Videotaped observation data continued to be collected during the intervention period in all four classrooms.

Data collection remained the same as in baseline during the two weeks in which the functional assessment classes took place. Teachers were reminded to take data, and this researcher came into the classroom 2-3 times each week to check the tapes, switch them out as needed, and answer any questions related to camera operation or taping. The researcher did not observe sessions in which data were collected, nor did the researcher give feedback relating to the class, functional assessments, or behavioral interventions while in the individual classrooms.

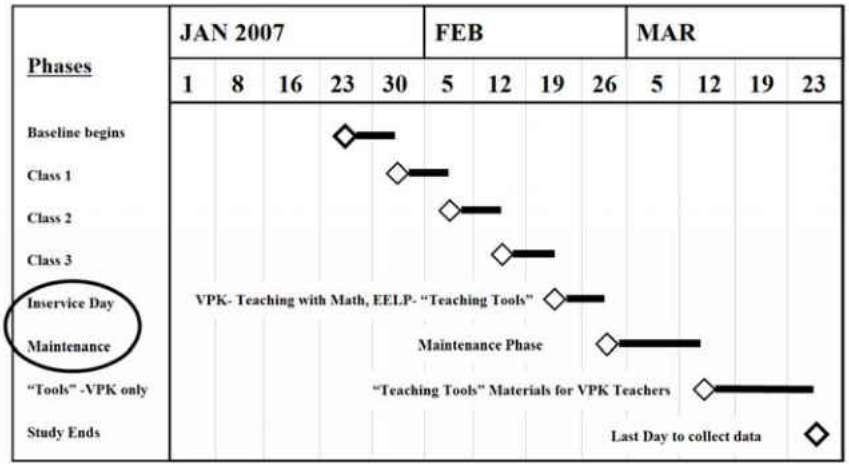


Figure 3: 4. Functional assessment classes are completed.
The Inservice phase = 5 days, the Maintenance phase = 2 weeks (VPK), 5 weeks (EELP).

Data Collection after Functional Assessment Classes

Data collection continued after the final class session of the intervention. One week after the intervention was completed; all three of the EELP teachers, including the one who was participating in the study, attended a Workshop entitled "Teaching Tools for Young Children with Challenging Behavior." The same group who developed the functional assessment curriculum used as the intervention in this research study

developed this workshop curriculum. There was concern that many of the materials related directly to the functional assessment intervention, but the materials presented did not appear to impact significantly on the functional assessment curriculum. The Workshop was planned many months in advance of the research study and could not be postponed or changed.

The VPK teachers were scheduled to attend a different Workshop, "Cooking with Math", on the same day, completely unrelated to the intervention. It was too late to change the workshop. In order to see if the workshop materials would have been a confounding variable in the intervention, this researcher attended the workshop with the EELP teachers and obtained the materials for the three VPK teachers, but did not give them to the teachers for three weeks.

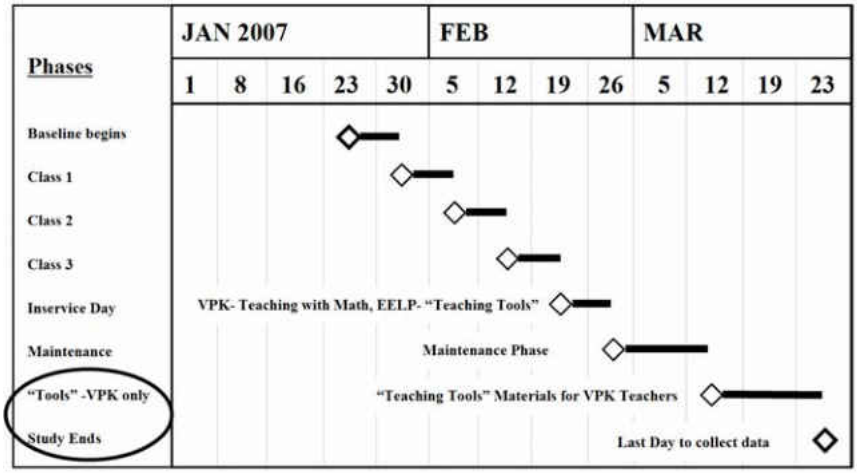


Figure 3: 5. The study ends. "Tools" phase (VPK teachers only) = 9 days

Data Collection during Maintenance and "Tools" Phases

Three weeks after the inservice day, this researcher gave the "Teaching Tools" materials to the VPK teachers. The materials included a CD with techniques and interactive activities for the teachers to do with their students. Additionally, the researcher assembled several "make-n-take" items during the workshop so that the VPK teachers would have the same materials as the EELP teachers. This researcher also gave a brief outline of the materials along with a printed index of the materials and overview of how the CD was organized. Data collection continued in all three classrooms for an additional two weeks, until the end of the study.

Summation

In all there was a six-day timeframe for baseline data, three weeks of data during the functional assessment classes, three weeks of post-workshop data, and two additional weeks of data collection after the VPK teachers received the workshop materials, for a total of nine weeks of data collection.

Functional Assessment Instruction

Class protocol

FBA instructional classes took place in a classroom on the school property and at a time mutually agreed upon by each dyad and the researcher. Every effort was made to keep the convenience of the subjects in the forefront. The same class was offered twice on each class day, in 2-hour units, and classes were held approximately one week apart.

Two class sessions were offered each class day in order to accommodate the schedules of the teachers and assistants. Every effort to obtain six substitute teachers, one for each class, was utilized on each of the three class days. Allegedly, there was one substitute missing in one of the EELP classrooms on the second class day as the assistant came to class, but the teacher did not attend either class session on that day.

Participants had the options of teachers and assistants attending together from the same classroom, teachers attending one session and assistants attending another, or either attending a part of the morning and afternoon sessions. Sessions started a few minutes after the scheduled time in order to accommodate transitions and classroom crises as they occurred. The VPK teachers usually attended the morning session and the assistants attended in the afternoon, but the EELP teachers and assistants could not be as consistent and attended mornings, afternoons, and split sessions. All Participants attended a minimum of one session each week except for the one EELP teacher who missed the second class completely. She was not a participant in the classroom data collection.

The researcher used PowerPoint slides from the curriculum for the first two class days and the same anecdotal examples were given in both sessions. The open forum for the third class day was used to discuss testing hypothesized behavioral functions. Fortuitously, the same functions were brought up in both class sessions and similar hypothesis testing methods were discussed.

The First Class Session

The first class meeting included dispersal of the instructional material, and housekeeping duties such as how the teachers and assistants would collaborate on the functional assessments, how to contact the instructor, etc. Instruction began from the curriculum, using the PowerPoint with embedded video exemplars, and predominantly followed the agenda from the curriculum instructor guide

The agenda, class objectives and definitions of challenging behaviors were identified and discussed in both sessions on the first day of class. A video with "Tim," in a preschool classroom engaging in aggressive behaviors, was viewed and discussed. The Positive Behavior Supports behavioral pyramid was identified, and the difference between reactive and proactive procedures was presented and discussed. Two videos of "Brendon" at the library, one before intervention and one after, were shown.

Young children's communication was presented as a process that takes many forms, and may represent many functions. The concept of reinforcement was presented and defined. The "Major Messages" of the functional assessment process were identified; participants were informed that children use behavior to get their needs met, that the functional assessment is used to help determine why the behaviors occur when they do, and that the hypothesis statement defines the behavior and describes what happens before and after the behavior.

The method of A-B-C event recording was presented, and the Behavior Event Equation form was introduced. Setting events were discussed and added to the Behavior

Event Equation forms. The class completely reviewed brief behavioral narratives for five preschool students, and the Behavior Event Equation examples were examined as a group. The functional assessment procedure was reviewed and potential team members from school and family were identified. Participants were informed that participants outside of the class were not required. None of the participants sought other school staff or parental involvement for the functional assessments authored for the class. The concepts of behavior functions were introduced and identified. Participants were each given an 8 ½ x 11 color handout, titled "It's NOT About Me", presented in a humorous way, with the four behavior functions, escape, access to reinforcers, attention, and automatic reinforcement, as well as their definitions, identified. This was to assist staff in identifying student behavior function while in class, and to remind them that students are rarely trying to "ruin" a teacher or assistant's day, but are trying to meet their own needs. The concept of behavior extinction was presented and the phenomenon of the extinction burst was explained with several examples in each class session.

The observation card, a 5 ½ x 8 ½ narrative form that identifies the environmental details (where, when), the social context, behavior, social reaction (of others), and asks for the potential behavior function, was presented and explained. Two video vignettes were presented and the sample observation cards relating to the two videos from the curriculum materials were reviewed. This made the sample cards more functional later, as exemplars, when the staff were writing their class functional assessments.

The functional assessment form was reviewed in its entirety, using "Tim's" completed form from the curriculum. Some portions of the form were discussed briefly

in order that staff would be able to fill out the functional assessment, however, areas such as the hypothesis statement would be very difficult to do until they had the second class where it would be discussed in detail. The functionally based intervention procedures were given and discussed. A color 8 ½ x 11 handout called "What to Do" with the behavior functions and corresponding interventions identified, were distributed to the participants. Participants were informed that the handouts were intended to be used as a visual prompt; this researcher suggested the handout be posted in the classroom where it would be easily seen, to assist staff in intervening correctly. None of the research participants did this; however, staff in the classrooms that were not involved in the research may have done so.

During the first session, copies of the functional assessment materials from the participant manuals were dispersed to the dyads and instructions were given as to how to fill out the FBA worksheets. Each dyad was instructed to complete two FBAs, working together, as homework before the next class; however, all of the dyads had difficulty doing the homework. The teachers and assistants do not have planning time (except during nap time) and even had lunch with their students. In addition, the assistants were usually assigned other tasks throughout the day such as computer lab monitor, lunch duty, bus duty and after-school care. None of these additional duties, with the exception of the after-school care, was identified to the researcher during the planning stage of the study.

Occasionally there were a few moments of free time at naptime, but the functional assessment forms require well over two hours to complete, sometimes significantly

longer if the child has complex behaviors. Preparation for the inclusion project also demanded time from the teachers, students were still being identified and the inclusion process was still being formulated during this researcher's intervention phase (the three weeks of functional assessment class). As such, the original requirement was to have two assessments completed by each classroom dyad (or triad) between the first and second class, and three between the second and third class, one together, one by the teacher and one by the assistant. This requirement was changed midway through the first week of the functional assessment class as this researcher determined it would not be possible for the teachers and assistants to get the assessments completed. Instead, the dyads were told to complete two assessments together and one each independently for a total of four from each classroom. The one triad did one together and one individually for each of the staff for a total of four from the classroom. The assessments needed to be completed by the Friday after the last class, giving three weeks, instead of two, to complete the assessments. This meant that there were fewer completed assessments to discuss during the second and third classes, however, comments and questions in class were such that the teachers and assistants were able to identify the steps and procedures of the assessment. Sample data collection sheets were given to the dyads for adaptation/use in their classrooms. Data collection included parent questionnaires, ABC data sheets, narratives, and scatter plot data sheets.

In addition to the functional assessment portion of the curriculum, four simple interventions were taught that were to be utilized in response to the teacher/teacher assistant-hypothesized function of a behavior. These interventions were taught in the

first class, in conjunction with the behavioral functions. It was important that the participants understood the concept of the intervention matching the behavioral function, so time was taken in class until each participant was able to verbally indicate the relationship. Participants were instructed to use the interventions starting the first day of class and were encouraged to give each other feedback as they implemented interventions. Because the goal was to have as many opportunities to practice correctly as possible, the dyads were encouraged to work as a team to strengthen each other's skills.

The Behavioral Interventions

1. For challenging behaviors maintained by escape, the strategy was to block and re-direct back to the task demand, or, if the child has left the area, return the child to the area to complete the task. Verbal reinforcement would be provided when they engaged in the task, periodically during the task, and when they completed the task. Physical assistance could also be added based on the ability of the child.
2. For challenging behaviors maintained by attention, the strategy was Pivot - to ignore/give minimal attention to the child engaging in the inconsequential challenging behavior, give attention to other, appropriately-behaving children, and attend to the target child when the challenging behavior stopped, or the child selected an appropriate activity or bid for attention. An "I like it when you

indicate the behavior such as 'raise your hand' or 'ask nicely'" would be added to reinforce the correct behavior to access attention.

3. For challenging behaviors maintained by access to reinforcers, the child would be asked to either; engage in the correct behavior to access the reinforcer and be given the reinforcer, or be given a time when they could have the reinforcer. The reinforcer would be withdrawn or withheld until the child engaged in the behavior (or an approximation of the behavior, if it was an emerging skill) that was appropriate to gain access to the reinforcer. When the reinforcer was not allowed, or belonged to someone else, the reinforcer would be withdrawn or withheld and the child would be re-directed to another activity and reinforced when they began to engage in the requested activity.
4. For challenging behaviors maintained by automatic reinforcement, the child would be blocked, re-directed back into an appropriate activity, and reinforced when they began engaging in the appropriate activity.

Safety took precedence over any intervention. If children were engaging in behavior that was dangerous to them, others, or would result in property destruction, the first intervention was to block the continuation of the behavior, followed by the functionally based intervention.

The Second Class Session

The second class session continued from the curriculum, and additional information on the concept of setting events was presented. Activity analyses and the home observation card (for family and caregivers) were explained and discussed in each of the second class sessions. The concept of forming a hypothesis statement was presented, the process components were broken down and discussed, and hypothesis statements were generated. The class viewed a number of video clips, including a repeat of two videos seen in the first class that viewed the children before interventions and after interventions. Three videos were observed to complete observation cards and discuss behavior function. The Functional Assessment Interview form was discussed further, in relation to family input. Each class participant completed the Functional Assessment for "Tim" in class as a group, using the information provided in the curriculum, discussing the setting events, antecedents, behaviors and consequences of his behavior.

The information discussed in each session was disseminated to the other group at their next session. Because of the homogeneity of the teachers and staff, the fact that they know each other's students, and frequently cover each other's classrooms, meant there was a lot of overlap in topic as assistants from one class brought up the same behavior challenges that the teacher or assistant brought up earlier. Also, the few behaviorally challenged students were well-known by all involved as, the staff sometimes assist with behavioral interventions by taking the target child, or an innocent bystander, in their classroom during times of crisis.

The processes of Positive Behavior Supports were discussed as they related to the material in the curriculum, and a discussion of the possibility of school support, and a lack thereof, was mentioned in both classes. Participants were reminded of the "Major Messages" of the functional assessment process, that challenging behaviors have meaning. They were reminded that children use behavior to get their needs met, that the functional assessment is used to help determine why the behaviors occur when they do, and that the hypothesis statement defines the behavior and describes what happens before and after the behavior.

The second class ended with four video clips from "Brendon's" family, discussing how the interventions and the skills they learned have increased their quality of life and their ability to participate in activities. One of the clips included the successful visit to the local library where "Brendon" was able to interact appropriately with materials and his mother.

The Third Class Session

Class session three continued with some participants passing in their assignments, and others asking questions in order to complete theirs. Both classes asked how one tells the difference between behaviors that are maintained by attention and those that are maintained by escape. Hypothesis testing was discussed at length, as well as some interventions that the teachers have been using since before the class started, and some changes they have made since starting the class. Participants were verbally reinforced for

data and information-driven changes to behavior programming, and were reminded that programs that were not resulting in a reduction of inappropriate behaviors after two weeks or so, probably needed to be re-examined for behavior function or implementation consistency.

Researcher Feedback to Participants

This researcher gave generalized feedback that was a result of observations made in the classrooms while changing tapes and confirming class times and attendance. Feedback was not given in the classroom at the time of the observation because the information would not be available to the other research participants. When the observations were discussed the student(s) were not discussed directly by this researcher, however, most participants were able to guess the identity of the student by their behavior(s). Occasionally a teacher or assistant would mention a child and others would chime in with the student's name.

Class Materials and Data

Teacher/teacher assistant participants had opportunities to practice data collection, writing observation cards, writing functional assessments, and forming hypothesis based on data from the case studies in the curriculum. Several case studies were examined, and videos from the curriculum were observed to allow opportunities to engage in behavioral observations and data recording. Homework consisted of the dyads conducting four functional assessments between the first week of class and the end of the third week; two

were completed as a team, and one completed by each as an individual. Some were not completed on time; but were completed soon after the last FA class. Because all of the teachers were to receive inservice points for successfully completing the class, the teachers (research participants and non-participants) were required to turn in a minimum of three functional assessments per classroom. One of the functional assessments had to be completed independently by each teacher as a permanent product for the inservice points. Even though the assistants would not receive inservice points, they were required to do a functional assessment independently as a permanent product demonstrating competence.

A survey asking about the class, materials, and curriculum presentation was given for quality assurance and future training purposes. The EELP teachers who took the "Teaching Tools" workshop on the countywide inservice day filled out an additional survey, authored by this researcher, which was sent to all of the workshop participants as a follow up. Both of the surveys were related in that the survey for all six teachers who took the functional assessment class in the study had questions pertaining to the "Tools" materials they all had received at some point before the end of the study. The three EELP teachers from this school, only one of whom participated in the study, all received the materials on the inservice day, the three VPK teachers in the study received the materials on the 12th of March.

"Teaching Tools" Workshop Materials from the Countywide In-Service Training

The materials given to the EELP teachers in the countywide inservice included a comprehensive CD with many activities to promote social and emotional competence. The workshop participants alternated between lecture-style presentations and hands-on make-'n-take sessions. In addition, a lengthy multi-page index with behavioral interventions tailored for common preschool areas and activities was contained within the materials. Although the interventions were based on behavioral function, very little time was spent discussing the function of behavior in the county workshop. Most of the instructional time was spent discussing how to foster preschool emotional competence. Most behavior challenges were attributed to "getting something" or "getting out of something."

One month after the countywide workshop, this researcher and the county coordinator sent out a survey to the participants, authored by this researcher, to indicate satisfaction with the training and the functionality of the materials in the classroom.

This researcher provided the VPK teachers the "Teaching Tools" CDs and an overview of the information in one, ½-hour session that occurred during naptime, three weeks after the EELP teachers received the full-day workshop. The brief overview was not as detailed as the complete inservice, however, this researcher mentioned the key areas of the inservice day and explained how to find those areas on the CD. Attendees at the workshop had made several activities including a social-story book called Tucker the Turtle, "emotion" dice, an "emotion" spinner, small "emotion" cards on a key ring, and a "First-Then" card with several laminated pictures. This researcher and some of the

workshop attendees made these make-n-take activities for the three VPK teachers who were not attending so they would have the same materials in-hand that the workshop participants had. This researcher gave the materials to the VPK teachers along with CDs and instructions as to how to use the disk. Because the workshop facilitator spent time showing the attendees how the CD was organized, and this researcher would not have the time to do so, this researcher also created some easy-to-read menus as a handout to assist the VPK teachers to get to the activities and information in which they would be interested. The overview and make-n-take materials would not replace all of the information in the inservice workshop, nonetheless, it was meant to ensure the VPK teachers in the study at least had the same access to the materials as the EELP teacher who was participating the study. Data collection continued in the classrooms for two weeks after the VPK teachers received their packets from the in-service.

Processing, and Coding the Research Data

Editing the Video

Data were recorded on a digital video camera using DV-size tapes. The camera recording setting was on the highest quality and provided clear resolution in most conditions. Each tape held an hour of video data. The distance from the subjects, lighting quality, and environmental barriers affected the camera placement and ultimately the quality of the video. The distance from the participants, the number of people who were simultaneously videoed and any ambient noises, such as air conditioning, affected the quality of the audio portion of the video.

All video was processed to add a title with the staff names and the date the data were recorded. Some video required additional editing to block students without parental consent. In addition, each clip was cut to 12-minutes and 5 seconds after the title, starting with the first staff/student interaction after the tape was started. Any footage of the staff adjusting the camera was omitted, unless there was a directive given to a student during the adjustment, or if the other staff was in the camera view. Footage of empty areas was omitted. If the teacher and students were entering the area, the video clip started with the first appearance of a student in the camera range. Because two students from one classroom did not have consent, the teacher usually had them sit out of camera range. Because the students would move around during the taped intervals, additional processing was sometimes required to delete them from the frame, such as cropping the view or pixilating the face and/or body of the student. This sometimes eliminated other students from view, or resulted in briefer taped sessions.

Because data collection process used momentary time sampling in 30-second intervals, the tapes were modified to include a "chime" sound every 30 seconds to indicate the end of the interval. This was to assist the observers in determining the correct time to pause the tape and record the data, and to increase inter-observer agreement. The chime was from the Microsoft Office sounds included with Office programs, this researcher copied it several times and re-recorded it in the simple recorder program included with Office until there was a 12-minute and 5-second clip that could be imported to the video editing program. After processing, the video was copied to a DVD

to be viewed for coding. Staff data collection was done by pausing for every second chime, allowing a one-minute interval.

Originally, the data were collected in 10-second intervals, however, the amount of data collected for each student in each interval made the shorter interval too difficult to obtain reliable data. The original "chime" clip was in 10-second intervals, when the interval was extended the video clips had to be re-processed with the 30-second interval chime clip, adding considerable time to the process.

Because the video was recorded to a digital tape, it was a relatively simple process to transfer the video to the computer for editing. Transfer had to be done in "real time" however, meaning the 40 hours of raw video took 40 hours to transfer. A camera with a hard drive would have allowed a faster transfer process. Video requires a tremendous amount of hard drive space. Because picture and sound quality needed to be maximized, video was saved at movie settings (best quality). Each minute of video with minimal editing required 1.78 megabytes of file storage, files with clips with more complex edits were larger. The raw video, the 96 finished, 12-minute segments, the multimedia training video, and various still pictures and smaller clips for training required in excess of 500 gigabytes (1/2 a terabyte) of storage. At one point, two computers, each with a 160-gigabyte hard drive, were filled with video to the extent that neither had sufficient space left to supplement the RAM needed to open video files to be viewed. Video was transferred to a 500-gigabyte hard drive, requiring almost 24 hours per computer for the transfer.

This researcher used three programs to edit video, Microsoft Moviemaker, Sony Vegas, and Adobe Premier. The Moviemaker software was sufficient for much of the movie editing. It is simple to use, and for the typical "cut the clip to 12 minutes and 5 seconds, put a title at the beginning and add the chimes" it worked well. Drawbacks include a coarse cutting and splicing process, no tools to edit audio, and no method to mask (pixelize or block) people or objects from the video. Sony Vegas was more complex, and had a much steeper learning curve. The tools were far more sophisticated than Moviemaker was, however, title frames did not always show up when the movie was saved back to a digital tape, or if the clips were burned to a DVD using a different program.

The most comprehensive video editing program, Adobe Premier, was the most expensive and the most difficult to learn, but provided the most refined tools to edit. It also had more online assistance, tutorials and reference books. Clips from Classroom 3, because of the two students without consent to participate, required significant video editing. The teacher was very good about setting the camera angle to avoid the students, but sometimes the students would randomly get up and wander, or the group activities would include out-of-seat activities and actions. Even the most rudimentary editing of the video for this classroom required more than an hour per clip, with earlier clips taking far longer and later clips requiring less time.

Overall, for two of the three classrooms, for each one-hour tape; transferring to the computer to edit, minimally editing the video (clipping to length, adding a title and chimes), rendering to a hard drive, and burning to a DVD, required about four hours for

about 48 minutes (4, 12-minute clips) of data to be coded. Classroom 3 required five or six hours for the same four clips, depending upon the amount of time the non-participant students appeared on tape. This did not include dating the tape, outlined below.

Each tape was labeled with the teacher's name when it was placed in the camera. This researcher also left an unopened tape in each of the camera bags left in the teacher's classroom in case the teaching staff ran out of tape before this researcher returned. The researcher also put a start date (usually the next data day) on each tape that was placed in a classroom camera. When the researcher exchanged tapes the (assumed) last data day on the tape was written on the label and the new, labeled tape was put in the camera. Due to time overruns, missed data days and occasional operator error, the tapes could have 5, 12-minute segments (very rare), or only one, one-hour session. The dates on the tape label were a suggested starting point, but not an accurate indicator of the actual data dates on the tape. The cameras had a date and time function that appeared on the tape, but when the video was transferred to the computer, the date and time stamp did not transfer. This meant every clip had to be viewed with the camcorder, either on the small viewing screen, or plugged into a monitor, to see the date stamp. In order to get the accurate dates, the taped had to be briefly viewed at the first date, fast-forwarded to the next data day, and so forth to determine the data days on the clip. The label was revised, or a new label was then placed over the old one with the exact dates on the tape.

The cameras had a time and date stamp functions, but somehow two of the cameras were not set correctly. This problem was not discovered until the cameras had been in the classrooms for more than two weeks. Since both classrooms were taping

during “Circle Time” this should have been a time-consuming, but simple process. The researcher would view the tape until the calendar was discussed; listen for the date, then put the date on the title. Unfortunately, in one classroom, this was not so simple. The teacher had stopped using the calendar in the traditional way, and was demonstrating monthly color patterns instead. In the first few days of the month, the teacher would establish a color pattern like; red, yellow, green; one color for each day. The student who was the “calendar person” for the day would stand at the calendar at the front of the room and recite the pattern. In this classroom, the camera angle ran parallel to the calendar but the calendar was just out of range on the right side of the screen. Frequently the student and teacher were in and out of camera range as well, meaning the audio quality, calibrated to the camera angle, was sometimes poor. Rather than hearing the date, the researcher had to listen to the student recite the pattern and count out the days to determine the date. This sometimes required repeating the segment several times. During video editing the correct date was added to the beginning of the video on a title screen with the teacher’s name and the assistant, if appropriate.

Data Coder Training

Data coders for students were staff from the primary researcher’s Adult Day Training program, and undergraduate and graduate students in behavior analysis from local universities. All had either practical experience taking data in real situations, or were in the process of learning how to take data in their coursework. Data coders had

experience in behavior change strategies, or had completed classes in concepts and theories of behavior analysis, or both. All coders were paid for their work.

Initially data were coded starting the month after the study was completed. Several iterations of the data collection sheet were done to try to reduce possible coding errors. Staff were trained by this researcher to criterion, and data collection began. This researcher had to be out of town for several weeks and the data collection was assigned to a research assistant. While the researcher was out of town, coder behavior drift occurred. One portion of the data collection, marking blocked for students who were blocked or partially blocked, resulted in inconsistent coding, and unacceptable inter-observer agreement (IOA). All data were recoded after the researcher re-vamped the coder training process. Completion of the coding was delayed by approximately six months. The revised coder training is presented below.

Coders began the revised training by observing a 30-minute interactive PowerPoint presentation. The training presentation showed the data sheet, and had an animated component as to how to fill in the identifying data on the sheets, including the systematic method of filling in student names. The data codes were explained and data entry demonstrated with animated clips of the data sheet. The next segment showed stills of tapes taken at the chime, and an animated demonstration showing how the data would be recorded for a single student in a classroom, including using the blocked (BLK) code.

Next, coders saw exemplars of the individual seating charts for each classroom, showing where the teacher and assistant typically sat, the activities in which they typically engaged, the camera angle for each classroom, and barriers or classroom-

specific things of which to be aware. Each classroom description ended with a still shot of the classroom, taken from a video, with animated arrows showing different student behaviors such as attentive, inattentive, blocked, and out-of-seat behaviors.

The video then gave the coders step-by-step instruction and time to fill out a data sheet for one of the classrooms, provided at the onset of the training. Five students were observed in 10-second intervals (simulating the full 30-second intervals) and a still shot was taken of the final frame of the video to simulate pausing the tape. In the first interval each student was identified with a name printed on screen, animated arrows indicated their behavior as attentive or inattentive, and an arrowed box with the behavior code(s) appeared on the screen pointing to the appropriate student. Animated arrows drew a line from the identified behavior code(s) to the data sheets at the bottom of the screen, student by student, where the data appeared in the appropriate place on the data sheet. Coding trainees were told to fill out the interval on their sheets for each student at the same time as the data appeared on the demonstration.

In the second interval, the student names on screen were omitted, but behaviors were identified with boxes and arrows, and animated arrows made the connection between the student behavior and the appropriate interval on the data sheets at the bottom of the screen. Again, coders completed the appropriate areas of the data sheet.

There were six data intervals in all, each subsequent clip faded prompts until the coders were making the data decisions themselves first, but each clip ended with the correct answer on the on-screen data sheets, and an explanation, if needed, as to why data

were recorded in a particular way. This was to prompt coders to be attentive to details when they were coding.

Coder trainees then watched a full video segment, with their definition sheet next to them. Coder training was typically done with at least three individuals at the same time. After coding the segment, the researcher did IOA on the trainee's data sheets, comparing them to each other, to see if there was homogeneity between the new coders. Then IOA was done again, using a data sheet from the same segment the researcher had coded, or one from the same segment that an experienced coder whose IOA was close with other experienced coders, had done. If the trainees' IOA was acceptable based on the data sheets from experienced coders, they were allowed to start coding segments. IOA was done several times between all of the coders to continually check for coder behavior drift.

If a novice or experienced coder's data appeared incongruent with other coder's data in the same relative time frame, the researcher frequently viewed and coded the session and compared the results with the coder's sheet. If there were obvious difficulties, such as a tendency to forget to circle "Blocked" for students who were obviously blocked, the researcher reviewed the behavioral definitions with the coder before she coded any subsequent sessions. The session data that was incorrectly coded was recoded, by either the initial coder or another coder, depending upon which staff were available.

Student Behavioral Data

Because the teachers and assistants were experienced with many, excellent teaching strategies in their repertoires, and because it was the beginning of the second semester and most of the students were accustomed to the typical routines of school, there were few overt behavior challenges present in any of the classrooms that agreed to be observed. Some did exist, however. In addition, all of the teachers indicated that off-task, inattentive behaviors were prevalent and they would like to increase on-task behavior.

Data were collected on all students in each of the five operationally defined behaviors; aggression, self-injurious behavior (SIB), oppositional, attentive and inattentive behavior. In addition, there were two modifiers; blocked, used with the behavior codes for students who were partially or fully blocked at the end of the interval, and out-of-seat, also used in conjunction with the behavior codes. This gave a varying number of students and behavior combinations to observe and record in each classroom. Data were recorded using momentary time sampling in 30-second intervals; the observer recorded only the behavior that occurred at the end of the 30-second timed interval.

Staff Behavioral Data

Staff data collection required that the processed video, described above, be viewed by a second observer using a staff data collection sheet. Data were collected using continuous data recording in one-minute intervals, and the observer was instructed to pause the tape at the sound of the chime to allow for data recording tabulation and

adjustments, and to help ensure the coder was recording in the correct interval. Staff data collection consisted of identifying the staff responses in conjunction with the student behaviors occurring in the one-minute interval, based on the behavioral function. Staff interventions were documented individually, teacher and assistant, and were summarized as the rate of correct vs. incorrect per minute for each staff over each of the data observation sessions. Because of the additional skill required to determine behavior function, data coders for staff were Board Certified Behavior Analysts, with over three years of experience at the graduate level, in clinical behavior analysis. This was because the data coders had to observe each one-minute segment, determine the behaviors occurring and their likely function(s), and then determine if the teacher or assistant was intervening appropriately. Knowledge of the concepts and principals of behavior analysis, as well as a level of practical experience, were necessary to make these determinations.

The primary researcher and the IOA/alternate data coder developed the data sheets. Both have several years of staff supervision and behavior change experience in addition to their certification as Behavior Analysts.

The data coders used pre-coded data sheets for the staff data, first noting the identifying information from the video on each of the data sheets. Data was collected separately for each staff during the session. Next, the data coder started the video at the first chime after the title, waited for the first interval to start, and viewed the first one-minute interval. Teacher interactions that were instructional were not counted as behavior change interactions per se, however, there were some strategies that were both

instructional and fostered attention to task. One such intervention was "1,2,3, eyes on me" that was counted as appropriate behavior change statement/action as it was considered a "pivot", bringing attention to the teacher without bringing attention to the undesired behavior. Data were recorded as "hash marks" on data collection sheets with a separate line of code for each of the staff, for each of the 12 intervals. Coders recorded all interventions as hash marks in the "Number of Interventions" box, then immediately separated the interventions into "Correct" and "Incorrect" boxes, again as hash marks. At the chime, coders counted the hash marks in each of the correct and incorrect boxes and wrote the totals in the corresponding total boxes. The number of correct and incorrect responses had to total the number of hash marks in the "Number of Interventions" box, or the coder recoded the interval. A space was provided on the sheet for brief written notes to explain anomalies and special circumstances. Because the videos were imbedded with a chime at every 30-second interval, staff coders had to attend to the time while watching the video in order to stop the video in one-minute intervals, or every other chime. To this end, coders usually noted the time, in minutes and seconds from the video itself to track when the video was to be paused. When the interval chime occurred, the data coder paused the tape and finished transcribing the data that occurred during the interval.

Next, the data coder watched the next one-minute interval, recorded the data as hash marks in the correct boxes, and transcribed the intervention data when the chime sounded. This continued for all 12 data intervals. It was possible that the data coder could miss data if more than one person was observed. In classrooms with two instructional staff, it was sometimes difficult to determine who said what, and listening

several times might be necessary. The data coder was allowed to re-view the interval again, if needed, to obtain the data. If the data coder somehow lost track of the observation intervals, or missed the data for more than one interval, the coder was to rewind to the beginning of the 12-minute data sample and skip forward, interval by interval, until the interval in question was found. Data collection resumed at that point. If the coder could not determine where the intervals became confused, the entire session was recoded. There are 12 time samples per individual, per session, unless the session was shortened, such as a change in activity. Short sessions were indicated on the data sheet, with the reason why (tape ran out, etc). If the subject left the view of the camera, but was still responding to student behavior, the interval was scored as if the staff were present, but the observer noted the staff were off camera. When each data session was completed the data coder tabulated and summarized the data, signed the forms, and handed them in. Data coders were not to take the video or data sheets from the observation location for any reason. Data collection procedures for inter-observer agreement (IOA) were identical to the above-stated procedures.

Transcribing, and Inter-Observer Agreement

This researcher trained the coders. Board Certified Behavior Analysts, Certified Associate Behavior Analysts and graduate students in applied behavior analysis were preferred observers, however, individuals experienced in data collection, and individuals who were able to take data reliably and accurately were also used for the student data collection. Twenty to fifty percent of the 94, 12-minute sessions were co-observed for

student behavior data and staff intervention data in order to assess inter-observer agreement (IOA), based on the number of sessions in each phase of the study. IOA was done interval by interval for each session and was calculated as number of agreements divided by number of agreements plus disagreements. Because the chime was approximately 1.2 seconds in duration, and a great deal can happen in a preschool classroom in 1.2 seconds, IOA data were collected with the two coders observing at the same time, with a partition between them, whenever possible.

Student Data

Coders used pre-coded data sheets for the student data, first noting the identifying information from the video on each of the data sheets. Data was collected separately for each student during the session. The data coder could have up to 18 students to observe, and up to three sheets (front and back) on which to record the data. Next, the data coder started the video at the title, and waited for the chime at the end of the title indicating the first interval had started. The next chime would be the end of the first 30-second interval, and the first opportunity to record data. When the first post-interval chime occurred, the data coder paused the tape and transcribed the data that occurred at the time of the pause. Contextual data during the interval consisted of tracking teacher and/or assistant instructions, such as staff instructing a student to wash their hands, look at them, etc. Data was recorded as circled codes on data collection sheets with a separate line of code for each student for each of the 24 intervals. A space was provided on the sheet for brief written notes to explain anomalies and special circumstances. Behaviors that were

completed prior to the pause could not be recorded after the fact, nor could initiating behaviors be hypothesized to occur in the future. In other words, behaviors that occurred, but were completed, prior to the pause, such as an aggression, were not scored as aggression for that interval. Next, the data coder watched the next 30-second tape interval, and transcribed the behavior data when the chime sounded. This continued for all 24 data intervals. The data coder was allowed to stop the video as long as needed to record data, or to take a break during observations, but was encouraged to do so after a 12-minute session, rather than during the observation intervals.

It was possible that the data coder could miss data due to a number of environmental factors. Some camera angles were such that another person or object partially or fully blocked a student during intervals. If the face of a student was blocked, but hands are clearly seen participating in the activity, the child was marked Blocked and Attentive. Likewise, if the student's hands were blocked, but their face was oriented towards the teacher or task, the student was scored Blocked and Attentive. If the coder could not easily determine if the partial view indicated Attentive or Inattentive, the coder simply marked blocked. The data coder was discouraged, but not forbidden, from re-viewing the interval again to determine a behavior. If the data coder somehow lost track of the observation intervals, or missed the data for more than one interval, the coder was to rewind to the beginning of the 12-miute data sample and skip forward, interval by interval, until the interval in question was found. Data collection resumed at that point. If the coder could not determine where the coding error occurred, data for the entire session was recoded. There are 24 intervals per individual, per session, unless the session

was shortened. Short sessions were indicated on the data sheet, with the reason why (tape ran out, etc). If the subject was out-of-seat, left the view of the camera as a result of asking the teacher if they could engage in an activity like using the restroom, or, if the teacher gave them an out of seat task, the data coder circled out-of-seat (OOS) and Attentive (AT), indicating the student was out of the area engaged in a task. A student out-of-seat, seen in another area of the viewing screen engaging in activities unrelated to a legitimate task, was scored as out-of seat, Inattentive. If, after several minutes of being off screen for a legitimate task, the student re-appeared and was off task, the data was marked out-of-seat Inattentive for the intervals they were off task. If it was unclear if the student was engaged in a legitimate task, the coders indicated out of seat (OOS), without a behavior, until the student's actions were clear, then subsequent intervals would have the appropriate behavior added. These OOS-only intervals, like the blocked (BLK) code, were excluded from the data tabulation.

When each data session was completed, the data coder handed in the data sheets immediately. Data coders were not allowed to take the video or data sheets from the observation location for any reason. Data collection procedures for inter-observer agreement were identical to the above-stated procedures. Twenty to fifty percent of sessions were randomly selected for IOA from each of the phases of the study, with a minimum of 20%, and a maximum of 50% of intervals per phase. During the process of data collection, several additional segments were recoded for IOA due to significant differences in data during the same phase. If the IOA data was within 80% agreement of data from the session in question, both of the data sheets were entered on the date (as

with the random IOA). If the IOA data were less than 80% in agreement, a third coder recoded the session and the two with the closest scores were entered as data and IOA for the day. Other data from the same coder with the assumed error might then be recoded for IOA to determine if they had an erroneous concept of the behavioral definitions that was missed by the researcher, or if coder behavior drift had occurred. Data were compared interval by interval in order to establish IOA.

Teaching Staff Data

Two Board Certified Behavior Analysts completed data coding for teaching staff. Coding criterion was developed between the two coders, using video segments from each classroom, before ongoing data coding started. This was done because it was necessary to separate instructional interactions from behavior change interactions. Instructional interactions were statements such as "Everyone look at me, we are going to color theses shape blue, everyone show me their blue crayon." If the teacher or assistant followed with "OK", or "Next, we are going to…" there would be no behavior coding for that exchange, it was all instructional. However, if they said "Good job", "I like how everyone at this table is holding their blue crayon", "Wow, you all look like Kindergarteners!" or another reinforcing statement to the group or to an individual, it was coded as a behavioral intervention and placed in the "Correct" box. Statements that started as correct or incorrect, but then switched during the interaction, like "1, 2, 3, eyes on me…Jon, you are not paying attention!" would be coded as two interactions, one "Correct" for the 1, 2, 3 statement, one as "Incorrect" for bringing a lot of attention to the

inattentive behavior of Jon. Had the teacher or assistant said, "1,2,3, eyes on me…look at how Suzie is sitting criss-cross applesauce with her hands on her lap, … and now Jon is, too!"; it would be counted as three "Correct" interventions. One for "1,2,3", one for praising Suzie's appropriate behavior, and one for completing a "pivot" praise (turning back to Jon and attending to his appropriate behavior as soon as he emits it).

An "automatic" reinforcing statement was not counted as praise. "Thank you" did not count, unless it was paired with a specific behavior. A student gives a paper to a teacher and the teacher says "Thank you." This was not counted as a reinforcing statement as it is typically more of an acknowledgment of receipt in this case. "Thank you for using your inside voice" would be counted as a reinforcing statement as it is targeting a specific behavior "using an inside voice." If the teacher or assistant gave a directive, such as "Everyone needs to sit down right now." If everyone does, and the teacher says "Thank you", this was not counted as a reinforcing statement as it is not paired with compliance to the specific request. "Thank you for following directions" or "Thank you for sitting" was counted as correct.

Because of the individual methods used by each teacher to access attention, it was necessary to determine any staff behaviors that might be tough to categorize due to teaching style. One teacher, for example, may only start a phrase such as "1, 2, 3" without the "eyes on me" as the students now quiet down very quickly. This was coded as a "Correct" intervention; especially as it appeared to be fading from a full verbal prompt to a gestured prompt (standing quietly at the front of the room). When she starts the "Hey there Neighbor" chant each morning with a count of "1,2,3", it is not counted as

an intervention as it is a pacing count so everyone can start at the same time, not an abbreviated "1,2,3, eyes on me."

Data Decisions

Students

Because of the number of students observed in each classroom, certain concessions were required in order to obtain useable data. The classroom is an ever-shifting environment, and even structured "table work" may encompass two or three separate, or scaffolded, activities in the 12-minute session. In some classrooms, almost every student was blocked or partially blocked during each session. Students could have been blocked by a table or bookcase, by other students, by themselves (their back is to the camera, or their arm is blocking their face), or by instructional staff. As such, the data sheet included a "Blocked" (BLK) column. Data coders were required to circle this when a student was blocked or partially blocked. Because it was frequently possible to determine if the student was on task based on the orientation of their head, or if their hands were seen interacting appropriately with the materials at the chime, coders were taught to make the observations, mark BLK, and also attempt to identify the appropriate behavior code.

Inter-Observer Agreement coding was frequently done at the same time, watching the same television, with a partition between the two coders. The only contact between the observers was to indicate they were finished coding an interval so the coder with the remote control could restart the video. However, disagreements appeared to be more

frequent in some classrooms than they should have been. After polling the staff and observing the coders, it appeared IOA was affected based on what part of the television screen the coder was observing at the time the chime sounded. Coders on the left tended to have their eyes on the students on the left side of the screen, coders on the right tended to favor the right. If a single student was having a disagreement, a behavioral incident, or fell out of his chair; something that drew the coders attention, they tended to have closer IOA for that interval. If two classroom staff appeared to be giving instructions to two different students at the same time, there was a slightly higher probability that the coders would not agree for that segment.

Because of this, and the intermittent ability to have a clear view of some students interval to interval on the data sheets, some data were discarded if certain criteria were met. Data sheets were scored using the procedure that follows.

Data Sheet Analysis Procedure

For each student column, non-IOA data sheets:

1. Put a hyphen (-) on the right side (next to AT) of any row (interval) in which the student was blocked and no behavior is recorded (only BLK is marked), where the row is blank (the tape ended early), or where the student was out of seat (OOS) with no additional behavior noted. These rows (intervals) are not used.
2. Count the total useable rows with Attentive (AT) selected and write the number in the AT total space at the bottom of the column.

3. Do the same for the INA, A, O, and SIB columns.
4. Count all useable rows. Under the AT total on the bottom of the data column make a horizontal line and put the total of usable rows under that line. When the AT total is written in AT total space, it should look like an equation (AT ÷ total useable rows). When the data are entered in excel, each behavior will be divided by the useable intervals, this will give a percentage of intervals for each behavior.

For Inter-Observer Agreement (IOA):

1. Compare, row by row, the data for each student on both data sheets.
2. If there are rows (intervals) in which the coders disagree with a behavior, but they both marked "BLK", meaning the student was blocked or partially blocked, or OOS without an additional behavior selected, put a hyphen (-) on the right side of the column of the student's data (the AT column). These data will not be used.
3. If there are intervals in which the two coders disagree on the behavior, and blocked is NOT marked, or is only marked on one of the sheets, make an "X" on the right side of the column (the AT column) on BOTH sheets. This indicates a disagreement. There should be the same number of hyphens and "X"s for the same student on each data sheet. Do not use OOS to determine disagreement. If A, O, SIB, AT and/or INA are in agreement, but OOS is not, it is an agreement row.
4. For each data column, count the rows without hyphens. Under the AT total on the bottom of the data column, make a horizontal line and put the total number of rows without a hyphen under that line. Later, when the AT total is written in AT total space, it should look like an equation (AT ÷ total useable rows).

5. For each student column, count the total rows with AT selected (without a hyphen), including those with an "X", and write the number in the AT total space at the bottom of the column.
6. Do the same for the INA, A, O, and SIB columns.
7. To calculate IOA
    a. Look at all rows without a hyphen. If there are no disagreements ("X"s), IOA is 100%. If there are "X"s, count the number of useable rows of agreements (no "X"s) in the column. Divide the number of agreements by the number under the horizontal line below the AT total. It should be a smaller number divided by a larger number (Agreements ÷ Agreements + Disagreements). This will give the percentage of IOA. Write the IOA (IOA= ____) in the comments section of the student's data column on both data sheets. In some cases, the total number of behaviors will match on each sheet, it is only100% IOA if the behaviors match interval by interval.

Staff

Staff data were coded in one-minute intervals using continuous recording. In order to facilitate IOA, the coders stopped the video every minute (every other chime) to tally data for each interval. Operationally defining teacher and assistant behaviors was a challenge. In order to evaluate behavior change interactions, referred to as interventions, it was necessary to separate instructional statements and directions from behavior change

interactions. Although there are many interactions that may increase or decrease a behavior in the classroom, certain phrases or actions did not count as behavior change interactions. The phrase "Thank you", by itself, did not count as a behavior change statement as it is frequently an automatic response to another's behavior. If the staff combined it with a specific form of feedback, however, it counted. "Thank you for raising your hand" is a correct "intervention." The teacher or assistant giving neutral feedback, such as "O.K.", "Alright", "Umm hmm" were not used. Neither were "Right" or "Correct" unless they were embellished with "You are *so* right" or "I *knew* you'd get it right!." Phrases such as "Sit on your bottom", "Please sit down", "Come to the table" were instructional the first time, if it was repeated more than once in the interval, or combined with "I SAID sit on your bottom!", it was an incorrect intervention. After the first instruction, the staff were to have praised other children who were sitting correctly.

Interventions that were used by teachers before the functional assessment classes, like "1,2,3, look at me", clapping games, and the like were counted as correct interventions as they were to gain attention from the students without drawing attention to the undesired behaviors. The primary researcher and the alternate/IOA coder had to confer and recode staff data sheets several times due to low IOA as some teachers had individualized some things, like shortening "1,2,3, eyes on me" to "1,2,3, eyes on _____" to indicate another student, or simply abbreviated to "1,2,3." The coders sometimes interpreted the teacher's idiosyncratic behavior differently and the new operationalized statements were added to the definitions. Many times a teacher or assistant would use a

phrase or statement typically considered as giving too much attention to an undesired behavior. Recognizing the students are all four or five years old, sometimes clear, concise directives about wiping up spills, sitting appropriately in the chair, and walking through the school were necessary due to the developmental level of the students. If it continued past one statement, however, it was "lecturing" and was coded as an incorrect intervention. Some behavior change interactions started well, but ended badly. Statements such as "I like it when you sit nicely… not like _____ who is always running around" were coded as one correct and one incorrect interaction.

Data Sheet Analysis Procedure

Data sheets were coded by the primary researcher and one alternate/IOA coder who was also certified in behavior analysis at the graduate level and who has several years of experience as a staff supervisor and behavior analyst. Video coding was done using a data sheet that was horizontally separated into 24 intervals, 12 for the teacher and 12 for the assistant. Coders made a "hash mark" (a small vertical line) in the "Interventions" box on the data sheet, then immediately transferred correct responses, as hash marks, to the correct or incorrect box on the data sheet. This method was used as sometimes staff verbal interventions occurred at very high rates and making a small vertical mark allowed the coder to keep up with the action. In addition, if totaled scores were difficult to read, the person entering the data was able to count the hash marks to determine the correct number. Sometimes, however, coders had to view the interval a

second time to be sure the data were accurate. Voices were sometimes difficult to discern in the ambient noises of the classroom. Because of this, coding was considered a match for IOA if correct and incorrect data for each interval were within one data point, but did not exceed a 25% difference on the total staff behavior count per session.

CHAPTER 4 - RESULTS

This study examined the results of a professional development training in which preschool teachers and their assistants were taught functional assessment skills and four, basic, behavioral interventions. The study explored the interactions between teachers or assistants, and the students in their classroom, in regards to students' behavior. Student behaviors tracked in the study included Attentive (AT), Inattentive (INA), Aggression (A), Oppositional (O), and Self-Injurious Behaviors (SIB). Out-of-Seat (OOS) behavior was also tracked and reported for those students with functional assessments in which out-of-seat behavior was identified as an undesired behavior, or as a contributing factor to other undesired behaviors. Teacher behaviors were tracked in regards to their behavior change interactions, or interventions, during the study. Interventions were coded as correct or incorrect, based on the observed function of the student's behavior.

The Research Questions:

1. Will teaching functional assessment skills and specific behavioral interventions to Prekindergarten classroom staff affect the children's aggressive, oppositional, self-injurious and attentive behavior?

2. Will teaching functional assessment skills and specific behavioral interventions to Prekindergarten classroom staff result in staff implementation of responses and interventions that relate to the function of the students' behavior?

Data Results

Presentation of IOA Data

Inter-Observer Agreements are presented on the student and staff graphs as a second data point on the same date. Data days in which there are 100% IOA show as a single data point on the graph. IOA for the teacher and assistant data ranged from 83% to 100% with an average of 94% in classroom 1. IOA for the teacher in classroom 2 ranged from 92% to 100% with an average of 99%. IOA for the teacher in classroom 3 ranged from 93% to 100% with an average of 99%. IOA was high in the teacher data as the criterion for scoring (see Appendix D) required a recoding if fewer than nine intervals out of twelve agree within one point. In addition, total correct or incorrect data for each staff person in the 12-minute session could not exceed a difference of 25% of points between the coders or the data had to be recoded.

The lowest average IOA per student in Classroom 1 was 92%. The combined average IOA for Classroom 1 was 95% agreement.

The lowest average IOA per student in Classroom 2 was 95%. The classroom average IOA was 98%.

The lowest average IOA per student in Classroom 3 was 95%. The combined class average IOA was 99.9% and was rounded up to 100%.

Classroom 1

This classroom had one teacher and one assistant. Both agreed to participate in the research. The students' exact ages are not known, however, all were four years old as of the previous September 1 and none were five at that time. There were 13 boys and 5 girls. Eight of the students were African-American, seven were Caucasian, and three were Hispanic. The teacher was Caucasian and the assistant was Hispanic.

The teacher and assistant in this classroom had worked together for several years. The assistant was comfortable running the classroom in the teacher's absence, however, when the teacher was in the room, the assistant's responsibilities were more limited. During "Circle Time", the teacher had primary interaction responsibilities, and the assistant provided support to the children who had chores or needed assistance with toileting or clothing. She also prepared materials for the next activity. During "Circle Time"' several students had jobs to do. These might include wiping tables, throwing trash in the wastebasket, or drawing a picture of the weather. Since the assistant's responsibilities were to support these few students in their jobs, she was as unobtrusive as possible as not to disturb the activities in which the teacher and other students were engaging.

Teacher assistant interventions were skewed by a tendency to remain silent unless she was "needed." This meant that when the teacher was present, the assistant typically only gave direction or instruction when a student was off-task or misbehaving. Additionally, it was very difficult to hear her speak, and she was frequently out of camera

range. Because the data are expressed as a ratio of correct and incorrect interventions, and because there were days with only 1,2,or 3 data intervals, the data for the teaching assistant were frequently in the extreme ranges, with some "100%" correct and some "100%" incorrect responses. By limiting valid data days to days in which four or more data intervals were available, a more accurate picture of the assistant's intervention skills is seen. It note that during the entire nine weeks of data collection there was not a single incidence of the target behaviors occurring with a student when the assistant was providing assistance.

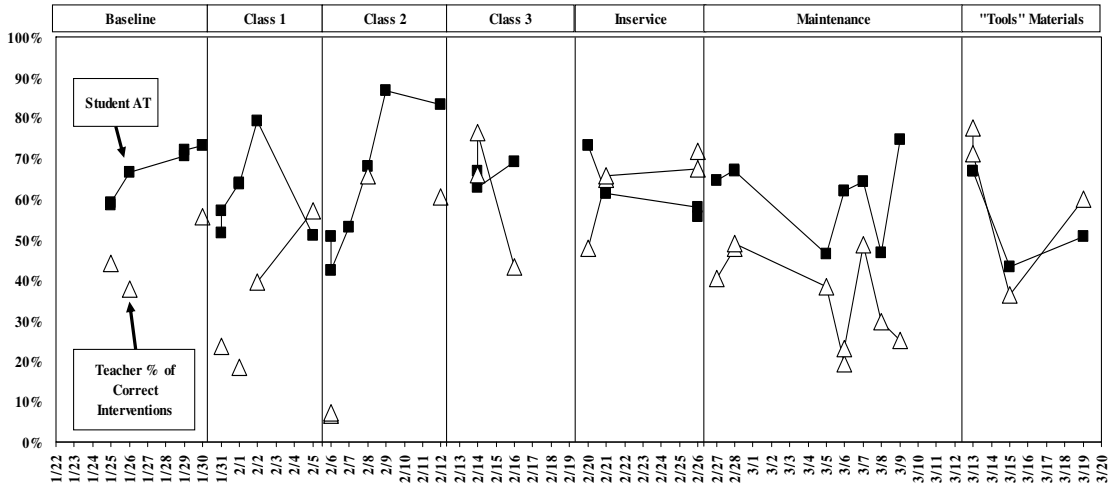


Figure 4-1: 1. Classroom 1 - Averaged daily percentage of student attentive behavior compared with teacher daily percentage of correct interventions.

The teacher's implementation of the interventions was initially sporadic; however, as classes continued the teacher implementation and the students' behavior showed a distinct relationship.

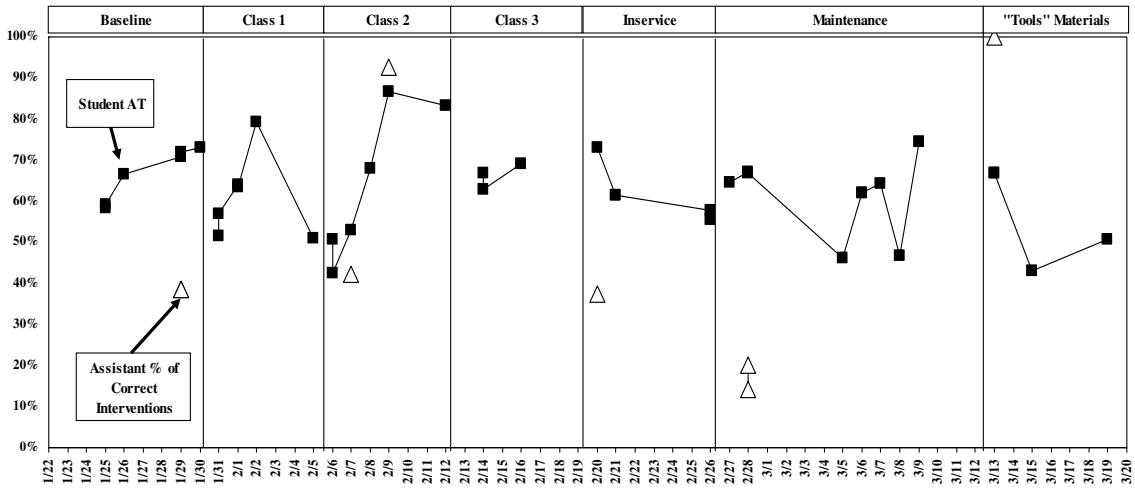


Figure 4-1: 2. Classroom 1 - Averaged daily percentage of student attentive behavior compared with teacher assistant percentage of correct interventions.

It should be noted that the day of the highest attentive student behavior was February 9th, with an 87% AT. The teacher was absent and the assistant was teaching "Circle Time" with the students. Of the six valid data days, the first four were days in which the assistant was covering the class due to the teacher's absence. Because there are so few valid data days for the assistant, a relationship between the student behaviors and the assistant's ratio of correct interventions is not well established.

As seen in Figure 4-1:3, there was an initial surge of teacher interventions with a low rate of correct responding, but as time, experience and the classes continued, the ratio of correct to incorrect responses increased, even as the number of interventions per minute decreased.

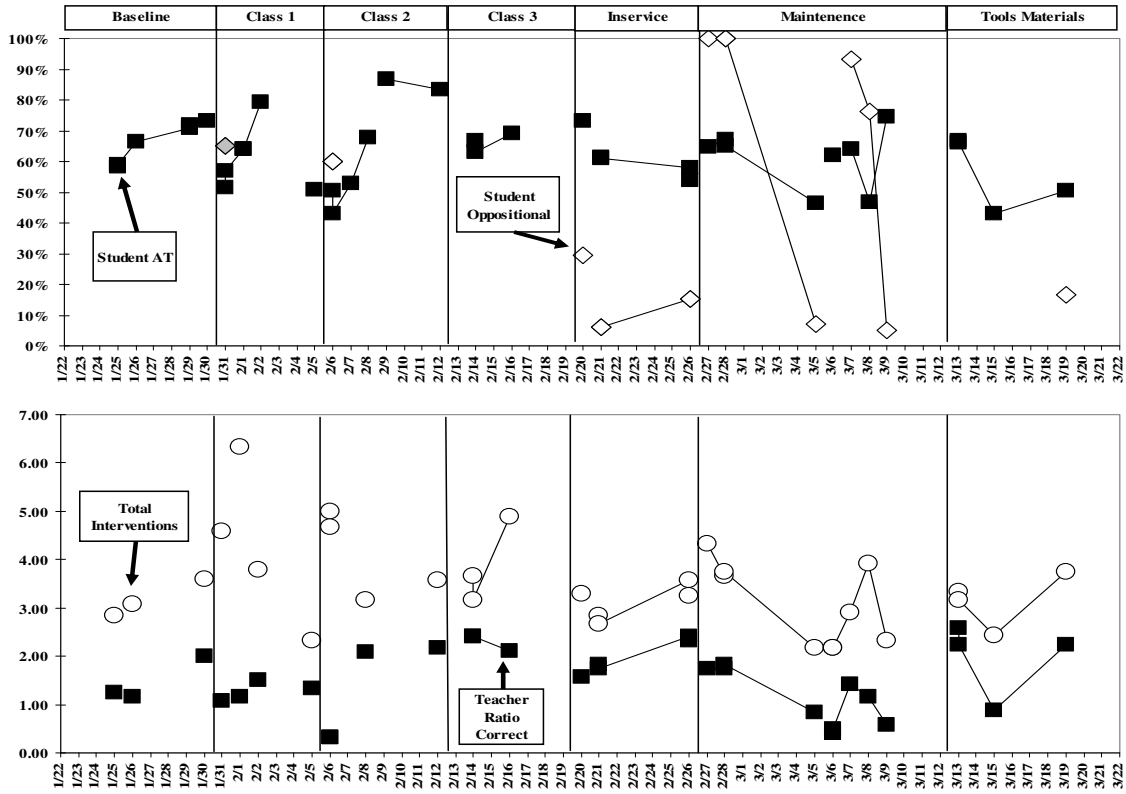


Figure 4-1: 3. Classroom 1 – Student attentive with two students' oppositional behavior (above) and teacher correct interventions compared to total interventions (below).

By the third week after the classes were completed, there was a decline in both the rate correct and the rate of interventions per minute, but the rate of correct interventions compared to total interventions correlated more closely and remained in a 60% to 70% correct range. During baseline, there was a day in which one student had several intervals of oppositional (o) behavior. This is represented on the upper graph as a grey diamond on 1/31. This student did not repeat the oppositional behavior during the study. However, starting in February, one of the other students, student 14, began escalating in his attention-seeking, disruptive and destructive behavior.

Student 14 was not present in the classroom during the week of February 12-16, but was referred to once as "being in Ms. ____'s room for a while, "Thinking of how to make good choices." The teacher and assistant did well ignoring, but ultimately they attended to the behavior. They also did not re-direct the student back to task, which was the correct intervention for escape maintained behavior. His behaviors started to escalate further and he was frequently out of the classroom. By the first week of March, one of the other VPK teachers started "helping" by coming in and taking the difficult student so she could talk to him. By the middle of March, he had been sent home more than once and openly screamed, "I want to go home."

The relatively high rate of attention during the one student's outbursts related to three significant factors; the action occurring, the number of teacher interventions and the percentage correct. First, the students were attending to the interactions between the teacher and the student as they occurred. Second, the teacher, attempting to ignore much of the individual student's disruptive behavior, became more focused on maintaining the attention of the other students, such as engaging in clapping games, doing deep breathing exercises, and increasing positive interactions and pivot praising to the appropriately attending students. Third, these interventions, because they were measured as frequency, rather than duration, appeared to decrease in the frequency of interventions per minute, but the teacher was actually reinforcing the students more during each interval. She verbally reinforced students for "Making good choices" and "Setting a good example." Unfortunately, she also used "Good ignoring student 14's bad choices." The students, however, were decreasingly tolerant of the individual student's behavior and there were

several incidences in March where the students yelled to the misbehaving individual to "Shut up."

Another finding was the apparent transfer in the relationship between the teacher's interventions and the students' attentive behavior. If one compared the student attentive data with the total number of daily teacher interventions, it appeared the *frequency* of interventions, good and bad, may have influenced the students' attentive behavior the most (Figure 4-1:4).

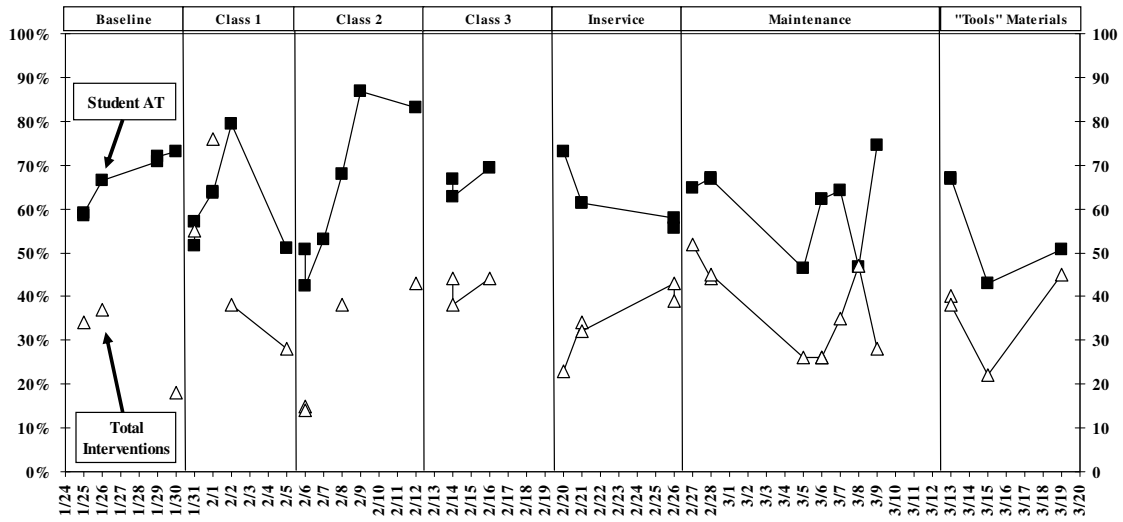


Figure 4-1: 4 Student attentive behavior compared to the total number of daily teacher interventions.

Yet, by separating the data into percentages of correct and incorrect responses, it seemed, initially, that either the percentage of incorrect interventions, or the total frequency of all interventions, had the closest relationship to the students' attentive behavior. This appeared to change in three places, in the phase following the second functional assessment class, and in the maintenance and "Tools" phases. In the phase

following the second class (Class 2) the AT data did not correspond with the incorrect interventions, they only corresponded with the total interventions and the correct interventions. In the maintenance phase, only on 3/6 and 3/9, were student AT and incorrect interventions closely related. In the "Tools" phase, there was no correspondence with incorrect interventions and student attentive behavior.

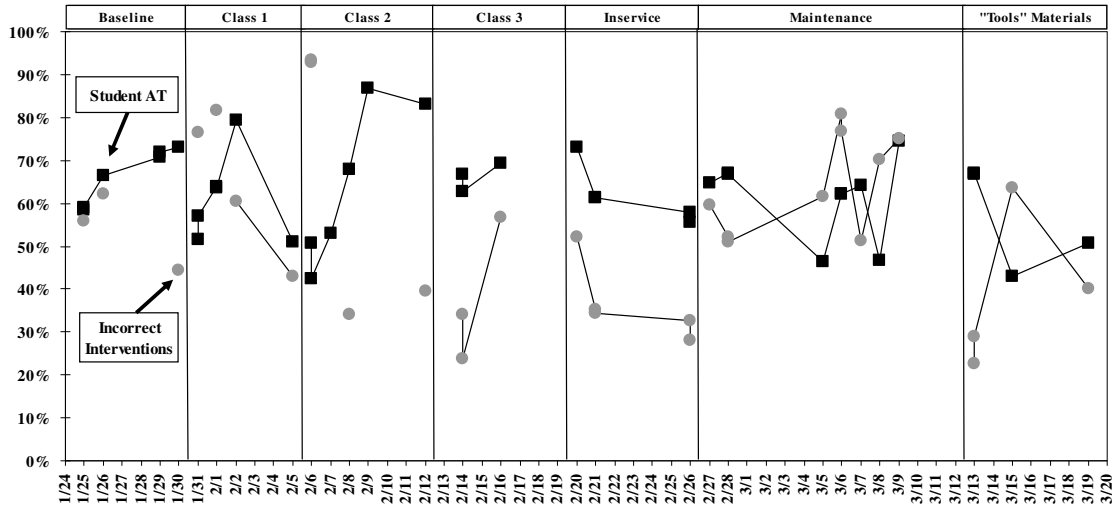


Figure 4-1: 5. Student attention compared to the ratio of incorrect daily teacher interventions.

When comparing the student attentive data with the percentage of correct responses, initially there was little correspondence between the students' behavior and the teacher's correct interventions. However, in the phase following the second functional assessment class, and in the maintenance and "Tools" phases, the more dominant relationship seemed to be the teacher's correct interventions (Figure 4-1:6). This suggested that the teacher's correct interventions were having more of an impact in these phases.

The very challenging behavior of one student appeared to help this teacher in refining her skills as she tried to keep the other students attentive and engaged during the student's behavioral outbursts. This suggested the stimulus control for the students' behavior might have shifted from the frequency of the interventions, or the incorrect interventions, to the correct interventions.

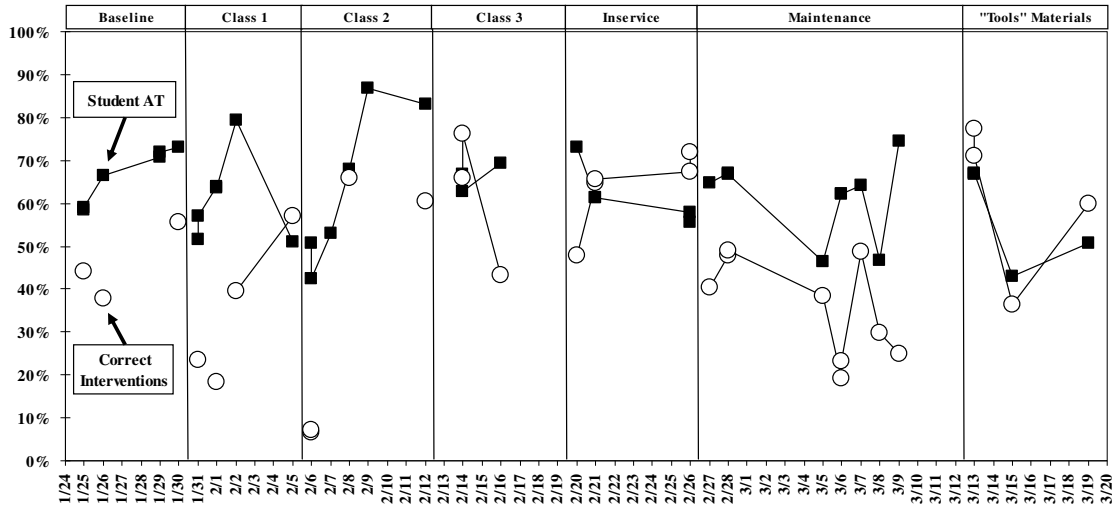


Figure 4-1: 6. Student attentive behavior compared to the ratio of teacher correct interventions.

The relationship between the total frequency of interventions and the students' attention was strong; however, the relationship between the correct interventions and student AT appears stronger, particularly in the "Tools" phase.

Functional Assessment Outcomes for Students in Classroom 1

Table 4: 1 Classroom 1 – Student functional assessment summary.

Student #	Behavior	Hypothesized Function(s)
8	Bullying/Aggression Non-compliance to directions	Access to item/Attention Escape
11	Touching others Out-of-Seat Touching/aggression during transitions	Attention/Escape Attention/Escape Attention
12	Non-compliance to directions Aggression	Attention Attention
14	Refuses transitions Out-of-Seat Non-compliance to directions Aggression/property disruption Inappropriate language	Escape/Attention Escape/Attention Escape/Attention Escape/Attention Escape/Access to R+ activity

The teacher and assistant identified four students on whom they would conduct a functional assessment. All four students were present for the duration of the study.

Student 8, aged 5 years at the onset of the study, was identified as having bullying and aggressive behaviors when playing with others, as well as not following directions. A large boy, he sometimes bullied to gain access to items or toys, but he also did it for peer attention. If he was non-compliant in "Circle Time" he was sent to the "safe chair" to "think about his bad choices", out of the area. There were no documented incidences of aggression, and only one day with oppositional behavior, however, it occurred in 50% of intervals for the day. This student's attentive behavior was 60% in baseline, 66% in both Class1 and Class 2 phases, increased to 82% in the Class 3 phase, dropped to 50% in

the inservice phase, increases slightly to 58% in the maintenance phase, and ends at an average of 62%.

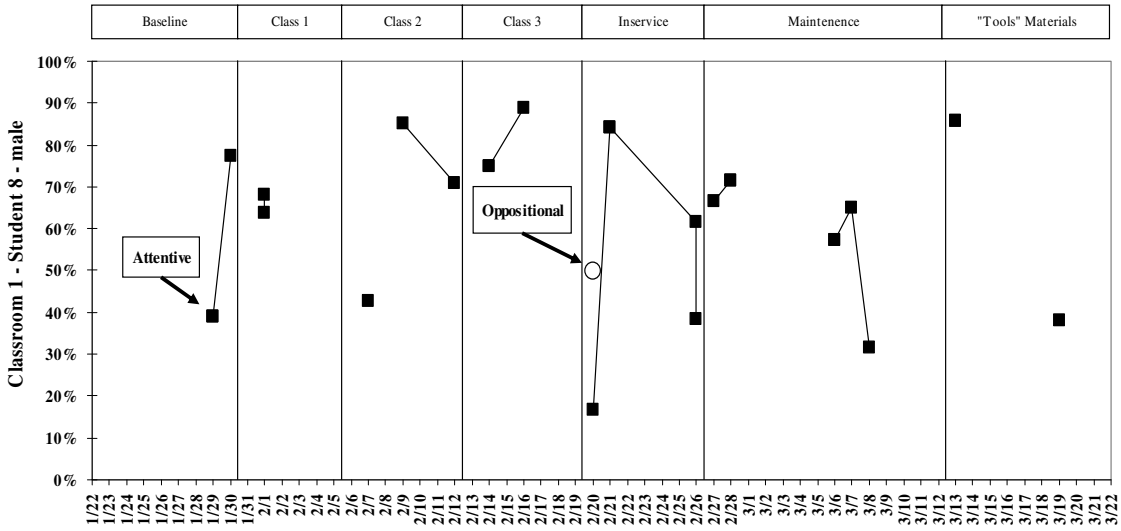


Figure 4-1: 7. Classroom 1 – Student 8-Attentive and oppositional behavior.

Student 11, 5 years old at the onset of the study, was identified as having out-of-seat behaviors, aggression during transitions, and touching others when teacher attention was low. There were no recorded incidents of aggression, but touching could have occurred and not been recorded if it was a "friendly" touch. Out-of-seat behavior was frequent, but as can be seen from the data, he was attentive to task most of the time when out of seat. Note that because the students sit on the floor in this classroom, the students are scored out-of-seat if their buttocks are not on the floor (i.e.: sitting on their knees, etc). Instances of 100% OOS are likely times when the student is engaging in class chores.

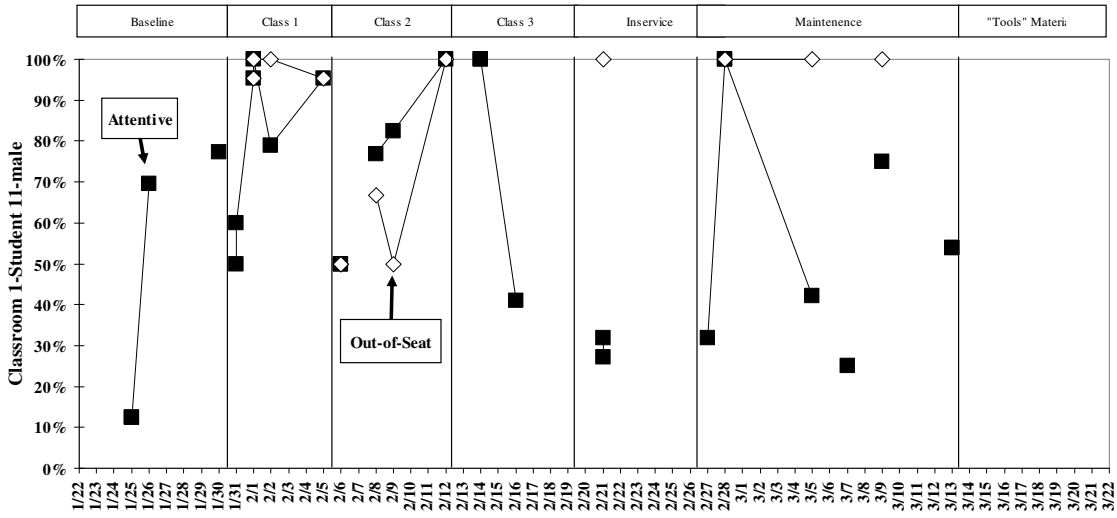


Figure 4-1: 8. Classroom 1 - Student 11 attentive behavior with out-of-seat behavior.

Student 12, 5 years old at the onset of the study, was identified as having non-compliance to directions (oppositional) and aggression. The teacher indicated that on occasion, the student would not follow directions, or display defiance, and if not redirected, she would escalate into aggression. This student was very attached to the teacher and was very reinforced by her attention. When the student became "out of control" the teacher would sometimes do a "basket hold"; with the teacher sitting on the floor, she would hold the student on her lap, with the student facing away, wrap her arms around the student, and hold the student's wrists in a crossed-arms position until she "calmed down." Occasionally this student was not in class and was referred to as "Being in Ms. _____'s room, thinking about her choices." There was one data day the week of February 14 in which this statement was heard. There were no incidences of aggression recorded during the study, and only one day with oppositional behavior. This student

made temporary gains in her attentive behavior, but by the end of the study her data indicate a reduction in attentive behavior.

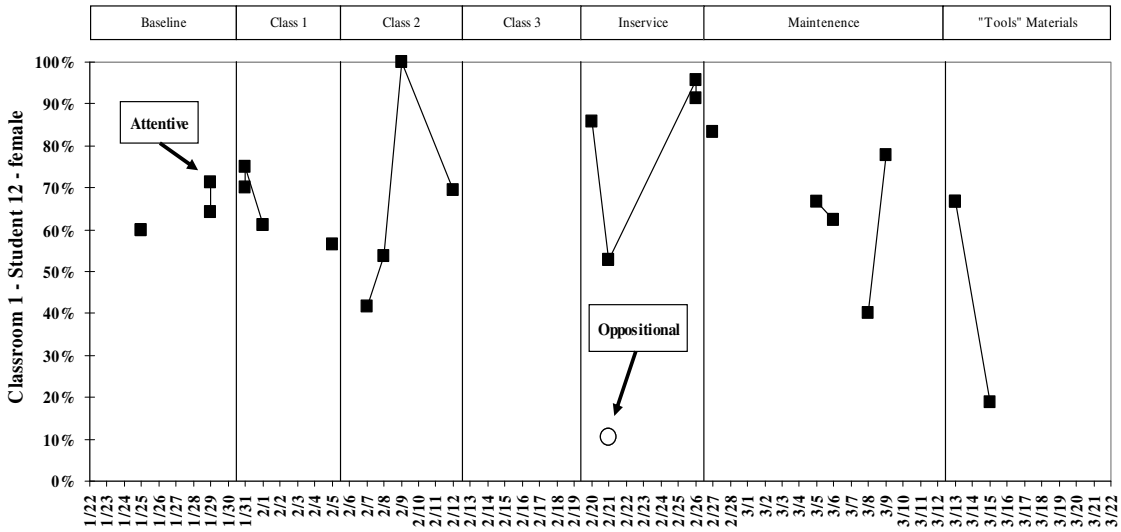


Figure 4-1: 9. Classroom 1 – Student 12 Attentive and oppositional behaviors.

The student with frequent, escalating, oppositional behavior, discussed previously in this section, was one of the students with whom the teacher had done a functional assessment, student 14. She correctly identified his attention and escape-maintained behaviors in the functional assessment. Also identified were; aggression, property disruption, refusing transitions, out-of-seat, and inappropriate language. Only one aggressive incident was identified during data collection, property disruption was heard, but not seen. Out-of-seat behavior occurred in conjunction with the oppositional behavior and was not displayed on the graph. The teacher indicated that negotiation was a good way to get some behavioral momentum going. However, the student was frequently sent to another room, or was moved to another area of the room when he

began to exhibit disruptive behaviors. During the taped sessions, the teacher frequently ignored much of his inconsequential behaviors, but eventually she attended. She habitually forgot the antecedent interventions, such as negotiation, and gave ultimatums that often resulted in an escalation of his behavior. He was usually sent to the "safe chair" to "Think about his choices" when he became oppositional. The correct intervention for his escape-maintained behaviors should have been re-directing him back to the activity. There were days when he was out of the area prior to the start of the tape, and there was no way to know the circumstances of the exclusion from "Circle Time." There were a number of days when the student was not seen, or he was seen at a worktable some feet away from the group, but can be heard singing, yelling, and kicking furniture. Like the previous student, this student was very reinforced by the teacher's attention, much more so than the assistant's. It is unknown what strategies were used at other times of the day.

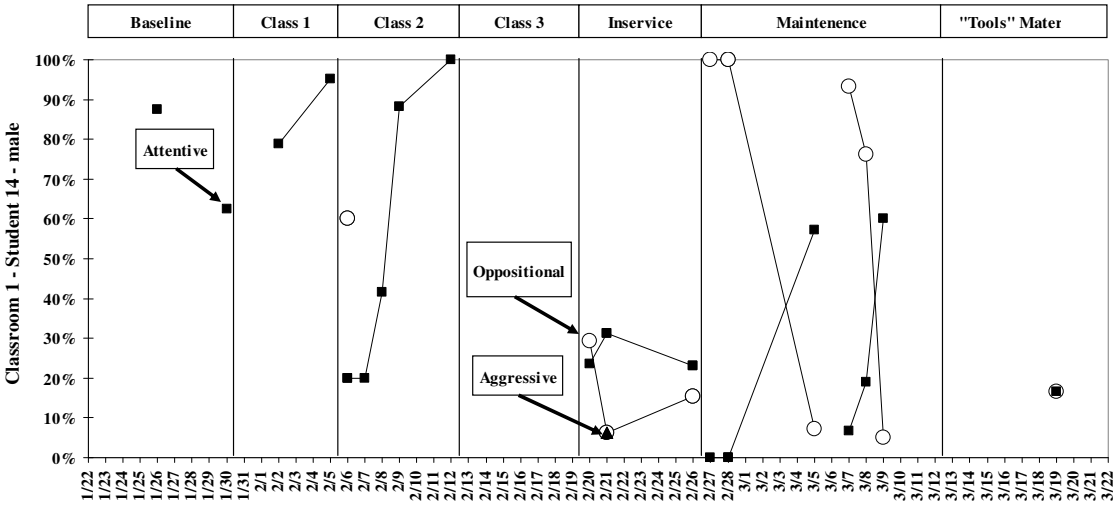


Figure 4-1: 10. Classroom 1 – Student 14 - Attentive, oppositional, and aggressive behaviors.

Classroom 2

This classroom had one teacher and one assistant. Both agreed to participate in the research; however the teacher assistant was so soft spoken that even when she was closer to the camera than the teacher, coders were unable to reliably determine her verbal behavior. In addition, the camera angle was such in the room that the staff who worked at the table on the left side of the screen was occasionally cut off. If the teacher was sitting in that seat, her movements and verbal behavior could be reliably coded, but not the assistant. Due to this, the assistant's data could not be used. Also, because of this, data days in which there was a substitute teacher were "no data days" for staff behavior data.

The students' exact ages were not known, however, all were four years old as of the previous September 1st and none were five at that time. There were 7 boys and 11 girls. Eight of the students were African American, and ten were Caucasian. The teacher was Caucasian as was the assistant. The teacher and assistant in this classroom had worked together since the beginning of the current school year. The teacher chose to videotape during small group activity. In this classroom, the teacher and assistant each had a table of students and they alternated tables weekly. Despite the fact that the assistant had equal authority with the children, during activity time the teacher frequently took the lead over both tables, giving instructions to the whole group, or gaining attention to make a suggestion or give feedback.

This teacher was already a very competent teacher, but much of her verbal behavior with students was pre-teaching, prompting, and directing. The teacher was an

animated speaker, and her attention was reinforcing to many students, but there were few reinforcing statements during work time. There were also several times when a direction was given, such as "I can't speak to you unless you are sitting in your seat", but then she spoke to the child, or another out-of-seat student, a few moments later. Student unsolicited callouts were frequent, and the teacher indicated that off task behavior was an issue. Teacher interventions were frequent, and were appropriately given much of the time. Figure 4-2:1 shows the average daily percentage of student attentive behavior (AT), and the daily percentage ratio of correct behavior change interventions.

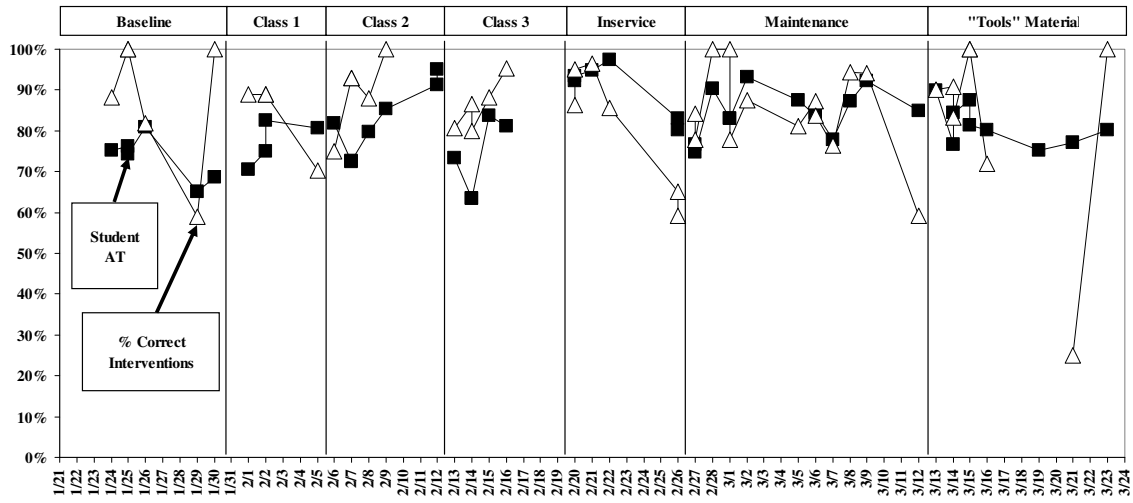


Figure 4-2: 1. Classroom 2 – Daily average of student attentive behavior compared with the daily percentage of teacher correct interventions.

Although not a perfect match, the relationship between student on-task behavior and high ratios of correct behavioral interactions were apparent. The teacher had indicated that inattentive behavior was a concern, but the students in this classroom were attentive well over 70% of the time each day, on average. Figure 4-2:2 shows the student

attentive behavior through each phase of the research project. Again, the relationship between student on-task, averaged by phase, closely shadowed the teacher's phase-average of correct interventions, culminating in a 99% agreement of averages at the end of the maintenance phase and a 98% agreement at the end of the final phase. Phase change lines were omitted as the phase-average data are on the phase change lines. The agreement data path crosses the phase change lines to assist reader interpretation.

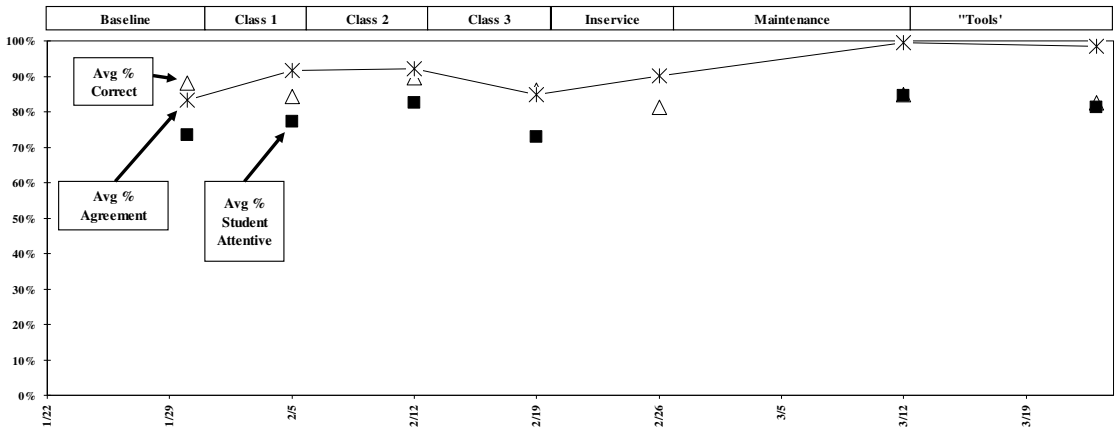


Figure 4-2: 2. Classroom 2 - Average percentage of student attentive behavior by phase and average percentage ratio of teacher's correct interventions by phase with the percentage of agreement.

As was previously stated, the teacher's ratio of correct interventions was high before she received the functional assessment classes. The total number of interventions was also high, meaning she had many behavior change interactions with the students in small group time, and many were correct. They were not always specific, however. During baseline, correct interventions were more generalized, using statements such as "Very good", "That is awesome", and other positive phrases. After baseline, the teacher gradually increased specific feedback, such as "Thank you for raising your hand" and

"You really worked hard to color in the lines this time!" Pivot praises, such as " _____, you are sitting on your bottom and your hand is raised, I can call on you now!" were also used with increasing frequency. Figure 4-2:3 shows the relationship between the teacher's frequency of interventions and the frequency of correct responses as time went on. This was especially apparent when looking between the ratio of correct interventions per minute and total interventions per minute on 1/29 (during baseline) and 2/28 (during maintenance). On the former, the teacher was addressing many behaviors, but was giving attention to undesired behaviors. Out of the 56 interventions in the 12-minute session, she gave incorrect interventions 23 times, or 50% of the interventions. On 2/28, she intervened 27 times and was correct in 100% of intervals.

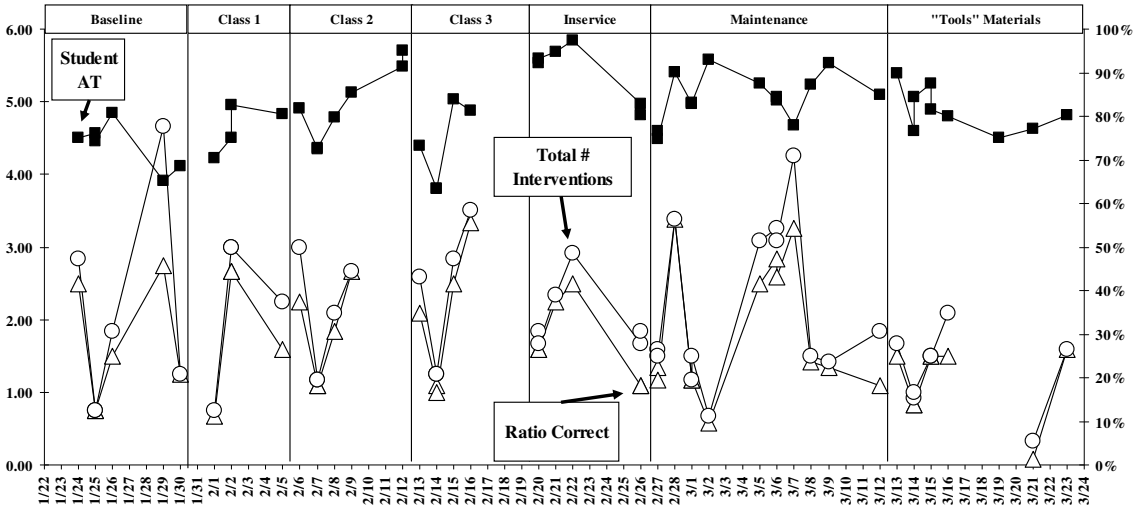


Figure 4-2: 3. Classroom 2 - Total teacher interventions and ratio of correct interventions with student attentive behavior.

Note that this teacher sometimes intervened appropriately 100% of the time even in the baseline phase. However, initially the ratio correct was high only when the rate of interventions was low. As can be seen, over time, the ratio of correct interventions

improved even when she engaged in high rates of interventions. As the trend of the total number of interventions appeared to decline, the ratio of correct intervention remained extremely high. On March 21, as on many low-intervention days, the teacher spent much of the session in active instruction; guiding, prompting, and assisting. Because she frequently required that students wait for her feedback or assistance until they moved to the next task, students may have been off-task because they were waiting for their turn for one-on-one interaction. This tended to make the student attention scores lower, and the teacher intervention scores lower as well. The final week of the study, the teacher was ill and was out sick at least one day. There were no data on two of the remaining four days, it is unknown if it was due to teacher illness or a competing activity.

Functional Assessment Outcomes for Students in Classroom 2

The teacher and assistant selected four students on whom to do functional assessments, however, one of the students was seated in an area that was blocked from camera view, either by the camera angle, or by the teaching staff and his data cannot be used. Therefore, only three functional analyses are discussed.

Table 4: 2 Classroom 2 – Student functional assessment summary.

Student #	Behavior	Hypothesized Function(s)
3	Crying Falling down/dropping to the floor Hitting Whining Playing with food	Attention Attention Access Attention Escape
7	Exaggerated fear Inattentive Excessive hand washing	Escape/Attention Escape Automatically Reinforced
10	Verbally aggressive to peers Easily upset Inattentive Touching pushing	Staff Attention/Escape Staff Attention/Escape Attention from peers Access to a preferred place in line/items

Student 3, aged 4 years, 6 months at the onset of the study, was reported to have aggressive, attention-seeking, and oppositional behaviors. There were no recorded acts of aggression. Crying and whining were not noted during data collection. Dropping to the floor and playing with food were unlikely to occur during small group time, and were not witnessed. There were two incidents of oppositional behavior, one on 2/14, the other on 3/5. The first occurred for 5% of intervals for the day, the latter, for 8% of data intervals. The student's attentive behavior was high, but variable, for the duration of the study. There was an increase of attentive behavior in the class 2 phase with a steady increase each phase until the maintenance phase. After a decline in the maintenance phase, attentive behavior averages higher than baseline by the end of the study.

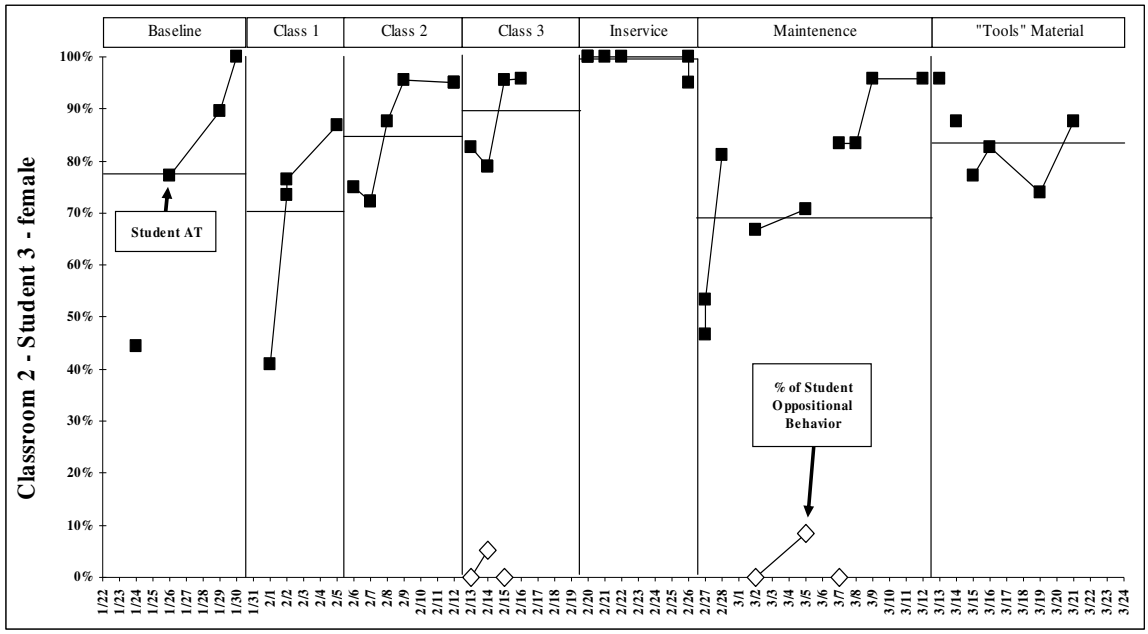


Figure 4-2: 4. Classroom 2 – Student 3 attentive and oppositional behavior.

Student 7, aged 5 years, 2 months at the onset of the study, was reported to have several anxiety-related behaviors such as exaggerated fears of new places, strangers, animals, and environmental events such as fire drills. In addition, she was frequently inattentive, by teacher report, and engaged in frequent hand washing. The behaviors related to this student's fears and excessive hand washing was not addressed with the functional assessment skills or the basic interventions taught as a part of this study. This student's attentive behavior averaged 63% during baseline, decreased slightly in the first phase, but then increased, remaining well above baseline for the duration of the study. Only one incident of opposition was recorded, on February 27.

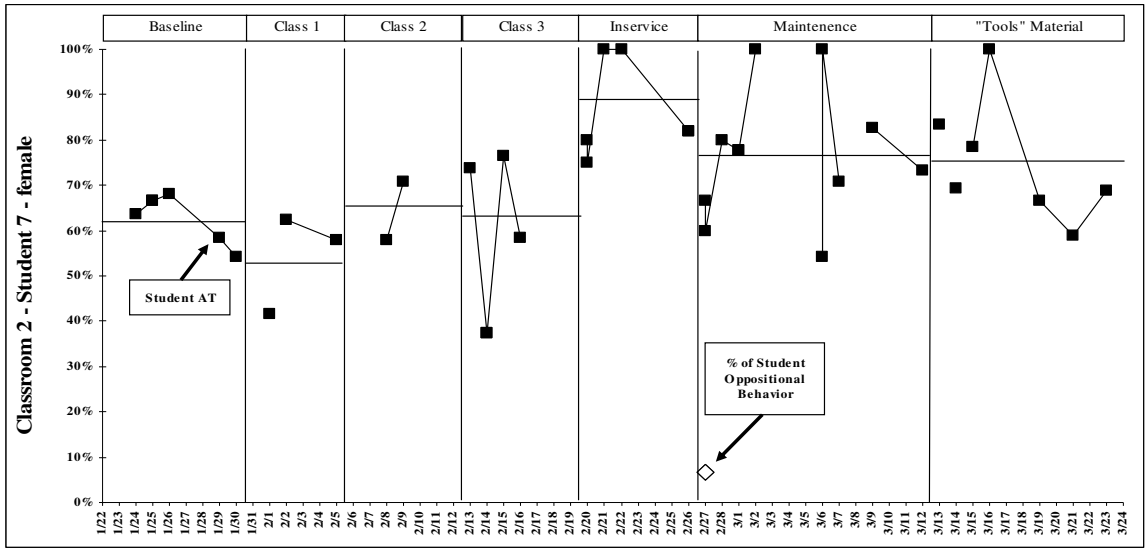


Figure 4-2: 5. Classroom 2 – Student 7 average attentive behavior with oppositional behavior.

Student 10, aged 4 years, 8 months at the onset of the study, was identified as verbally aggressive, loud in his mannerisms, inattentive to instruction, engaged in touching/pushing in line and was easily angered. There were no incidences of aggression during the study. There was one interval with oppositional behavior on March 7th. This student's attentive behavior was variable, but showed a clear arc that appeared to peak in the inservice phase.

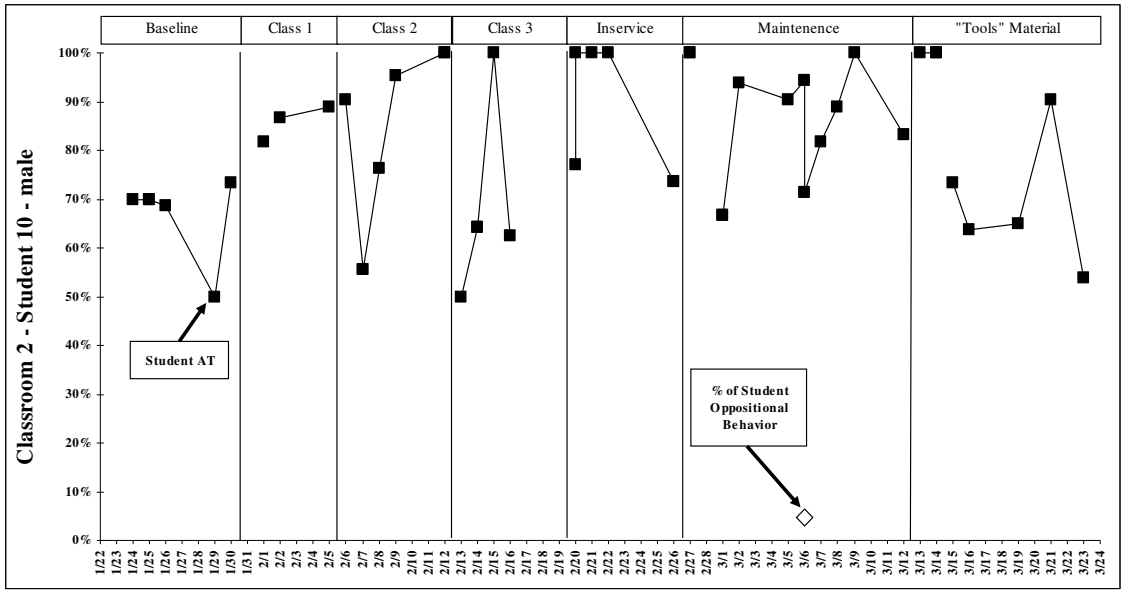


Figure 4-2: 6 . Classroom 2 – Student 10, percent attentive behavior seen with oppositional behavior.

Attentive behavior remained high-variable in the maintenance phase, and then declined in the "Tools" phase. This student sat next to the teacher or assistant every day, and he was out-of-seat (OOS) frequently. Seen in Figure 4-2:7, however, the student is twice as likely to be attentive than inattentive when out of seat. Out-of-seat behaviors and attentive (OOS + AT) are graphed as a percentage of daily out-of-seat intervals, which are themselves a percentage of the daily intervals. The OOS data points may only reflect one or two intervals in which the student is OOS. Although this student's attentive behavior was temporarily affected by the intervention (Figure 4-1:6), the out-of-seat behavior was largely unaffected (Figure 4-1:7).

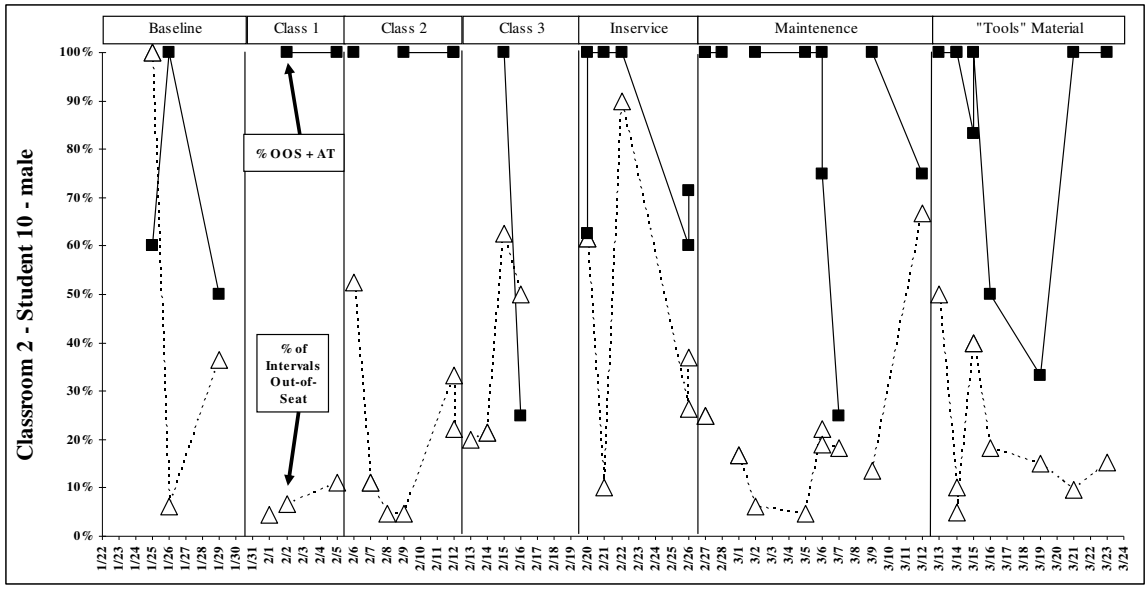


Figure 4-2: 7. Classroom 2 – Student 10 - Percentage of intervals out-of-seat (OOS) with the percentage of intervals the student is OOS *and* attentive (OOS + AT).

Classroom 3

This classroom had one teacher and one assistant. Only the teacher agreed to participate in the research, the assistant declined. This classroom is an Exceptional Education Learning Program (EELP) classroom and the student range in age from three to five years old. Unlike VPK, children can enter the EELP program at any time during the school year. There were seven students participating in the research. Two children did not have parental consent and participated in "Circle Time" out of camera range. When activities required that the students move around or come up to the teacher, the video was edited to mask the non-participating students. Initially there were five boys and two girls participating, however, one girl left during the third week of February. Six of the participating students were Caucasian, and one was Hispanic. The teacher was

Caucasian. The teacher chose to videotape during "Circle Time." In this classroom, the teacher sat in a rocking chair in front of the blackboard and the children sat in a semi-circle, in chairs, in front of her.

The teacher in this classroom was not able to move around the room well, she was contemplating knee surgery at the end of the school year. Because of this, the teacher tended to have several things out on a table next to her chair to for use as circle time progressed. One student, in particular, was very attracted to these materials and many behavior challenges during sessions resulted from the student inappropriately gaining access.

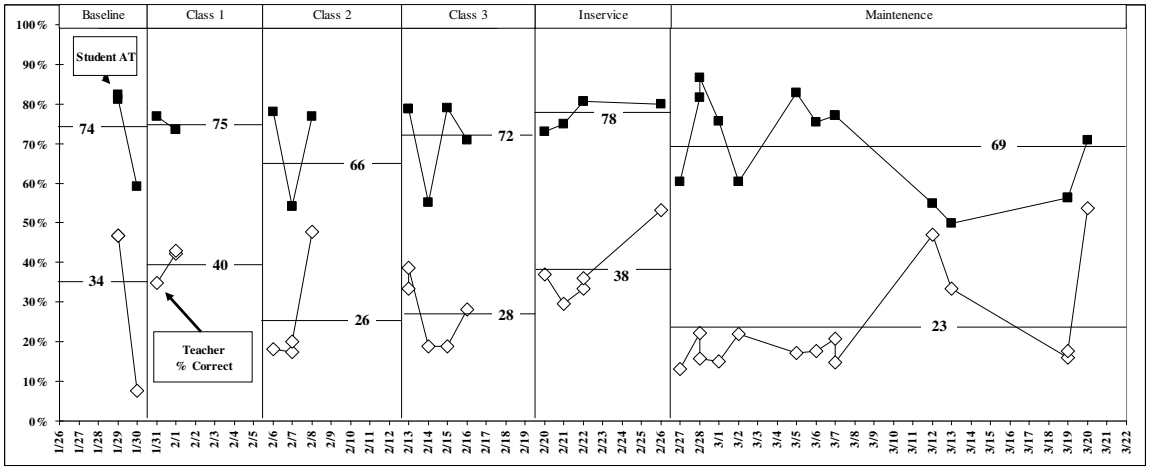


Figure 4-3: 1. Classroom 3 - Average student daily attentive behavior compared and teacher percentage of correct interventions, with phase averages.

The teacher's average correct interventions showed variability over the course of the course of the study (Figure 4-3:1), students' attentive behavior also showed variability. The students' attentiveness was linked to the teacher's correct responses An extended morning routine, explained further, later in the chapter, explains some of the

apparent relationship between the students' relatively high attentive behavior and the teacher's low percentage of correct interventions during the beginning of the maintenance phase. The largest increases in teacher percent correct interventions occurred after the first class (Class 1) and the inservice day, when the "Teaching Tools" were distributed. Throughout the study, there were only two days in which her percentage of correct interventions exceeded (by a few points) her incorrect interventions. Her average percent correct was 30% for the duration of the study. Although the "Teaching Tools" inservice did not address functional assessments, or behavior analysis per se, the materials from the inservice related to behavior, and were authored by the many persons from the same group as the functional assessment curriculum used in this study.

Even though the teacher's correct interventions did not increase dramatically, as seen in Figure 4-3:2, the average students' attention per phase, and the teacher's average correct interventions per phase, paralleled each other with very little variation in the agreement between the scores (if one increased, the other increased).

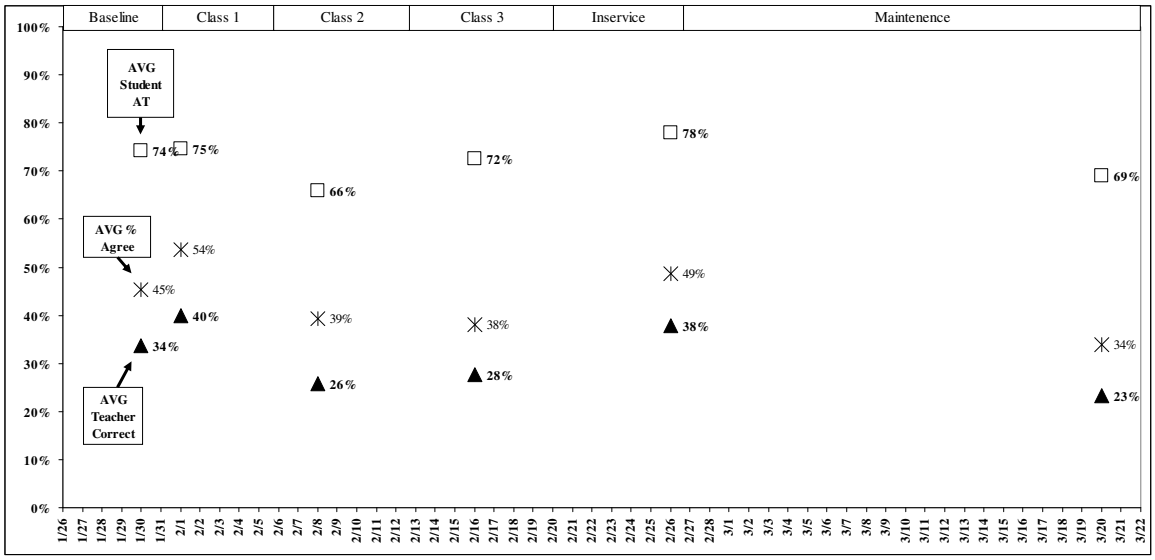


Figure 4-3: 2. Average student attention and teacher correct interventions averaged by phase with percentage of agreement.

Overall, student attention averaged in the 70% range during "Circle Time" which is less structured than small group activity. As has been seen in previous classroom data, there was still a strong relationship between the students' attentive behavior and the teacher's percentage of correct interventions. If the teacher's correct interventions increased, student attentive behavior usually increased as well, but rarely of the same magnitude.

This teacher had a greeting song with the phrase "Who is here today?" and the song ended with the phrase "Who is here today? Raise your hand." The students were supposed to raise their hand and the teacher would call on them one by one and greeted them. In the first week of baseline, student 4 was pouting, and did not raise his hand. The teacher asked, "Why didn't you raise your hand?", and had a brief interaction, but moved on to the next student quickly. The next week he did not raise his hand and the

teacher gave a lot of attention, asking why he would not raise his hand. She then said something to the effect of "Oh well, ____ must not be here, that must be somebody else in his chair." The next day the process repeated, and by the following week (2/6), most of the students were "not there." Much attention was given to the students for "not being there", for increasing intervals over time, each morning.

These interactions were not scored as incorrect because "Circle Time" is a socially interactive class activity. It did engage some students who were typically not very vocal in class, allowing them to be a part of the "joke", however it was not effective instructional time. Initially the more time spent in greeting; the more attentive the students were for that day. However, as seen in Figure 4-3:3, by the inservice phase the relationship between the time spent in greeting, and student attention, started to reverse. More time in greeting resulted in less attentive behavior.

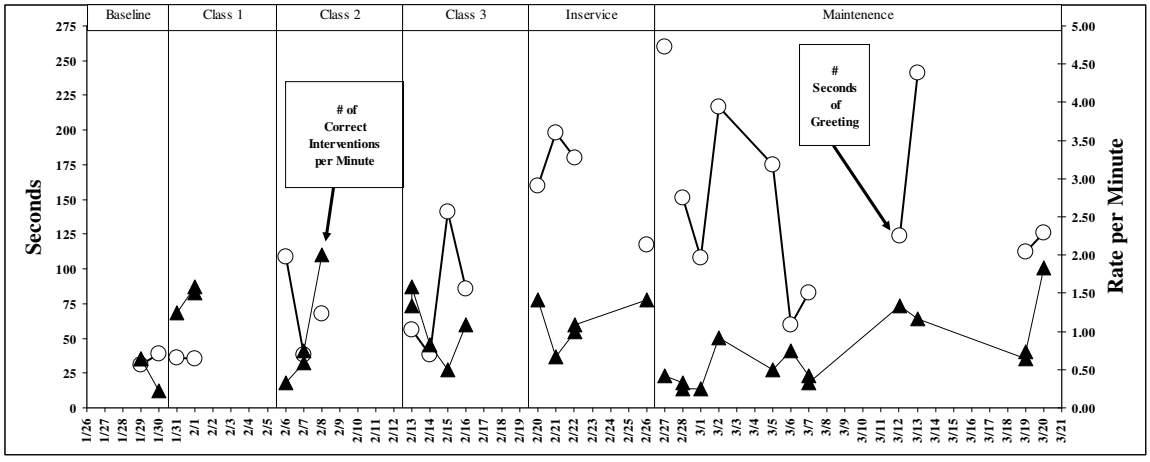


Figure 4-3: 3. Total percentage student attention (L axis) compared with the duration of the morning greeting in seconds (R axis).

Later in the study, the teacher attempted to pivot to those students who had their hands raised as "being there", but then attended to the others immediately afterwards. As it was, students who were "there" received approximately 3-5 seconds of enthusiastic "Hi, _____, it's good to see you. I'm so glad you are here today." This was at odds to the 30-90 seconds of 1:1 teacher attention some students received if they were "not there." The reinforcing aspects of "not being there" exceeded the reinforcing aspects of "being there" by tenfold.

The greeting ritual influenced the rate of correct interventions as the time spent on the ritual frequently started a chain of inattentive and disruptive behavior. The teacher's use of pivoting, praising students who were behaving correctly and then praising the students who started behaving appropriately, increased significantly. However, she continued to use an intervention called "making a face", where students "got an eye" or other facial feature drawn on a card for every instance of undesired behavior. Unfortunately, the criterion for getting a facial feature were not clear to the students and appeared dependent on the teacher's affect or "mood" each day. She frequently threatened to "give an eye" or other facial feature, but then did not have a pen or paper on which to draw. This method of behavior change did not appear to result in any real changes in behavior, but the teacher continued to use it. By March, she had inappropriately combined her "face intervention" with "pivot" and would correctly praise several students for being attentive and quiet, and then would go around the group saying "_____, you got an eye, and _____, you have an eye, and _____ you have an eye" to all the students who were off task. Because the intervention was arbitrary, undefined,

and did not relate to a specific behavior, any time the teacher used the "face" intervention, alone, or paired with pivot, it was scored as an incorrect intervention.

Another teaching strategy that became a source of inappropriate behavior was the teacher's method of determining whose turn it was to speak during "Circle Time." The teacher, rather than having students raise their hand to speak, decided to use a ball. It appeared she intended that the ball would be tossed back and forth between her and the students, and whoever had the ball would be the only one speaking. The ball she chose was a large "koosh" ball, about eight inches in diameter. It had an air-filled core with an approximate six-inch diameter, and thousands of 1½ -inch long, thin rubber fingers radiating out from the core. The teacher called it the "hair ball". On the one hand, this was a good choice for the students, some of whom had motor delays. The ball was easy to catch; however, it was about the same weight as a common rubber playground ball. This became an issue when the students threw the ball back to the teacher. Some students grasped the ball by the "hair" and would try to throw it back to the teacher. But because their fingers were grasping the rubber "hairs", releasing the ball was difficult and the ball would frequently go far off target (out of the teacher's reach). A few students would then leap out of their seats to retrieve the ball. Depending on the student, the teacher might have responded by telling the student to return to their seat, or she may have thanked the student for "helping." The consequences were not consistent.

In addition, some students started throwing the ball very hard when returning it to the teacher. She sometimes found herself deflecting the ball to avoid injury, rather than trying to catch it. Instead of exchanging the ball for one more suitable, or trying a

different method to signal when it was time to speak, she began saying “Don’t throw it hard” when one of the students gave the appearance of winding up for a hard throw. Every time she made this statement, it was scored as an incorrect intervention as she was bringing attention to an undesired behavior that was maintained by attention. The function of the behavior was evident as sometimes the students would pretend they were going to throw it hard, and then when they received a response, either verbally or physically (the teacher would put her hand out in a defensive stance to deflect the ball) they would throw it correctly. Every so often, the teacher would praise a student for throwing the ball correctly; this was counted as a correct intervention.

There was confusion about the use of the ball as well. Several times the teacher engaged in pre-teaching, giving explicit directions about who was to speak when he had the ball and how the ball should be returned to the teacher. Then she would start the lesson, ask for an answer, and forget to throw the ball to a student, encouraging call-outs. The students tended to adapt to the situation relatively easily, but because calling out was not a behavior that was tracked in this study, it is unknown how this inconsistency may have affected student behavior.

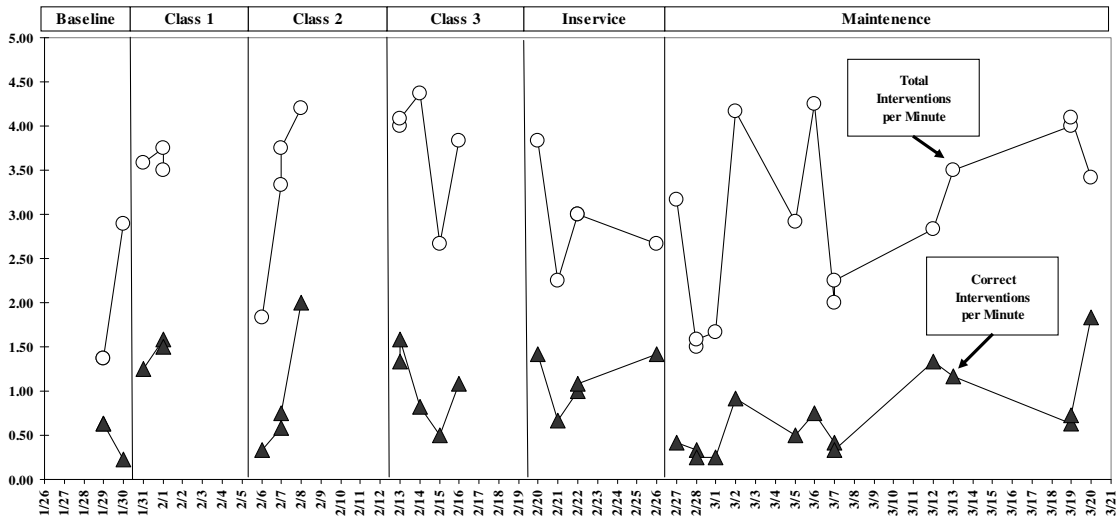


Figure 4-3: 4. Classroom 3 – Daily rate per minute of total teacher interventions compared to the teacher daily rate correct.

One of the most interesting data trends in this classroom is seen in Figure 4-3:4. Teacher 3, despite the increases to her correct interventions, maintained a consistent ratio of correct and incorrect interventions throughout the study. In other words, if she increased the frequency of her correct interventions, she raised the frequency of her incorrect interventions, to almost the same magnitude. There is an increase in incorrect interventions at the beginning of the Maintenance phase. It appears to be an extinction burst. As noted earlier in Figure 4-3:3, the students were no longer attending as well during the extended morning routine, and the teacher uses the incorrect pivot much more frequently in order to gain student attention. She recovers, however, and utilizes the appropriate pivot technique more frequently as the phase continues. Although reduced to some of her lowest rates of correct interventions in the Maintenance phase, total

interventions and correct interventions were on an upward trend after the 8th of March, whether the teacher continued an upward trend after the study ended is not known.

Functional Assessment Outcomes for Students in Classroom 3

In this classroom there were four functional assessments completed for students. One was done by the teaching assistant who chose not to participate, and was done for a student whose parent did not give consent. Therefore, three students received a functional assessment. The student number assignment was random.

Table 4: 3 Classroom 3 – Student functional assessment summary.

Student #	Behavior	Hypothesized Function(s)
2	Doesn't answer when spoken to Doesn't ask for assistance	Attention Escape
4	Screaming Out-of-seat behavior Grabbing toys/items	Attention Attention/Escape Access to Reinforcers
5	Whining Out-of-seat behavior	Attention/Escape Escape

Student 2, aged 4 years 8 months at the onset of the study, did not engage in oppositional, aggressive or self-injurious behavior. His refusal to answer questions appeared to relate to whether or not he was sure of his answer. He appeared hesitant to guess. It appeared that if he delayed his response another student was likely to call out the answer, increasing his chances of answering correctly. Asking for help was not something the students typically do during "Circle Time", so opportunities to observe this

were limited. His attentive behavior during "Circle Time" averaged 65% during baseline, all subsequent phases have a phase-average higher than baseline, with most data points above 70%, but the data remained variable through the study. He appeared to benefit the most from the teacher's extra attention during the morning greeting, he was excited and smiling when he gave his "I'm not here" responses to the teacher. During his extended exchanges with the teacher, he would frequently look to other students for social approval, and as the time spent in greeting increased over time, he became one of the students who would encourage others to "Say you're not here!"

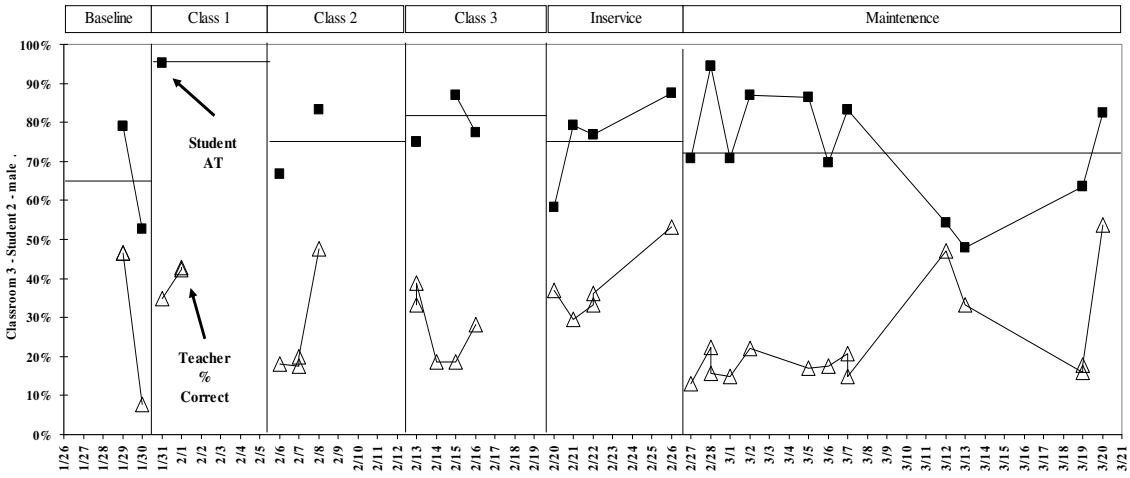


Figure 4-3: 5. Classroom 3 – Student 1: Attentive behavior.

Student 4, aged 4 years, 4 months at the onset of the study, engaged in screaming, out-of-seat behavior and grabbing toys and items from others, according to the functional assessment. There was a relationship between Student 4's attentive behavior and his undesired behaviors. His out of seat behavior did not always indicate he was engaging in oppositional or aggressive behaviors, however. Later in the study, his attentive behavior

appeared to be on a decline overall, but there was no corresponding increase in undesired activities. This may indicate he was still inattentive for part of the time, but he was staying seated, and keeping his hands to himself.

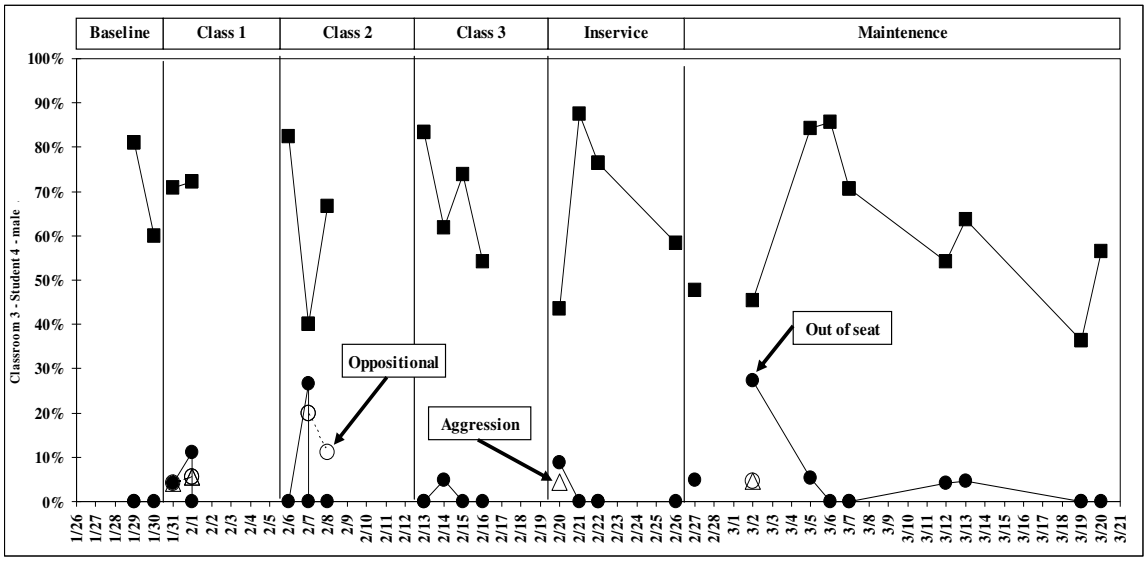


Figure 4-3: 6. Classroom 3 – Student 4 attentive behavior and undesired behaviors.

This student's behavior data corresponded closely to the teacher's rate of correct interventions. Anecdotally, the teacher was frequently addressing this student's behavior. He was one of the students most likely to throw the ball hard, debate answers with the teacher, or disrupt the class. He was also the most likely to jump up to assist the teacher if she dropped something or missed the ball. She was far more likely to rebuke him for helping, even when he was not the cause of the disarray.

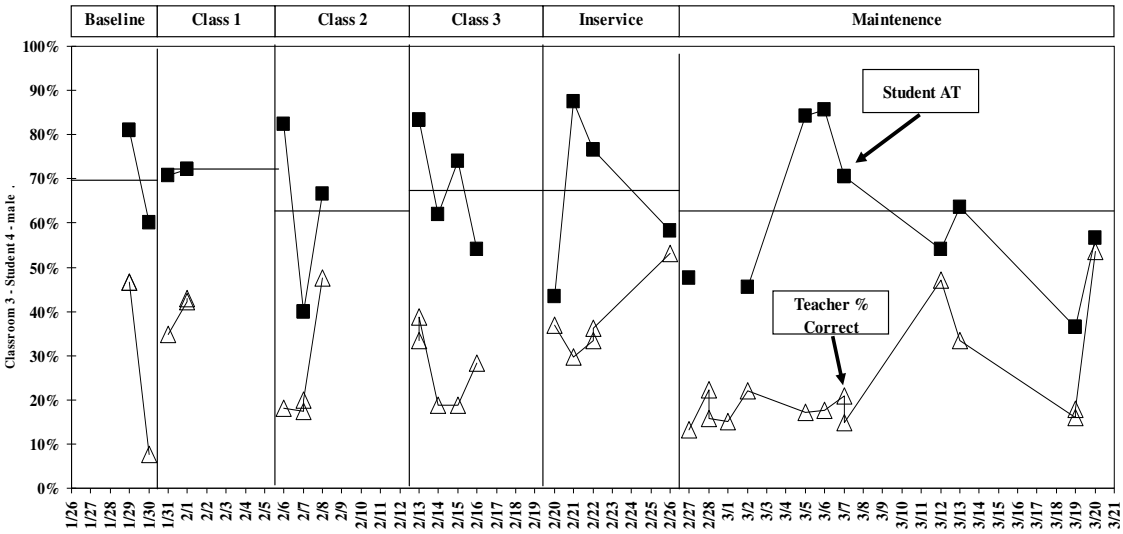


Figure 4-3: 7. Classroom 3 – Student 4 attentive behavior compared to teacher's percentage of correct responses.

Student 5, aged 4 years, 11 months at the onset of the study, engaged in whining and out of seat behavior, according to the teacher. Throughout the study there was only one interval with out-of-seat behavior, on February 16th. As seen in Figure 4-3:6, the student started with attentive behavior averaging approximately 65% in baseline. Her attentive behavior shows a steady increase until the 5th phase, maintenance. Unfortunately, this student stopped attending on February 22, and the long-term effects of the intervention are not known.

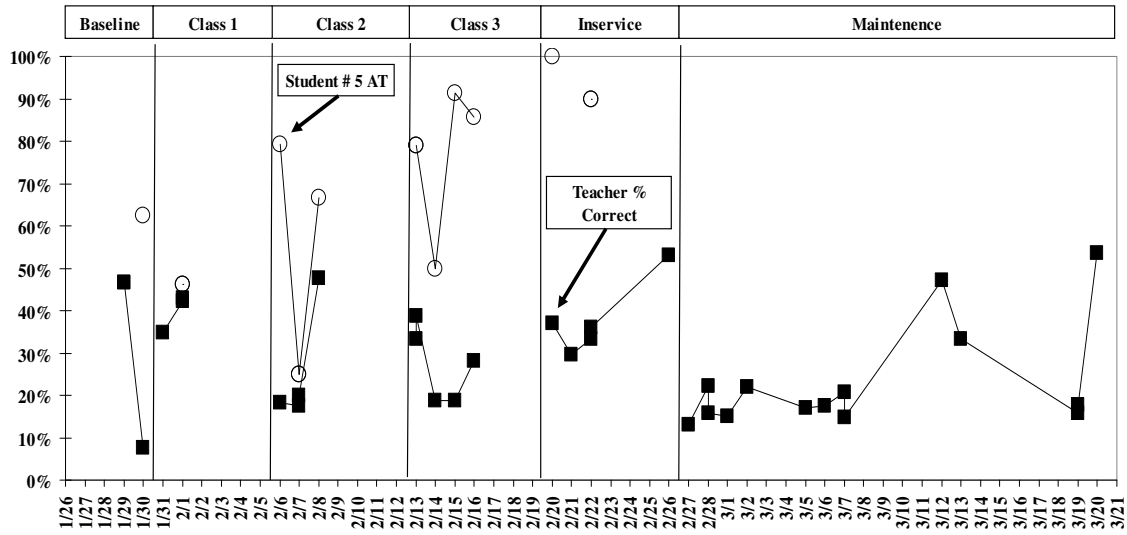


Figure 4-3: 8. Classroom 3 – Student 5 attentive data compared with teacher percentage of correct interventions.

Combined Staff Results

Of the seven staff who agreed to participate in this study, reliable data were available for four. Of the four, only the teacher in Classroom 2 was consistently implementing appropriate behavioral interventions prior to training. This teacher also had excellent instructional prompts as well. Because of the functional assessment professional development, the teachers in Classrooms 1 & 2 increased their correct interventions, and the teacher in Classroom 2 sustained the increase throughout the study. There was a marked increase in attentive behavior in Classroom 2 and the increase maintained, though slightly reduced, by the end of the study. Classroom 1 had a temporary increase in student attentive behavior that paralleled the teacher interventions.

Each teacher became more adept with behavioral interventions, and a relationship emerged between the teacher's behavioral interventions and the actual student behavior.

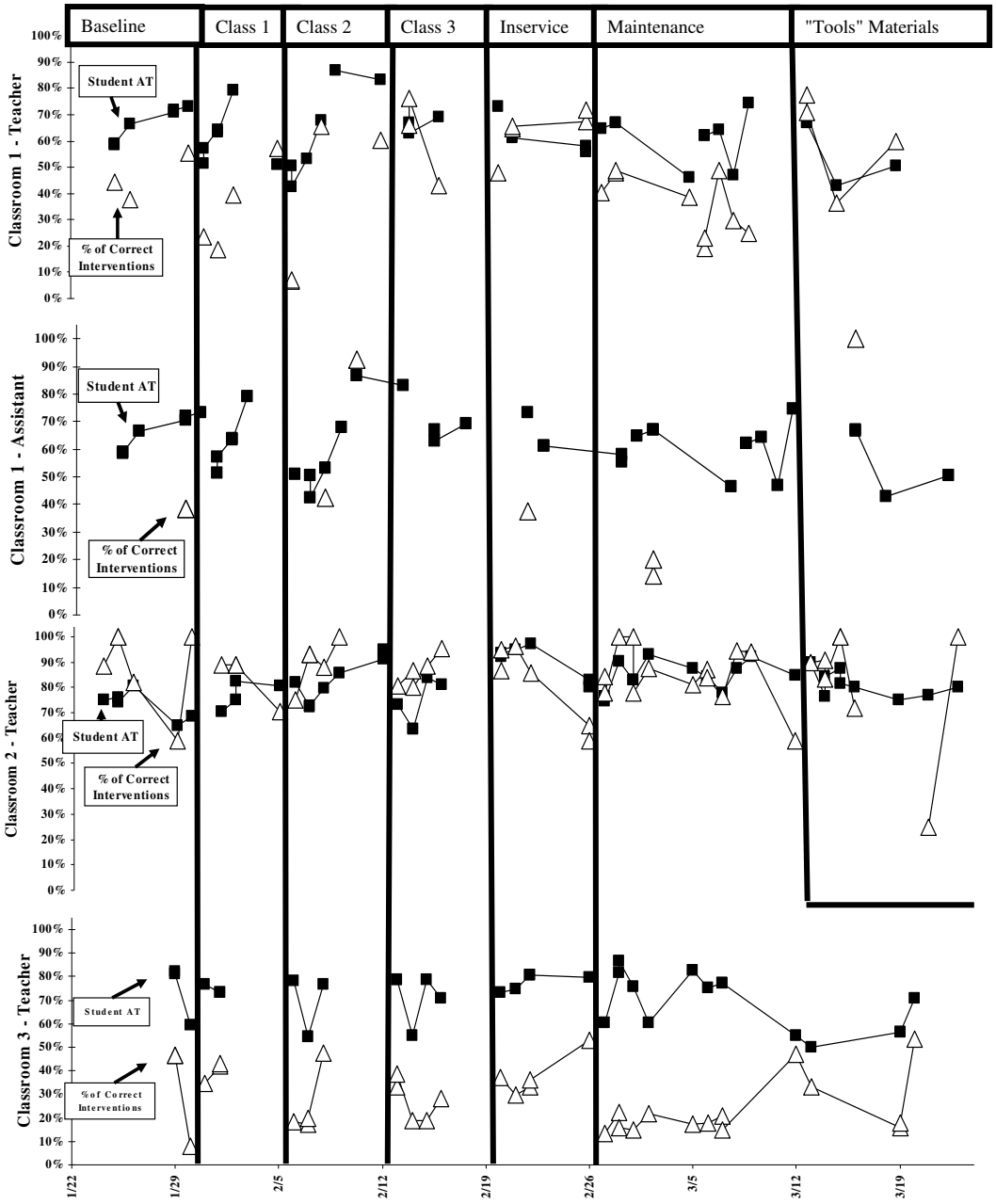


Figure 4-3: 9. A comparison of Classrooms 1, 2, and 3: Teacher percentage correct responses and student percentage attentive behavior.

Anecdotally, the teacher assistant in Classroom 1 became very adept at using pivot with the students. There was a definite increase, especially when she was teaching "Circle Time" in the teacher's absence.

Of the four students with functional assessments in Classroom 1, three showed an increase in attentive behavior that peaked before the Maintenance phase of the study. The fourth student's attentive behavior declined, and his oppositional behavior spiked, then reduced during the intervention. The fourth student's increasingly oppositional behavior did impacted upon the rest of the students, however, and his behavior may have significantly reduced the behavioral outcomes for the other students in the classroom.

Of the four students in Classroom 2 with functional assessments, data were gathered on three. All three demonstrated significant increases in attentive behavior that also peaked just prior to the maintenance phase, however, all three students in Classroom 2 ended with attentive behavior that remained significantly higher than baseline.

Classroom 3 had far fewer students than the other two classrooms, giving more weight to each individual student score. Of the four students in Classroom 3 that had functional assessments, data were collected for three students. Two students had increases in attentive behavior; both peaked just before the maintenance phase. Of the two, one student's attentive behavior declined but remained above baseline, the other had dramatic increases in attentive behavior, but moved away before the end of the study. It is unknown if her attentive behavior would maintain over time. The third student's attentive behavior did not significantly increase during the study. His data most closely matched the teachers correct intervention data. During the study, this student engaged in

several oppositional, impulsive, and aggressive behaviors. The teacher frequently seemed to base her interactions on this student, in particular.

Unfortunately, in the two weeks between the teachers return to school after winter break, and the onset of baseline data collection, the teachers received three inservice trainings relating to the imminent preschool inclusion process, scheduled to start during the study. The inclusion process did not start during the study, yet the teacher inservice trainings, by the Florida Inclusion Network, may have influenced the baseline scores as the material included strategies to increase participation from students with academic and behavioral challenges. Therefore, baseline scores may have been artificially high.

Because of the lack of baseline data in one classroom, the data from that teacher and her assistant were unusable. Between the three classrooms that remained, there were 94, 12-minute video sessions produced. There was variation in day-to-day taping consistency, Classroom 1 and Classroom 3 had 28 sessions each, Classroom 2 produced 38 video sessions.

In all, 40 students, 3 teachers, and 2 teaching assistants had their behavior examined over the nine-week research period. Because of their 6-hour professional development, all staff completed their functional assessments correctly. All were able to verbally indicate the function of behavior after watching video from the curriculum, and all were able to indicate the correct response to a child's behavior, based on function, by the end of the third functional assessment professional development classes, if not before.

Answers to the Research Questions:

In answer to research question one: Will teaching functional assessment skills and basic behavioral interventions to prekindergarten classroom staff affect the children's aggressive, oppositional, self-injurious and attentive behavior? The answer was yes, there was a relationship between the teacher's behavioral interventions and the students' attentive behavior. Some interventions, such as blocking and redirecting to task, were under-utilized by staff during the study, some were used incorrectly, or in combinations with other interventions that affected their effectiveness. Student attention, in almost all cases, elevated after baseline, then slowly declined again, ending near baseline levels. Over the course of the nine-week study, two of the teachers' frequency of interventions increased after baseline and descended again in relation to the students' attentive behavior, indicating teacher interventions affected student behavior. One teacher's interventions increased, both the correct and incorrect interventions. Student attention was high, but variable throughout, there was correspondence between the teacher's correct interventions and student attention, but the teacher had difficulty with the concept of minimizing attention to undesired behavior and only attending to desired behavior.

What is clear, in all three of the classrooms, is that the students' behavior is directly related to the teacher's behavioral interventions, both correct and incorrect.

In answer to question two: Will teaching functional assessment skills and specific behavioral interventions to prekindergarten classroom staff result in staff implementation of responses and interventions that relate to the function of the students' behavior? This answer is more difficult, as the teacher intervention data were not segregated into distinct

areas of function. It does appear that the teachers in Classrooms 1 and 2 increased the number of interventions after starting the classes, but their rate of correct interventions were variable at first. As the study progressed both teachers increased correct interventions, and student attention increased. If correct interventions based on function increased, and desired behaviors increased, there is a strong possibility that the increase in functionally correct interventions increased the students' attentive behavior. In addition, the one student with significant oppositional behavior peaked and decreased during the study, suggesting that while the interventions used were not the most correct, they appeared effective in reducing the undesired behavior. This could not be confirmed absolutely, however, as the study ended with the behavior at low rates, but it is unknown if the behavior continued at low rates for the remainder of the school year.

The behavioral interventions were not coded as proactive or reactive interventions. Like good teaching strategies, antecedent interventions are usually better at reducing behaviors over time. Additionally, as stated before, some strategies were under-utilized, which likely affected some rates of behavior change.

Good teaching strategies were not measured in this study. Practices such as; pre-teaching, scaffolding skills, prompting, and general classroom organization were not addressed. Obviously, these affect students' undesired behavior and would affect the students' attentive behavior as well.

CHAPTER 5 – DISCUSSION

Introduction

This study examined the results of a professional development training in which preschool teachers and their assistants were taught functional assessment skills and four, functionally-based, basic, behavioral interventions that focused on appropriate behaviors. Behaviors tracked in the study included Attentive (AT), Inattentive (INA), Aggression (A), Oppositional (O), and Self-Injurious Behaviors (SIB). Out-of-Seat behavior was also tracked for all students, and was reported for those students with functional assessments in which out-of-seat behavior was identified as an undesired behavior, or as a contributing factor to other undesired behaviors.

The site of this study was a Title I school in Central Florida, identified as Title I. The school had scored well on the state school-rating process for the previous year and was rated an "A" school. As was previously stated, the teachers in Classroom 2 and 3 had Master's degrees in Exceptional Education, the teacher in Classroom 1 had a bachelor's degree in Early Childhood, and the assistants had an Associates degree or had passed a basic academic competency test. This school was considered a stable school and there were no crises in the VPK or EELP classrooms at the time the study began.

This study encompassed several constructs; professional development, criterion-based instruction, behavior change, effective data collection and of course, the results of professional development. The research questions addressed the most challenging construct of all, however, process product. Process product, in this case, examined the effect on the students, based on the instruction received by the teachers and assistants.

No direct intervention was done with students, yet in two of the three classrooms, the daily averaged percentage of students engaged in attentive behavior not only improved, but also moved in concert with the correct behavioral interventions the teachers displayed. In the third classroom the teacher's correct interventions did not significantly improve over the course of the study, however there was still a strong relationship with the classroom's overall attentive behavior.

The research questions: Will teaching functional assessment skills and specific behavioral interventions to Prekindergarten classroom staff affect the children's aggressive, oppositional, self-injurious and attentive behavior? And: Will teaching functional assessment skills and specific behavioral interventions to Prekindergarten classroom staff result in staff implementation of responses and interventions that relate to the function of the students' behavior? Both were answered in the affirmative in the previous chapter, the second more cautiously than the first, however.

Question 1

This professional development training, teaching teachers and their assistants how to conduct functional assessments, with four basic behavioral interventions, did have an affect on student behavior. Each classroom showed a clear relationship between the teachers' behavioral interventions and the students' attentive, and in one case, oppositional, behavior. The average student attentive behavior by classroom showed an increase after the baseline phase, peaked towards the middle of the study, and declined again in each classroom. Teacher interventions were on a similar arc in two of three

classrooms, and student and teacher behavior paralleled each other in the third, suggesting that teacher interventions were affecting student attentive behavior.

Classroom 1

In Classroom 1, this relationship started as correspondence between incorrect interventions and increased student attention, but in the third week of the study, the relationship between correct interventions and student attention temporarily became stronger. By the maintenance phase, this relationship was the stronger of the two again, and remained so until the end of the study. In the "Tools" phase, the frequency, or number, of interventions decreased, but the relationship between correct interactions and student attentive behavior was extremely close. When the teacher percentage of correct interventions increased, so did the percentage of student attentive behavior. All four students with functional assessments had a temporary increase in attentive behavior that peaked at the approximate mid-point of the study, parallel with the teacher's increase in interventions, then declined again as the teacher's interventions declined. The student daily average of attentive behavior was parallel to the number, or frequency, of the interventions. Increases and declines in both student and teacher behavior were consistent and proportional with each other as they fluctuated. This strongly suggests the teacher's correct interventions were influencing the students' behavior.

The teacher's correct interventions also paralleled other undesired behaviors among the students with functional assessments; however, only one student had several

days of undesired behavior, so determining the effect over time for was not possible for three of the four students. In the singular case of repeated oppositional behavior, the most correct intervention would have been to redirect the student back to the activities and not allow him to escape. However, the teacher had already excluded him from the area on many of the observed days. Her most correct intervention after banning him was to ignore his loud verbal behavior. She, and the assistant, did this for several minutes during sessions. However, eventually they responded to his verbal behaviors. In addition, in some intervals he picked up a chair and swung it around, dropped it on the floor, and otherwise inappropriately manipulated it. The most correct intervention would have been for the staff to put it on the ground correctly and have him sit in it (block and redirect). Instead, the chair-manipulating behaviors were ignored, and the assistant eventually took him aside to talk to him for several minutes, an incorrect intervention.

Overall, he had less frequent moderate oppositional behavior in the second and third phases, more frequent, but less intensive oppositional behavior in the fifth phase (inservice), but one aggression is added, two cycles of very high-to-very low oppositional behavior in the sixth (maintenance) phase, and one low frequency/low intensity oppositional day in the final ("Tools") phase. It suggested he may have been responding to the increase in correct teacher interventions, despite the exclusion. This also suggested the oppositional behavior may have been multiply maintained by escape and attention.

Classroom 2

This teacher started with a high percentage of correct interventions, even in baseline. In the beginning of the study, her rate of correct interventions declined as she increased the total number of interventions per minute. As the study continued, she improved the rate of correct interventions, even when she increased the frequency of interventions. Her correct interventions closely paralleled with student attention throughout the study, and student attention improved, and remained above baseline, throughout the study. The correspondence of student attention and teacher correct responses both increased at the beginning of the Class 1 phase, peaked in the maintenance phase and declined slightly thereafter; remained close. This strongly suggests the teacher's correct interventions were influencing the students' behavior.

Classroom 3

This classroom appeared to have the least amount of treatment effect of the three classrooms. The students' attentive behavior did not change dramatically over the study and the teacher's ratio of correct interventions was variable, though on an increasing trend at the end of the study. Nevertheless, data were significant in demonstrating "Be careful what you attend to as you will see more of it." Furthermore, there were conditions that affected the outcomes in this classroom differently than in the others.

These students were identified as either having a disability, at risk for academic challenges, or as having a developmental delay; they were in this classroom because they

were in need of a more intense staffing ratio. None of the students appeared to have a severe disability, but there were cognitive delays compared to many of the students in the VPK classrooms. As mentioned before, the teacher had physical challenges of her own that appeared to interfere with her behavioral interventions. This teacher also had a classroom management intervention in place prior to the functional assessment professional development. Unfortunately, this preexisting intervention was coercive, was not implemented consistently, and continued during the study.

In this classroom, the effects of the professional development were more subtle, yet one of the best demonstrations of the teacher affecting student behavior occurred here. As described earlier, in the first week of baseline, a student did not raise his hand during the morning greeting. The teacher asked, "Why didn't you raise your hand?", but moved on to the next student quickly. The next week the teacher gave more attention, asking why he would not raise his hand. She then said something to the effect of "Oh well, ____ must not be here, that must be somebody else in his chair." The next day the process repeated, and by the following week (2/6), most of the students were "not there." Much attention was given to the students for "not being there", for increasing intervals each morning. Students ultimately received up to 10 times more attention for "not being there", than they did if they indicated they were present. This is an excellent example of "Be careful what you attend to as you will see more of it", a phenomenon discussed in the functional assessment class. It is likely that had she ignored the students who were "not there" during greeting, and only attended to those who were, the behavior would have disappeared within a day or so. Initially, it appeared the teacher was reinforced by the

"game." Later, it became apparent that those students not directly "arguing" with the teacher were either reinforcing the "game" by telling other students to "Say you're not here!", or were off-task and sometimes creating mischief. Either way, the students were attentive, but not to meaningful learning activities.

Other strategies used by the teacher, such as the "faces" intervention and the "hair ball" are easy to see as questionable practices when looking from the distance of time. Although this researcher recommended data collection, the teacher was not prepared to evaluate her interventions to determine efficacy. None of the teachers appeared to take behavioral data throughout the study. A person in a coaching capacity may have been able to give feedback in the moment, reducing ineffective strategies and encouraging the use of her newly acquired skills from the professional development classes.

When comparing this classroom to the others, another factor to consider was class size. This classroom had, on average, 1/3 the students of the other classrooms, so each individual student score had more weight. With a range of four to seven scores of students' behavior on a given day, the weight of each child's attentive behavior in the EELP classroom counted for far more (approximately 15% - 25%) than in the VPK classrooms (approximately 6% - 8%). In effect, a student's undesired behavior in the EELP classroom showed to a larger extent than a student's attentive behavior in a VPK classroom.

Despite these conditions, two of the three students with functional assessments showed increased attention to task during the study, increasing after baseline, peaking at approximately half way through the study, and in one case, declined slightly by the end

of the study. One student left school after the inservice phase; her attentive data were very high. Both students' data appeared to show a strong relationship with the teacher's correct intervention data. The third student showed a very brief increase in the second phase, but thereafter his attentive behavior closely paralleled the teacher's correct interventions, which were variable, but low. This would suggest the teacher did influence student behavior because of the functional assessment class.

Question 2

Will teaching functional assessment skills and specific behavioral interventions to Prekindergarten classroom staff result in staff implementation of responses and interventions that relate to the function of the students' behavior?

This professional development training did affect student behavior, and in two of the three cases the teachers appeared able to affect student behavior by relating the intervention to the function of the behavior. In Classroom 1 there was a clear relationship between the teacher's behavioral interventions and the students' attentive, and in one case, oppositional, behavior. The teachers increased percentage of correct interventions appeared to have increased student attentive behavior and influenced one student's oppositional behavior. In Classroom 2, the teacher's increased ratio of correct responses resulted in a higher rate of student attention after baseline, continuing throughout the study.

Summation

Of the ten students in the study for whom a functional assessment was completed, nine showed some increase in attentive behavior after baseline, typically peaking by the mid point of the study. Optimal results were not permanent. The student who did not show an increase in attentive behavior had several oppositional behavior episodes exhibited during the study.

This student, from classroom 1, had significant oppositional behavior that appeared, increased, and reduced to a low level by the end of the study. Because this teacher's frequency of correct interventions increased during this same time, and was higher on the same days as the oppositional behavior, there is a strong likelihood that the teacher's interventions were strongly influenced by the function of the behavior of that student. The corresponding increase in attentive behavior for the other students in the classroom, on the same days, would also suggest that the teacher's interventions were functionally correct to keep them in task as well.

One other student, from Classroom 3, had a minimal increase in attentive behavior in the Class 1 phase, and had lower attentive behavior for most of the rest of the study. He displayed several undesired behaviors such as aggressive, oppositional, inattentive, and out-of-seat behaviors. His attentive behavior, although not increased during the study, strongly paralleled his teacher's correct interventions, indicating that he was more attentive when the teacher was intervening correctly. His most prevalent behavior, out-of-seat, was on a downward trend at the conclusion of the study. The other undesired behaviors occurred infrequently.

All of the interventions by teachers and assistants were determined correct or incorrect based on the raters' observed function of the students' behavior. Teacher interventions based on student behavior that appeared reinforced by attention were scored as correctly if they gave minimal attention, or pivoted to another student. Likewise, teacher interventions were scored as incorrect if they gave a lot of attention to those same behaviors. Escape-maintained behaviors that resulted in a "time-out" procedure (excluded from the group) were counted as incorrect, when it occurred during the video session.

In one class there was a coding problem as sitting in the "safe chair" to "think about your bad choices" was a frequent consequence to the students' disruptive behavior. The "safe chair" was located in the classroom, was about 15 feet from the group, but within the teacher's line of sight. In a couple of cases, the students' banishment to the "safe chair" was not really called for, and was not an intervention from the functional assessment class. However, because the function of the student's behavior was attention from his or her peer, it was not functionally *incorrect*. The intervention typically lasted for several minutes, but it could only be counted as one incorrect intervention.

In addition, one student was sometimes already excluded (but still in the room) when the video began. The student was banned despite the fact his behaviors were escape-maintained. The teacher might have received several correct interventions because she was appropriately ignoring the loud verbal behavior of the excluded student, but never received an incorrect score for the ongoing, functionally incorrect, exclusion.

Implications for Practice

Several factors influenced this study. Most were indicative of working in a school system, such as those relating to the amount of time allocated for training, the ability to provide the supports necessary for success, and the motivation of the participants.

This researcher had many positive elements with which to work; paid substitutes for the time teachers and assistants were in class, a school that was well run and stable, very experienced staff, and a classroom space for the professional development that was not ideal, but was adequate for the need.

Negative elements included a lack of lead-time to prepare staff for the study, paraprofessional staff who had several additional duties to perform (sometimes during functional assessment class time), inadequate time for staff to practice the skills they were learning, and several staff who indicated the intervention was unnecessary and was an imposition on their time. Overall, there were definite effects from the study. Even a very skilled teacher was able to increase her correct intervention skills appreciably. This study demonstrated a clear relationship between teacher behavior and student behavior, but due to a paucity of teacher assistant data, this relationship was not clearly seen.

Teaching Assistants

Paraprofessionals are frequently not included in professional development training that teachers receive (Giangreco et al., 2001). Teachers, to prepare for the impending inclusion process, received three in-services from the Florida Inclusion Network in the two weeks prior to this study, but the assistants were not included. The

responsibilities are very different between the teachers and assistants; nevertheless, as seen in this study, teacher assistants were frequently in the teacher's role when teachers were not present. When laying the groundwork for this study, this researcher asked several questions as to the scheduling of the functional assessment classes, trying to present the classes at a time when the teachers and assistants could participate. After the schedule was confirmed and the first class winding to an end, teacher assistants rose and indicated they needed to leave. When asked why, they stated they had to get the children set up for bus riding. This was not mentioned earlier, nor was one teacher assistant's need to leave class to monitor the computer lab, or the two others who had to do split sessions in order to monitor lunch in the cafeteria.

It was this researcher's observation that the teachers and assistants were so accustomed to the assistant's being scattered throughout the school for "other duties as assigned" that it never occurred to anyone to mention it to the researcher when scheduling the functional assessment class sessions. The focus appeared to be on the teachers getting the training, and the assistants were allowed to come along. Carroll (2001) and Pickett (2003) indicate that para-educators, or assistants, frequently receive little training on the job. Assistants who took this class corroborated this, but most stated they came to this job with years of experience in day care centers or classrooms in the school system. In *A Guide to Schoolwide Planning for Paraeducator Support*, by Giangreco, *et al.* (2003), it is stated that paraprofessionals should be able to receive college credit or CEUs for training. This researcher had the same expectations from the assistants as from the teachers in regards to permanent product (a completed functional

assessment), attendance, skill attainment and student outcomes, but the teachers received inservice points and the assistants did not.

Additionally, this researcher did not anticipate the culture of the classroom, which put the assistants in a purely supportive role to the teacher, as much as to the students. This is not to say this was bad, the assistants all seemed happy with the arrangement, relationships between teachers and assistants seemed collegial throughout, and the attitude of respect from students, for lack of a better term, was generally high for both the teachers and the assistant. It affected the study in that the limited amount of intervention data from assistants was insufficient to determine the efficacy of how the study related to them. However, if two adults work as a team for the betterment of the students, both people should have access to the information that would likely increase positive outcomes.

Title I Schools and Challenging Behaviors

Identified as a Title I school, it rated an "A" by the State of Florida. Many students met criterion as low income, but rates of challenging behavior in the classrooms were low, even before the functional assessment classes. Research shows statistically high rates of challenging behavior in programs serving children from low socioeconomic status households (Kaiser, A. & Hancock, 2000; Qi & Kaiser, 2003; Webster-Stratton & Hammond, 1998), yet there is a very low incidence of challenging behaviors in the classrooms studied, and only two students with behaviors invasive enough to potentially

require an intervention. As was stated earlier, there were many good teaching practices occurring and the principal was supportive of his teachers.

It was expected that results from this school would be low, as this school was considered very stable. If the school were in crisis the findings would likely be more dramatic, and more outcomes would be attributed to the study. However, crisis within a school or classroom contains many variables, several of which are not related to the study. In the stable environment of this school, there was significance in the changes in teacher and student behaviors *because* there was no crisis, and the staff *were* so stable. The relationship between teacher interventions and student behavior was very strong throughout as a correlational relationship, but not proven as a causal relationship. However, when staff correct interventions increased, student attentive behavior increased. In addition, the motivation of the staff was low, the class was seen as unnecessary and an inconvenience, yet positive outcomes occurred.

Skill Deficits as Challenging Behaviors

Like the teachers from Nungesser and Watkins study (2005), the teachers and assistants, when initially presented with the professional development training, stated they did not need training as they did not have anyone this year who "had behaviors." Later a couple of students were identified, but teachers, especially, indicated they did not need assistance. It was only after this researcher asked about skill deficits and attention to task that the teachers realized behavioral interventions could be used to increase desired behaviors, as well as decrease undesired behaviors.

López, Menez, & Hernández-Guzmán (2005) indicated that a preschooler's ability to attend to instruction is partially developmental, but is also related to the student's ability to "tune out" other environmental distracters. The intervention, "pivot", used in this study, allowed teaching staff to draw the attention of students by praising the correct behavior of some students, then pivoting to the now-attending student who was previously off-task. This intervention was the most-used intervention by teaching staff once functional assessment classes began, and it continued to be used in all classrooms until the end of the study.

Farmer and Bierman (2002) indicated that aggressive-withdrawn students in first and second grade were often inattentive with social skills deficits in kindergarten. Knowledge that giving social competency skills to the child who self-isolates and has trouble interacting with others in preschool may increase positive outcomes for many children would likely be a motivating factor for several teachers who participated in this study. Staff indicate they track their former students as they progress through school and derive satisfaction when they hear of former students using skills they know they taught.

Coaching and Feedback

In viewing the tapes for teacher's intervention skills, there were several times where coaching could have increased the effectiveness of the functional assessment training. In Classroom 3, when the teacher began attending to the inappropriate behaviors during the morning welcome, or when the positive "pivot" was combined with the coercive "faces" intervention, timely feedback from a coach would likely have

redirected the teacher to attend to the appropriate behavior of the other students. Recent research (Bradshaw et al., 2008; Lipton & Wellman, 2007; Simkins et al., 2006) indicates that feedback and coaching are very important components of professional development and subsequent skill implementation.

Some staff feedback, in regards to the training, indicated, "It was OK, but I didn't need it", or "I didn't learn anything new", but the teacher in Classroom 1 indicated, "I never thought of escape as a function of behavior before." Considering she had the classroom with the very oppositional student, this was a big revelation.

Videotaping Data Collection

Asking teaching staff to collect pencil and paper behavioral data can create several challenges. Time and effort expended by the staff may not be compensated; and teachers and teaching assistants have incredible amounts of multi-tasking to do, especially in a preschool classroom. Having the researcher collect real-time data has several drawbacks as well. Teaching staff may be uncomfortable with strangers in the classroom, yet developing a relationship between the researcher and the staff may compromise the objectivity of the researcher over time. Staffing can also be a challenge as taking data in multiple classrooms, during the same general period, over several weeks, can be a staffing nightmare. Requirements for background screenings create a cost-prohibitive barrier as well. For this study, with these staff, videotaping appeared to be the best solution.

There were challenges determining how videotaping would occur. This researcher was prepared to install timed video cameras in each classroom, but the teachers were reluctant to do this because activities occurred in a relative timeframe, not at the exact time each day. They also indicated to their principal that they were not comfortable just having the camera in the classroom connected to a computer. Understandably, they did not know this researcher and were concerned that others could "tune in" to the classroom at any time. Individual videographers were impractical for each classroom as the activities tended to overlap in the four classrooms. In addition, state legislation requires FBI background screenings for anyone in contact with children in the schools, requiring a sizable fee and 30-90 days to process. There was insufficient time to identify, hire and process a sufficient number of camera operators for each classroom, especially for the brief time required each day. Existing school staff could not be used, as the data collection would continue through the state achievement-testing period. The prekindergarten classrooms were not directly involved in testing, but all school personnel were utilized in some way for test processes, it was indicated that any staff assisting with videography would not be available for three to four weeks during testing preparation, the testing itself, and test make-up. Thus, teaching staff offered to operate the video camera themselves. Consistency was a problem, some lost data days, and one teacher and assistant whose data could not be used, but overall the process was a success. This researcher could not have examined so many individuals and their behaviors, with such accuracy, without videotaping.

The practice of a teacher's videotaping herself in the classroom has been used for quite some time. Some pre-service programs allow intern supervisors to watch videos of their interns while they instruct students (UCF-COE, 2005). One of the teachers participating in this study was regularly videotaping herself in the classroom as a permanent product for her National Teaching Certification.

This researcher selected videotaped data collection as there were many students, many activities, and many behaviors to track. Videotaping allows repeated viewing of the data to ensure accuracy (Graff et al., 1998), and creates a fixed viewing perspective. It also allowed the researcher to enhance the coder's accuracy by processing the video to include titles and audio signals to indicate data intervals. In addition, a more naturalistic setting (López et al., 2005) for data collection was created, as there were no additional people in the classroom to influence teacher or student behavior.

Other supports, such as providing alarm clocks and timers, appeared to have an effect on the compliance to daily taping as they were used regularly in Classroom 2 and Classroom 3 to time the videotaped sessions.

Data had to be discarded and recoded when it was discovered that a combination of incorrect information, procedural variations and behavior drift resulted in incorrect coding of much of the data. As a result, the coder training was made more rigorous. Coder training was enhanced by the use of video clips and still shots from the research video. Utilizing PowerPoint, with its custom animation tools, allowed this researcher to put together a relatively sophisticated, 30-minute multimedia training presentation that ensured all coders received the same information and instructions, specific to the

classrooms. Material was scaffolded, building on previous skills, and prompts were faded, allowing more independent decision-making from coders, as the training progressed. Combined with practice data collection from the full classroom sessions, and researcher feedback, training was efficient. This process allowed a very high level of inter-observer agreement among the coders, an indicator that the coder training was likely an effective process.

Technical challenges included masking students who did not have permission to participate. Although both students were in the same classroom, and the teacher was diligent in placing the students just out of camera range, frequent activity during circle time resulted in several moments when the students entered camera range to interact with the teacher. The students were masked with a moving, opaque "bubble" or oval whenever they appeared on screen.

The quality of the video was very good under most circumstances, yet was sometimes inadequate to pick up the subtle verbal and physical communication that sometimes occurred. Some students were excluded from the study, two because of a lack of consent, two from Classroom 2 because of camera angles. Microphones may have been effective, but it was challenging getting teaching staff to turn on the camera. Even wireless microphones would add another element that would likely have reduced staff's willingness to tape.

The camera angle was sometimes a very big problem. As the camera was turned on, most of the staff checked the angle to make sure it was accurate. Sometimes it was bumped slightly, and sometimes the "zoom" function for the lens was increased slightly,

reducing the field of vision. Just as the students were intermittently out of camera range on some days, so, too, were the teaching staff. In one class, much of circle time was spent with the teacher at the blackboard with whoever was the "Calendar Person" for the day; unfortunately, the teacher and/or student were frequently just out of sight. In both of these cases, the camera microphone was calibrated to the camera angle, and some verbal behavior was lost as well as the physical affect of the staff. In these cases, verbal behavior was counted correct or incorrect, but non-verbal cues or affect could not be counted. The teaching assistant in the same classroom was also difficult to observe for behavioral interventions. When the teacher was out, she taught circle time and data were readily available, however, this was infrequent. When the teacher was present, the assistant was usually assisting students in completing chores, assisting in the bathroom, or preparing the classroom for the next activity. The teacher assistant in the other VPK classroom was also soft spoken, resulting in an inability to utilize her data.

Data Collection and Class Permanent Product

When it was discovered the data had to be recoded, the coder training was made more rigorous. In addition, coders had to have, use, and show on demand, their copy of the behavioral definitions and coding procedures whenever they were taking data. Additional IOA were scored between new coders and more experienced coders; new coders with new coders; and experienced coders with experienced coders, to continually monitor the IOA between each of the eight data coders for student data. Though time consuming, the results indicated better fidelity in data collection and IOA.

Staff data were collected in 12, one-minute intervals per session as continuous data. A data trial using momentary time sampling with both 10 and 30-second intervals was attempted, but because teachers give instructions and directions intended for student response over a period of time, matching student behavior to staff behavior was not possible. Staff might have been responding, appropriately, to a behavior that was emitted 20 or 30-seconds previously, but because of the short duration of the intervals the teacher's responses could not be coded appropriately; the coders couldn't always retain the specific instructions that were given to students two or three intervals previously.

A difference of opinion between the teaching assistants who responded to a post-professional development survey and the teachers was apparent for one series of questions about the experience of teachers and assistants taking the class, and their thoughts on getting the information as a team. The questions were similar, but were asked differently of teachers and the assistants. The teachers were less enthusiastic about taking the class with the assistant. One of the three teachers in the study indicated the assistant did not need the class. They felt that behavior interventions were the teacher's responsibility; the behavior concepts were more advanced than the assistants could use. The assistants, however, were grateful to have the training and felt it improved their ability to work well with the students. Later, one of the assistants indicated she did not complete the post-professional development survey because the questions seemed "negative" to her. She enjoyed the classes and she did not want to give negative feedback on the survey.

The three hours of material that were eliminated were group discussions about definitions of behavior, and activities meant to stimulate teamwork. Because these teachers and assistants were all very experienced and were already accustomed to working as a team, these activities were removed from the class. Dividing it over three sessions in three different weeks was supposed to give staff time to practice the skills, complete the functional assessments, develop questions relating to the process, and process the shift from reactive interventions to forming proactive interventions. Some of this did occur, as demonstrated to this researcher by the questions asked by staff during class sessions. However, functional assessments were seen as "something that had to be done", and procedures taught in class, such as the use of data collection forms, did not appear to be formally used. Only one teacher appeared to use any of the data collection techniques discussed at length in class, instead, staff used anecdotal data, combined with their additional, just-learned awareness of behavior function, to complete the functional assessments.

Potential Limitations

This study does have some limitations. Because the study was conducted in the school system, where the personnel requirements are more stringent, the functional assessment training may not generalize to the typical preschool teacher in a private daycare center. In addition, the school schedule played a large part in the methodology used. There were no randomized participant or classroom selections. The study is contained within one school. The timeline began in mid-January, and a countywide inservice training, potentially relating to the study, was scheduled for mid-February. The

intervention duration, including baseline and post-intervention data, was nine weeks. This required that the study be scheduled in order to complete baseline and the intervention (three classes) before the inservice; and the post-class data collection had to be completed before spring break, as both were potential confounding factors to the study.

A single-subject pre-post design was selected because of the small number of participants; statistical analysis would be limited with only four classrooms and seven staff participants. Ultimately, data from only three classrooms (four staff) were useable. The single subject design ultimately allowed a level of specific detail for each individual that may not have been apparent in a larger study.

In the original curriculum, instructional time was scheduled for a total of nine hours for the functional assessment section. The original curriculum was written for day care workers with varied educational foundations. All of the teachers and many of the assistants had worked with young children with challenging behaviors for several years. Because the teachers and assistants were experienced, and educated beyond the typical daycare worker for whom the curriculum was designed, the nine-hour program of study was shortened to six hours. However, the three hours of instructional time may have had an impact on the skill acquisition of the staff. The researcher did not give specific feedback to staff during the study, instead, anecdotal observations were generalized and feedback given during class sessions. The delayed feedback did not appear to be as effective as coaching, and did not appear to be as efficacious as immediate feedback, but it ensured that the participants received the same information during the study. To

prevent unintentional bias, the researcher did not view the videos prior to the end of the study.

Ironically, the stability of the classrooms was one of the greatest barriers to the study; staff did not feel they needed the training. In previous years, staff had several students who engaged in significant aggression and property destruction. This year, even though there were a few students who had oppositional behaviors that were disruptive, and one who was a particular challenge, there was no sense of urgency on the part of the teachers. The time and effort required for the class, while not excessive, was seen as irrelevant and intrusive, according to two of the teachers. As such, the motivation to practice and/or use the skills was minimal. Some staff indicated they wanted the researcher to give pre-packaged interventions and instructions as to when to use them.

The functional assessment class was to teach the teachers and paraprofessionals how to recognize why the students were behaving the way they were in order to eventually select from a larger class of interventions. From the teacher's perspective, they were made to take a class they did not want, nor thought they needed, the class was thrust upon them with little notice, and they were denied the information they wanted. The implementation of the study became, completely by accident, exactly how teacher training has typically occurred in school systems.

It is only the professionalism of all involved that resulted in completion of the classes and data collection. Given the personal feelings of the teachers, in particular,

their continuation of the data collection was well above and beyond the call of duty. My respect and admiration for their dedication to their profession knows no bounds.

Implications for Research

Because the curriculum had not been the focus of a previous research study, and because it was possible, the training would be used as an ongoing training curriculum for the school system, the research procedures needed to be done systematically, with as few extraneous variables as possible. For this reason, the only two significant variations in the class were the reduction from a nine-hour class to a six-hour class, and that it was spit into three, two-hour sessions, instead of being presented in a lengthy, one day workshop format. Individual coaching, used extensively by this researcher with typical staff and parent training, would add too many additional variables to the study. However, it should be used in subsequent studies as video demonstrated the emergence of some skills, but the lack of feedback in-situ put some staff behaviors on extinction when they were unable to recognize the behavior effects or problem-solve with an experienced behavior analyst.

To continue this line of research, the next study should involve teaching the class in the same manner as in this study, however, after the functional assessment classes are completed, behavior coaching should be added. Coaches should be individuals certified in behavior analysis, or with a level of experience and equivalent coursework as a Board Certified Behavior Analyst.

A week or two later, the next module in the curriculum, 3b, Individualized Intensive Interventions: Developing a Behavior Support Plan should be taught in order to give the teachers interventions that are more comprehensive.

Data collection may need to be done at least twice each day, to encompass times when the teacher assistant has primary responsibility for the students, so the researcher may better measure the effects from the professional development on each member of the teaching team.

Continuing the research would require recruiting teacher and assistant dyads from schools where they may be required to volunteer their time. This would be a challenge, but not impossible. A critical persuasive argument, when potential volunteers balk at the time commitment, is the amount of time that will be saved during the school year. This, admittedly, would be an easier sell for staff who work with more behaviorally challenged students. However, with more and more students with exceptionalities participating in general education classes, all teachers may express an interest in developing methods to address specific, individual behavior, but may also express interest in increasing participation of all of their students.

Generalizing this line of research to the community, into the daycare centers and private preschools for whom the curriculum was originally developed, is also recommended. The current model of curriculum delivery does not call for a behavior coach, and obtaining a behavior coach to provide feedback and coaching may be challenging for many programs. However, this study would likely have produced greater, more lasting results, if there had been a coach to prompt the teachers to pivot,

instead of attending to inconsequential behavior; or to redirect the teacher when she started combining pivot with a coercive intervention; or prompting the teaching assistant to block and redirect back to the activity at hand. If these experienced, well-educated staff could have received great benefit from coaching, it would almost certainly be a requirement when teaching this professional development training to entry-level preschool staff who have had limited formal training in early childhood or exceptional education.

This study attempted to teach functional assessment skills and four, simple behavioral interventions to preschool teachers and their assistants. Functional assessment skills are very important in order to recognize student behaviors as a method the child uses to access what they want or need from the environment. These attempts to access what they want or need may present as undesired behavior. By reinforcing students' appropriate methods to get their needs met, the teacher does two things; she reinforces the individual student's correct behavior, and she points out the appropriate modeling of behavior to other students who may lack the skill, or whose fluency in the skill is still forming. The teachers and assistants were able to complete functional assessments and learn the four interventions, but their ability to put the knowledge into practice was varied and difficult to sustain. In this case, over time, staff tended to reduce reinforcing statements in general, fall back on coercive interventions, or point out undesired behavior, rather than reinforce appropriate behavior. Future research should focus on the suggestions outlined previously in order to increase sustainability of the skills necessary to identify the function of students undesired behavior, develop meaningful interventions

to reduce those behaviors, and allow students opportunities to develop more acceptable methods to meet their needs.

APPENDIX A: IRB LETTER

University of Central Florida

Office of Research & Commercialization

December 27, 2006

Karen R. Wagner
550 St. Johns Street
Cocoa, FL 32922

Dear Ms. Wagner:

With reference to your protocol #06-4059 entitled, "The Effects of the Attainment of Functional Assessment Skills by Preschool Teachers and Their Assistants on Students' Classroom Behavior," I am enclosing for your records the approved, expedited document of the UCFIRB Form you had submitted to our office. **This study was approved on 12/27/06. The expiration date for this study will be 12/26/2007.** Should there be a need to extend this study, a Continuing Review form must be submitted to the IRB Office for review by the Chairman or full IRB at least one month prior to the expiration date. This is the responsibility of the investigator.

Please be advised that this approval is given for one year. Should there be any addendums or administrative changes to the already approved protocol, they must also be submitted to the Board through use of the Addendum/Modification Request form. Changes should not be initiated until written IRB approval is received. Adverse events should be reported to the IRB as they occur.

Should you have any questions, please do not hesitate to call me at 407-823-2901.

Please accept our best wishes for the success of your endeavors.

Cordially,

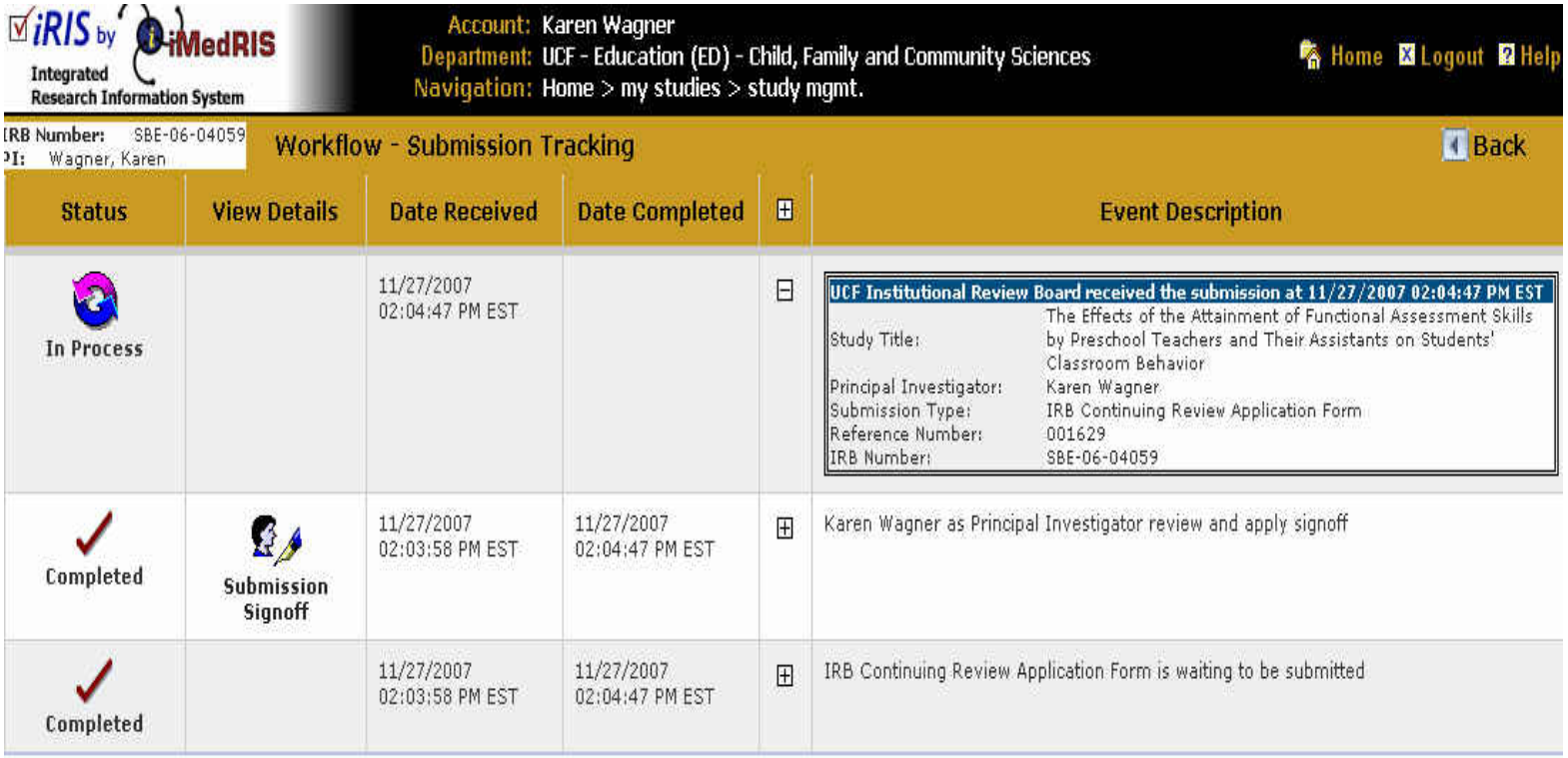
Joanne Muratori
UCF IRB Coordinator
(FWA00000351 Exp. 5/13/07, IRB00001138)

Copies: IRB File
Lee Cross, Ph.D.

JM:jm

12201 Research Parkway • Suite 501 • Orlando, FL 32826-3246 • 407-823-3778 • Fax 407-823-3299

APPENDIX B: IRB RENEWAL NOTIFICATION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IRB Number: SBE-06-04059
PI: Wagner, Karen
Workflow - Submission Tracking
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Status
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Date Received
Date Completed
Event Description
In Process
11/27/2007 02:04:47 PM EST
UCF Institutional Review Board received the submission at 11/27/2007 02:04:47 PM EST
Study Title: The Effects of the Attainment of Functional Assessment Skills by Preschool Teachers and Their Assistants on Students' Classroom Behavior
Principal Investigator: Karen Wagner
Submission Type: IRB Continuing Review Application Form
Reference Number: 001629
IRB Number: SBE-06-04059
Completed
Submission Signoff
11/27/2007 02:03:58 PM EST
11/27/2007 02:04:47 PM EST
Karen Wagner as Principal Investigator review and apply signoff
Completed
11/27/2007 02:03:58 PM EST
11/27/2007 02:04:47 PM EST
IRB Continuing Review Application Form is waiting to be submitted

APPENDIX C: VIDEO PROTOCOL

Video Camera Protocol for Classroom Staff

Teacher _____ Video Release Y N
Teacher Assistant _____ Video Release Y N
Teacher Assistant _____ Video Release Y N
Substitute Teacher _____ Video Release Y N

Remember- Once we start taping, Please do not change video location or time!

The area to be taped is: _____

During the activity: _____

The typical time the activity takes place: From _____ to _____.
Set up Camera at _____

1. Set camera and tri-pod in area to be taped, on the marks on the floor.
2. Plug in the camera, open the LCD screen and make sure it is working.
3. Turn the camera until it is in the correct position; remember: Do not video children without consent.
4. Make sure there is enough blank tape for the activity.
5. Set timer or reminder to turn the camera on at the correct time.

When it is time to video:

1. Turn on Camera, set timer for 12 minutes
2. Turn off camera when the timer goes off
3.

We would like to tape the following part of the activity:

Transition and The Beginning	**The Beginning**	**The Middle**	**The End**	**The End and Transition**
– From the time children are told what the next activity is, tape 12 minutes	- From the time the activity starts, tape 12 minutes	- In a 30 minute activity, start the tape 8 minutes after activity begins	- Start the tape 12 minutes before the end of the activity	- Start the tape 3-5 minutes before the end, run tape for 12 minutes

The following children do not have consent:

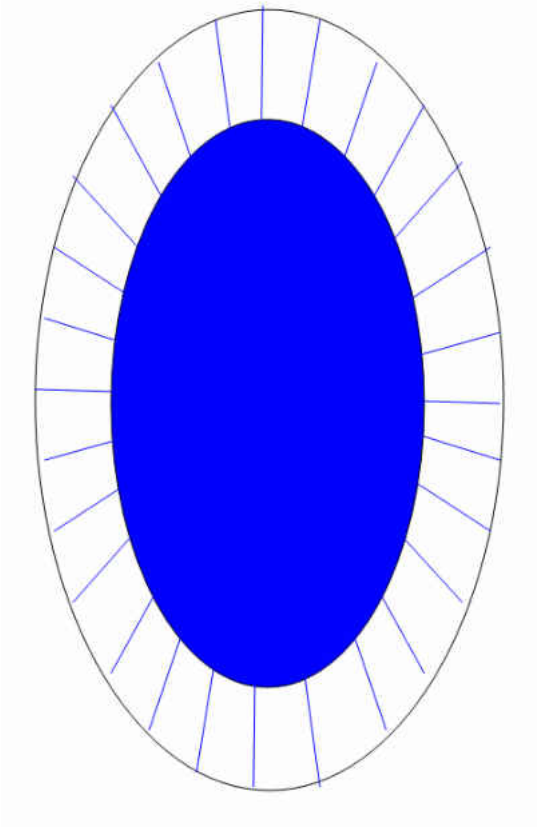
_____
_____
_____
_____

Special Notes:

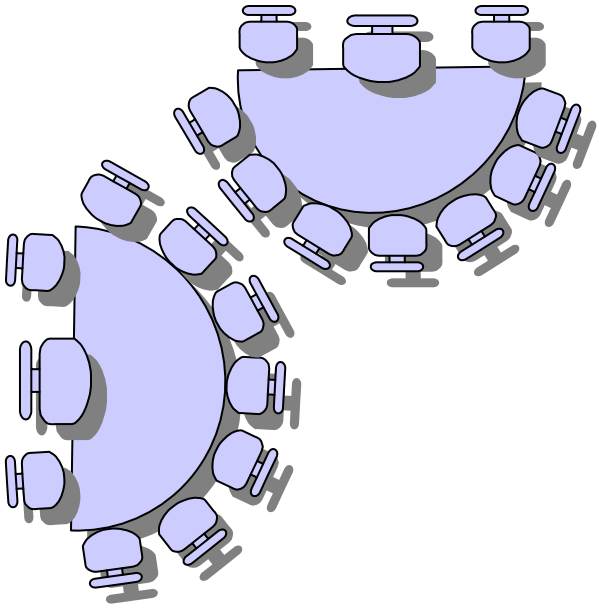
APPENDIX D: CLASSROOM LAYOUTS

Classroom Layouts

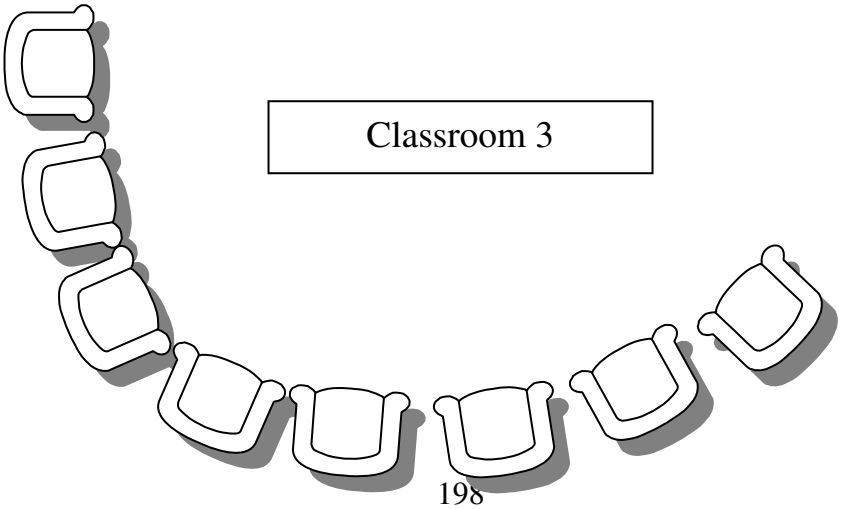
Classroom 1



Classroom 2



Classroom 3



APPENDIX E: FUNCTIONAL ASSESSMENT FORM

Adapted from: O'Neill, R. E., Horner, R. H., Albin, R. W., Sprague, J. R., Storey, K., & Newton, J. S. (1997). *Functional Assessment and Program Development for Problem Behavior.* Pacific Grove, CA: Brooks/Cole Publishing.

FUNCTIONAL ASSESSMENT INTERVIEW FORM—YOUNG CHILD

Child with Challenging Behavior(s): _____
Date of Interview: _____
Age: _____Yrs _____ Mos
Sex: M F
Interviewer: _____ Respondent(s): _____

A. DESCRIBE THE BEHAVIOR(S)

1. What are the behaviors of concern? For each, define how it is performed, how often it occurs per day, week, or month, how long it lasts when it occurs, and the intensity in which it occurs (low, medium, high).

	Behavior	How is it performed?	How often?	How long?	Intensity?
1.					
2.					
3.					
4.					
5.					

2. Which of the behaviors described above occur together (e.g., occur at the same time; occur in a predictable "chain"; occur in response to the same situation)?

B. IDENTIFY EVENTS THAT MAY AFFECT THE BEHAVIOR(S)

1. What *medications* does the child take, and how do you believe these may affect his/her behavior?

2. What *medical complication* (if any) does the child experience that may affect his/her behavior (e.g., asthma, allergies, rashes, sinus infections, seizures)?

3. Describe the *sleep cycles* of the child and the extent to which these cycles may affect his/her behavior.

4. Describe the *eating routines and diet* of the child and the extent to which these routines may affect his/her behavior.

5. Briefly list the child's typical daily schedule of activities and how well he/she does within each activity.

DAILY ACTIVITIES

Time	Activity	Child's Reaction

6 Describe the extent to which you believe activities that occur during the day are predictable for your child. To what extent does the child know what he/she will be doing and what will occur during the day (e.g., when to get up, when to eat breakfast, when to play outside)? How does your child know this?

7. What choices does the child get to make each day (e.g., food, toys, activities)?

C. DEFINE EVENTS AND SITUATIONS THAT MAY TRIGGER BEHAVIOR(S)

1. **Time of Day:** *When* are the behaviors most and least likely to happen?

   Most likely:

   Least likely:

2. **Settings:** *Where* are the behaviors most and least likely to happen?

   Most likely:

   Least likely:

3. **Social Control:** *With whom* are the behaviors most and least likely to happen?

   Most likely:

   Least likely:

4. **Activity:** *What* activities are most and least likely to produce the behaviors?

   Most likely:

   Least likely:

5. Are there particular situations, events, etc., that are not listed above that "set off" the behaviors that cause concern (particular demands, interruptions, transitions, delays, being ignored, etc.)?

6. What one thing could you do that would most likely make the challenging behavior occur?

7. What one thing could you do to make sure the challenging behavior did not occur?

D. DESCRIBE THE CHILD'S PLAY ABILITIES AND DIFFICULTIES

1. Describe how your child plays (With what? How often?).

2. Does your child have challenging behavior when playing? Describe.

3. Does your child play alone? What does he/she do?

4. Does your child play with adults? What toys or games?

5. Does your child play with other children his/her age? What toys or games?

6. How does your child react if you join in a play activity with him/her?

7. How does your child react if you stop playing with him/her?

8. How does your child react if you ask him/her to stop playing with a toy and switch to a different toy?

E. IDENTIFY THE "FUNCTION" OF THE CHALLENGING BEHAVIOR(S)

1. Think of each of the behaviors listed in Section A, and define the function(s) you believe the behavior serves for the child (i.e., what does he/she get and/or avoid by doing the behavior?)

Behavior	What does he/she get? Or what exactly does he/she avoid?
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

2. Describe the child's most typical response to the following situations:

   a. Are the above behavior(s) more likely, less likely, or unaffected if you present him/her with a difficult task?

   b. Are the above behavior(s) more likely, less likely, or unaffected if you interrupt a desired event (eating ice cream, watching a video)?

   c. Are the above behavior(s) more likely, less likely, or unaffected if you deliver a "stern" request/command/reprimand?

   d. Are the above behavior(s) more likely, less likely, or unaffected if you are present but do not interact with (ignore) the child for 15 minutes.

   e. Are the above behavior(s) more likely, less likely, or unaffected by changes in routine?

   f. Are the above behavior(s) more likely, less likely, or unaffected if something the child wants is present but he/she can't get it (i.e., a desired toy that is visible but out of reach)?

   g. Are the above behavior(s) more likely, less likely, or unaffected if he/she is alone (no one else is present)?

F. HOW WELL DOES THE BEHAVIOR WORK?

1. What amount of physical effort is involved in the behaviors (e.g., prolonged intense tantrums vs. simple verbal outbursts, etc.)?

2. Does engaging in the behaviors result in a "payoff" (getting attention, avoiding work) every time? Almost every time? Once in a while?

3. How much of a delay is there between the time the child engages in the behavior and gets the "payoff"? Is it immediate, a few seconds, longer?

G. HOW DOES THE CHILD COMMUNICATE?

1. What are the general expressive communication strategies used by or available to the child (e.g., vocal speech, signs/gestures, communication books/boards, electronic devices, etc.)? How consistently are the strategies used?

2. If your child is trying to tell you something or show you something and you don't understand, what will your child do? (repeat the action or vocalization? modify the action or vocalization?)

3. Tell me how your child expresses the following:

MEANS

FUNCTIONS	GRAB & REACH	GIVE	POINT	LEAD	GAZE SHIFT	MOVE TO YOU	MOVE AWAY FROM YOU	HEAD NOD/HEAD SHAKE	FACIAL EXPRESSION	VOCALIZE	IMMEDIATE ECHO	DELAYED ECHO	CREATIVE SINGLE WORD	CREATIVE MULTI WORD	SIMPLE SIGNS	COMPLEX SIGNS	SELF-INJURY	AGGRESSION	TANTRUM	CRY OR WHINE	OTHER	NONE
Requests an Object																						
Requests an Action																						
Protests or Escapes																						
Requests Help																						
Requests a Social Routine																						
Requests Comfort																						
Indicates Illness																						
Shows You Something																						

4. With regard to receptive communication ability:

   a. Does the child follow verbal requests or instructions? If so, approximately how many? (List, if only a few).

   b. Is the child able to imitate someone demonstrating how to do a task or play with a toy?

   c. Does the child respond to sign language or gestures? If so, approximately how many? (List, if only a few.)

   d. How does the child tell you "yes" or "no" (if asked whether he/she wants to do something, go somewhere, etc.)?

H. EXPLAIN CHILD'S PREFERENCES AND PREVIOUS BEHAVIOR INTERVENTIONS

1. Describe the things that your child really enjoys. For example, what makes him/her happy? What might someone do or provide that makes your child happy?

2. What kinds of things have you or your child's care providers done to try and change the challenging behaviors?

I. DEVELOP SUMMARY STATEMENTS FOR EACH MAJOR TRIGGER AND/OR CONSEQUENCE

Distant Setting Event	Immediate Antecedent (Trigger)	Problem Behavior	Maintaining Consequences	Function

APPENDIX F: STUDENT AND STAFF DATA SHEETS

Teacher _____ Assistant _____ Today's date _____ Observer Name _____

Date of tape _____ # of Children Observed _____

REMEMBER: Mark the behavior WITH the modifier (BLK and/or OOS) if the student is out-of-seat, partially blocked, or has their back to the camera!

Student Name_____

Int	Behavior
1	A O SIB BLK OOS INA AT
2	A O SIB BLK OOS INA AT
3	A O SIB BLK OOS INA AT
4	A O SIB BLK OOS INA AT
5	A O SIB BLK OOS INA AT
6	A O SIB BLK OOS INA AT
7	A O SIB BLK OOS INA AT
8	A O SIB BLK OOS INA AT
9	A O SIB BLK OOS INA AT
10	A O SIB BLK OOS INA AT
11	A O SIB BLK OOS INA AT
12	A O SIB BLK OOS INA AT
13	A O SIB BLK OOS INA AT
14	A O SIB BLK OOS INA AT
15	A O SIB BLK OOS INA AT
16	A O SIB BLK OOS INA AT
17	A O SIB BLK OOS INA AT
18	A O SIB BLK OOS INA AT
19	A O SIB BLK OOS INA AT
20	A O SIB BLK OOS INA AT
21	A O SIB BLK OOS INA AT
22	A O SIB BLK OOS INA AT
23	A O SIB BLK OOS INA AT
24	A O SIB BLK OOS INA AT

A__O__SIB__OOS__INA__AT___

Comments:

Student Name_____

Int	Behavior
1	A O SIB BLK OOS INA AT
2	A O SIB BLK OOS INA AT
3	A O SIB BLK OOS INA AT
4	A O SIB BLK OOS INA AT
5	A O SIB BLK OOS INA AT
6	A O SIB BLK OOS INA AT
7	A O SIB BLK OOS INA AT
8	A O SIB BLK OOS INA AT
9	A O SIB BLK OOS INA AT
10	A O SIB BLK OOS INA AT
11	A O SIB BLK OOS INA AT
12	A O SIB BLK OOS INA AT
13	A O SIB BLK OOS INA AT
14	A O SIB BLK OOS INA AT
15	A O SIB BLK OOS INA AT
16	A O SIB BLK OOS INA AT
17	A O SIB BLK OOS INA AT
18	A O SIB BLK OOS INA AT
19	A O SIB BLK OOS INA AT
20	A O SIB BLK OOS INA AT
21	A O SIB BLK OOS INA AT
22	A O SIB BLK OOS INA AT
23	A O SIB BLK OOS INA AT
24	A O SIB BLK OOS INA AT

A__O__SIB__OOS__INA___AT__

Comments:

Student Name_____

Int	Behavior
1	A O SIB BLK OOS INA AT
2	A O SIB BLK OOS INA AT
3	A O SIB BLK OOS INA AT
4	A O SIB BLK OOS INA AT
5	A O SIB BLK OOS INA AT
6	A O SIB BLK OOS INA AT
7	A O SIB BLK OOS INA AT
8	A O SIB BLK OOS INA AT
9	A O SIB BLK OOS INA AT
10	A O SIB BLK OOS INA AT
11	A O SIB BLK OOS INA AT
12	A O SIB BLK OOS INA AT
13	A O SIB BLK OOS INA AT
14	A O SIB BLK OOS INA AT
15	A O SIB BLK OOS INA AT
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20	A O SIB BLK OOS INA AT
21	A O SIB BLK OOS INA AT
22	A O SIB BLK OOS INA AT
23	A O SIB BLK OOS INA AT
24	A O SIB BLK OOS INA AT

A__O__SIB___OOS__INA___AT_

Comments:

Student Name_____

Int	Behavior
1	A O SIB BLK OOS INA AT
2	A O SIB BLK OOS INA AT
3	A O SIB BLK OOS INA AT
4	A O SIB BLK OOS INA AT
5	A O SIB BLK OOS INA AT
6	A O SIB BLK OOS INA AT
7	A O SIB BLK OOS INA AT
8	A O SIB BLK OOS INA AT
9	A O SIB BLK OOS INA AT
10	A O SIB BLK OOS INA AT
11	A O SIB BLK OOS INA AT
12	A O SIB BLK OOS INA AT
13	A O SIB BLK OOS INA AT
14	A O SIB BLK OOS INA AT
15	A O SIB BLK OOS INA AT
16	A O SIB BLK OOS INA AT
17	A O SIB BLK OOS INA AT
18	A O SIB BLK OOS INA AT
19	A O SIB BLK OOS INA AT
20	A O SIB BLK OOS INA AT
21	A O SIB BLK OOS INA AT
22	A O SIB BLK OOS INA AT
23	A O SIB BLK OOS INA AT
24	A O SIB BLK OOS INA AT

A__O__SIB__OOS__INA__AT___

Comments:

Today's Date _____ **Observer Name** _____ **Date of Tape** _____

Teacher Name _____ **Assistant Name** _____

Interval	Teacher or Assistant	# of Times Behavior is Addressed (hash Marks)	# Correct (hash marks)	# Incorrect (hash marks)	Total Correct	Total Incorrect	# of STUs not BLK	# AT	# INA
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									

Orange - Data are taken continuously DURING the interval.

Interval	Comments

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