PROFESSIONAL DEVELOPMENT FOR PARAPROFESSIONALS:
IMPLEMENTING POSITIVE BEHAVIORAL SUPPORTS FOR
STUDENTS DIAGNOSED WITH AUTISM

A Thesis Presented to the Faculty
of
California State University, Stanislaus

In Partial Fulfillment
of the Requirements for the Degree
of Master of Arts in Education

By
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May 2016
CERTIFICATION OF APPROVAL

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IMPLEMENTING POSITIVE BEHAVIORAL SUPPORTS FOR
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DEDICATION

To all the children and families that I have been so privileged to support, serve, and learn from. My passion for education has grown from my experience as an Instructional Assistant fresh out of high school, to my current position as a Clinical Supervisor in practice. You created and supported my drive to become the Clinician and Educator that I am today. Thank you many times over for everything you have given me.
ACKNOWLEDGEMENTS

My parents have taught me to be strong, resilient, dedicated, and caring. Thank you for all the times you encouraged me when I thought I could not succeed.

To my husband, my better half, who has been through the thick and thin of my extended college career, I would not be here at the finish line if it weren’t for your long nights with the kids, encouraging words, and keeping me awake! Thank you and I love you. To my children, I hope this challenges you to do great things and be the amazing individuals I see every day, I love you Emma, Gabby and Trace. I can’t forget the support of my grandmothers, cousins, aunts, brothers, in laws and many other family and friends have made this journey with me. Thank you.
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ABSTRACT

With the prevalence of autism continuing to rise, it is essential that public schools be assisted with identifying best possible outcomes, as well as best practices for supporting the academic success of students in the special education system. Recent data indicate more than 312,000 paraprofessionals are providing services for students with disabilities in the United States (Giangreco, M.F., Broer, S.M., 2005). With the growing reliance on paraprofessional support, who is supporting the paraprofessionals? What knowledge and training is being utilized to support these direct line staff with implementing individualized plans and tailored curriculum to meet each student’s current need? The manual, *Professional Development for Paraprofessionals: Implementing Positive Behavioral Supports for Students Diagnosed with Autism*, was designed to assist education professionals with training and support of paraprofessionals in the education field. The manual is geared to encourage paraprofessionals personal and professional growth by creating a larger understanding of the diagnoses of Autism and how it impacts a student’s life. In addition, the manual will present strategies for paraprofessionals to better assist each student’s individual need by creating a learning environment which fosters strong motivation, consistency across settings, and clear behavioral expectations throughout a student’s instructional day.
CHAPTER I
INTRODUCTION

Autism Spectrum Disorder

Autism Spectrum Disorder (ASD) is a disorder which affects various areas of brain development. This disorder is characterized by qualitative impairments in social and communicative skills, as well as the presence of repetitive, stereotyped patterns of behavior (Phetrasuwan, S., Miles, M., Mesibov, G.B, & Robinson, C., 2009). ASD impacts a child’s ability to make eye contact, as well as share and maintain attention during play and conversations (CDC Autism Spectrum Disorder, 2016). Additionally, children diagnosed with ASD often demonstrate delays in appropriate play, social relationships, and development of spoken language, as well increases in stereotyped repetitive motor skills (hand or finger flapping and twisting) and inflexible or ritualistic behavior specific to routines (CDC Autism Spectrum Disorder, 2016; Phetrasuwan et al., 2009). Due to the nature of the disorder, ASD may mildly to profoundly impact an individual’s social, communicative, and daily living skills. Low functioning individuals, having little to no communicative language or adaptive behavior, may require full residential assistance and care throughout their adult life. Individuals mildly or moderately impacted by the disorder may acquire basic, functional verbal language and moderate adaptive behavior, allowing them to live with minimal or no support as they age. High functioning individuals can become
fully independent, demonstrating the ability to adapt both socially and behaviorally in all aspects of life (CDC Autism Spectrum Disorder, 2016; Phetsuwan et al., 2009).

Children are being diagnosed with ASD as early as two years of age. However, the average age for diagnosis continues to hover around four and a half years of age. The cause of Autism is currently unknown. There is continued research focusing on genetic and environmental factors pre- and post-pregnancy, during early brain development (CDC Autism Spectrum Disorder, 2016).

In March of 2014, The Center for Disease Control (CDC) and Prevention reported a continued rise in the prevalence of autism within the United States. Autism has increased from 1 in 88 children diagnosed in 2010, to the current rate of 1 in 68 (Christensen, D. L., Baio, J., Braun, K. V., Bilder, D., Charles, J., Constantino, J. N., Daniels, J., Durkin, M.S., Fitzgerald, R.T., Kurzius-Spencer, M., Lee, L., Pettygrove, S., Robinson, C., Schulz, E., Wells, C., Wingate, M.S., Zahirodny, W., Yeagin-Allsopp, M., 2016).

In addition to the impact of ASD on the lives of the children diagnosed, there is a broader impact of the disorder affecting an individual’s immediate family members and their surrounding community. In California alone, the Autism rate for K-12 grade students has tripled. Despite the number of students diagnosed with Autism climbing from 17,508 in 2002 to 59,690 in 2010 (Lucile Packard Foundation, 2010), the number of students receiving special education services has remained steady at 11 percent enrollment. Of those receiving special education services in 2010, 8.8 percent were diagnosed with ASD, in contrast to 2.6 percent of students qualifying under the category of Autism in 2002 (Lin, J. 2011).
Statement of the Problem

With the prevalence of Autism continuing to rise, it is essential that public schools be assisted with identifying best possible outcomes as well as best practices for supporting the academic success of students in the special education system. Current legislation and policy initiatives are requiring higher standards of treatment for all students with disabilities. In 1975, Congress passed the Education for all Handicapped Children Act, to address the exclusion of children with disabilities from public schools. In accordance with this act, it became mandated that all children be entitled to a “Free and Appropriate Public Education,” in the “Least Restrictive Environment” (Heward, W. L., 2009). National concerns continue to develop Public Law with amendments and reauthorizations beginning in 1986 and continuing through 2004. The amendment to “Education for the Handicap Act” (EHA) in 1986 was created to support children and families from birth to 2 years when developmental milestones occur (PL 99-457). In 1990, amendments were created to rename the legislation to “Individuals with Disabilities Education Act” (IDEA) and related services were added to the law, including social work and rehabilitation counseling as well as the identification of autism and traumatic brain injury as distinct disability categories. While the initial law focused primarily on providing students with disabilities access to special education services and physical access to the school building, amendments were made to the act in 1997. Under the “Individuals with
Disabilities Education Act,” students with disabilities must receive access to the general education curriculum and “specially designed instruction.” Additional amendments consisted of regular educators becoming part of the IEP team, children with disabilities being included in statewide and district assessments, and assistive technologies being considered by the IEP team. The amendment also raised expectations for the performance of students with disabilities. In 2001, the “No Child Left Behind Act” was established with the goal of improving academic performance and aligning quality teaching and instruction. Schools began to be held accountable for the academic achievement of all students, requiring meaningful learning outcomes with strong empirical support. Educators were deemed responsible for delivering these services and providing quality education (Carter, E., O’Rourke, L., Sisco, L.G., Pelsue, D., 2009).

Students diagnosed with ASD have or can benefit from Public Laws, including IDEA and NCLB, as they are now afforded access to general education classroom placements and curriculum, as well as Individualized Education Plans to support their specific needs. Placement options range from least to most restrictive and are supported by a continuum based on the students need. The continuum of placement options are available to students with ASD and should be determined by an IEP team. A child will be served starting with the least restrictive placement in a general education setting. This may or may not include supports in the means of accommodations or modifications. Resource services are provided to students in the general education setting who may need additional support in specific areas of
instruction. Resource can be served using a “pull out” model, where the student completes instruction in another classroom or “push in” model, where the resource teacher provides the instruction in the general education classroom. Once a child is receiving more than 50% of their instruction from resource it is recommended that other placement or services be discussed to meet the students need. An inclusive classroom is also the least restrictive where typically developing children and children with disabilities learn together. Placement in a more restrictive setting could include a Special Day Class (SDC) or Autism Classroom. An SDC placement supports students of varying disabilities in a smaller group setting with more support and opportunities of mainstreaming into general education when appropriate. A specialized classroom such as an autism classroom is a more restrictive environment that is geared at supporting 1:1 instruction and specialized instruction. The most restrictive placement would include a non-public school, home or hospital care. However, even with an open range of placement options and services, more must be done to support each student’s overall success. Some special education teachers are thoroughly trained in utilizing methods such as explicit instruction, differentiated instruction, curriculum-based evaluation, and classroom management strategies, all of which are paramount to ensuring that each student meets his or her full potential. However, few of these methodologies are actually being utilized. Credentialed teachers are delivering far less direct classroom instruction (Giangreco, M.F., Broer, S.M., 2005). If the teachers are spending less time teaching direct classroom instruction, then who is teaching these students? Paraprofessionals are now spending
more time delivering direct services to students in both the general education and special education settings (Giangreco, M.F. & Broer, S.M., 2005). In addition, paraprofessionals comprise a large portion of the educational workforce. Recent data indicate more than 312,000 paraprofessionals are providing services for students with disabilities in the United States (Carter, et. al., 2009). With the growing reliance on paraprofessional support, who is supporting the paraprofessionals? What knowledge and training is being utilized to support direct line staff with implementing individualized plans and tailored curriculum to meet each student’s current need? In addition, who is delivering the “specially designed instruction” as stated in the current law? Researchers have examined the workload of paraprofessionals and discovered that approximately 47% of their time was spent delivering instruction, followed by 19% of their time offering behavioral support (Giangreco, M.F., & Broer, S.M., 2005). If these are the two key components making up a paraprofessionals workload, it is vital that there be a shift in focus to what training will directly benefit staff and students alike. The most current and effective treatment for students diagnosed with autism is derived from methods of applied behavior analysis (ABA) (Dunlap, G., Kern, L., Worcester, J., 2001). ABA shares a mission and philosophy with special education; it is individualized using single subject designs and individual functional analysis. Secondly, ABA utilizes direct observation and empirical evidence to support learning and replicable instructional practices. In addition, successful intervention strategies derived from ABA that are used in classroom placements include, motivational programs using positive reinforcement, systematic task analysis for the
development of academic skills and operations of prompting, shaping and fading to support mastery of target skills. Applied behavior analysis has had a deep and vast impact on education. ABA has supported a shift in instructional design, classroom systems of motivation and behavior management, individual behavior support, school-wide behavior support, and the many realms of assessment (Dunlap et. al., 2001). The methods and procedures associated with ABA have proven to be effective in various realms of education with a full range of student populations, with the biggest contributions in special education.

**Purpose of the Project**

Due to the lack of adequate training and overall professional development of paraprofessionals in the educational workforce, it is suggested that the professional development training manual provided in this project be utilized to assist paraprofessionals in acquiring knowledge and training to support the current population for whom they serve. It is recommended that Special education teachers, directors, coordinators, inclusion specialists, behavior analysts or any other qualified professional, to support the introduction of the manual. Continued collaboration between identified professionals and the paraprofessionals can support generalization of materials presented in the manual into the classroom environment. Consistency across settings and maintenance of skills will ensure a higher quality of direct instruction and more confident and qualified staff. Professionals supporting the training manual implementation should ensure treatment integrity through continued support of growth and knowledge as paraprofessionals are acquiring experience.
Furthermore, this manual is designed to help paraprofessionals develop a larger understanding of the diagnosis of ASD and how it impacts a student’s life. As a result of this training manual, it is proposed that paraprofessionals will learn how to better support each student’s individual need and create a learning environment which fosters strong motivation, consistency across settings, and clear behavioral expectations throughout a student’s instructional day.

**Significance of the Project**

This project will give paraprofessionals the necessary tools to create more learning opportunities, as well as improve learning outcomes of students with ASD through the use of various behavior management techniques. It will provide paraprofessionals with training in the most current evidence-based practices and effective treatment for students diagnosed with autism, as well as any other student within a similar educational setting. There will be an overall increase in awareness and understanding of the diagnosis and how it impacts the students and schools. In addition, the training will improve quality of service provided by paraprofessionals in the public school settings, thereby resulting in increased skill acquisition of students and a greater likelihood of their academic success.

**Definition of Terms**

*Applied Behavior Analysis (ABA).* The process of systematically applying interventions based upon the principle of learning theories to improve socially significant behavior to a meaningful degree, and to demonstrate that the interventions
employed are responsible for the improvement of that behavior. The use of antecedent conditions and consequences to shape behavior.

**Autism Spectrum Disorder (ASD).** A group of developmental disabilities that can cause significant social, communicative, and behavioral challenges.

**Behavioral Support Plan.** Maladaptive behaviors are difficult to change because they are functional; they serve a purpose. These behaviors are supported by reinforcement and the environment. A behavior management system used to decrease/replace undesired maladaptive behavior and increase more desired socially acceptable or incompatible behavior.

**Center for Disease Control (CDC).** The Centers for Disease Control and Prevention is the leading national public health institute of the United States.

**Evidence Based Practices.** An evidence based practice is an instructional strategy, intervention or teaching program that results in consist outcomes when experimentally tested. All practical decisions made should be based on research studies demonstrating scientifically verifiable and sound data and studies are selected and interpreted according to specific norms.

**Individuals with Disabilities Education Act (IDEA).** A public law mandated on November, 29, 1975 by President Gerald Ford. This legislation is considered the
“Bill of Rights” for children with disabilities and their families. It ensures that all children with disabilities are entitled to a free and appropriate public education (Special Education) to meet their unique needs and prepare them for further education, employment, and independent living. Autism was included as one of the 13 disability categories in the re-authorization of IDEA in 1990.

**No Child Left Behind (NCLB).** A United States act of congress which supports standards-based education reform based on the premise that setting high standards and establishing measurable goals can improve individual outcomes in education. NCLB is to ensure accountability for all students as well as access to general education curriculum, including students with disabilities who are disadvantaged. Students are assessed through adequate yearly progress for achievement.

**Paraprofessional.** A teaching-related position within a school generally responsible for specialized or concentrated assistance for students in elementary and secondary schools (instructional aide).

**Professional Development.** The acquisition of skills and knowledge, both for personal development and career advancement. Professional development encompasses all types of facilitated learning ranging from college degree to formal coursework, conferences and informal learning opportunities situated in practice.
Summary

The purpose of this project is to compose a professional development training manual with informational text and visual strategies to assist individuals in gaining knowledge and practical skill sets to support the needs of individuals diagnosed with autism in the public school settings. The training manual will provide paraprofessionals with definitions and characteristics of autism and special education, current research on effective strategies to support growth and learning in special education, and an introduction to the methods of applied behavior analysis to create effective behavior management strategies in the classroom settings.

Chapter I introduces the importance of training and supporting paraprofessionals working with students diagnosed with autism in an effort to improve their overall academic success. Chapter II reviews the literature related to special education, paraprofessionals, autism, and effective treatment. Chapter III describes the outline of the professional training manual and identifies the critical components necessary to acquire the current knowledge and practices to best support students diagnosed with autism in the classroom settings. Chapter IV describes the procedures for implementing the manual to promote professional development. This chapter will assist all levels of staff in the implementation of the procedures and how to apply various strategies into daily classroom routines. Chapter V summarizes the project and provides conclusions and recommendations for future research.
CHAPTER II
REVIEW OF LITERATURE

What is Special Education?

Special Education is a broad term. It can be defined as specially designed instruction to meet the unique needs of a child with a disability. It is also public law and a practice in education to support individuals with disabilities as well as their families. Educators in the field recognize special education as intervention. Research and time have proven that preventive efforts are most promising when they begin at an early age (Heward, W.L., 2009).

Special education starts at identification. A child can be referred by a parent or teacher or be identified from screening results. Once a child has been referred or identified, a multi-factored evaluation is administered (based on parent consent) to determine if the child has a disability, what additional services may be needed and how the child can participate in the general education curriculum. After evaluation, results and all other relevant information are reviewed to determine if a child meets eligibility criteria for at least one or more of the 13 disability categories identified in IDEA. If a child is deemed eligible for special education an Individualized Education Plan (IEP) is developed and an IEP team is formed from school professionals, parents, and other community professionals. The goal of the IEP team is to create a program tailored to fit the student’s current educational need (Heward, W.L., 2009). The IEP must include; measurable and annual goals, services that will enable the
student to access the general academic curriculum and the extent to which the student will participate in the general education placement, and involvement in state or district wide testing or assessments. Additional items can include a positive behavior intervention plan, transition needs and services, special instruction and or related services. Once the IEP is developed, the team discusses possible educational placements based on the child’s need and not disability category. Based on IDEA, the general education placement would be the starting point for a Least Restrictive Environment (LRE). If the child is not included fully in the general education placement, the IEP must explain the extent of removal and why removal is necessary. All placement decisions are decided as a team and in conjunction with parent consent. Once placement has been decided, the educational team is responsible for implementing the IEP and special education services. Special education services need to include progress monitoring on the child’s IEP goals (mastery or progress towards benchmark objectives quarterly); as well as annual review and re-evaluation.

**Past and Current Law to Support Students with Disabilities**

Our society has made leaps and bounds when serving our population of exceptional children with disabilities. Prior to the 1970s, state laws approved public schools of denying enrollment to children with disabilities (Murdick, N.L., Gartin, B.L., & Crabtree, T.L., 2006). In some states, children were denied access to education on the basis of, “bodily or mental conditions” rendering attendance inadvisable. The majority of court cases supported segregation. Children with mild learning and behavioral problems remained in the general education classroom with
no support and the children who did not make satisfactory progress were labeled as “slow learners,” “flat liners,” or “disciplinary problems.” Children with severe disabilities (physical or health impairments) were placed in segregated private schools, institutions or kept at home (Heward, W.L., 2009). As our society’s concept of freedom, equality and justice expanded, our educational system moved from exclusion and isolation to inclusion and participation with the history of special education following closely with the legal rulings of civil rights movements. The 1950s case of *Brown vs. Topeka Board of Education* (1954) was related to our population in the means of unjust inequality; however, this court case challenged the practice of segregating students based on race. The Supreme Court ruled that education must be made available to all children on equal terms. Federal legislation and court rulings made it clear that no longer was a child turned away from school because it was believed that he or she could not benefit from education. *Pennsylvania Association for Retarded Citizens (PARC) vs. Commonwealth of Pennsylvania* (1972) challenged state law that denied public education to children that were “unable to profit from public school attendance.” Parents argued that even though their children were intellectually disabled, they were still able to be educated. From this case, children were now entitled to receive a free, public education and parents had the right to be notified before any changes were made to their child’s educational programming. In addition, PARC was responsible for federal legislation which made it possible for all children to be supported in a general education setting and not defined by a disability category, but appropriate to the child’s capacity and preferably
a general education placement over a special education setting. For children with autism, this legislation has made it possible to this day for students to excel academically aside from a diagnosis (Heward, W.L., p#17, 2009).

In 1975, Public Law 94-142, the Education for All Handicapped Children Act was enacted which has changed our educational system for the better. The law has since been amended numerous times. The 1990 amendments renamed the law the Individuals with Disabilities Education Act referred to as IDEA. In addition, the 1990 reauthorization included the newly identified category of ASD. Prior to the 1990 authorization, society had a limited or distorted understanding of autism. The increasing prevalence of ASD and inclusion of the ASD category in IDEA changed mandates on how students with ASD should be supported and educated in the school system. The most recent reauthorization of IDEA was titled the Individuals with Disabilities Education Improvement Act of 2004. The purpose of IDEA was to ensure that children with disabilities were served through a public placement free of charge. Students were supported by any services necessary to benefit educationally and that services are provided statewide, are effective and provided by qualified educators (Heward, W.L., 2009). There are six main principles of IDEA which define the regulations set forth in law. Students with ASD are also protected by the six guiding principles of IDEA.

**Zero Reject**

Regardless the nature or severity, schools must educate all children (absolute for ages 6 years-21 years) with disabilities and provide free public education.
**Nondiscriminatory Identification and Evaluation**

Assessment and evaluation must be nonbiased and nondiscriminatory. All tests must be administered in the student’s native language and each evaluation must be multi-factored to make appropriate placement decisions (Comprehensive tests and assessments).

**Free and Appropriate Public Education (FAPE)**

All children with a disability shall receive an education at public expense, without cost to the parents. An Individualized Education Program (IEP) was developed to support the child’s need based from assessment and observation. Annual goals were created within the IEP to support the student’s current need and drives the related services to attain educational benefit based upon test scores.

**Least Restrictive Environment (LRE)**

Mandated that students with disabilities be educated with nondisabled peers to the maximum extent appropriate. Students with disabilities should only be removed to separate classrooms or schools when the nature or severity of their disability cannot be supported in the general education classroom with supplementary aids and services. To ensure that students were educated in the least restrictive environment, school districts provided a continuum of placement and service alternatives.

**Due Process Safeguards**

Protect the rights of parents and students in the educational placement. Parents must be informed and consent to any assessment or evaluation relating to placement in special education. If evaluations were conducted and parents did not
agree with the results, an outside assessment could be conducted at the expense of the public. In addition, if parents do not agree with identification, evaluation, placement (FAPE, LRE) or related services a due process hearing may be requested. Prior to a due process hearing, school districts or special education local plan area’s (SELPA) must offer parents the opportunity of resolution through mediation of a third party.

**Parent and Student Participation and Decision Making**

Schools were required to include parents and students in the decision making process relating to all special education needs with goal planning and implementation, placement and related services.

**Symptoms, Screening and Diagnosis of ASD**

Autism Spectrum Disorder (ASD) is a developmental disability that can cause extreme social and communicative delays as well as maladaptive behaviors. Children and adults with ASD struggle to engage in socially appropriate interactions and daily communicative exchanges which creates uncomfortable situations for all parties involved. ASD is also a lifelong disability. It affects all racial, ethnic and socioeconomic groups and is five times more common in boys than girls. Like many families living with ASD, the CDC has reported that ASD is an important public health concern. With the current rate of 1 in 68 children diagnosed with ASD, it is evident that our communities need to understand the prevalence and concern around this developmental disability (CDC, 2016).

Unlike children with Intellectual Disabilities (Syndromic), who share common looks or physical abnormalities (chromosomal difference), children with autism do
not display like features that identify them as “autistic”. Autism is characterized by a wide and varied range of (gifted to severely delayed) cognitive and adaptive abilities.

Children with autism often communicate, interact, behave, and learn in ways that are different from others. Their learning, thinking, problem solving, and independence can be compromised and present varied ranges of capabilities. Some children struggle socially with deficits in understanding one’s emotions, using perspective taking, engaging in social exchanges (e.g., reading facial cues or body language or engaging in simple conversational exchanges) and developing friendships. Communication skills vary from clear articulate speech patterns to no functional verbal speech. Language delays are typically characterized by repeated words, phrases or questions that are unfamiliar or not understood, difficulties in pronoun usage, and delayed overall language development or acquisition (e.g., articles, nouns, categories, attributes) (American Psychiatric Association, 2013; Lord, C., Risi, S., DiLavore, P.S., Shulman, C., Thurm, A., Pickles, A., 2006). When individuals are unable to verbalize their wants and needs, such communication deficits often lead to maladaptive behaviors in the form of tantrums, aggression or self-injurious behaviors. Other problem behaviors include stereotypy (e.g., repetitive movements with one’s body or objects), rigidity (in schedules or routines), control, obsession, or preoccupation with objects or movements. Additional symptoms include avoidant eye contact, isolation, no shared interests, preference to play alone, lack of imaginative play, delayed speech and language skills, difficulties in understanding feelings and emotional states, repeated words or phrases (echolalia),
obsessive interests, hand flapping, jumping, rocking back and forth with their body
and/ or unusual sensory reactions to touch, sound, smell, taste or sight (American

Developmental screenings typically start within the medical profession when
children are seen for well-baby visits. Diagnosing children with ASD can be difficult,
as there are no medical test such as blood tests. Pediatricians, in turn, may assess a
child’s development and behavior. Diagnosing ASD is a two-step process. Initially,
pediatricians may assess a child’s verbal/non-verbal behaviors and developmental
milestones during routine visits. Screenings take place at 9 months, 18 months, 24
months and 30 months of age where pediatricians look for developmental delays and
disabilities. If a pediatrician recognizes any symptoms or problems, a comprehensive
diagnostic evaluation is recommended. Parents’ have reported recognizing a problem
with their child’s development as early as 12 months and up to 24 months of age.
Social development in infants starts as early as 2 to 4 months in age (e.g., smiling,
cooing, babbling and responding to affection) and continues through age 5 (e.g.,
showing sympathy for others, wants to please others, and speaks clearly with a large
vocabulary) (American Psychiatric Association, 2013; Lord, C. et. al., 2006; CDC,
2016). However, many factors may be involved for why a child does not receive a
diagnosis until later in their development. First, developmental milestones vary based
on the child’s family medical history, learning environment, and pre and postnatal
care. Some children are not profoundly impacted and may demonstrate some
emerging language or social reciprocities and therefore pass a basic developmental
screening. Secondly, a child may not receive well baby visits due to the family’s lack of medical care or insurance funding. In this instance, a child will more than likely not be identified until later in development, usually when reaching school age. Lastly, it may be that a child’s parents are not familiar with developmental milestones, are in denial that there child may have autism or do not understand what autism is. The second step of assessment may include a parent interview, hearing and vision screening, genetic testing, neurological testing and other medical testing. Once a child has received a comprehensive diagnostic evaluation, the pediatrician determines if the child needs to be referred to a specialist for diagnosis. Specialists include Developmental Pediatricians, Child Neurologists, Child Psychologists and Psychiatrists. Medical professionals diagnose children using the Diagnostic Statistical Manual- 5th Edition. A child can also receive a diagnosis through other community agencies, such as SELPA (Special Education Local Plan Area), LEA (Local Education Agency) or the Regional Center (California Department of Developmental Services, 2016; California Department of Education, 2005).

**Supports and Services for Children and their Families**

In California, The Department of Developmental Services (DDS) is the agency responsible for providing support to individuals with developmental disabilities. These disabilities include intellectual disability, cerebral palsy, epilepsy, autism and related conditions. Services are provided through state-operated centers and community facilities. DDS contracts with 21 non-profit regional centers. The regional centers serve as a local resource to help find and access services
and supports available to individuals and their families. The State of California provides supports and services to individuals with developmental disabilities throughout their lifetime. Services and supports are provided through a combination of federal, state, county and local government services, private businesses, support groups and volunteers (California Department of Education, 2005).

Regional centers provide diagnosis and assessment of eligibility and assist in planning, accessing, coordinating and monitoring services and supports. Infants and toddlers who are “at risk” of having developmental disabilities (i.e., autism) or who have a developmental delay may also qualify for services. Currently, 1,312 children under the age of 3 are being served through Valley Mountain Regional Center (Valley Mountain Regional Center, 2016). These children receive access to services due to a delay in the area of cognitive, social-emotional, adaptive, motor skills or communication or if the child has an established risk condition due to birth issues or other factors. If children do not pass screenings during early start services they may be referred for diagnosis as well as an increase of service hours based on the diagnosis. Early Start services provided by the Regional Center continue until the child reaches the age of 3. Once a child has been diagnosed with a disability that began before his or her 18th birthday and is expected to continue the child will remain eligible for some type of services until they are no longer warranted. Regional centers provide and coordinate a broad range of services related to developmental disabilities (California Department of Education, 2005).
Once a child turns 3, the local school district, county office of education, LEA or SELPA is contacted to assess, develop, and support a child’s current educational needs. In 1990, IDEA required school districts to serve all children with disabilities ages 3-5. This is known as the child find mandate. Child find requires local school districts to identify and assess children with disabilities regardless of their severity. California’s Department of Education has established a program to identify and provide early education to children with disabilities in a typical environment to produce substantial gains in psychosocial, physical, self-help, cognitive and speech and language development (California Department of Education, 2005). Early education (IFSP) is also provided to reduce family stress, societal dependency and institutionalization, as well as the need for placement in special education once the child reaches school age. Programs and services offered to students may include public and or private preschool placements, child development centers, in-home services, 1:1 or small group speech and language services, Early Intensive Behavioral Treatment, and/or Occupational Therapy. Service hours and placement options vary based on the child’s assessment results, goals and current needs. In some instances, children are identified at age 5 or older when they are school aged. The child may be attending a general education placement and identified by school personnel due to behavior problems or difficulties in academic content areas. If a child has not been identified prior to age 5, parents and teachers can report concerns and request for referrals. Upon receiving the referral requests, teachers and administrators will work closely with other qualified professionals to assess and
determine students’ eligibility for receiving special education. If and when students are deemed eligible. The IEP team will create an Individualized Education Plan (IEP) so as to support the student’s progress under the recognizable category of autism in an organized and coherent manner.

**Current Treatment Models for Children with Autism in the Public School Placement**

As the prevalence of ASD increases, more responsibility is placed on public schools in providing specialized educational supports and services. In addition, current legislation in general and special education mandates that all educators implement evidence-based educational programs (Individuals with Disabilities Education Improvement Act [IDEA] 2004). However, due to the extensive number of treatment modalities, teachers struggle to identify effective programs that are aligned with educational standards, policies and best practices for students diagnosed with ASD. Despite increased research, funding, and public awareness, the field continues to struggle with identifying, validating and effectively implementing evidence-based practices (Callahan, K., Henson, R.K., Cowan, A.K., 2008; Hess, K.L., Morrier, M.J., Heflin, L.J., Ivey, M.L., 2007). There are few studies examining interventions utilized in public education settings. Stahmer, Collings, and Palinkas (2005) used focus groups to research techniques employed in community early intervention programs in California and found that both researched and non-researched practices were being used. Leaders in the service providing agencies highlighted a lack of adequate training and preparation for teachers and paraprofessionals as a noted concern. A
web-based Autism Treatment Survey was conducted in Georgia to identify the
treatment, therapies and interventions being used by teachers serving students from
preschool-12th grade. (Hess et al., 2007). The survey listed 43 possible strategies for
teachers to select within five main treatment categories devised by Simpson, Boer-
Ott, Griswold, Myles, Byrd, Ganz, Cook, Otten, Ben-Arieh, Kline, Adams (2004). The five main categories were (a) Interpersonal Relationships, (b) Skill-based, (c) Cognitive, (d) Physiological/ Biological/ Neurological, and (e) Other. There were 226 respondents to the survey with 79% of the population being special education teachers and 21% being general education teachers. Responding teachers indicated that Skill Based strategies were the most employed in the public school setting (47%). The most frequently used Skill Based strategies were assistive technology (AT), visual schedules and structured teaching. Interpersonal Relationship strategies were reported as the second most frequent type of intervention strategy used (22%). This category included, Gentle Teaching, Floor Time, and Relational Development Intervention. Additional results of this study suggested that fewer than 10% of the strategies used with students with ASD in Georgia Public schools were based upon scientifically based practice.

Heflin, J.L., Simpson R.L., (1998) discussed a variety of intervention and
 treatment programs and methods for children and youth with autism similar to the
categories presented in the Hess et al. (2007) research article. The intervention and
treatment option review discussed interventions based on (a) Relationship
Information (b) Skill Based Treatments (c) Physiological Oriented Interventions (d)
Others. The first interventions discussed were methods based on Interpersonal Relationships. The four main relationship-based approaches, which varied in acceptance and utilization, included Holding Therapy, Gentle Teaching, Options, and Floor Time.

**Holding Therapy**

Originating in Europe, the Holding Therapy method was established and published in English by Welch in 1988. According to this approach, when a child refused to make eye contact with the caregiver, the caregiver must reestablish physical attachment. The caregiver held the child very closely and tightly while speaking in a comforting manner until the child submitted to the caregiver making eye contact (Welch, 1988). Few studies have been done to support the effectiveness of holding therapy (Stades-Veth, 1988).

**Gentle Teaching**

This was an approach based on the premise that adults needed to unconditionally accept the child with ASD and interact in a caring and warm manner so a bond would develop (Smith, 1996). With unconditional acceptance, children were taught using ignoring, redirection of inappropriate behavior, errorless learning, prompting, task analysis and choice making (McGee & Gonzalez, 1990; McGee, J.J., Menolascino, F. J., 1991). Activities were modified so the child could be successful. Tasks were accompanied by positive verbal interactions and high levels of non-contingent positive and negative reinforcement. Evidence for the effectiveness of gentle teaching was presented by the University of Nebraska Medical Center 1980-
Researchers reported that participants within the study whom demonstrated severe forms of self-injurious behavior prior to gentle teaching, demonstrated zero problem behavior upon discharge or within the 1-5 year follow up. The outcomes reported in the preceding study have not been replicated. Other researchers have reported that the approach was ineffective (Mudford, 1995) and even harmful (Smith, 1996) for individuals with autism.

**Son Rise-Options**

The Son-Rise Program was originated in 1974, by parents Barry and Samahria Kaufman for their son. Using techniques of imitation (the child’s actions), parents attempted to build a bond and enter their child’s world of isolation. Parent’s reported success in reaching their child through their own methods of relationship bonding, which fostered the development of the Options Institute. The Option Institute trains individuals in implementation of the Son-Rise Program. The Son-Rise Program and other programs developed by the Kaufman’s teach a specific system of treatment and education designed to help families and caregivers enable their children to improve in various areas of learning, development, communication and skill acquisition. The program offers educational techniques, strategies and principles for designing, implementing and maintaining a one-on-one, home-based child-centered program (Kaufman, 2015). The effectiveness of the approach is supported by six case studies.

**Floor Time**

Floor time described a systematic approach that sought to reestablish a child’s developmental sequence of communicating with and relating to others (Greenspan,
The primary goal of floor time is to “foster warmth, intimacy, and pleasure in interactive relationships” (Wieder, 1996, p.30). Floor time typically started with gestures to engage in social exchanges and continued engagement in activities initiated by the child where the adult was being directed and led. A critical component was the circle of communication in the floor time interaction. As the child progressed, adults included strategies to promote longer and more elaborate interactions. Floor time did not teach a specific skill set, but rather, developed a sense of pleasure in relating to others. The efficacy of floor time approach was supported mainly through testimonials.

The second treatment program discussed was the use of Skill Based Treatments. Skill Based treatments targeted the acquisition and demonstration of specific skills rather than bonding and attachment (Heflin & Simpson, 1998). Skill based approaches assessed the individuals performance and targeted specific skills to teach adaptive functioning.

**Picture Exchange Communication System**

The Picture Exchange Communication System (PECS) was utilized for children and youth who are nonverbal or lack basic expressive abilities (Bondy & Frost, 1994). PECS used pictures and other symbols in isolation or on a strip to exchange one word or a full sentence for individuals to initiate a communicative request or intent. PECS was developed at the Delaware Autistic Program and used a step by step, six element program to teach a functional nonverbal communication system (Bondy & Frost, 1994). PECS was an empirically sound method that had
excellent utility in developing communication skills in both nonverbal students with autism and limited communication students with autism (Heflin & Simpson, 1998).

**Social Stories**

Social Stories promote desired social behavior by describing specific social situations along with appropriate social responses in clear, concrete terms (Gray, 1995; Gray & Garand, 1993; Swaggart, B., Gagnon, E., Bock, S.J., Earles, T., Quinn, C., Myles, B.S., Simpson, R., 1995). Individualized for students, social stories typically rely on the following content: (a) descriptive sentences providing information regarding individuals, circumstances and settings; (b) directive sentences that describe the appropriate behavior based on the circumstance; and (c) perspective sentences that describe feelings, perceptions and reactions of others (Heflin and Simpson, 1998). More current research has supported Social Stories as a promising method of intervention for children with autism. Pane, H. M., Sidener, T. M., Vladescu, J. C., & Nirgudkar, A. (2015) demonstrated that 2 students with autism were successful in decreasing problem behavior when utilizing a social story to target the function of the behavior. An alternating treatment design supported the increase in more socially appropriate responding. A Meta-analysis of the Social Stories literature was conducted by Test, D. W., Richter, S., Knight, V., & Spooner, F. (2010), including 18 studies, and results indicated a need for additional research to support social stories as evidence based practice.
Joint Action Routines

Joint Action Routines (JAR) is geared at instructing students within the context of familiar classroom and social routines (Snyder-McClean, L., McClean, J., Etter-Schoeder, R., & Rodgers, N., 1984). JARs involve set activities and interactions that follow a set sequence (e.g., setting the table, snack time, cleaning up). Relating to these routines, students are trained to make preset responses often following a script of what to say and how to respond in a given situation (Heflin & Simpson, 1998). JARs are most appropriate for students who would demonstrate limited spontaneous social language in the natural setting. Snyder-McClean et al. (1984) identified three types of Joint Action Routines: (a) activities associated with specified end product or outcome (e.g., preparation of classroom snack); (b) routines developed around an activity story line (e.g., how we “eat out at a restaurant,” “shopping at the grocery store”) where in scripts for characters related to an activity are developed and practiced; and (c) routines related to cooperative turn taking (e.g., playing a game at recess). There is clinical and empirical support for manipulating environments to increase a student’s social and communication responses (Layton & Watson, 1995; McClenny, C., Roberts, J., & Layton, T., 1992; Snyder-McClean et al., 1984).

Visual Schedules

According to Dalrymple (1995), visual schedules offered a form of environmental support for students with autism. Environmental supports assist students to organize and understand environmental events and factors, predict, anticipate and identify daily scheduled or altered routines, understand expectations,
make choices and function more independently as a whole. Visual schedules could also be combined with task organizers to identify the steps required to complete a specific task. Visual schedules were commonly used, however, continued research can better support the use of schedules in various environments of children with ASD.

**Fast ForWord**

According to Heflin et al., (1998) Fast ForWord (popular computer program) was originally developed for children with language-based learning problems and dyslexia. The program was game oriented and purportedly focused on developing specific brain functions in children. Limited research has been conducted on this program with a single case study conducted by Tallal & Saunders (1997), identifying the program as promising for students with autism.

**Applied Behavior Analysis and Discrete Trial Training**

Applied Behavior Analysis (ABA) targeted identification of deficit skills and analysis of the child’s current functioning level. ABA used analysis and manipulation of antecedent conditions and consequences to attain a desired response. Once deficit skills had been identified, target skills were developed and systematic teaching and intervention methods were employed (e.g., shaping, prompting and fading). A salient element of ABA included ongoing assessment and performance evaluation to ensure acquisition was occurring. ABA was identified as one of the most efficacious intervention strategies for students with autism (Heflin & Simpson, 1998).
Treatment and Education of Autistic and related Communication Handicapped Children (TEACCH) was founded in 1972. It was a statewide autism program that served individuals of all ages with autism spectrum disorder. TEACCH was based on a structured teaching approach where each environment was organized to support clear concrete and visual information. Parents and therapists were also taught using the same strategies to support their children. Programming was based on individualized assessment to develop programming which would be tailored to meet the student and family needs. TEACCH developed a communication curriculum for non-verbal children as well (National Research Council, 2001).

Pivotal Response Training

Developed in the 1970s by educational psychologists Robert Koegel, Ph.D., and Lynn Kern Koegel, Ph.D., Pivotal Response Training (PRT) was a play based model of treatment developed to be child driven. Derived from methods of applied behavior analysis, PRT targeted acquisition of communication, language, and positive social behaviors. PRT focused on “pivotal” areas of a child’s development including motivation, response to multiple cues, self-management, and initiation of social interactions. By targeting these crucial areas, PRT produced increased sociability, communication, behavior and academic skill building. Motivational strategies were an important part of PRT and emphasize natural reinforcement as rewards for social interactions (Koegel & Koegel, 1995).
Cognitive Behavioral Methods

A variety of cognitive behavioral methods have been used with children and youth with autism namely, cognitive behavioral modification, social scripts, behavioral contracts, social autopsies and social stories. Instruction was delivered by review of scripts or contracts stating rules or social norms and what desired responses were expected. Students were then responsible for managing and monitoring their own behavior. Modeling and feedback was frequently used to instruct the students in using the cognitive behavioral methods (Heflin & Simpson, 1998). This type of instructions required the student to demonstrate the skill set necessary to independently monitor and apply reinforcement and other program procedures. Heflin & Simpson (1998) concluded that cognitive behavioral strategies were especially promising with higher functioning students diagnosed with autism.

Physiological oriented intervention programs were additional methods used to address the neurological dysfunction that was believed to be at the core of autism spectrum disorder. Such programs attempted to modulate how information was received in the brain. Two common therapies utilized in treating individuals with autism were Sensory Integration (SI) and Auditory Integration Training (AIT). Sensory integration focused on the aberrant behavior of students to identify what sensory needs were being sought out. Auditory integration provided students with access to sounds varying in tone to integrate sounds that might be creating the aberrant behavior (Heflin & Simpson, 1998). Other treatments identified were psychopharmacological, dietary, rhythmic entertainment intervention, vision therapy,
as well as combined therapies. In addition to the therapies and interventions presented, many program models had been researched and evaluated in the treatment options available for students diagnosed with autism.

At the request of the U.S. Department of Education, the National Research Council (NRC) formed a committee on educational interventions to merge the scientific, theoretical, and policy literature and to create a framework for effective educational practices and interventions for children diagnosed with ASD (NRC, 2001). The book entitled *Educating Children with Autism* was published in October of 2001. Readings included the NRC’s committee charge, information on diagnosis, assessment and prevalence, roles of the families, goals for educational services, characteristics of effective interventions, public policies, personnel preparation, research, conclusions and recommendations. *Educating Children with Autism* (NRC, 2001) was widely disseminated to practitioners, policy makers, and researchers in the field of ASD to inform individuals on best practices for educating students with ASD (Tincani, M., Cucchiarra, M.B., Thurman, S.K., Snyder, M.R., & McCarthy, C.M., 2013).

In 2013, Tincani et al. surveyed parents and state-level special education administrators to evaluate how the NRC’s recommendations had impacted educational practices for children with autism in the US over 10 years later. There were a total of 149 parents of children with autism and 35 state-level special education administrators from 35 states who completed the survey. The survey was derived from the seven areas presented in *Educating Children with Autism* (NRC,
Parents and administrators rated questions using a five point Likert scale ranging from “strongly agree” to “strongly disagree” with regards to agreement of recommendations and “totally implemented” to “not at all implemented” with regards to implementation of effective treatment. The results of the survey showed that parents and administrators agreed with the majority of recommendations and that the recommendations had been poorly to modestly implemented overall. However, disagreements were evident regarding labeling students as autistic, intensity of services provided and training of staff. The lowest levels of implementation were found in training of qualified staff, researched based curricula, and mental health supports for families. A qualitative analysis of parent comments highlighted the need for advocacy for their children to receive appropriate services consistent with the NRC’s recommendations (Tincani et al., 2013). Conclusions of this study demonstrated the need for policy makers to focus on improving professional training, disseminating more research based practices, and providing mental health supports and services to families who were in need.

**Effective Evidence Based Practices for Children Diagnosed with Autism**

Applied behavior analysis (ABA) has demonstrated efficacy in educating children with autism with over three decades of strong empirical evidence. Among the studies which supported its efficacy were: Repp et al. 1988; Matson et al. 1990, Adair & Schneider, 1993; Bay-Hinitz et al., 1994; Fad et al., 1995; Schloss et al., 1996; Smith et al., 2000; Eikeseth et al., 2002; Sallows & Grauper, 2005; Howard et al., 2014 (Loiacono, V., & Allen, B., 2008). The U.S. Surgeon General reported that
children with ASD received optimum classroom instruction when ABA was utilized and implemented (Rosenwasser & Axelrod, 2002). Jacobson (2000) identified that in comparison to other methodologies, ABA maintained the most significant amount of data supporting the treatment of autism. When exposed to structure, consistent programming and effective educational intervention children with autism thrived and ABA was best known for utilizing these effective strategies (Anderson & Romanczyk, 1999; Schloss & Smith, 1998). ABA identified the relationship of antecedent events or variables on behavior, as well as environmental consequences to systematically plan desired learning and behavior change programs (Myers, C.A., Sulzer-Azaroff, B., & Mayer, G.R., 1978). ABA was also designed to identify socially valid targets and responses for the potential to make meaningful differences or change in individuals’ lives (Koegel & Koegel, 1995). ABA encompassed environmental analysis and manipulation of curricula, personnel, environmental conditions and other antecedent variables. It used scientifically valid principles of reinforcement to produce behavior change (i.e., increase desired responses while reducing undesired responses), while using continued measurements of behavior targets to assess effectiveness of treatment. Practitioners, including teachers, systematically and carefully measured the effects on target responses based on antecedents or consequences to assess whether an intervention was responsible for a change in student behavior (Simpson, 2001). McGee, G.G., Morner, M.J., & Daly, T., (1999) described ABA as a highly utilitarian and flexible method that could be applied in a variety of ways and settings with students with autism, including
implementing incidental teaching programs and teaching social skills in natural settings. Dunlap, G., Kern, L., & Worcester, J. (2001) recognized ABA as extremely valuable in virtually all aspects of education and type of learner, including instructional design, classroom management, individual behavior support, school wide behavior support and assessment. With support of government mandates, such as functional behavioral assessments in the 1997 amendments of the Individuals with Disabilities Education Act (IDEA, 1997), education was continually evolving to support students need. The mission and philosophy of special education coincided with ABA with an emphasis on individualization, empiricism, replicable instructional practices and a dynamic discipline with persistent experimentation.

Curriculum for students was typically comprised of a range of activities, schedules and practices, including instructional content, standards and scheduling of instruction. When utilizing methods of ABA, such as a functional behavioral assessment, a teacher planned around antecedent interventions to reduce or anticipate problem behavior and increase adaptive and pro-social behavior in the classroom setting. Weeks & Gaylord-Ross (1981) found that when participants with severe disabilities were presented with difficult tasks, they engaged in challenging behaviors, including aggression and self-injury. When the tasks were simplified or errorless teaching procedures were used, reductions in challenging behavior were observed. Modifying a task size or amount of time spent on one activity or task interspersal were all forms of antecedent curricular intervention that supported improved student behavior. One of the most important contributions related to ABA in the field of
education was the linking of assessment to intervention with a focus on modifying instruction to improve academic behavior (Daly, E. J., Witt, J. C., Martins, B. K., & Dool, E. J., 1997). Empirical evidence was an important aspect when identifying appropriate treatment options, however, social validity was also important when coming from a consumer standpoint. Callahan et al. (2008) surveyed parents, teachers and administrators on autism intervention components relevant to a public education setting. Intervention components targeted in the survey were, individualized programming, data collection, empirically-demonstrated strategies and interventions, active collaboration and long term outcomes. The results of this study indicated extensive support by teachers, parents and administrators for implementation of evidence-based interventions in public school autism programs. Prior and present research demonstrated the relationship of special education practices and methods of ABA to bridge the gap in educational support and treatment for students with autism in the public school setting.

**Individuals Responsible for Providing Services to Students with Disabilities**

Symptoms or characteristics of ASD vary in cognitive and adaptive nature. Each student’s needs depend on individual assessment. All areas of development were typically assessed to identify what goals will drive the services. Therefore, each child may require a different placement option, services, or professional to support their need. Some children may be placed in a general education setting with consultation from a special education teacher. Other children may receive all of their services in a self-contained special day class from a special education teacher and
paraprofessional or from a resource teacher during pull out into a separate classroom in a given content area.

Teaching students with disabilities is a collaborative effort. Multidisciplinary teams are comprised of special and general education teachers, resource specialists, occupational therapists, speech and language pathologists, behavior analysts, psychologists, counselors and paraprofessionals. Whatever the case may be autism is currently considered the fastest growing disability in the United States (National Center on Birth Defects and Developmental Disabilities, 2006) and, therefore, we need to identify if our public school systems are prepared to teach children with ASD.

As the need for support increases for children diagnosed with Autism, paraprofessionals are taking on larger roles in service delivery which in the past had been more exclusive to teachers. A paraprofessional’s increased responsibilities include implementation of behavior strategies, instructional interventions and providing 1:1 support in various classroom settings (Killoran, J., Templeman, T.P., Peters, J., and Udell, T., 2001). When questioning paraprofessionals on what their daily tasks entailed, Giangreco and Broer (2005) found that 47% of their time in the classroom was spent on delivering instruction, which was followed by 19% of their time designated to providing behavioral support. Carter, E., O'Rourke, L., Sisco, L. G., and Pelsue, D. (2009) surveyed paraprofessionals to evaluate their own knowledge and training with respect to standards and on the job or in-service training. Paraprofessionals reported low levels of knowledge in rationale for assessment, roles of educational team members in planning an Individualized Education Program (IEP),
basic technologies appropriate to students with disabilities and rights and responsibilities of families and children as they related to learning needs. Being involved in direct observation of general education placements and mainstreaming children with autism, it was noted that paraprofessionals lacked the knowledge of the diagnosis, best practices, prompting and shaping strategies or overall behavior management strategies within the classroom placement to support behavioral and academic success.

Teachers and paraprofessionals alike feel that additional training and support would be beneficial in serving students diagnosed with ASD. New York State legislation currently requires special education teachers and school administrators to have coursework or training in autism to be eligible for their respective certifications. Results of a survey conducted by Loiacono and Allen (2008) indicated that 11.24% of the special education teachers in New York State received ABA training. The remaining 88.76% of Special Education teachers have not received ABA training. Whether it is a special education teacher or paraprofessional, No Child Left Behind of 2001 required evidence based research practices to be implemented within the educational placements. Training and support of students diagnosed with autism needs to be discussed further to better support our students.

Chapter III outlines the description of the project which can support students diagnosed with autism in their current school placement. It describes the manual, *Professional Development for Paraprofessionals: Implementing Positive Behavioral*
Supports for Students Diagnosed with Autism and how it can be utilized for training purposes.
CHAPTER III
DESCRIPTION OF THE PROJECT

The research presented in Chapter II suggests that students with autism thrive in environments which are rich in structure, explicit in instruction and strong in behavior management strategies. When all of these factors are included in a student’s learning environment, it can and will produce long term positive effects in any students daily living, educational placement, and overall success. The manual, *Professional Development for Paraprofessionals: Implementing Positive Behavioral Supports for Students Diagnosed with Autism*, found in the Appendix, was designed to assist education professionals in training and support of paraprofessionals. The manual is geared to support personal and professional growth of paraprofessionals by creating a more comprehensive understanding of the diagnoses of autism and how ASD impacts a student’s major life activities, including learning. In addition, the manual can help paraprofessionals to better meet each student’s individual needs by creating a learning environment that fosters strong motivation, establishes clear behavior expectations, increases the likelihood of desirable behaviors, and consistency across settings throughout a student’s instructional day. Each paraprofessional, when given the necessary tools, can focus heavily on increasing learning opportunities with respect to naturally occurring social situations, using functional communication in their daily classroom routines, and increasing the student’s availability to learn through the use of various behavior management
techniques. Instruction and learning should not be limited to what curriculum or subject is being taught at a given moment but students receiving specialized instruction should be given additional trials for learning, repetition, application as well as opportunities for generalization, maintenance and independence. Para’s can target such skills throughout the instructional day.

The goal of the manual was to develop modules for teachers and other educational staff to provide to paraprofessionals in the field of education. The manual targets training in the most current evidence based practices in effective treatment for students diagnosed with ASD. With support from educational professionals and guidance from each of the five modules presented in the manual, paraprofessionals will attain a strong skillset in methods of Applied Behavior Analysis to support each student’s educational need. Furthermore, paraprofessionals can utilize scientifically based best practices, such as, discrete trial training to strengthen classroom instruction and ensure high quality participation from each student.

*Professional Development for Paraprofessionals: Implementing Positive Behavioral Supports for Students Diagnosed with Autism* was designed to introduce five main components in behavior management techniques and methods of applied behavior analysis. The five modules include; (1) Orientation: The important things you need to know (2) Background information: Special Education, Diagnosis, and Academic Instruction and Effective Treatment (3) Breakdown of Reinforcement: Reinforcers, Differential Reinforcement, and Application of Reinforcement in the

Each module represented the current content that was lacking in the eclectic form of on the job/ in service training which was being utilized in various school/district trainings. According to Carroll (2001), Paraprofessionals typically receive a few handouts and are given a verbal explanation of special education prior to entering the classroom. French (2003) provided recommendations for improving paraprofessional responsibilities which included appropriate supervision, appropriate training, and clearly defined roles and expectations. The modules were composed of critical information and skills to assist the paraprofessional in understanding their job parameters and how to better assist each student’s individual needs.

The first module was designed to introduce the paraprofessional into their new position. It contains information of their new placement, any policies that they are expected to follow (e.g., procedures, confidentiality, schedules and events, and professionalism), applicable information of the school as well as the parents and students’ for which they will be serving. Module 1 also includes a mission statement for the paraprofessional geared at understanding the student’s needs and what we strive for when serving exceptional children.

The second module provides basic information about rules and regulations related to special education. Research has shown the lack of knowledge that
paraprofessionals possess with respect to special education. Carter, et. al. 2009 reported that paraprofessionals evaluated their own knowledge across Council of Exceptional Children (CEC) paraeducator standards and found paraprofessionals identified low areas of knowledge in rationale for assessment, roles of educational team members in planning an IEP, basic technologies for students, as well as rights and responsibilities of families. This module also defines special education, the 14 disability categories of the population which will be served and how students qualify for such services. Special emphasis was given on describing diagnosis information specific to students with autism and effective treatment in academic instruction for this population.

The third module focuses on tools to increase the likelihood for students to engage in desirable behavior. This module defines reinforcement and describes how to use a specific reinforcer. Differential reinforcement and the application of reinforcement are also described with models provided to use within the classroom setting. In addition to the instructional information, video modeling is provided at the end of the module to support clarity in the application of reinforcement in a classroom placement.

The fourth module focused on tools to decrease the likelihood of students engaging in undesirable behaviors. This module defines what problem behavior is and how it impacts a student’s learning. Functions of behavior are described in detail, as well as the A-B-Cs of problem behavior, and how to collect data to better understand the how and why of each problem behavior exhibited by a student. In addition,
module 4 supports the understanding of weakening or strengthening behavior utilizing the tools presented in the prior modules relating to methods of applied behavior analysis and behavior management systems to present in a classroom setting.

The final module identifies proactive measures to utilize in the classroom setting when supporting student’s acquisition rate and accelerated learning. This module includes strategies of prompting (modeling, shaping and fading) to increase the likelihood of responding in the classroom setting. Common types of prompts are discussed with visual representation to support the paraprofessionals understanding of how each prompt can be utilized under a given condition. Shaping and fading are also included with positive and negative examples to support understanding of such concepts. The final proactive measures included in the manual support a paraprofessionals understanding of discrete trial training, skill building and language building in the classroom setting.

In conclusion, *Professional Development for Paraprofessionals: Implementing Positive Behavioral Supports for Students Diagnosed with Autism* was developed to support paraprofessionals in the workforce. Paraprofessionals need solid knowledge and sound education around what special education is, what autism is and what effective treatment can be. We have established in law what special education is, however, we have not taught our paraprofessionals how to implement such treatment to create effective change in how our training is administered. This manual will support professional growth for each paraprofessional in some facet when
working with exceptional children which can bring change to how we serve our students. Chapter IV describes how to implement the manual for training paraprofessionals.
CHAPTER IV
IMPLEMENTATION OF THE PROJECT

*Professional Development for Paraprofessionals: Implementing Positive Behavioral Supports for Students Diagnosed with Autism* was a training manual designed to support paraprofessionals in professional development of knowledge with respect to special education practice, behavior management, and the population they will serve. Education professionals should introduce this manual to paraprofessionals prior to placing them in a classroom setting. In addition, this manual was created to support para-professionals daily practices in the classroom by identifying tools to utilize from methods of applied behavior analysis. This manual is simple in form to obtain the necessary pre-requisites to support behavioral needs for varying degrees of behavior in a classroom placement. At times, paraprofessionals are placed without the proper training to support the needs of students with autism. This manual can supplement whatever form of training has been received or introduced as the initial training for the paraprofessional who is new to the field. As discussed in Chapter II, as the need for support increases for children diagnosed with autism, paraprofessionals are taking on various roles in service delivery which in the past had been more exclusive to teachers. Paraprofessional’s increased responsibilities include implementation of behavior strategies, instructional interventions and providing 1:1 support in various classroom settings (Killoran et al., 2001). This chapter focuses on
the implementation of the manual to help paraprofessionals in supporting each student’s individual need in the classroom placement.

Education professionals should be the responsible parties for supporting the introduction of the training manual and each module. Education professionals can include but are not limited to, special education teachers, resource teachers, special education director or assistant, program specialists, speech and language pathologists, behavior specialists or other qualified educational staff. Education professionals should plan to utilize the modules in sequence as they are presented to yield positive outcomes for their learner. It is recommend that the training manual be presented in its entirety for a clear understanding of how each module fits in to daily interactions with the students. A three and a half hour block of time to present the manual should be identified and can likely be completed during an in-service day or prior to the school year commencing. If time constraints occur the modules can be presented separately to target immediate training needs. Modules 1 (approximately 15 minutes) & 2 (approximately 45 minutes) together as well as 4 (60 minutes) and 5 (60 minutes) can be presented in an hour block of time each. Module 3 can be presented in a half an hour. Additional time has been added to each module for a few minutes of questions and comments related to content.

During module training, education professionals presenting the materials should provide examples and real life situations to the content provided in the training manual. The more experience and training can better support the application in future training opportunities, supervision or hands on application. Paraprofessionals should
be given additional time to express their own experiences if possible. Hands on activities have also been included for supplemental training and support of the skill content being delivered. In addition, some video models have been included as supplemental materials for generalization and practice. Review sections are included at the end of each module to check for clarity and content knowledge. It is recommended to remind paraprofessionals to take notes during the presentation and ask questions as materials are presented.

After the Professional Development for Paraprofessionals: Implementing Positive Behavioral Supports for Students Diagnosed with Autism manual has been presented it is recommend that each paraprofessional receives continued support of skill acquisition and maintenance and generalization of skills taught during the in-service with education professionals. Additional resources are presented at the end of the training manual and should be reviewed by the paraprofessionals. Resources are always a plus when you are trying to grasp a certain concept.

This chapter discussed the implementation of the manual, Professional Development for Paraprofessionals: Implementing Positive Behavioral Supports for Students Diagnosed with Autism. It is suggested that para-professionals thoroughly review the manual from start to finish in a group training format to have open discussions on what occurs in the classroom placement and how to utilize the tools described in the manual. Strategies described in the manual are also recommended to be employed while serving students in a special education placement. Chapter V discusses recommendations for future research in para-professional support and the
use of training manuals such as these. It also concludes overall implications of supporting students with autism in the educational placement, best practices, effective treatment strategies, such as methods of applied behavior analysis and who is supporting our student’s needs.
CHAPTER V

SUMMARY, RECOMMENDATIONS, AND CONCLUSION

Summary

The current rate of autism within the United States is 1 in 68. The cause of autism is currently unknown. Autism impacts a child’s ability to interact with others with delays in social and communicative skills. The average age for diagnosis continues to hover around four and a half years of age. With the prevalence of Autism continuing to rise, and age of diagnosis being very close to school age, it is essential that public schools assist in establishing best practices and outcomes for the children they serve. Currently, paraprofessionals are spending more time delivering direct services to students in both the general education and special education settings than actual credentialed teachers. Due to the lack of adequate training and overall professional development of paraprofessionals relating to autism in the education workforce, it is suggested that the professional development training manual provided in this project be utilized to assist paraprofessionals in acquiring knowledge and training to support the current population for whom they serve.

Chapter I discussed the characteristics and prevalence of autism within our communities and who it is impacting. With the continued rise in autism, our community must support our students by following public law and ensure that higher standards of treatment are being delivered in our public school placements. In addition, Chapter I discussed current service delivery in various classroom
placements specific to special education and who is responsible for providing such services. The purpose of this project is to ensure that paraprofessionals are receiving training in effective evidence based practices specific to children diagnosed with autism and that coincide with current law. The literature reviewed and discussed how autism is characterized by a wide and varied range of cognitive and adaptive abilities. Children with autism often communicate, interact, behave and learn in ways that are different from others. This brings to light why we should be training individuals in effective practices. Law has supported the movement of change towards treating individuals with varying disabilities in the public placement and to offer Free and Appropriate Public Education in the Least Restrictive Environment, however, to do this we need qualified and trained staff. In addition to the literature reviewed, current practices were discussed and concluded that methods of applied behavior analysis is currently the most effective evidence based treatment in serving children with autism. The significance of this project lies within the training of paraprofessionals on the methods of applied behavior analysis to maximize learning opportunities, as well as increase the student’s availability to learn through the use of various behavior management techniques. These techniques can be implemented as positive behavior supports in the classroom setting. In addition to application of the skills taught, the knowledge based information in the manual is intended to support professional and educational growth within the field.
**Recommendations**

It is recommended that this training manual be disseminated to all paraprofessionals supporting students with autism in an educational placement. Basic knowledge and content of this manual can support individuals in implementing positive behavioral supports in the classroom setting. Group training is most beneficial for clarity and understanding of the materials presented to help paraprofessionals work collaboratively with other school staff and focus on the best interest of the child. This manual should be supported by additional materials pertaining to special education services, related services, academics, curriculum standards, individualized student needs and any other beneficial professional development offered. Hands on training is also recommended for any professional supporting exceptional students in a classroom setting. Hands on experience is crucial when: identifying additional supports, creating and modifying instruction, and providing accommodations to fit the student’s academic or behavioral need. In addition to hands on training, continued supervision, supplemental training, and consistent evaluation of performance on a continual basis is recommended. Continuous feedback and support is highly valuable and promotes treatment integrity, as well as best practices.

Continued research is also recommended to focus on what is needed for student and teacher success in education. Research can identify what is empirically sound for appropriate interventions and what trainings can support the paraprofessionals in effective treatment.
Conclusion

In conclusion, without a known cause, we need to support our students and families living with autism. Effective evidence based practices and treatment should be the standard for children who are struggling with a skill set that is necessary for daily living in our society, communication and social interactions. These skills are imperative when living amongst others. These are our children “It takes a village to raise a child”- African Proverb. We must learn from our past to create a brighter future. Increasing rates of autism and lack of knowledge will continue to impact our communities with respect to families, friends and loved ones if we do not create change. Behavior analysts and educators must come together to form a team of highly qualified individuals with vast amounts of knowledge and skillset to bridge the gap between education and behavior. Students with autism thrive in a setting that is rich in structure and reinforcement. Teachers, paraprofessionals and behavior analysts can conquer all facets of an environment to impact change for the better when supporting children with autism. Educators see “Special Education” as intervention and Behavior Analysts see “ABA” as intervention. We can all agree that intervention is best practice. In addition, our goal as special educators is for our students to receive access to general education to the most extent possible. We need to strive to mainstream children when appropriate. Special education does not have to be served in a different placement and we should never place students based on their disability category. Additional supports and services should be provided as an alternative to alternative placements.
Methods and procedures associated with ABA have proven to be effective in various realms of education with the biggest contributions in special education. Let us make change and support our students in need.
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APPENDIX

Professional Development for Paraprofessionals: Implementing Positive Behavioral Supports for Students Diagnosed with Autism
Professional Development for Paraprofessionals:
Implementing Positive Behavioral Supports for Students Diagnosed with Autism

Julie Klein 2016
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Module 1: Introduction

Congratulations and welcome to the Education Profession! We are excited in your career choice of serving exceptional children of all ages and skill sets. We hope this position is rewarding in many ways and encourages you to gain insight within the field, learn and grow within our profession, as well as with the students we serve.
I. Orientation: Important Things You Need To Know

❖ School policies and Procedures
  ➢ Your paraprofessional hiring packet should include a handbook of school policies and procedures relating to; safety (drills and precautions), hours of operation (bell schedule, calendar year), school regulations and behavioral procedures, school faculty, programs and services, and job responsibilities. If this information is not provided for you, reach out to the teacher or the human resource department for further clarification of policies and procedures.

❖ Confidentiality
  ➢ Confidentiality is an ethical duty, and privacy is a right rooted in common law. To practice confidentiality an individual must limit information and refrain from exchanges with others regarding diagnosis, deficit areas, educational need or any other information that could hinder a student’s performance or opportunity to be socially accepted by others. We, as educators, need to understand the impact of being confidential. We are professionals and need to present in that fashion. For example, when we go to the doctor for a private matter, we expect that are information is not shared and remains confidential. Having confidential information of others is a practice many professionals share. We are responsible for upholding the law and protecting the students we serve. Be a problem solver not a gossiper, it only creates problems and animosity in the workplace.

❖ Schedules and Events
  ➢ Professional trainings and events may be available to you as an employee. Seek information for professional growth opportunities or any other events available within the school year.
  ➢ Schedule changes are always important to know to keep parents informed of upcoming events. Parents appreciate when professionals present with knowledge on basic information. This in turn can help you build rapport and trust with parents of the students you serve.

❖ Professionalism
  ➢ If you were a parent and your child had support in his or her classroom by a paraprofessional, would you feel comfortable if:
    ▪ He or she was wearing sweats or a tank top in winter
He or she was holding a cup of coffee (that could spill on your child)
He or she is talking to another staff about the “problem child”
He or she is complaining about coming into work
He or she is talking about another student’s placement and whether they belong in a certain classroom
He or she is uninvolved and looks irritated

When looking at these three individuals, who would you choose to work with your child or someone’s child who is close to you?

- These examples are just a few observed in various educational placements with professionals. Remember someone is always observing and the way you present yourself tells a lot about the level of support, care, and involvement you are willing to deliver. Again, gossiping, talking badly about other students and being unpresentable are all unprofessional.
- Being Professional involves; caring for yourself and others, presenting as knowledgeable in the field and with the population you serve, and remaining confidential to respect the privacy of others.
- As paraprofessionals we carry a mission in our daily service delivery to ensure we are the voice for children who cannot speak and our actions support the growth of each student we serve.

THE MISSION OF A PARAPROFESSIONAL

WE are responsible for... supporting students with varying disabilities and needs. Each child is an individual and may require academic, behavioral, and emotional support. It is up to US as paraprofessionals to provide each student with the care they need as well as creating learning opportunities and shaping behavior for success in education. We are strengthening overall daily living skills, social opportunities with peers, and fostering independence to create a brighter future.
REVIEW OF MODULE 1:

Answer the following questions and score yourself. Let’s make sure we meet mastery criteria of 80% or above (90-100%) prior to moving on.

1. What are 2 of your school policies?
2. How do you “practice” confidentiality?
3. Why is it important to know schedules and events?
4. What does being professional involve?
5. What is your mission as a paraprofessional?
ANSWERS:

1. Here are a few examples of the CDE (California Department of Education; http://www.cde.ca.gov/ls/ss/se/samplepolicy.asp) sample policies

   i. The _______________ School District believes that all students have a right to a safe and healthy school environment. The district, schools, and community have an obligation to promote mutual respect, tolerance, and acceptance.

   ii. The _______________ School District will not tolerate behavior that infringes on the safety of any student. A student shall not intimidate, harass, or bully another student through words or actions. Such behavior includes: direct physical contact, such as hitting or shoving; verbal assaults, such as teasing or name-calling; and social isolation or manipulation.

2. To practice confidentiality an individual must limit information and refrain from exchanges with others regarding diagnosis, deficit areas, educational need or any other information that could hinder a student’s performance or opportunity to be socially accepted by others.

3. Professional trainings and events may be available to you as an employee and schedule changes are always important to know to keep parents informed of upcoming events.
4. Caring for yourself and others, presenting as knowledgeable in the field and with the population you serve, and remaining confidential to respect the privacy of others.

5. To support students with varying disabilities and needs by strengthening overall daily living skills, social opportunities with peers, and fostering independence to create a brighter future.
Module 2: Background Information

I. Special Education

Special Education is a broad term. It can be defined as specially designed instruction to meet the unique needs of a child with a disability. It is also public law and a practice in education to support individuals with disabilities as well as their families. Educators in the field recognize Special Education as intervention (Heward, 2009).

Special Education starts at identification. A child can be referred by a parent or teacher or be identified from screening and or assessment results. Once a child has been referred or identified a multi-factored evaluation is administered (based on parent consent) to determine if the child has a disability, what additional services may be needed and how the child can participate in the general education curriculum.

After evaluation, results and all other relevant information are reviewed to determine if a child meets eligibility criteria for at least one or more of the 13 disability categories identified in IDEA (http://idea.ed.gov/). Furthermore, there is one additional category identified for children 3 and under to qualify for early start services.

Table 1. Disability Categories

<table>
<thead>
<tr>
<th>Special Education Terminology and Disability Categories, Classification and Definitions of IDEA, Part 300</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Autism</td>
</tr>
<tr>
<td>2. Deaf-Blindness</td>
</tr>
</tbody>
</table>
and educational needs that they cannot be accommodated in special education programs solely for children with deafness or children with blindness.

<table>
<thead>
<tr>
<th>3. Deafness</th>
<th>Deafness means a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, that adversely affects a child’s educational performance.</th>
</tr>
</thead>
</table>
| 4. Emotional Disturbance | Emotional disturbance is defined as follows: (i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child’s educational performance:  
A. An inability to learn that cannot be explained by intellectual, sensory, or health factors.  
B. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;  
C. Inappropriate types of behavior or feelings under normal circumstances;  
D. A generally pervasive mood of unhappiness or depression; or  
E. A tendency to develop physical symptoms or fears associated with personal or school problems. (ii) The term includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance. |
<p>| 5. Hearing Impairment | Hearing impairment means an impairment in hearing, whether permanent or fluctuating, that adversely affects the child’s educational performance but that is not included under the definition of deafness in Section 300.7. |
| 6. Intellectual Disability (formerly MR) | Significantly sub-average general intellectual functioning, existing concurrently [at the same time] with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child’s educational performance. |
| 7. Multiple Disabilities | Multiple disabilities means concomitant impairments (such as mental retardation-blindness, mental retardation-orthopedic impairment, etc.), the combination of which causes such severe educational needs that they cannot be accommodated in a |</p>
<table>
<thead>
<tr>
<th>Impairment Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>special education program solely for one of the impairments. The term does not include deaf-blindness.</td>
<td></td>
</tr>
<tr>
<td>8. Orthopedic Impairment</td>
<td>Orthopedic impairment means a severe orthopedic impairment that adversely affects a child’s educational performance. The term includes impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.), impairments caused by disease (e.g., poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (e.g., cerebral palsy, amputation, and fractures or burns which cause contractures).</td>
</tr>
<tr>
<td>9. Other Health Impairment</td>
<td>Other health impairment means having limited strength, vitality or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment that (i) Is due to chronic or acute health problems such as, asthma, attention deficit disorder or attention deficit hyperactivity disorder, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever and sickle cell anemia; and (ii) Adversely affects a child’s educational performance</td>
</tr>
<tr>
<td>10. Specific Learning Disability</td>
<td>Specific Learning Disability is defined as follows: (i) General. The term means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which manifests itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia. (ii) Disorders not included. The term does not include learning problems that are primarily the result of visual, hearing or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural or economic disadvantage.</td>
</tr>
<tr>
<td>11. <strong>Speech or Language Impairment</strong></td>
<td>Speech or language impairment means a communication disorder, such as stuttering, impaired articulation, a language impairment or a voice impairment, that adversely affects a child’s educational performance</td>
</tr>
<tr>
<td>12. <strong>Traumatic Brain Injury</strong></td>
<td>Traumatic brain injury means an acquired injury to the brain caused by an external force, resulting in total or partial functional disability or psychosocial impairment, or both that adversely affect educational performance. The term includes open or closed head injuries or brain injuries from certain medical conditions resulting in mild, moderate or severe impairments in one or more areas, (Continued) 16 The School Counselor’s Guide to Special Education Table 2.2 (Continued) including cognition, language, memory, attention, reasoning, abstract thinking, judgment, problem solving, sensory, perceptual and motor abilities, psychosocial behavior, physical functions, information processing, and speech. The term does not include injuries that are congenital or caused by birth trauma.</td>
</tr>
<tr>
<td>13. <strong>Visual Impairment</strong></td>
<td>Visual impairment including blindness means an impairment in vision that, even with correction, adversely affects a child’s educational performance. The term includes both partial sight and blindness. Legally blind: An individual with a visual acuity of 20/200 or less even with correction or has a field loss of 20 degrees or more. Low Vision: A person who is still severely impaired after correction, but whom may increase functioning through the use of optical aide, non-optical aids, environmental modifications and/or techniques.</td>
</tr>
<tr>
<td>14. <strong>Developmental Delay- ages 3 and under only</strong></td>
<td>Children from birth to age three (under IDEA Part C) and children from ages three through nine (under IDEA Part B), the term developmental delay, as defined by each State, means a delay in one or more of the following areas: physical development; cognitive development; communication; social or emotional development; or adaptive [behavioral] development.</td>
</tr>
</tbody>
</table>
If a child is deemed eligible for special education an Individualized Education Plan (IEP) is developed and an IEP team is formed from school professionals, parents, and other community professionals to create a program tailored to fit the student’s current educational need (Heward, 2009). The IEP must include; measurable and annual goals, services that will enable the student to access the general academic curriculum and the extent to which the student will participate in the general education placement and involvement in state or district wide testing or assessments. Additional items can include a positive behavior intervention plan, transition needs and services, special instruction and or related services. Table 2 below presents an example of a goal written in an IEP document as well as a service page.

Table 2. Example of IEP document

<table>
<thead>
<tr>
<th>ANNUAL GOALS AND OBJECTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Name: Johnny</td>
</tr>
<tr>
<td>Date of Birth: 10/10/2009</td>
</tr>
<tr>
<td>IEP Date: 10/15</td>
</tr>
</tbody>
</table>

**Area of Need:** Behavior (Asking for help/ requesting a break)

**Baseline:** As of October 2015, Johnny screamed and tore his paper when unable to complete a worksheet independently.

**Measurable Annual Goal#: 5**

By October 2016, Johnny will request a break or ask for help when he needs support from his teachers in the absence of screaming or destroying property (a rate of zero) 4/5 opportunities presented across 10 consecutive school days.

**Short Term Objective:** By January 2016, Johnny will tolerate a difficult worksheet placed in front of him by remaining calm and the absence of screaming or property destruction for 30 seconds followed by an immediate verbal prompt to state, “I need help” or “I need a break” with a visual icon of break and help in his view.

**Short Term Objective:** By April 2016, Johnny will tolerate a difficult worksheet placed in front of him by remaining calm and the absence of screaming or property destruction for up to 5 minutes or once Johnny verbally requests, “I need help” or “I need a break” and or requests by exchanging a visual icon of “break” or “help” from his desk.

**Short Term Objective:** By July 2016, Johnny will tolerate a difficult worksheet placed in front of him by requesting “I need help” or “I need a break” and the absence of screaming or property destruction 5/5 opportunities presented across 5 consecutive instructional days.

Progress Report 1: __________
Progress Report 2: __________
Progress Report 3: __________
Annual Review: __________
Goal Met: yes □ no □ Comments: __________
**Offer of FAPE- SERVICES**

<table>
<thead>
<tr>
<th>Aids, Services, Program Accommodations/ Modifications and or Supports</th>
<th>Start Date</th>
<th>End Date</th>
<th>Frequency</th>
<th>Duration</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimize the number of words when giving multiple step directions Have student move to the back of the room to de-escalate when upset</td>
<td>10/5/2015</td>
<td>10/5/2016</td>
<td>Daily as needed</td>
<td></td>
<td>Classroom</td>
</tr>
</tbody>
</table>

**SPECIAL EDUCATION and RELATED SERVICES**

Service: Language and Speech  
Provider: District of Service  
Duration/ Freq: 30 minutes x25 totaling 750 yearly  
Comments: 1:1 pull out  

<table>
<thead>
<tr>
<th>Service</th>
<th>Start date</th>
<th>End date</th>
<th>Provider</th>
<th>Duration/ Freq</th>
<th>Frequency</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language and Speech</td>
<td>10/5/2015</td>
<td></td>
<td>District of Service</td>
<td>30 minutes x25 totaling 750 yearly</td>
<td>Daily as needed</td>
<td>Service provider</td>
</tr>
</tbody>
</table>

Once the IEP is developed, the team discusses’ possible placements based on the child’s need and not disability category. Based on IDEA the general education placement would be the starting point for a Least Restrictive Environment (LRE). If the child is not included fully in the general education placement, the IEP must explain the extent of removal and why removal is necessary. All placement decisions are decided as a team and in conjunction with parent consent. Once placement has been decided, the educational team is responsible for implementing the IEP and special education services. Special education services need to include progress monitoring on the child’s IEP goals (mastery or progress towards benchmark objectives quarterly) as well as annual review and re-evaluation.
Table 3. Continuum of Placement Options (William L. Heward, *Exceptional Children: An Introduction to Special Education*, 2006)

Open Discussion of Special Education

1. What did you know before this presentation and what do you know now?
2. Is there any other additional information you would like to add?
3. Are there any questions or comments?
II. Diagnosis

Autism Spectrum Disorder (ASD) is a disorder which affects various areas of brain development. This disorder is characterized by qualitative impairments in social and communicative skills, as well as the presence of repetitive, stereotyped patterns of behavior (Phetrasuwan, S., Miles, M., Mesibov, G.B, & Robinson, C., 2009). ASD impacts a child’s ability to make eye contact, as well as share and maintain attention during play and conversations (CDC Autism Spectrum Disorder, 2016). Additionally, children diagnosed with ASD often demonstrate delays in appropriate play, social relationships, and development of spoken language, as well increases in stereotyped repetitive motor skills (hand or finger flapping and twisting) and inflexible or ritualistic behavior specific to routines (CDC Autism Spectrum Disorder, 2016; Phetransuwan et al., 2009). Due to the nature of the disorder, ASD may mildly to profoundly impact an individual’s social, communicative, and daily living skills. Low functioning individuals, having little to no communicative language or adaptive behavior, may require full residential assistance and care throughout their adult life. Individuals mildly or moderately impacted by the disorder may acquire basic, functional verbal language and moderate adaptive behavior, allowing them to live with minimal or no support as they age. High functioning individuals can become fully independent, demonstrating the ability to adapt both socially and behaviorally in all aspects of life (CDC Autism Spectrum Disorder, 2016; Phetransuwan et al., 2009).

Children are being diagnosed with ASD as early as two years of age. However, the average age for diagnosis continues to hover around four and a half years of age. The cause of Autism is currently unknown. There is continued research focusing on genetic and environmental factors pre- and post-pregnancy, during early brain development (CDC Autism Spectrum Disorder, 2016).

In March of 2014, The Center for Disease Control (CDC) and Prevention reported a continued rise in the prevalence of autism within the United States. Autism has increased from 1 in 88 children diagnosed in 2010, to the current rate of 1 in 68 (Christensen, D. L., Baio, J., Braun, K. V., Bilder, D., Charles, J., Constantino, J. N., Daniels, J., Durkin, M.S., Fitzgerald, R.T., Kurzius-Spencer, M., Lee, L., Pettygrove, S., Robinson, C., Schulz, E., Wells, C., Wingate, M.S., Zahorodny, W., Yeargin-Allsopp, M., 2016).

In addition to the impact of ASD on the lives of the children diagnosed, there is a broader impact of the disorder affecting an individual’s immediate family members and their surrounding community. In California alone, the Autism rate for K-12 grade students has tripled. Despite the number of students diagnosed with Autism climbing from 17,508 in 2002 to 59,690 in 2010 (Lucile Packard Foundation, 2010), the number of students receiving special education services has remained steady at 11 percent enrollment. Of those receiving special education services in 2010, 8.8 percent were diagnosed with ASD, in contrast to 2.6 percent of students qualifying under the category of Autism in 2002 (Lin, J. 2011).
III. Academic Instruction and Effective Treatment

Applied behavior analysis (ABA) has demonstrated efficacy in educating children with autism with over three decades of strong empirical evidence. Among the studies which supported its efficacy were: Repp et al. 1988; Matson et al. 1990, Adair & Schneider, 1993; Bay-Hinitz et al., 1994; Fad et al., 1995; Schloss et al., 1996; Smith et al., 2000; Eikeseth et al., 2002; Sallows & Grauper, 2005; Howard et al., 2014 (Loiacono, V., & Allen, B., 2008). The U.S. Surgeon General reported that children with ASD received optimum classroom instruction when ABA was utilized and implemented (Rosenwasser & Axelrod, 2002). Jacobson (2000) identified that in comparison to other methodologies, ABA maintained the most significant amount of data supporting the treatment of autism. When exposed to structure, consistent programming and effective educational intervention children with autism thrived and ABA was best known for utilizing these effective strategies (Anderson & Romanczyk, 1999; Schloss & Smith, 1998). ABA identified the relationship of antecedent events or variables on behavior, as well as environmental consequences to systematically plan desired learning and behavior change programs (Myers, C.A., Sulzer-Azaroff, B., & Mayer, G.R., 1978). ABA was also designed to identify socially valid targets and responses for the potential to make meaningful differences or change in individuals’ lives (Koegel & Koegel, 1995). ABA encompassed environmental analysis and manipulation of curricula, personnel, environmental conditions and other antecedent variables. It used scientifically valid principles of reinforcement to produce behavior change (i.e., increase desired responses while reducing undesired responses), while using continued measurements of behavior targets to assess effectiveness of treatment. Practitioners, including teachers, systematically and carefully measured the effects on target responses based on antecedents or consequences to assess whether an intervention was responsible for a change in student behavior (Simpson, 2001). McGee, G.G., Morner, M.J., & Daly, T., (1999) described ABA as a highly utilitarian and flexible method that could be applied in a variety of ways and settings with students with autism, including implementing incidental teaching programs and teaching social skills in natural settings. Dunlap, G., Kern, L., & Worcester, J. (2001) recognized ABA as extremely valuable in virtually all aspects of education and type of learner, including instructional design, classroom management, individual behavior support, school wide behavior support and assessment. With support of government mandates, such as functional behavioral assessments in the 1997 amendments of the Individuals with Disabilities Education Act (IDEA, 1997), education was continually evolving to support student needs. The mission and philosophy of special education coincided with ABA with an emphasis on individualization, empiricism, replicable instructional practices and a dynamic discipline with persistent experimentation.

Curriculum for students was typically comprised of a range of activities, schedules and practices, including instructional content, standards and scheduling of instruction. When utilizing methods of ABA, such as a functional behavioral assessment, a teacher planned around antecedent interventions to reduce or anticipate
problem behavior and increase adaptive and pro-social behavior in the classroom setting. Callahan et al. (2007) surveyed parents, teachers and administrators on autism intervention components relevant to a public education setting. Intervention components targeted in the survey were, individualized programming, data collection, empirically-demonstrated strategies and interventions, active collaboration and long term outcomes. The results of this study indicated extensive support by teachers, parents and administrators for implementation of evidence-based interventions in public school autism programs. Prior and present research demonstrates the relationship of special education practices and methods of ABA to bridge the gap in educational support and treatment for students with autism in the public school setting.

**REVIEW OF MODULE 2:**

*Answer the following questions and score yourself. Let’s make sure we meet mastery criteria of 80% or above (90-100%) prior to moving on.*

1. **What is Special Education?**

2. **What are the 13 disability categories in education?**

3. **What are some characteristics of autism?**

4. **What is effective treatment?**

5. **What is Applied Behavior Analysis (ABA)?**
ANSWERS:

1. Special Education is specially designed instruction to meet the unique needs of a child with a disability. It is also public law and a practice in education to support individuals with disabilities as well as their families.


3. ASD impacts a child’s ability to make eye contact, as well as share and maintain attention during play and conversations. Additionally, children diagnosed with ASD often demonstrate delays in appropriate play, social relationships, and development of spoken language, as well increases in stereotyped repetitive motor skills (hand or finger flapping and twisting) and inflexible or ritualistic behavior specific to routines.

4. A practice or methodological approach for teaching that is supported by empirical evidence.

5. ABA encompasses environmental analysis and manipulation of curricula, personnel, environmental conditions and other antecedent variables. It uses scientifically valid principles of reinforcement to produce behavior change (i.e., increase desired responses while reducing undesired responses), while using continued measurements of behavior targets to assess effectiveness of treatment.
Module 3: Breakdown of Reinforcement

I. Reinforcement

Reinforcement is a term used in operant conditioning (B.F. Skinner, 1938) to refer to anything that increases or decreases the likelihood that a response will occur. Reinforcement is defined by the effect that it has on behavior and can be positive or negative. Reinforcement is very important in the classroom setting when improving student’s motivation and overall performance. Some examples of reinforcement in the classroom include:

- Physical interactions or verbal praise
- Highly preferred activities (parties, games)
- Tangible items: stickers/ stars/ edibles (candy, snack)
- Behavioral Systems (which can include, earning money in a jar, points as a group, or tokens on a board)

Delivery of reinforcement will depend on the classroom environment as well as the student’s motivation. As adults, we are not working unless we are getting paid! The more praise we receive for a job well done the harder we work. This applies to our children as well during class. If students are being reinforced for the good work they do, they are more willing to engage in the appropriate responding. Behavior targets and reinforcers are the first things identified to apply reinforcement in the classroom setting.

II. Reinforcers

When breaking down a given system students can earn specific reinforcers. To be clear on how to use reinforcement one must understand how to identify and use a reinforcer.

A reinforcer is a stimulus that increases the desired response when applied or removed. Common practice in behavior analysis includes completing continued preference assessments (to identify a reinforcer) prior to delivering instruction to ensure a child is motivated by what he or she will be given following a desired response. Common reinforcers utilized in a classroom setting can include:

- Food (candy, chips, or other snacks that students enjoy)
- Toys (access to cars, trains or blocks)
- Stickers
- Games (computer games, board games)
- Small prizes
- Tokens or points (secondary reinforcers which are paired to exchange for tangible preferred items)
- Yourself - kids love access to an adult who is fun (spinning, interacting in the child’s favorite song or game, doing silly things like putting stickers on your face or just joking around)

When selecting a reinforcer you must first identify at least 4-5 items which a child has gravitated towards or has showed some type of interest in, prior to introducing it to them. An example would be a child entering the classroom requesting to play the dinosaur game on the computer at 8:00am when he knows computer time is 10:30am. Another example would be a non-verbal student hand leading you to chips on top of the shelf. Take note of items the students seek out on a daily basis to ensure you are selecting a highly preferred and reinforcing item. Be sure you are constantly assessing reinforcers in a large field. When given a choice between two items a child will typically select one, whether or not it is preferred.

**Open Discussion of Reinforcers:**

1. Break into groups.
2. Have half of the group write down a list of 5-10 items that they love and would think of as a reinforcer.
3. Have the other half of the group act as the receiving party of a reinforcer.
4. They must select 1 of 2 items on the other persons list.
5. Then they should have a choice of 4-5 items from the list.

Discuss as a group why more reinforcers to choose from is better and why it is important to identify someone else’s likes and interests (we do not always want what someone else loves!).

**III. Differential Reinforcement**

Differential reinforcement is the most effective and widely known technique used to reduce problem behavior. In differential reinforcement, the child is reinforced if the desired response occurs and no reinforcement is delivered if the desired response does
not occur. The five common variations of differential reinforcement are, differential reinforcement of incompatible behavior (DRI), differential reinforcement of alternative behavior (DRA), differential reinforcement of other behavior (DRO), and differential reinforcement of low/high rates of behavior (DRL/DRH).

- **Differential reinforcement of incompatible behavior (DRI)** - In this intervention the reinforcer is delivered when other behavior is used in place of the problem behavior (e.g., sitting in your chair during instruction which is incompatible with getting out of your seat) which is incompatible with the desired response and identified as a replacement behavior.

- **Differential reinforcement of alternative behavior (DRA)** - In this intervention the child demonstrates an alternative response such as stating, “I am all done” in the absence of throwing his paper at his teacher when his work is complete. Engaging in an alternative response other than the problem behavior is reinforced.

- **Differential reinforcement of other behavior (DRO)** - In this intervention, the reinforcer is delivered contingent upon the absence of the problem behavior. This serves to decrease the undesired or inappropriate response.

- **Differential reinforcement of high/low rates of behavior (DRL/DRH)** – In this intervention the reinforcer is delivered when the behavior occurs at a lower rate than before (DRL) or at a higher rate than before (DRH). A DRL serves to decrease the rate of inappropriate behavior and a DRH serves to increase desirable behaviors which decreases the amount of time for inappropriate behaviors.

### IV. Application of Reinforcement In The Classroom

Now that we have defined reinforcement, reinforcer, and each type of differential reinforcement; it is important to understand how to apply this in a classroom setting. There are multiple schedules of reinforcement that can be used, however, for the classroom environment a fixed interval schedule is the most user friendly. Here are some basic rules of reinforcement to start.

- **Reinforcers must be isolated** – The only time the child receives access to the reinforcer is contingent upon the desired response. This helps to maintain the reinforcing value of an item. If the access is limited the child’s desire will be greater. An isolated reinforcer should only be delivered for a short period of time and in moderation.

- **Be consistent** – Deliver reinforcement immediately for the desired response and accept only clean, correct responses. Delivering reinforcement for incorrect or prompted responses confuses the child and the expectations set forth. If you are not consistent either is the child. If the child is on a reinforcement schedule you must provide the reinforcement at the appropriate times. If you do not reinforce when appropriate you may inadvertently reinforce an undesired or inappropriate response. Missed opportunities to reinforce the desired response can shape unwanted
responding. This hinders the child’s ability to be successful and again creates confusion and potentially more problem behavior.

- **Use behavior specific praise** – Let the child know what they are doing appropriately with behavior specific praise. For example, if Tommy struggles to color in the lines and he has his crayon in the middle of the paper, you can state, “I like the way you are staying in the lines!” Catch the kids “being good.” An example would be stating, “I like the way ____ and ____ are raising their hands to ask a question.” When the other kids are not engaging in the desired response.

- **Pair Reinforcement** - Sometimes verbal praise alone is not enough for a child to understand the significance of the desired responding. Therefore, pairing reinforcement is a good method to teach the value of a given response. For example, if Tommy continues to struggle with saying “hello” to his teacher each morning even though he loves social engagement, pairing the behavior specific verbal praise, “nice job saying hi” with a high five might increase the desired responding versus just the praise.

- **Fade reinforcement when appropriate** – Schedules of reinforcement should change as more target responding is occurring. The level and amount of reinforcement depends on the level of support needed. Fading reinforcement to more naturally occurring events within the environment is desired. Levels and schedules of reinforcement will vary and should always be data driven based on the child’s success. Sometimes we must increase the amount of reinforcement when a child is struggling with a skill or decrease the reinforcement when the child is demonstrating high levels of success.

- **Differentially reinforce** - Behavior targets can be difficult or easy for a child to master. Easier targets should be reinforced with lower levels of reinforcement such as, Libby being told, “good job” or “you earn a sticker on your star chart for a pizza party” (50 stars = an exchange) for engaging in silent reading for 10 minutes. More difficult targets need a higher level of reinforcement. An example would be Kyle earning a piece of candy if he asks to go to the restroom in the absence of peeing his pants. The level of reinforcement can be on a dense schedule with immediate access such as Kyle or more delayed and a thinner schedule such as Libby.

- **Using Differential Reinforcement in the classroom** -
  1) Select a target behavior
  2) Select an interval of time (based on the child)
  3) Select the type of system will be appropriate for the learner
  4) Collect data on the effectiveness of your intervention

- Behavior management systems in module 3 will incorporate systems for reference.

- Attached is a hyperlink of selecting a target behavior and 2 systems of reinforcement commonly used in the classroom environment.
REVIEW OF MODULE 3:

Answer the following questions and score yourself. Let’s make sure we meet mastery criteria of 80% or above (90-100%) prior to moving on.

1. What is a reinforcer?

2. Kayla never raises her hand to be called on in a small group setting. She is missing out on opportunities to engage with her peers because of this. What form of differential reinforcement can we use to increase hand raising behavior?

3. Jenna cries every time a worksheet is presented to her. She cries over 50% of her instructional day because of this. What form of differential reinforcement can we use to decrease the crying behavior and increase other responding that is more socially appropriate?

4. What are the six strategies to support the application of reinforcement in the classroom?

5. Give an example of how to fade reinforcement.
**ANSWERS:**

1. A reinforcer is a stimulus that increases the desired response when applied or removed.

2. Differential reinforcement of higher rates of behavior (DRH) – which increases the rate of a desired behavior – the criterion of rate is based on where Kayla’s baseline data falls. If she does not raise her hand at all in a 30 minute small group circle you might want to make the criterion of raising her hand 2 times in a 30 minute circle. You can shape this responding by initially prompting the hand raising with a visual cue card or physically prompt the response and immediately reinforce once the hand is raised.

3. Differential reinforcement of other behavior (DRO)- this is used to decrease the inappropriate or undesired behavior- to reduce the amount of time that Jenna is crying you can reinforce any other responding that is more socially appropriate- stating “no thanks” “I need a break” or maybe even whining to decrease the crying. To collect data and ensure that the behavior is decreasing you can add the total duration of crying recorded and divide it by minutes in the instructional day which will give you a percentage.

4. Reinforcers must be isolated, you must be consistent, use behavior specific praise, pair reinforcement, fade reinforcement when appropriate and differently reinforce.

5. The level and amount of reinforcement depends on the level of support needed. Levels and schedules of reinforcement will vary and should always be data driven based on the child’s success. Discuss as a team-
Module 4: Breakdown of Behavior

I. Behavior

What are “Problem Behaviors?”
To support a student’s need we must first define the term for a clear understanding. In education, any behavior which interferes with a student’s availability to learn or acquire new skills in their current environment constitutes a problem behavior. A problem behavior can be produced in many ways, shapes and forms depending on the function that it serves. Problem behavior is viewed as a form of communication which can draw unwanted attention, interfere with learning, be a danger of self or others and is socially unacceptable. Therefore, we must be trained to support a student’s need by decreasing unwanted behaviors and in turn increasing desired responding. To decrease problem behavior we must first identify the function that is maintaining or reinforcing the unwanted behavior exhibited. Let’s look at all possible functions of behavior and some examples of what it can look like.

II. The Functions of Problem Behavior

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Description</th>
<th>Examples (just a few)</th>
</tr>
</thead>
</table>
| Attention | The student engages in problem behavior to get attention from peers, teachers, parents or others around them | • Making inappropriate statements to others  
  • Exposing themselves |
<table>
<thead>
<tr>
<th></th>
<th>Touching materials that are not available</th>
<th>Falling to the floor when given an instruction</th>
<th>Hitting/ kicking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escape/ Avoidance</td>
<td>The student engages in the problem behavior to be removed from an activity or have immediate demands removed</td>
<td>Elopement (running away)</td>
<td>Hitting/ kicking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Throwing materials on the floor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Closing eyes or plugging ears</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hitting/ kicking</td>
<td></td>
</tr>
<tr>
<td>Seeking Access to Materials</td>
<td>The student engages in the problem behavior to get immediate access to a preferred item or activity</td>
<td>Hitting or biting if told to wait or told “no” to receive access to an item</td>
<td>Drops to the floor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Screaming/ crying</td>
</tr>
<tr>
<td>Sensory Stimulation</td>
<td>The student’s problem behavior creates immediate gratification to themselves (feels good)</td>
<td>Flapping hands</td>
<td>Making verbal sounds that have no meaning</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hitting self</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Biting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Squeezing self or others</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Spinning items</td>
</tr>
</tbody>
</table>

As you can see, problem behavior can have multiple forms and serve multiple functions. So why do students engage in problem behavior?

Potential reasons for Problem behavior:
- The student cannot verbally express their immediate want or need
- The student has not learned how to engage in the appropriate responding
- The student is reinforced for the undesired responding
- It gets the students need met (its “functioning” for them)
There are many reasons why a student engages in such problem behavior and identifying functions helps us to determine an intervention that will either decrease the unwanted behavior or replace it. Let’s Discuss this further…

At times, in educational placements, punishment is employed to decrease problem behavior (i.e., detention, in home or in school suspension, community service) which can be very effective with students whom seek social approval or are denied access to preferred items from parents following punishment procedures from the school to the home setting. But how effective are these procedures for students with exceptional needs? If our students are acting out in class due to competing deficits is it fair to send them home or have them pick up trash? We as educators must make it our responsibility of serving students with exceptional needs to support such problem behaviors with learning and teaching. Our student’s language may be limited and problem behavior is the only way in which they can be heard or understood. We need to support our students to engage in socially appropriate behavior which will support them throughout life and support overall functioning within the home and community settings. We can support contingencies in a more effective way to bring change to a child’s behavior by utilizing behavioral strategies…let’s continue!
III. The A-B-Cs of Problem Behavior

Now that we have discussed what problem behavior is and how it functions we can move on to events that occur prior to the behavior and following the behavior which are equally important when creating change.

(A) Antecedents- Antecedents are any type of stimulus or setting event that precedes a response. This can be a picture card of a dog which elicits a student stating “I see dog!” or a parenting stating, “No” when the child wants access to a preferred item which elicits the response of a child tranrtrumming. Any stimulus that is presented “before” a response is an antecedent.

(B) Behavior- Behavior is everything that an organism does. The interaction of the muscles, glands, or other parts of a live organism with the environment. Everything a person does is behavior; if you are not engaging in some type of behavior, you are probably dead! This is why “behavior” is termed as “problem” or “maladaptive” behavior, which is the undesired responding.

(C) Consequence- A stimulus which follows a behavior, occurring after a response. Following the above example in the antecedent, if the child states, “dog” when we are teaching labeling, the teachers consequence could be stating, “You’re right!” (This is a form of positive reinforcement to increase the likelihood of future responding) If a child is told “no” by a parent and the child starts to tantrum a consequence could be the parent either walking away (i.e., actively ignoring, a form of extinction) or giving the desired item to the child to prevent the continued response of crying (This is also reinforcing an undesired response).

Antecedents and Consequences are highly valuable tools in teaching and the overall success of the student in an academic placement. When the A-B-C’s of behavior are determined; we as educators can make data driven decisions which in turn can change a child’s rate of acquisition, communication, level of mastery, confidence, competence, self-perception, adaptive skills and self-esteem. Why wouldn’t we do this? Let’s pinpoint how we take A-B-C data and what interventions can be used following data collection. The example below includes a “Setting Event” and “Other” column which can sometimes give us a better picture or more information on why Problem Behavior exists.
Table 4. Data Collection

<table>
<thead>
<tr>
<th>Setting Event</th>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where did the behavior occur?</td>
<td>At home, on the bus, during computer lab</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The teacher handed out math grades, the teacher told the student to sit down</td>
<td>Johnny cried, Johnny threw his progress report on the floor, Johnny refused to sit down.</td>
<td></td>
<td></td>
<td>Any other information that might help understand why the behavior is occurring</td>
</tr>
</tbody>
</table>

Example 1: In the classroom reading books
“go line up for recess” Tami threw the reading book across the room Told not to throw books and to go back and read until the teacher was ready for her

Example 2: In the classroom playing blocks
“clean up the blocks” Kyle put the blocks in his mouth Kyle was told to take the blocks out of his mouth

Example 3: On the bus
Bus driver opened the door for Samantha Hitting and kicking the bus driver Bus driver closed the door and told the Parent was outside of the door telling
Open Discussion of Problem Behavior:

1. Example 1- What is the concern with the behavior and consequence- was the behavior handled appropriately? Who should have supported the child?

2. Example 2- What is the concern with the behavior and consequence- was the behavior handled appropriately? Who should have supported the child?

3. Example 3- What is the concern with the behavior and consequence- was the behavior handled appropriately? Who should have supported the child?

Each example demonstrates that the problem behavior happens in a given environment, something is said or done prior to the problem behavior (antecedent), the behavior occurs (behavior) and something happens (consequence) following the behavior that occurred. It is also worthy of noting that an antecedent can be verbal (“hands down”) or non-verbal (teacher writes the child’s name on the board) and a consequence occurs regardless of the problem behavior (a consequence can be natural i.e., falling down if you attempt to kick someone). In addition to an ABC chart, simple data collection on how often it occurs will help to identify if a given teaching opportunity or behavioral intervention in supporting the students need. There are two specific forms of data collection that can support our students overall outcome, duration data and frequency data.

IV. Other Data Collection

Duration Data- Duration data is used to document the amount of time a student engages in a behavior. It can be best utilized when a student is engaging in a behavior that has a clear beginning and end. Some examples are crying, tantrumming, and or refusing to work. Data would be recorded by starting a timer or watching a clock from the onset of the target behavior until the offset where you would record the time of the clock or stop the timer.

<table>
<thead>
<tr>
<th>Duration Data</th>
<th>Start time</th>
<th>Stop time</th>
<th>Total minutes of crying behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date/ observer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/15 Julie</td>
<td>8:05 am</td>
<td>8:25 am</td>
<td>20 minutes</td>
</tr>
<tr>
<td>3/15 Julie</td>
<td>10:15 am</td>
<td>10:46 am</td>
<td>31 minutes</td>
</tr>
</tbody>
</table>
Frequency Data- Frequency data is used to identify how many times a behavior occurs in a period of time. This is most useful when measuring behavior that is discrete and short in duration. To measure the frequency of a behavior you record each observation using a tally. For example, how many times a student raised their hand during math period or inappropriate statements made when asked to complete independent tasks.

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Tally number of occurrences</th>
<th>Total frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/3</td>
<td>Math test</td>
<td>IIIII IIII IIII</td>
<td>12</td>
</tr>
<tr>
<td>12/4</td>
<td>Reading</td>
<td>III</td>
<td>3</td>
</tr>
<tr>
<td>12/7</td>
<td>P.E.</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>12/8</td>
<td>Math test</td>
<td>IIIII IIIII</td>
<td>14</td>
</tr>
</tbody>
</table>

For a video clip of recording problem behavior using A-B-C data please reference the two links below:
https://onedrive.live.com/redir?resid=2344D5E2A677880F!183&authkey=!AC-1ZGXX5cQXyKs&ithint=file%2cpptx

ABC Chart to practice filling out following the video clip

<table>
<thead>
<tr>
<th>Setting Event</th>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where did the behavior occur?</td>
<td>What happened before the behavior occurred?</td>
<td>What was the behavior?</td>
<td>What occurred after the behavior?</td>
<td>Any other information</td>
</tr>
</tbody>
</table>

V. Weaken or Strengthen Behavior

Depending on the behavior for change we have to decide if we want to reinforce or punish the behavior. Reinforcement can be delivered in two different ways to strengthen behavior; it can be positive reinforcement where preferred items are presented to increase behavior or negative reinforcement where non-preferred items are halted or removed to again strengthen behavior.

If we are attempting to weaken or decrease behavior we can use a form of punishment. Punishment can also be delivered in two different ways to weaken behavior; it can be positive punishment in the form of a negative consequence such as a teacher calling a student out in front of the whole class for picking their nose or negative punishment where you are taking away a desired item such as computer time for an undesired response.

Below is a table to further understand the breakdown of behavior to weaken and strengthen when using reinforcement or punishment as a consequence.

Table 5. Weaken and Strengthen Behavior
We understand functions we know how to weaken or strengthen behavior and we can identify behavior using an A-B-C chart, so how do we treat each behavior? Let’s look at some ways in which we can support the problem behavior in the classroom as well as our teaching approach.

<table>
<thead>
<tr>
<th>Function</th>
<th>Behavioral Strategies</th>
<th>Proactive Measures/ Teaching Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention Maintained</td>
<td>Actively ignore the inappropriate responding by engaging the student in a task that requires thinking (i.e., a puzzle or worksheet) Do not draw attention, do not engage in any verbal exchanges until the child is calm</td>
<td>Look for antecedents that are occurring. Attempt to manipulate the environment for reduced problem behavior (i.e., the student being removed before he/she escalates to reduce attention). Teach to the skill deficit (e.g., teaching the student how to take deep breaths or take a break). If the behavior is socially maintained, teach getting attention the right way.</td>
</tr>
<tr>
<td>Escape/ Avoidance Maintained</td>
<td>Give the student visual supports (i.e., a token board for identifying that 10 responses = time away from work. Use a schedule to know what’s next) and state the facts (e.g., “Once you finish this worksheet, we get to have a snack.”)</td>
<td>Deliver frequent breaks building up the students tolerance to activity completion. Break up difficult tasks with simple tasks. Use prompting and reinforcement to support reduction of escape behavior. Teach the student to request a break when you see signs of escalating problem behavior. Use visuals to support the student knowing what comes next or when a given task is complete.</td>
</tr>
<tr>
<td>Seeking Access to Materials</td>
<td>If the student is tantrumming, throwing, or engaging in aggression, remove the student from others to prevent</td>
<td>Teach the student to wait or accepting “no” or “not now.” For the instruction “wait,” identify a baseline of the current time before</td>
</tr>
</tbody>
</table>
unwanted attention or harm. Deliver a break until the student is calm. Do not acknowledge the inappropriate behavior (unless absolutely necessary (property destruction)) and refrain from speaking to the child until he or she calm, present visuals to support calming and understanding.

the student’s behavior escalates (e.g., if Johnny can wait 3 seconds for his snack before tantrumming, place the snack in front of Johnny, present the instruction “wait” and present a visual timer of 2 seconds, reinforcing remaining calm). Increase the time of waiting as the student demonstrates mastery. Teach the student to verbally express displeasure in the absence of tantrumming. Present the student with visual supports.

| Sensory Stimulation | Actively ignore if the behavior does not interfere. Give the student a replacement behavior which is socially appropriate if the behavior interrupts learning (e.g., hands in pockets when excited as a replacement for hand flapping). Add visual supports for an alternative response | Teach alternatives to re-direct the student to other stimulating interactions that are more socially appropriate. Self-stimulatory behavior can interfere with a student’s availability to learn and create problem behavior. Remind the student using visuals to reduce the behavior and reinforce all alternative responding. |

VI. **Behavior Management Systems in the classroom**

There are various systems to utilize when supporting behavior. We can set classroom contingencies as well as 1:1 or small group contingencies. Whatever it may be, you will always want to include reinforcement. A token economy is a great way to support your students understanding of reinforcement, identifying when it will take place and what correct responses are needed to get access to what they desire.

A token Economy is a system used to reinforce students for correct responding during teaching trials. It’s a student’s form of pay for working! We expect a pay check at the end of the week for our hard work, our kids deserve the same. A
A token economy is a visual support for the student to gauge when the task or activity will be complete and remind them of their ultimate goal of what they are working towards.

A large group behavior management system can be points earned for specific classroom rules (5 targets max) or a clip system. The two systems can support both reinforcement for target skills as well as a consequence for student's lack of the target skill or alternative responding.
Now that we have discussed policies and procedures, some important aspects of special education, autism, reinforcement, and problem behavior; let’s dive into some proactive measures that can be included to better support our classrooms and the population we serve.

**REVIEW OF MODULE 4:**

*Answer the following questions and score yourself. Let’s make sure we meet mastery criteria of 80% or above (90-100%) prior to moving on.*

1. **What is an Antecedent?**
2. **What is a Consequence?**
3. **What are the four functions of behavior?**
4. **Why types of data collection systems can be utilized in the classroom placement for problem behavior?**
5. **How can you reduce problem behavior?**
ANSWERS:

1. Antecedents are any type of stimulus or setting event that precedes a response. This can be a picture card of a dog which elicits a student stating “I see dog!” or a parenting stating, “No” when the child wants access to a preferred item which elicits the response of a child trantrumming. Any stimulus that is presented “before” a response is an antecedent.

2. A consequence is a stimulus which follows a behavior, occurring after a response. If a child is told “no” by a parent and the child starts to tantrum a consequence could be the parent either walking away (i.e., actively ignoring, a form of extinction) or giving the desired item to the child to prevent the continued response of crying (This is also reinforcing an undesired response).

3. Attention maintained, escape/ avoidance maintained, access to materials, and sensory stimulation (automatic reinforcement).

4. ABC charting to identify antecedents and consequences, frequency and duration data to identify the amount whether it is a number of occurrences or time.

5. You must first identify the behavior, what it looks like and how long it occurs. Then you should collect baseline data for your start. An intervention should be created to either reduce or increase the behavior with data continuing to be collected. Every plan should have some form of reinforcement and teaching to support the behavior change.
Module 5: Proactive Measures

I. What is “Proactive”

In the dictionary proactive is “Creating or controlling a situation by causing something to happen rather than responding to it after it has happened.” This is what every parent strives for in educating their children on a daily basis and what we should encourage in educational placements with children who have exceptional needs. In observing classrooms, there are constant reactions to everything taking place and continuous feedback for inappropriate responding of students.

Example: Tanya is told to go to the board and identify the letter “T.” She never follows the instruction to do this, however, today Tanya touched the letter “T,” she was told “good job” and to go back to her desk. When returning to her desk, Tanya grabs a toy from a bin left on a desk from the prior activity. The paraprofessional tells Tanya to put the toy back and that she does not earn a sticker.

First Concern: We need to reinforce Tanya with a higher level of reinforcement than just verbal praise if she does not engage in this responding as often as we would like her to (differential reinforcement). She needs a sticker or some other type of reinforcer paired with the verbal praise delivered when engaging in the desired response.

Second Concern: We need to be proactive and have previous materials put away or out of reach to prevent temptation to grab items. And why was the paraprofessional telling her she did not earn a sticker, was it for grabbing the toy, not walking appropriately or did she lose the sticker that she never received for when she identified the letter “T.” If so, the delivery of reinforcement was far too delayed and the punishment for the grabbing was very severe when the initial target was actually followed. In addition, Tanya may struggle to stay focused during transitions, it is our jobs as educators to identify these targets, as well as teach replacement behavior for success in the future. Tanya is not a “bad kid.” Tanya needs guidance and structure, this is why she is in special education. So what can we do to change this? We can be proactive and utilize the previous strategies discussed as well as the strategies presented below.

II. Prompting, Shaping and Fading

A prompt in ABA is a form of guidance through various modes, to create future independence of desired responding. When describing various modes of prompting you should always include shaping and fading to support total independence. Let’s look at the chart below to identify where a prompt belongs in teaching and how it is a “proactive” measure.
Table 6. Prompting

During teaching trials, an instruction is delivered followed by a response which is either correct or incorrect. If a prompt is delivered prior to the response we are able to “shape” the desired response by immediately reinforcing the appropriate target response or something closely related.

Let’s look at an example of prompt delivery:
There are various types of prompts that can be used to support students based on their current need.
Some common prompts used in the classroom include:

<table>
<thead>
<tr>
<th>Visual Prompts: charts, pictures, icons, schedules, token boards, written instructions, timers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gestural Prompts: pointing to a picture to reference, tapping an object to follow a command (tapping a chair to prompt the child to sit down) pointing to items to give or identify</td>
</tr>
</tbody>
</table>
Physical prompts: physical guidance by placing hands on the students shoulders to support a transition, leading the students pencil and hand to support tracing or writing letters, helping the student guide a mouse on a computer by placing your hand over their hand and manipulating the mouse

Verbal prompts: any command that is repeated more than once, having the child imitate words or sentences that were just stated

Imitative prompts: you complete an action for the child to imitate (your roll a car the child has the same car and rolls his as well)

Modeling prompts: demonstrating the target skill and then having the child engage in the same skill

Positional prompts: various placement of objects or 2D cards for selection (e.g., “show me the dog”)

The most commonly used prompts in classrooms are verbal prompts. If a child forgets to place their homework folder in the return bin, the teacher calls their name to get their folder. If a lunch box is left out, the teacher questions the class on whose it is. If a student is not quite during silent reading time, the teacher states their name and reminds them to be quiet. Verbal reminders are effective for students who have the necessary skill set to follow a wide range of receptive instruction, however, our population of students might not fare as well. Students with autism specifically tend to have a delay in their development of receptive and expressive language which limits what they comprehend. In addition, poor attending can also impact how are learners are understanding verbal and non-verbal instructions. This is why prompting, shaping and fading are so important.

Prompting is best delivered from most to least intrusive and your selected prompt depends heavily on your learner and what you are teaching. Each prompt can
be highly effective if being utilized appropriately. Below is a table to outline the type of prompt to be delivered based on a skill using least to most intrusive prompt types.

**Table 7. Least to Most Intrusive prompts**

<table>
<thead>
<tr>
<th>Least Intrusive</th>
<th>Most Intrusive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal</td>
<td>Physical guidance</td>
</tr>
<tr>
<td>Visual</td>
<td></td>
</tr>
<tr>
<td>Positional</td>
<td></td>
</tr>
<tr>
<td>Gestural</td>
<td></td>
</tr>
<tr>
<td>Imitative</td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td></td>
</tr>
</tbody>
</table>

Shaping is used to teach a skill through reinforcement of successive approximations toward a target behavior. Shaping can be used for any target to reach mastery by breaking down the skill into smaller components utilizing differential reinforcement.

Here are some examples of how to shape a target response.

<table>
<thead>
<tr>
<th>Behavior Target- starting point</th>
<th>Shaping step 1</th>
<th>Shaping step 2</th>
<th>Shaping step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal Imitation- Say “more”</td>
<td>Child states “mmm”</td>
<td>Reinforce approximation of “mo” until the child emits the response with mastery</td>
<td>Reinforce “more” until the child emits the response with mastery</td>
</tr>
</tbody>
</table>
“mmm” sound accurately | response with mastery | Give command- “sit down” with child standing @ chair, physically prompting by placing weight on the child’s shoulders and immediately reinforcing the child in the chair | Give command- “sit down” 1 foot from chair, giving a gestural prompt by tapping the chair with a hand until the child emits the response with mastery | Give the command “sit down” from a distance reinforce sitting behavior until mastery

| Instructional Command- “Sit Down” | All steps should have 80% or more accuracy to be mastered (8 out of 10 trials) | Give the command “sit down” from a distance reinforce sitting behavior until mastery |

As you shape a given response you are slowly fading the prompting necessary for mastery of the target behavior.

Fading - Fading is gradual removal of prompts. When teaching a difficult skill to a given student you must fade the amount of guidance to ultimately reach independence. Sometimes we continually prompt a student and create prompt dependency. For example, Teacher Sarah verbally reminds Johnny every lesson to write his name on his paper. This prompting could set up Johnny for failure. What if Johnny’s teacher ends up being sick for a week and Johnny has all zeros for turned in work because he can’t remember to write his name. An alternative to a verbal prompt could be a visual prompt. All of Johnny’s papers could have the name line highlighted (Name: __________). Once Johnny demonstrates mastery (we would need to take data) of the highlighted visual, we could fade the amount of the line being highlighted (Name: __________). Once this phase is complete we could fade the visual completely and Johnny will turn his work in with his name on it.

For more examples of prompting, shaping and fading please view: https://onedrive.live.com/redir?resid=2344D5E2A677880F!187&authkey=!ANfdRjUbZxUAAAA&ithint=file%2cpptx

I. Discrete trial teaching

Discrete Trial Training is a method of teaching using adult directed mass trial instruction in conjunction with reinforcers, clear contingencies, and repetition. Skills are broken down into smaller teaching units and build up to support skill acquisition based on mastery of prerequisite skills. This form of teaching is utilized with students who struggle to meet mastery of skills in a looser and less structured learning environment. Being available for learning is a struggle for students who have a hard time focusing. After teaching in this format it is recommended to further support the students learning by rotating stimuli and setting up opportunities for generalization and maintenance of the mastered skill.
If you would like further information on how to teach discrete trial training please reference the website below.

http://csesa.fpg.unc.edu/sites/csesa.fpg.unc.edu/files/ebpbriefs/DTT_Steps_0.pdf

II. Skill Building

Skill building is a very important part of making a child successful. We must always remember that exceptional children need supplemental teaching and various modes of instructional design to be successful learners. Skill building can be introduced at all times, but is very beneficial when a deficit has been identified through assessment or direct observation. Reinforcing, prompting and shaping are all part of the skill building process. Once a skill has been identified as a deficit we must teach each component in depth for the student to be successful. Skill building can be targeted in all settings even if academic progress is not the target. It is much easier to identify if a student is struggling in math when they have low test scores (assessment) or reading when they struggle with reading fluency in a group reading session (observation). However, in a school setting, there is much more occurring than just academic content. Kids spend the majority of their day in a school placement. Communication, play, conversation, relationships and many other factors are included in their instructional day. For children with autism, social, play and communication skills are deficit areas. In a school setting, those deficits transpire into difficult situations if we are not proactive when identifying areas of need that we can support. Examples of skill build can include, but are not limited to, requesting items, requesting for help, communicating intent, answering questions, asking questions, playing with a peer, looking when speaking and many more. A child might not be able to engage in a small group learning activity because he or she does not demonstrate the pre-requisite skills necessary to maintain attention. We need to identify through assessment and observation where the child may need skill building to be successful in this area. Below is a table to demonstrate scaffolding and skill building when supporting a child with deficits in attending.
III. Language Building

Increasing Communication and the use of language (verbal/ non-verbal) is key in decreasing problem behavior and increasing language and learning opportunities. There are many ways to build language for a student. The first and most effective way to build language is to identify where the child struggles by assessing and teach components necessary for acquisition.
Remember functional language opens doors for learning and it does not necessarily have to be verbal. Even if a student is receiving speech services, supplemental teaching and maintenance and generalization of skills is imperative for a student to make greater gains.

We can teach language building in many ways:

- FOKES Sentence Builder: [www.4gaslps.com/FSBLetter.doc](http://www.4gaslps.com/FSBLetter.doc)
- Teaching Vocabulary: [https://www.superduperinc.com/](http://www.superduperinc.com/)
- Direct instruction: [https://www.mheonline.com/directinstruction/language-for-learning/](https://www.mheonline.com/directinstruction/language-for-learning/)

Modeling and repetition of foundation skills and building on skills that the child displays will also increase language. Just remember verbal prompts are hard to fade so visual prompts are much easier when promoting language. In addition, we always want the outcome of prompted responses to be the student demonstrating independence. Sometimes we can practice the skill using successive modeling and then promote the student to engage in an independent response as the final response.

**REVIEW OF MODULE 5:**

*Answer the following questions and score yourself. Let’s make sure we meet mastery criteria of 80% or above (90-100%) prior to moving on.*

1. **How can you be proactive in the classroom placement?**

2. **Select a target skill to teach a student; create an intervention plan that outlines the prompts, shaping or fading procedures you would use to master the target with full independence.**

3. **What is discrete trial training?**

4. **Why is skill building important for our students?**

5. **Why is language building important for our students?**
ANSWERS:

1. Prompting, shaping, fading, and reinforcement are all proactive strategies to reduce problem behavior and accelerate learning. It is a systematic way to increase independent responding.

2. An example of a skill to teach would be name identification in a small group circle. You could start by having the student identify his or her name in a field of three in a quiet work area with at least 10 prompted trials for errorless learning. The next step would be to have the student identify his or her name at the carpet area, now raising a hand when the name is shown. The last step would be having the student identify his or her name on the carpet during a small group circle when presented by a novel teacher. The student raises his or her hand and states, “That’s me!”

3. Discrete Trial Training is a method of teaching using adult directed mass trial instruction in conjunction with reinforcers, clear contingencies, and repetition. Skills are broken down into smaller teaching units and build up to support skill acquisition based on mastery of prerequisite skills. This form of teaching is utilized with students who struggle to meet mastery of skills in a looser and less structured learning environment.

4. We must always remember that exceptional children need supplemental teaching and various modes of instructional design to be successful learners. Skill building can be introduced at all times, but is very beneficial when a deficit has been identified through assessment or direct observation. Reinforcing, prompting and shaping are all part of the skill building process.
5. Increasing Communication and the use of language (verbal/ non-verbal) is key in decreasing problem behavior and increasing language and learning opportunities.

I hope this manual is beneficial for new paraprofessionals in the field of education. Again, welcome to the profession!
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