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School Counseling

by

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DEDICATION

I want to dedicate this project to my Lord and Savior, Jesus Christ. Next, to my husband, Sheldon, you have supported me in every way possible. This project could never have been completed without your love and support especially during the long nights. I would also like to thank all my family and friends for all their support and prayers for me to complete this project.
ACKNOWLEDGEMENT

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ABSTRACT

BEHAVIOR INTERVENTIONS AND INSTRUCTIONAL STRATEGIES:
EFFECTIVE CLASSROOM MANAGEMENT WORKSHOPS FOR
GENERAL EDUCATION TEACHERS

by

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Master of Science in Counseling,
School Counseling

As more children are becoming diagnosed with autism spectrum disorder, there is a growing necessity for schools to become more prepared for how to service and meet the needs of this increasing population. The workshops will prepare teachers for the behavior and emotional challenges working with children with autism spectrum disorder. General education teachers will be taught comprehensive workshops on behavior interventions, instructional strategies, and visual supports to better ascertain how to effectively help children with autism spectrum disorder.
CHAPTER I
INTRODUCTION

Loud tantrums, aggressive behaviors, and uncomfortable lack of social cues are just a few of the characteristics that are common among individuals who are affected by autism spectrum disorder (ASD). The DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Text Revised), defines autism spectrum disorder as, “The persistent deficits in social communication and social interactions; restricted, repetitive patterns of behavior, interests or activities.” When these individuals with ASD are unable to communicate their wants and needs, it affects their families, friends, and society. In fact, autism spectrum disorder (ASD) affects the social, emotional, and cognitive abilities of an individual in ways that might keep them from interacting with the environment and society. Autism Society of America (n.d) describes autism as a developmental disability that has specific behaviors such as delays in language, repetitive speech or motor movements, limited eye contact, disinterest in peers, lack of spontaneous play, or consistent fixation on parts of an object. For example, depending on the individual with ASD, a person might struggle in social interactions by perseverating, which is continually repeating various movie lines all day long unless redirected to the right way of speaking in that particular situation. Otherwise, the individual might disrupt the class with a loud outburst about a difficult math problem that is too hard for them to solve. Moreover, the degree to which the disorder affects an individual’s daily life varies in the spectrum of ASD from mild to severe. Its mild form vaguely interrupts the life of the individual in terms of social skill deficits, and its severe form affects the communication and daily life of a person with ASD.
Prevalence of Autism

Before the 1980s autism was referred to as “autistic disorder”. It was thought at the time that autism affected about one in every two thousand children (Rice, 2006). According to Baio (2012), it is estimated that one in every 88 children in the United States has an autism spectrum disorder and the burgeoning incidence of children diagnosed with autism has led to an increase in the services that need to be provided for this population. Today, ASD is more prevalent than Type I diabetes (Centers for Disease Control, 2005), Down syndrome (National Center for Birth Defects, 2005), and childhood cancer (United States Cancer Statistics Workgroup, 2005). The increasing number of children entering schools with ASD will require teachers and supporting personnel such as aides to have a thorough depth of knowledge of ASD and how to advocate and address the needs of the individuals with ASD. Moreover, statistics from the United States Department of Education (2005) indicate a 600 percent increase in the numbers served under the Individuals with Disabilities Act autism eligibility classification. The California Department of Education (2011) reported 59,690 incidents of children diagnosed with autism between the ages of two and twenty two years old who are receiving special education services. If the trend continues, the California Department of Developmental Services will serve as many as 70,000 people with ASD by June 2012 (Cavagnaro, 2008).

Looking back on the history of public education for students with disabilities, Moores-Abdool (2010) describes how:

The most pivotal change in public education for students with disabilities in general education classrooms dates to the implementation of the federal law,
Education for All Handicapped Children Act of 1975 (PL 94-142), which is now known as the Individuals with Disabilities Education Act. (IDEA, 2004) (p.154).

More importantly, public education for all students is about providing quality education for all students—especially students with disabilities. In the year 1990, the Individuals with Disabilities Act included autism as a disability category (U.S. Department of Education Office of Special Education Programs [USDE OSEP], 2006). In addition, general education teachers will need to be prepared to deal with the increasing numbers of children with autism who are entering general education classrooms.

**Increase in Inclusion**

There has been a growing drive towards the inclusion of pupils with Special Educational Needs (SEN), including those children with Autism Spectrum Disorders (ASD) within mainstream classrooms (DfEE, 1997; DfES, 2001, 2004). In relation to pupils with ASD, the United States Department of Education (2011) noted that about 36.1% of such pupils were included in regular classroom settings. Inclusion is defined as the process of identifying and breaking down barriers for the individual with autism to find a sense of belonging while focusing on the complete experience of the individual and their family (Jones, et al., 2008). The inclusion of young people with ASD into general education settings has been argued to improve their quality of life, educational performance, and social development (Connor, 1998; Harris & Handleman, 1997; Knight, Petrie, Zuurmond, & Potts, 2009; Strain, 1983). A growing need is for general education teachers to have valuable training in the necessary teaching strategies that will provide them with how to effectively instruct students with ASD.
Statement of Need

The increasing number of children diagnosed with autism spectrum disorder has skyrocketed from one in every 2,000 children (Rice, 2006) to one in every 88 children (Baio, 2012). In 2008, there are more than 38,000 people in California receiving services for ASD. This growth has averaged 13.4 percent annually since 2002 (Cavagnaro, 2008). As these children enter the school system, the greatest need will be knowledgeable teachers who can manage and guide these students with autism spectrum disorder.

Purpose of the Graduate Project

The purpose of this study is the creation of a workshop geared to train general education teachers with teaching strategies and promising practices. The workshop will prepare the teachers with tools to deal with behavioral and emotional difficulties of individuals with autism spectrum disorder. The workshop will provide the general education teachers with behavior interventions based on the principles of applied behavior analysis and valuable instructional techniques. It will guide the general education teachers on how to decrease the maladaptive behaviors and increase the quality of learning for all students and especially students with ASD.

Terminology

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common childhood disorders and is characterized as an individual having severe and consistent inattention, hyperactivity, and impulsivity (National Institute of Mental Health, 2012).

Applied Behavior Analysis. ABA is a clinical discipline that focuses on creating solutions using the principles and procedures of behavior analysis (Fisher, Groff, & Roane, 2011).
Autism. Autism, as defined by the Autism Society of America (n.d.), is a developmental disability that typically occurs within the first three years of the individual’s life and affects their ability to communicate and connect with others. It is defined by specific behaviors (which are delays in language, repetitive language or motor movements, limited eye contact, disinterest in peer relationships, lack of spontaneous play, or consistent fixation on parts of objects), and is a spectrum disorder because it varies in how it affects each individual.

Board certified behavior analysts (BCBA) are individuals who have obtained a Masters Degree, completed 225 classroom hours of specific Graduate level coursework, finished fieldwork experience requirements and passed the Behavior Analyst Certification Examination (Behavior Analyst Certification Board, n.d).

Differential Reinforcement of alternative behavior (DRA) is a treatment to reduce problem behavior by strengthening a specific desired response or responses (Miltenberger, 2008).

Functional Communication Training is one of the most frequently applied treatments to reduce severe problem behavior such as aggression and self-injurious behavior (Tiger, Hanley, & Bruzek, 2008).

Priming is a low-demand version of the high-demand task which effectively reduces the need for escape-driven behaviors (Koegel, Koegel, Frea & Green-Hopkins, 2003).

Prompt is an antecedent stimuli that elicits specific responses and is a supplement to behavioral treatment (Cooper, Heron, & Heward, 2007).
Bridge to Next Section

The next section will include a literature review of the history of applied behavior analysis and how it has become a leading treatment for individuals with autism spectrum disorder. The review will describe various evidence-based interventions such as extinction, shaping, errorless learning, prompting, and punishment as treatments for ASD. Lastly, the review will describe instructional strategies and promising practices designed specifically for general education teachers to implement when instructing individuals with mild to moderate autism.
CHAPTER II
LITERATURE REVIEW

Introduction

The purpose of this chapter is to review the literature of the significant role of behavior interventions, teaching strategies and visual supports for general education teachers who educate children with autism. It is important to understand the pivotal role of Applied Behavior Analysis (ABA) has on behavior interventions today and how the leading pioneers have influenced behavior analysis. Applied Behavior Analysis is an effective and evidence-based intervention that is used as a treatment for children with autism spectrum disorder. Axelrod, McElrath and Wine (2012) discuss the significance of applied behavior analysis over the past 60 years, and how it has addressed the needs of the population with disabilities. The leading pioneers of ABA are Ivan Pavlov, Burrhus Frederic Skinner, and Ivar Lovaas, all of whom provide the founding evidence of the validity of ABA as the leading evidence based intervention for individuals with autism spectrum disorder. In the Handbook of applied behavior analysis, Donahoe and Vegas (2011) discuss how Ivan Pavlov found that the function of behavior was based on reinforcement which is one of the fundamentals of applied behavior analysis. Skinner (1938) laid the foundation of behavior analysis which would later consist of the experimental branch and applied branch called applied behavior analysis. In 1987, Lovaas published a groundbreaking study on behavior intervention in autistic children consisting of early intensive treatment of ABA produced significantly better outcomes than those children who received little or no ABA (Smith & Eikeseth, 2011). Later on the Lovaas study became highly criticized for its lack of randomization in the selection of subjects in experimental and control groups (Gresham & MacMillan, 1998; Schopler,
Short, & Mesibov, 1989). Regardless, of the significant outcomes from Lovaas study it is still uncertain if ABA principles and intensity were the significant factors (Smith, Groen, & Wynn, 2000). In summary, ABA is an evidence-based intervention that has proven to help the needs of individuals with autism.

This chapter will discuss behavior interventions and instructional strategies that general education teachers will be able to implement in the classrooms. It is vital for general education teachers to be trained in skills in instructional strategies and behavior interventions to meet the needs of all students, especially students with autism spectrum disorder.

**History of Applied Behavior Analysis**

According to the Association for Behavior Analysis International (ABAI; n.d.), “Over the past 60 years, applied behavior analysis has become recognized as the treatment of choice for behavior problems associated with mental retardation, autism spectrum disorders, brain injury, and other disorders...” (http://www.abainternational.org/BA/FAQ14.asp). The history of the effectiveness of ABA strongly demonstrates the validity of decreasing problem behaviors in children with autism spectrum disorder. In 1968, Baer, Wolf, and Risley defined ABA as, “The process of applying sometimes tentative principles of behavior to the improvement of specific behaviors, and simultaneously evaluating whether or not any changes notes are indeed attributed to the process of application” (p. 91). Applied Behavior Analysis is characterized as being applied, behavioral, analytical, technological, systematic, and effective, and displaying generality (Baer, Wolf, & Risley, 1968). Each of the characteristics of Applied Behavior Analysis provides significant finding that it is a comprehensive system based on research studies, procedures of the studies can be
repeatable, and studies are based on founding principles of behavior analysis backed by years of research. The movement of ABA has changed now becoming one of the most effective treatments of maladaptive behavior in children with autism.

**Pavlov.** Pavlov (1927) conducted an experimental study called classical conditioning where he was able to teach the dog to salivate every time the dog heard the sound of the bell. At first, he would ring a bell right before he gave the dog food. After several trials once the dog would hear the bell ring the dog would salivate. In Pavlov’s procedure, food was contingent on the sound of the bell going off so the dog would salivate in anticipation for the food. Meanwhile, another pioneer who exceeded the work of Pavlov is Thorndike who realized that it was not stimulus that altered the salivation of the dog, but it was response (Donahue & Vegas, 2011). The bell became a reinforcing stimulus or reinforcer because every time the dogs heard the bell it was paired with some type of reinforcer which was food. This paramount finding not only expanded the work of Pavlov’s theory of classical conditioning but it would later influence the work of B.F. Skinner.

**Skinner.** One of the leading pioneers in behavior modification is, B.F. Skinner (1953) who discovered the principles of behavior through experiments using rats and pigeons, and how behavior affects all animals including human beings. He also introduced the concept of operant conditioning in which the consequences that follow a behavior determine the probability of that behavior increasing or decreasing (Skinner, 1938). When reinforcement is applied following a particular behavior, that behavior is expected to stay the same or increase. Punishment decreases behavior, while reinforcement will increase the likelihood the behavior will occur in the future or it will remain the same (Boutout & Hume, 2012).
Skinner (1938) also proposed the concept of the three step contingency which is the (a) antecedent, (b) behavior, and (c) consequence. The three step contingency explains how the changes in the environment and consequences are related to the antecedent (Fisher, Groff, & Roane, 2011). For instance, if you woke up late and you need to catch the bus in order to get to class on time you have to rush. The antecedent is you slept in, the behavior is waking up late, and the consequence is the bus may or may not be there so you might not make it to class on time. Antecedents are flexible and can be altered while behavior is modified, but consequences follow in the order of the three term contingency. The last leader in ABA is Ivar Lovaas who implemented an intensive behavior intervention for children that has changed the way children with autism are viewed and understood.

Lovaas. According to Axelrod, McElrath, Kates, and Wine (2012) the largest contributor to research of ABA is Ivar Lovaas:

A hallmark behavioral intervention study published by Ivar Lovaas in 1987 found that with 40 hours per week of early intensive behavioral intervention (EIBI), involving a curriculum that emphasized language skills, and intensively applied behavioral procedures, nearly one half of the participants achieved IQ’s exceeding 100. Participants also had greatly improved social development and were successfully mainstreamed (p.3). This study was a groundbreaking intervention that was so pivotal to the effectiveness of Applied Behavior Analysis. Lovaas became a household name often the face of ABA because of his research and evidence based intervention that increases language skills and reduces negative behavior of children with autism spectrum disorder.
In classrooms today, teachers will apply the use of Applied Behavior Analysis, to teach skills and lower behavior problems (Boutot & Hume, 2012). ABA is applied in the classrooms commonly even without the knowledge of many general education teachers using behavioral interventions like priming, positive reinforcement and negative reinforcement, punishment, and prompting which all focus on classroom management skills. According to the website, Association for Behavior Analysis International (n.d), the significance of Applied Behavior Analysis to the treatment of children with autism is profound because it is backed by 60 years of reducing maladaptive behaviors. The current trends of ABA have changed from a focus on challenging behaviors to now skill building which focuses on social skills (Matson, Turygin, Beighley, et al., 2012).

Research demonstrates that teacher’s ratings show a high proportion of students with autism have behavioral difficulties that cause disruptions in the classroom, including behavior problems, distractions, frustration, stubbornness, difficulty regulating emotions, and hyperactivity (Ashburner, Ziviani, & Rodger, 2010). When students with autism exhibit non-compliance, it can result in inattention to direction, incomplete class work, classroom disturbances, and reduced social interactions, so these factors affect student engagement, school liking, and academic performance (Inglese, 2011). Ciccantelli (2011) showed that faculty and staff are interested in learning about how to help students with ASD and inquired about additional information and training on how to work with students with ASD and become more aware of the various behaviors and characteristics of ASD (Ciccantelli, 2011). Similarly, Nickels (2010) urges the necessity of training of teachers who are working with children with ASD and how the progress of the child from preschool through high school depends on continuing professional development. When schools provide training on autism, the teachers are more adequately trained to deal with
the students’ emotional and behavioral issues. General education teachers will be able to apply the trained techniques and skills in the classrooms and be able to focus on quality learning rather than dealing with problem behaviors of individuals with ASD.

**Behavior Interventions**

Applied Behavior Analysis is the most evidence-based practice because it is founded on research based on the National Standards. A project called the National Standards identifies four factors of evidence-based practice which are research findings, professional judgment, values and preferences, and capacity (National Autism Center, 2009). Each of the sections of the national standards represents the overarching reliability and guidelines of what characterizes a standard in each of the four sections. It requires research findings, and professional judgment to examine the treatment, and its validity by testing the study, and its progressiveness to the field of autism. The values and preferences must include feedback from all stakeholders such as, parents, care providers, and individuals with ASD who prove the effectiveness or ineffectiveness of the treatment. The last section, capacity focuses on the ability of the intervention to be sustainable over time through all people involved in the treatment should be properly trained, proper resources, and ongoing feedback about the treatment (National Autism Center, 2009). Over the course of this next section, each intervention will be explained thoroughly and how it applies to the practices of ABA. The behavior interventions will include extinction, shaping, positive and negative reinforcements, errorless learning, prompting and punishment.

**Extinction.** Extinction is defined by Catania (1998) as a “Discontinuous reinforcement of responding” (p.389). In other words, in the presence of maladaptive behaviors such as aggression, self-injurious behavior, or inappropriate behavior,
responding to reinforcement is lowered until an acceptable behavior is presented. Moreover, Ringdahl, Kopelman, and Falcomata (2009) describe extinction procedures that should reduce access to any reinforcers, leaving the individual with little to no understanding of appropriate alternative behavior which will increase in negative behaviors. Extinction should be combined with differential reinforcement, since it focuses on replacing the inappropriate behavior with appropriate behavior (Ringdahl et al.). Furthermore, Volmer and Athens (2011) interpret the effective factors of extinction such as identifying the function of the behavior, understanding and implementing use of reinforcement, creating a baseline or beginning point and when to administer reinforcement, and establishing rules and what in the environment is affecting the student. The significance of extinction alone will lower the frequency of negative behavior temporarily, but to provide complete elimination of negative behavior, extinction must be combined with other interventions like differential reinforcement, shaping, reinforcing and prompting.

**Shaping.** Shaping is the process of alternating reinforcements for successful approximations toward a desired response (Cooper et al., 2007). Hanley and Tiger (2011) explain the process of shaping as identifying the specific behavior, establishing reinforcement for the desired response, and adjusting the delivery of reinforcement according to the approximations of the desired response. Shaping is designed to be modified according to the approximation of the desired response. The goal of shaping is to create opportunities to build independence for the child with autism. Ricciardi, Luiselli, and Camare (2006) performed a study on a specific phobia of animatronic figures (like Santa Claus, Tickle Me Elmo, etc.) of an eight year old boy named Rich with an autistic disorder. The intervention determined the distance between Rich and the
animatronic figures and once Rich walked the certain distance of the animatronic figure he had access to preferred items (Ricciardi et al.). Shaping applies to this study in how the specified distance was altered to gain the desired response of Rich being able to tolerate the specific phobia of animatronic figures.

Another type of shaping system is termed percentile schedules which involves, predetermined rules for when to deliver reinforcers; rules can be modified, while time period or variety of responding can be altered depending on the value closest to the desired response (Hanley et al., 2011). For instance, a study by Athens, Vollmer, and St. Peter Pipkin (2007) increased task engagement of four students with learning or developmental disabilities through percentile schedules. Each student received a token at the end of the task completion with a minimum duration of task engagement of four minutes per five minute sessions. Results from the study show that percentile schedules can be used to shape decreases in negative behavior as well as thinning the delivery of reinforcements (Athens et al.). Shaping increases behavior through small modifications with reinforcement to accomplish the desired response. Another behavior intervention that focuses completely on effectiveness of reinforcers is positive reinforcement.

**Positive Reinforcement.** Positive reinforcement involves increasing the likelihood of an expected response with a specific stimulus (Piazza, Roane, & Karsten, 2011). For instance, teachers frequently reward students who are listening and paying attention with verbal praise and incentives, since the positive reinforcement increases the appropriate behavior. The students will be more likely to continue to have suitable behavior if they are positively reinforced by the teacher for their behavior. In addition, positive reinforcement increased working memory of two out of three children who had autistic spectrum disorder (Baltruschat, Hasselhorn, Tarbox, et al., 2011). Results showed
that the participants with best responses required explicit prompting and positive reinforcement. It is important to realize that positive reinforcement does not stand on its own, but must be combined with other interventions like prompting which guides the correct response. Positive reinforcement and prompting have significant affects in producing increases in the working memory of children.

Building compliance in children with autism is one of the first behavior interventions that teachers will use to help all students. One study on increasing compliance in children with autism showed the effectiveness of high probability requests when the individual was presented with established reinforcement (Pitts & Dymond, 2011). Similarly, Bouxein, Roane and Harpt (2011) suggest that both positive and negative reinforcement increase task compliance. Their study involved a 14 year old boy with Down syndrome who exhibited noncompliance with caregiver demands such as daily tasks, academic assignments and self-help skills. The participant was taught the task of throwing away trash on the floor into the trashcan through physical prompts and positive reinforcement. This was achieved by having music play when he completed the task and by having no music play when he did not throw out the trash. Likewise, a study of escape maintained problem behavior in a nineteen year old man with severe mental retardation resulted in compliance when he was presented with high reinforcers (Carter, 2010). The study did not include extinction and the results showed that the subject showed compliance when presented with high reinforcement. The research demonstrates that individuals will become more compliant when the established reinforcement is presented as each individual varies in what the established reinforcement will be.

Another important intervention that is not as well known and consistently used as often as positive reinforcement is negative reinforcement.
**Negative Reinforcement.** Negative reinforcement is how the aversive stimulus will provide a response that makes the individual avoid the stimulus (Catania, 2011). For instance, when it is rainy outside if you decide to not put on a jacket you may get sick, but if you put on a coat you will lower your chance of catching a cold. The research of Lomas, Fisher and Kelley (2010), suggests that in order to maintain a problem behavior of negative reinforcement, implementing positive reinforcement is an effective treatment. Another study consisted of three participants with autism spectrum disorder who displayed increased compliance when given food and praise, when a demand was placed, and during a set schedule. If the participant was not compliant, he still received the food and praise. Only one participant showed increase in compliance with food and praise. This study shows that participants who chose to be non-compliant still received reinforcement regardless of their compliance to the demand placed. Negative reinforcement applications are found when the target response to be strengthened is compliance (Hanley et al, 2011). Another teaching tool that focuses on compliance and guiding the correct response is errorless learning.

**Errorless Learning.** Errorless learning is a teaching strategy used for students with ASD to aid them in reducing the likelihood of the incorrect response (Minshawi, Ashby, & Swiezy, 2009). In a study on children with pervasive and developmental disorders, Mueller and Palkovic (2007) examined the application of errorless learning in the school settings and how effective it is in teaching basic skills like colors, different types of money, shapes etc. The study researched the six learning techniques which are stimulus fading, stimulus shaping, delayed prompting, response prevention, superimposition with fading, and superimposition with shaping. Each learning technique can be implemented in the classroom by having the teacher present the student with two
choices of shapes, a circle and a rectangle. The teacher would begin having the student distinguish the difference between the two shapes, and once the student has mastered the two shapes, they move to other shapes. Errorless learning helps the child with pervasive and developmental disorders to correctly respond to each choice because the teacher will give the correct response each time until the student is able to master the desired response. Much like errorless learning, prompting is another useful behavior intervention so widely used among teachers and parents.

**Prompting.** Prompting ranges from the most-intrusive (physical prompting), to least intrusive (gesture prompting). For example, a physical prompt of having the child sit in their seat would look like the teacher or aide using their hands to pushing down on the child’s shoulders. A gesture prompt of having a child sit in the seat would be the teacher or aide pointing to the assigned seat to have the child sit down. Ingvarsson and Hollobaugh (2011), describe a study on the use of picture prompts and verbal prompts with three young children with autism. The study showed that picture prompts were the most effective while verbal prompts were easier to implement due to the amount of time spent on creating picture prompts for each child with autism.

DeQuinzio, Townsend, Buffington, Sturmey, and Poulson (2007) explain how to teach appropriate responding to facial models through prompting, modeling, differential reinforcement, and error correction. Prompting teaches children the highly developed skill of appropriately responding to particular facial expressions. The study used the least-to-most prompting hierarchy. Let’s look at one type of facial modeling which is smiling. For example, if the child does not correctly respond to the first trial, then the experimenters would verbally prompt and say, “Do this” and model a smile for the subject. After five seconds if the child is not modeling a smile, the experimenters would
then follow up by modeling an open mouth and closed mouth showing the subject. If the child still does not repeat this then the experimenters would physically open and close the mouth of the subject. This study of teaching young children with autism responding appropriately to facial expressions uses least-to-most prompting depending on the responses from each individual, and other interventions such as modeling, differential reinforcement, and error correction.

**Punishment.** Punishment can be categorized into positive punishment and negative punishment. Lerman and Toole (2011) define positive reinforcement as, “When the contingent presentation of a stimulus decreases the future likelihood of a behavior” (p.348). In contrast, they define negative punishment as, “When the contingent removal of a stimulus decreases the future likelihood of behavior” (p.348). Moreover, negative punishment can be further broken down into two subtypes which is time out and response cost. Time out is a negative punishment for an allotted time period usually adjusted according to the age of the child. Most teachers will use time out to exclude a student from an activity perhaps when the entire class is told before the activity to not engage in horseplay. During the activity, if a student begins to horseplay with another student the teacher will send the student on time out for a certain amount of time. Lerman et al. found that, “Reinforcers lost as part of the timeout (tokens, access to music) is not returned to the individual based on the passage of time, but they may be earned for appropriate behavior” (p.352). The child learns that the only way to earn the reinforcers lost due to timeout would be to behave in an appropriate manner.

According to a study by Ma (2009), punishment is one of the most effective behavior interventions for children with autism. The results show that five of the most effective behavior interventions are priming, self control, training, positive
reinforcement, and punishment (Ma et al.). Zambolin, Fabrizio, Ferris, Barclay, and Carrier (2007) evaluate changing the teachers’ responses to a student; for example, Patrick has a moderate form of autism when he lost access to reinforcers when any maladaptive behavior was present. Patrick became more aggressive once he lost access to his reinforcers so the teachers altered their behavior by noticing that once Patrick began to feel frustrated: (a) he had to ask to stop the task, (b) ask for help with the task from the teacher, (c) ask for the task to be made easier by the teacher and, (d) ask for a break (Zambolin et al.). Once this procedure was implemented Patrick’s maladaptive behaviors decreased and he was able to have access with his reinforcers. For Patrick it was functional communication training in which the intervention is focused on replacing inappropriate behavior with acceptable behavior.

Punishment and reinforcement are used in homes, classrooms, and community when dealing with children and his or her positive or negative behavior. Adults may use punishment to spank or hit child when a child disobeys the parent by for instance, throwing a cup across the room when told by the parent to not throw anything as it may hit someone. The adult may either choose to punish the child, put the child in time out, or ignore the behavior. Each time the child learns punishment and reinforcement by how the adults choose to create boundaries in the home. Kapalka and Bryk (2007) described 43 boys with Attention Deficit Hyperactive Disorder (ADHD) and found that a time out of about two to four minutes was effective in both groups (traditional time out according to age and shorter time out of 2 to 4 minutes) showed reduced behavior problems rather than control group with no time out. In this study, punishment of time out for a specific time limit was more effective and decreased the likelihood of the inappropriate behavior from occurring again.
Instructional Strategies

In the classrooms, general education teachers need to develop instructional strategies to work effectively with children with autism. According to Ashburner et al. (2010), teacher’s ratings confirmed a higher degree of students with autism have behavioral challenges that cause disruptions in the classroom, including noncompliance, frustration, difficulties in managing emotions, and hyperactivity. Teachers are inundated with behavior problems in the classroom and need instructional strategies that will foster student compliance and promote classroom management. Another study by Inglese (2011) describes that noncompliance of children with autism in the school can result in inattention to direction, incomplete class assignments, classroom disruptions, and reduced social interactions which all affect the way the children feel about school and perform academically. Students with autism need the guidance of competent general education teachers to provide support, so that when challenging behaviors of students occur; teachers are able to effectively implement teaching strategies that increase appropriate behavior. A few of the instructional strategies that will be addressed are choice making, functional communication training, differential reinforcement of alternative behavior, and task analysis.

Choice Making. In order, to increase compliance of students with autism, offering two choices allows the child to have control of the activities that will be completed. Tiger, Toussaint, and Roath (2010) analyzed three children with autism on the importance of choice making based on fixed versus progressive ratio schedules. Choice making improves the efficacy of reinforcement interventions since two of three children had higher rates of task completion when given the fixed ratio schedule of reinforcement which was an edible item. Each student went through preference
assessment of their edible reinforcements before the study was conducted. The factors that influence preference for children who engage in problem behavior of escape will choose food reinforcer over functional choices of a break (Kodak et al.). Choice making builds compliance, and gives the student the power in the decision making process. Similarly, functional communication training is about replacing negative behavior with positive behavior.

**Functional Communication Training.** Functional communication training (FCT) is the process of replacing inappropriate behavior with an acceptable communicative behavior or skill. The steps to begin the functional communication training program consist of a behavior assessment which determines what the cause of the inappropriate behavior is either attention, demand placed, escape, access to tangibles, or denied access. Tiger, Fisher, Toussaint, and Kodak (2009) refined three cases of uncertain functional assessments. Two of the three children were diagnosed with autism with target behavior of aggression. The functional assessments results from the study show that assess escape, attention, sensory, and tangibles were conditions used to determine the function of the inappropriate behavior of aggression.

Fisher and Bouxsein (2011) explain FCT responses that are based on the language the individual already uses and providing the reinforcer even using physical assistance to help him or her say the FCT response. FCT responses can vary from “Help me please,” “I want a break,” and “I need more time”; these all alter depending on the individual. These FCT responses help the individual understand these responses provide reinforcement, but also replace inappropriate behavior to establishing appropriate responses. As the teacher gives a certain amount of assistance (verbal prompt to gesture) it is lowered till student is able to say the FCT response. For example, the teacher might
at first have the student gesture the sign language prompt for help to gradually verbally prompting the FCT response of asking an adult “Help, please” until the student is able to independently ask for help when they are frustrated. FCT is primarily used when individuals determine a high frequency of aggressive or self-injurious behavior. However, Falcomata, Ringdahl, Christensen, and Boelter (2010) evaluate the effectiveness of prompt schedules and mand preference during functional communication training. A mand is a verbal request (I want water) or command (Help me) (Kooistra, Burchmeir, & Klatt, 2012). The study examined one particular subject, Sara, and her mand preferences in which she favored microscripts and minor prompts (Falcomata et al., 2010). Each individual will differ in mand preferences, but learning alternative responses create opportunities to request for appropriate behaviors.

A functional communication training study on choice making in two children with developmental disabilities showed that problem behavior resulted from positive and negative reinforcement (Harding, Wacker, Berg, Winborn-Kemmerer, & Lee, 2009). When combining the interventions of functional communication training and choice making motivates children to show an increase in appropriate behaviors, it creates opportunities to request for breaking when the individual is frustrated and shows increased rates of compliance from the children after the preference assessment (subjects choose from a variety of reinforcers that they want compared to other reinforcers) occurred and the child received the reinforcement.

**Differential Reinforcement.** Differential reinforcement is the process of increasing the occurrence of desired behavior by working with the individual to follow that particular behavior (Hanley & Tiger, 2011). Differential reinforcement of alternative behavior (DRA) provides reinforcement at certain times while not at other times if the
certain behavior is not occurring. The potential advantages of differential reinforcement of alternative behavior consist of the individual learning a variety of skills that lead to a response to alternative reinforcement, continued exposure to instructional demands that become consistent and expectation, and the effect of appropriately asking to terminate an assignment for another time (Fisher & Bouxsein, 2011). Once an individual develops the use of DRA it is to the benefit of the individual, teacher, and students in the classroom. Fisher and Bouxsein (2011) reflect on the effects of compliance on DRA in such interventions as time out and extinction, which can produce an increase in positive behavior and compliance while consequences of compliance do not change. Time out and extinction allows the individual to (a) request the end of an activity, (b) have shared control in the decision making process, and (c) to ask for a break at any time. Each of these alternative behaviors creates new skills that foster power in the decision making process for the student and an increase in compliance in the classroom and beyond.

**Task Analysis.** Task analysis is breaking down a desired behavior into many steps so that the individual is able to complete the desired behavior. Task analysis consists of forward chaining, backward chaining, or total task presentation format (Noell, Call, and Ardoin, 2011). Forward chaining is a step-by-step guide on how to complete a particular task focusing on mastering the first step, while backward chaining is going through all the steps with the focus on mastering the last step. On the other hand, total task presentation format can be effective with completing an academic task with each step guided by a teacher or aide.

In 2011, Parker and Kamps described a task analysis for two children with high functioning autism to help them with peer interactions that was scripted and faded once interactions were completed. This study focused on helping both adolescents with mild
autism and typical adolescents to interact in verbal conversations that evoke interest and eventually friendship. Participants were able to self-monitor themselves through written task analysis activity steps that guided them in the direction of the verbal peer interaction. The subjects were able to complete tasks across all three activities which were games, cooking, and restaurant activities through written task analysis (Parker et al.). As each student became more confident in their task analysis, he or she was able to complete the tasks without the necessity of the task analysis. By developing self-monitoring skills, he or she will be able to increase the likelihood of developing more peer interactions in the future. Another self-monitoring skill, students can learn to use is a visual support that creates opportunities for communication and increases in student independence rather than adult support.

**Visual Supports**

There are many types of visual supports such as PECS, visual schedules and activity schedules. Picture Exchange Communication System (PECS) is a picture program used for children who are nonverbal to communicate their wants and needs (Bondy & Frost, 1994). Cohen and Sloan (2007) emphasize the need to develop visual supports to meet individual needs based on the skill level, age, and interests of the child. A few guidelines to consider when choosing visual supports are durability, portability, clarity and size, age appropriateness, and response effort required to use the visual support (Cohen et al.). Visual schedules help anticipate the order of events and activities and increase independence (Cohen et al.). Teachers use visual schedules to communicate to the students what activity they will be working on and what activity will take place next, to specify when an activity is finished, and to indicate any changes that might occur in the regular schedule (Meadan, Ostrosky, Triplett, Michna, & Fettig, 2011). Visual
schedules using the first/then approach prompt the child to follow a set routine by completing one task at time (Meadan et al.). When students are guided with visual supports they are less likely to depend on adult support via prompting and more likely to figure things out independently (Meadan, et al.). Visual supports focus on building independence of the student rather than on adult assistance. Another study describes a visual cueing strategy used to increase what events they were able to say they did that day (Murdock & Hobbs, 2011). The results demonstrated the students were able to communicate their days not only to school workers, but also to their parents as well. A visual cueing strategy incorporates the individuals to combine pictures symbols and hand drawings with written comments to create a schedule that the students will use throughout the day (Ganz, 2008). Similarly, activity schedules use either pictures or written comments for each activity to ease transitions and help the student focus on one activity at a time.

**Activity Schedules.** Activity schedules are another form of visual support in which students who have difficulty with transitions and remaining on task can use in the classroom. Lequia, Machalicek and Rispoli (2012) described how activity schedules help reduce challenging behaviors (such as destructive behavior, tantrums, elopement, noncompliance, self-injurious behavior, verbal and physical aggression) in individuals with autism spectrum disorder. The study reviewed 43 children aged 3 to 18 years old who used activity schedules which consisted of pictures, drawings of lines and videos to reduce challenging behaviors (Lequia et al.). Participants of the study showed increases in self regulation, independence, comfort ability with transitions, and appropriate play skills among peers after using activity schedules. Activity schedules are used to increase compliance and on task behavior in the classroom and during transitions. These activity
schedules used least-to-most prompting and reinforcement to guide the participants through the schedule, since the ages of the participants ranged from 3 to 18 years old. Furthermore, Koyama and Wang (2011) discuss the effectiveness of activity schedules in 69 children with autism and other developmental disabilities ranging in the age from preschool to adults in the areas of independence and time on task by using the activity schedules in easing transitions between activities. The activity schedules were able to reduce disruptive or self-injurious behavior when the students had activity schedules to guide the participants on activities and changes in the schedule. Banda, Grimmett, and Hart (2009) provide insightful strategies to reducing transition difficulties through “Choice making, incorporating preferred activities, using behavioral momentum, or high probability strategies and reinforcing appropriate transition behaviors (p.17).” Each of these insightful strategies increases the chances a student with autism will be become more willing to follow transitions with more ease and compliance. Activity schedules provide predictability throughout the student’s day and guide the student to anticipate any future changes in the day (Banda et al.). As students with autism often struggle to deal with transitions, activity schedules provide the predictability of a planned routine throughout the day. Depending on the age of the student with autism, they can have a notebook with one activity with Velcro on the back for each page, line drawings for each activity or a written schedule (Banda, et al).

**Summary**

Instructional strategies and behavior interventions will provide general education teachers with the necessary training to effectively provide an equal education for all students particularly students with autism spectrum disorder. It is estimated that one in every 88 children in the United States is diagnosed with autism (Baio, 2012). As the
increase in the number of children with autism enter the schools, general education
teachers need to be prepared to educate these students effectively with training in
instructional strategies and behavior interventions. It is important for schools to provide
workshops geared toward the growing needs of students with autism spectrum disorder.
Not only will the workshop meet the needs of all students but it will build a safe and
welcoming classroom environment.
CHAPTER III
METHODOLOGY

Introduction

The alarming rate of children diagnosed with autism spectrum disorder is rapidly increasing, and the primary solution to solve this problem is to better equip general education teachers with workshops that focus on behavior, and instructional strategies. Autism spectrum disorder will vary from individual to individual in severity from mild, moderate, to severe. Understanding how to effectively instruct each individual with autism requires training for general education teachers who deal with the process of inclusion of students with high functioning autism in the classrooms. One behavior intervention that has led the way in quality behavior intervention is Applied Behavior Analysis (ABA) which is evidence-based and backed by the National Standards. The behavior interventions chosen for the project are based on practices of Applied Behavior Analysis and have been researched in various studies.

This graduate project will consist of a workshop for general education teachers with a history of ABA, behavior interventions, instructional strategies, and visual supports for students aged twelve to eighteen years old with mild to moderate autism. This chapter will discuss the process for the development of behavior interventions, instructional strategies, the intended target population for this project, qualifications of project presenters, as well as how, where and under what circumstances the project is to be carried out.
Development of the Project

The project goal is to focus on autism and how it affects the schools-in particular; the general education teachers can become overwhelmed with large class sizes and the inclusion of students with autism spectrum disorder. With the increasing rate of autism spectrum disorder in California alone, it is expected that the education system there will serve a population of 70,000 individuals with autism spectrum disorder by June 2012 (Cavagnero, 2008). It seems that most general education teachers at any grade level may display a smaller or lesser amount of knowledge when it comes to instructional strategies for students with ASD (Ciccantelli, 2011). Research shows that all three participant groups came to the same conclusion that training is the essential ingredient for an effective educational program for children with ASD (Nickels, 2010). Furthermore, general education and special education teachers mentioned that if school systems are going to value the longevity of student progress, and provide the training for teachers with students with ASD, then there needs to be required opportunities of on-going professional development (Nickels, 2010). In order to meet the needs of students with autism, there needs to be a team of collaborative teachers, school personnel, and parents working together to achieve a common goal.

Intended Audience

This project is focused on educating general education teachers on the increasing number of children with mild to moderate autism and what instructional strategies these teachers can use in the classrooms to help these students. Teachers, aides, school counselors, and administrators would benefit from learning about behavior strategies that can be implemented in the classrooms and how effective each intervention is in meeting
Individual Education Plan goals for each student. It will give each individual that interacts with a student with autism the tools to create an environment where all students’ needs are met and where all students can work cohesively together regardless of disabilities.

**Personal Qualifications**

Board certified behavior analysts (BCBA) will help train the teachers. Presenters will instruct and provide detailed examples for general education teachers in understanding the valuable role of teachers in working with children with autism. It is important for general education teachers to have time to role play some of the programs like shaping, prompting, choice making, and functional communication training.

**Environment and Equipment**

The workshop will take place in a quiet space such as a classroom. If a classroom is not available, any conference room or auditorium is efficient as long as there are enough seats and physical space for role plays for general education teachers to move around comfortably. A laptop and projector are required to access the workshop presentation.

**Project Outline**

The workshops will consist of series of four sessions for general education teachers on behavior interventions and instructional strategies for adolescents aged 12 to 18 years old who have mild to moderate autism. It will be facilitated by professionals who are board certified behavior analysts and are trained professionals in the field of behavior analysis. The professionals will discuss topics such as the history of Applied
Behavior Analysis, behavior interventions that are evidence based, and instructional strategies, and visual supports. The information will be provided by handouts and guided activities led by the presenters. Participants will engage in interactive activities to role play and discuss with each other behavior interventions and instructional strategies. At the beginning and end of the presentation there will be a short questionnaire to be distributed to the general education teachers that will serve to provide changes to the workshop for future use.

I. The workshops will begin with an overview of the topics to be discussed which will take about 1 minute.
II. Next, the presenters will distribute pre-questionnaire survey about the workshop which should take about 5 minutes.
III. Then the presenters will welcome all participants to the workshop for about another minute.
IV. Each workshop will discuss the strategies along with activities for that day which will take about an hour.
V. Then, the presenters will answer any more questions.
VI. The workshop will end with participants completing the post-questionnaire survey about the workshop which should take about 5 minutes.
CHAPTER IV
EVALUATION AND RECOMMENDATIONS

Summary

The significance of autism spectrum disorder is a widespread issue that calls attention to the schools to provide adequate training for general education teachers in instructional strategies for students with mild to moderate autism. Applied Behavior Analysis plays an important role as an evidence-based behavior intervention that is founded on pioneers like Ivan Pavlov, B.F. Skinner, and Ivar Lovaas who have contributed to the understanding of behavior. Individuals with autism spectrum disorder need to be taught behavior interventions like extinction, shaping, positive and negative reinforcement, errorless learning, prompting, and punishment to effectively coexist in general education classrooms.

Evaluation

The workshop’s effectiveness will be evaluated based on pre- and post-participation questionnaires given to the general education teachers before and after the workshop. Results from the workshop will produce general education teachers who are prepared to deal effectively with noncompliance and disruptive behaviors from students with mild to moderate autism. The instructional strategies and behavior interventions taught during the workshop are meant to anticipate the needs of general education teachers’ reactions to behavior problems and noncompliance in and out of the classroom. It is designed to produce better trained general education teachers who will meet the needs of all students and provide collaboration between school personnel and parents.
The workshop can also be evaluated by the number of teachers who recognized the efficacy of general education teachers’ ability to implement the workshop teaching strategies in the classroom. Likewise, the series of workshop improves the classroom management skills of the general education teachers and how the teachers are able to better understand the needs of students with autism.

Discussion

The project is founded on the principles of Applied Behavior Analysis which is based on the National Standards of autism. Results from the workshop should conclude that the general education teachers will have stronger classroom management skills, and an increase in compliance with children with autism. The workshop will affect the way general education interact effectively with students with autism, and how general education students are able to positively interact with students with autism. Therefore, once general education students are able to accept, and build relationships with students with autism, it builds a school culture of acceptance and understanding. If one school can build the school culture to be one of acceptance, then every school has the ability to do so well.

Future Work and Research

The ultimate goal of this workshop is for every school in every district in California to have a professional development workshop once a year focused on educating all school personnel, specifically general education teachers on instructional strategies for students with autism. It is a game changer for schools to have this workshop conducted yearly to prepare teachers with the most recent behavior interventions. Since, teachers are the gatekeepers between the parent and the school,
educating the parents with instructional strategies and behavior interventions that can provide the parents with the skills to implement them in the home and the community. Educators must become trained to teach our future leaders, which are the children, by being prepared to meet the needs of all students, especially students with autism.
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APPENDIX A

WORKSHOP ONE: UNDERSTANDING BEHAVIOR INTERVENTIONS

OBJECTIVES

2. Learn how to effectively implement behavior interventions.
3. Learn to teach other colleagues skills learned from the behavior interventions.

MATERIALS NEEDED

Handouts on Extinction
Handout on Prompting Behavior

INSTRUCTIONAL FORMAT

Welcome all participants

Welcome all participants to the workshop and discuss with them the objectives.

Activity one

Explain extinction and how it is the stop in reinforcement of responding to maladaptive behavior. It has been show that extinction does not lower the frequency of inappropriate behavior.

Go over the Extinction handout and answer any questions the participants may have.

Have teachers get in groups of two or three and have come up with a definition for extinction.

Discuss with the large group the definitions of extinction that each group created.

Activity two

Explain shaping and how it is alternating reinforcements for successful approximations toward a desired response. It builds independence in the child which will decrease the need for adult support.

Have teachers do role plays having one person take the lead teacher role and the rest are students in the classroom. The students will act out and the lead teacher has to learn how to deal with negative behavior. At the end, teacher role and students’ role discuss how it felt to play that role and how can they better understand that the child with autism.

Activity three

Discuss positive and negative reinforcement. Positive reinforcement is widely used among teachers to acknowledge the students who are on task and working. It is often combined with prompting (which is a gesture or verbal approximation) and builds compliance.
Have teachers talk about ways they use positive reinforcement and negative reinforcement in the classroom. Then have teachers see brainstorm a definition of positive reinforcement and negative reinforcement.

**Activity four**

Explain errorless learning and how it’s a teaching strategy that is used for students with autism to assist them in reducing the number of incorrect responses.

Have teachers brainstorm ideas of ways they can implement errorless learning in the classroom with students with autism.

**Activity five**

Go over the Handout on Prompting Behavior and answer any questions the teachers might have.

Have teachers get in groups of two to three and discuss responses to most to least prompting example and to come up with some examples of prompt fading that could be done in the classroom.

**Closing thoughts**

Discuss how the teachers felt about the workshop and answer any questions they might have.
TARGET: TEXAS GUIDE FOR EFFECTIVE TEACHING EXTINCTION

BRIEF INTRODUCTION
Extinction refers to an applied behavior analysis (ABA) procedure whereby formerly reinforced behavior is no longer reinforced. Extinction can occur when teachers withhold identified reinforcers for a target behavior that was previously reinforced.

DESCRIPTION
- According to Miller (2006), extinction occurs when an event that follows a behavior is systematically stopped and the rate of the behavior decreases. In other words, extinction involves withholding or terminating the consequence of previously reinforced behavior to weaken an undesired behavior. Extinction has been used to decrease the occurrence of a variety of problem behaviors.
- Extinction procedures may take different forms.
- The first form of extinction procedure is related to positive reinforcement (Cooper, Heron, & Heward, 2007). For example, a child with autism drops his pencil in order to get attention from the teacher. If the teacher picks up the pencil and smiles at the child, he may be reinforcing the behavior and the behavior is likely to increase. If the teacher ignores the behavior, the child will eventually stop dropping his pencil.
- When behaviors are maintained by negative reinforcement, the form of extinction procedure is different. For example, Mike spit on his worksheet when he did not want to do his work. When this happened, Ms. Smith would send him to a thinking chair as a punishment. However, for Mike, sitting in the thinking chair was an opportunity to avoid completing the worksheet. Ms. Smith realized that his problem behavior was designed to escape the task. When, instead, Ms. Smith ignored his negative behavior (extinction) and reinforced him for completing problems on his assignment, Mike’s spitting behavior was gradually decreased.
- During the extinction process, extinction bursts may occur. An extinction burst is a temporary increase in the frequency, intensity, or duration of the undesired behavior as soon as extinction begins. It is critical that the teacher truly continue the extinction process that has been developed. Otherwise, the undesired behavior may remain at the increased level of intensity.

STEPS
Teachers can use extinction procedures as follows:
1. *Identify the relationship between reinforcer and the reinforced behavior.* Problem behaviors can be reinforced by negative reinforcement, positive reinforcement, or automatic reinforcement. It is important to differentiate reinforcers for the problem behavior.
2. *Discontinue the previously provided reinforcers.* After identifying reinforcers, teachers need to analyze the function of reinforcers. By removing the reinforcers or by preventing a removal of aversive stimuli, teachers can disconnect the relationship between reinforcers and problem behaviors so that the target behavior can be reduced.
3. *Monitor the rate of problem behavior.* The child’s problem behavior must be observed and the progress of the extinction procedure must be monitored. It is important to know that all members involved in the procedure share and follow the rules. Once the child connects the relationship between his behavior and reinforcers, it takes even longer to disconnect the reestablished connection.
BRIEF EXAMPLE
• Mr. Reid, a second-grade teacher, had difficulty dealing with Logan’s interrupting behavior during class. Logan asked several irrelevant questions while Mr. Reid was lecturing. Mr. Reid realized that he answered Logan whenever he asked questions in class, and through a functional behavior assessment found that Logan’s interrupting behavior was to obtain the teacher’s attention.
• Mr. Reid began to ignore Logan’s irrelevant questions and reinforced appropriate questions. After one week, Logan’s interrupting behavior gradually decreased. Finally, Logan stopped asking irrelevant questions while Mr. Reid was lecturing.

SUMMARY
Extinction is a procedure in which reinforcement for a previously reinforced behavior is discontinued. The extinction procedure itself is not an approach to prevent the occurrence of a problem behavior. Basically, the environment is changed through the extinction procedure so that the rate of problem behavior is decreased.

RESOURCES AND MATERIALS
• Children’s Intervention Learning and Development: http://www.childmdim.com/resources/sub-page-2/aba-approach/ This link takes the user to a page that defines and gives an example of using extinction; contains resources for parents and educators.
• National Professional Development Center on Autism Spectrum Disorders. Evidence-Based Practice: Extinction: http://autismpdc.fpg.unc.edu/content/extinction
• Teaching Children with Autism: http://www.polyxo.com/discretetrial/difficultbehaviors.html. Here the user will find a succinct summary of extinction as well as other ABA strategies.

GENERAL RESOURCES
• Autism Internet Modules (AIM) www.autisminternetmodules.org. The Autism Internet Modules were developed with one aim in mind: to make comprehensive, up-to-date, and usable information on autism accessible and applicable to educators, other professionals, and families who support individuals with autism spectrum disorders (ASD). Written by experts from across the U.S., all online modules are free, and are designed to promote understanding of, respect for, and equality of persons with ASD.
• The Autism Web Course: http://cdd.unm.edu/swan/autism_course/about/index.htm. This web course was developed out of materials from the Interactive Collaborative Autism Network (ICAN). The Autism Programs at the University of New Mexico has updated and added information to this web course.
  - Characteristics
    - Assessment
    - Academic Interventions
    - Behavioral Interventions
- Communication Interventions
- Environmental Interventions
- Social Interventions
- Family Support Suggestions

- Indiana Resource Center for Autism (IRCA)
  http://www.iidc.indiana.edu/irca/fmain1.html. The Indiana Resource Center for Autism staff’s efforts are focused on providing communities, organizations, agencies, and families with the knowledge and skills to support children and adults in typical early intervention, school, community, work, and home settings.


- Texas Statewide Leadership for Autism www.txautism.net. The Texas Statewide Leadership for Autism in conjunction with the network of Texas Education Service center with a grant from the Texas Education Agency has developed a series of free online courses in autism. Please check the training page, www.txautism.net/training.html, for update lists of courses, course numbers and registration information. Current courses include the following:
  - Asperger Syndrome 101
  - Augmentative and Alternative Communication and the Autism Spectrum
  - Autism for the General Education Teacher
  - Autism 101: Top Ten Pieces to the Puzzle
  - Classroom Organization: The Power of Structure for Individuals with ASD
  - Communication: The Power of Communication for Individuals with ASD
  - Futures Planning for Students with Autism Spectrum Disorder

(www.txautism.net/docs/Guide/Interventions/Extinction.pdf)
PROMPTING BEHAVIOR

- **Physical Prompts** - The most intrusive / restrictive type of prompt. Ranges from full physical guidance to a partial physical prompt such as a light touch to encourage a response.
- **Verbal Prompts** - Verbal instruction to perform the required action.
- **Visual Prompts:**
  - **Object Prompts** - The object acts as a stimulus for the response.
  - **Gestural Prompts** - A point or other gesture to prompt the expected response.
  - **Pictorial (two-dimensional) prompts** - A picture or other two dimensional representation (words, symbols, etc.) acts as a stimulus for the response.
  - **Positional Prompts** - Positioning the correct response in a way that the student is more likely to choose it (often used in direct instruction situations).
  - **Model Prompts** - Demonstration of the behavior to be performed (i.e., showing how to perform the behavior/action).

**Most-to-Least Prompting**

- Use when the student has minimum influence over behavior (adult maintains maximum control over behavior)
- Minimizes error (errorless learning)
- When used with physical prompting: Referred to as Graduated Guidance
- High risk of prompt dependency

**Least-to-Most Prompting**

- Allows the child maximum influence over behavior
- Student may experience more errors
- May need to increase level of prompting if errors continue
- Lower risk of prompt dependency

**Prompt Fading**

- Systematically fade prompts as soon as possible to avoid prompt dependency
- Plan for prompt fading as part of the teaching plan

(http://www.gvsu.edu/autismcenter/epli-coach-279.htm)
APPENDIX B

WORKSHOP TWO: IMPLEMENTING INSTRUCTIONAL STRATEGIES

OBJECTIVES

1. Learn valuable instructional strategies.
2. Learn to implement the instructional strategies
3. Learn to teach other colleagues skills learned from the instructional strategies.

MATERIALS NEEDED

Handouts on Choice making
Handout on Helpful websites for Choice making
Handouts on Functional Communication Training
Sheet of Examples for group work
Sheet of Possible Answers to Examples for group work
Handouts on Differential Reinforcement of Alternative Behavior
Chaining Data sheet
Shaping Exercise

INSTRUCTIONAL FORMAT

Welcome all participants

Welcome all participants to the workshop and discuss with them the objectives.

Activity one

Explain choice making and how it increases child’s compliance and gives the child control in the decision making process.

Have teachers work in groups of two or three people and discuss when to use choice making and any examples of successful attempts of using choice making in the past.

Activity two

Explain functional communication training and how it is a process of replacing inappropriate behavior with appropriate responses. It builds independence in the child and uses the language the child already uses to request for breaks, ask for help etc.

Go over the Handout on Functional Communication Training.

Have teachers work in groups of two and have them brainstorm appropriate responses that could be taught to students they might have or will have in the future.
Activity three

Discuss differential reinforcement of alternative behavior and how it allows students to change inappropriate behavior with alternative responses. It teaches the student variety of skills, instructional demands are expected and teaches the student how to appropriately ask for a break when frustrated or upset.

Have teachers get into work into groups of three to four and give them Examples sheet and have them figure out alternative behaviors.

Go over the alternative behaviors based on the examples.

Distribute Handout on Differential Reinforcement of Alternative Behavior.

Activity four

Explain task analysis and how effective it is in breaking down steps. Describe three types of task analysis which are forward chaining, backward chaining and full task presentation.

Go over both the Shaping exercise and Chaining Data sheet.

Have teachers fill out the Chaining Data sheet based on the Shaping exercise. Once teachers complete the Chaining data sheet have them get into groups of two and have then compare their findings.

Activity five

Role play with a partner using your chaining data sheet on your partner switching each role by if first time you are the student then the next time you should be the teacher. After discuss as the student role what could the teacher have changed or altered.

Closing thoughts

Discuss how the teachers felt about the workshop and answer any questions they might have.
TARGET: TEXAS GUIDE FOR EFFECTIVE TEACHING CHOICE MAKING

BRIEF INTRODUCTION
Research has shown that choice-making opportunities are effective in reducing problem behavior and increasing task engagement. As a preventive intervention, choice making enables students to participate in activities, including non-preferred or less preferred activities.

DESCRIPTION
• Choice making is an effective intervention for increasing the active participation of individuals with autism. For example, providing choice-making opportunities has demonstrated successful outcomes to manage problem behavior. Choices indicating personal preferences can also function as powerful reinforcers. Instructors and parents can use various options of choice to encourage individual performance. For example, if a student has a chance to choose preferred rewards, a target behavior is more likely to occur.
• Instructors can gradually expand the number of choices based on the student’s needs and level of functioning, and students can respond in various ways by pointing at objects or pictures or by verbalizing their choices. Choice making can be a reinforcer as well as a desired behavior associated with other reinforcers (i.e., when a student responds appropriately to making a choice, an instructor allows the student to play with a computer for 10 minutes).
• In many cases, choice making is used with other visual supports (i.e., activity schedules or picture boards) and verbal or physical prompts to increase engagement in activities.
• Peck et al. (1996) described five types of adult responses in their procedure of choice-making treatment: (a) providing choices (i.e., adults give a choice to a student by saying “Which one do you want? You choose”); (b) choice prompts (i.e., adults provide verbal or physical prompts by indicating the options or by placing the student’s hand on the choice board or objects); (c) task prompts (i.e., adults direct the option by saying “Take this” and providing physical guidance); (d) social interactions (i.e., positive social contact with the student, including praise, talking about the objects or activities, smiles, tickles, or hugs); and (e) redirection or block (i.e., restricting the student’s hand or correcting his posture to see the options when the student’s response was inappropriate or irrelevant to the task).
Examples of choice making include:
• Choosing own clothes or shoes daily at home
• Selecting own rewards (juice or apple)
• Identifying activities or materials for a given activity
• Deciding menu at a restaurant
• Choosing colors for writing or painting
**STEPS**
The following are general steps for implementing choice making:
- Assess the student’s needs prior to teaching choice making. It may be necessary to teach prerequisite skills if he does not understand the association between a choice (a stimulus) and a consequence of choice making.
- Identify the target behavior to increase or decrease.
- Provide choices.
- Evaluate the procedure and the student’s progress.

**BRIEF EXAMPLE**
- Ashley, a second grader, engages in severe self-injurious behavior (i.e., head or ear hitting), tantrums and meltdowns, and throwing things. During free play time, she usually roams the room and does not engage in play with her peers. She has limited verbal language and uses simple symbols, such as yes/no pictures, by pointing. Ms. Collins prioritized the target behavior as head hitting, defined as Ashley using her hand(s) and making forceful contact with her head. Ms. Collins observed Ashley and conducted a functional behavior assessment to identify the antecedent and the consequence of the behavior. She found that Ashley almost always engaged in self-injurious behavior when given a difficult task.
- Ms. Collins planned to provide choice-making opportunities for Ashley when she is given a task. The appropriate choice response was defined as pointing to one of two pictures when the teacher presents the picture choice-board to Ashley. Ms. Collins also used verbal and physical prompts based on Ashley’s response. When Ashley performs the appropriate response, she is given free time to roam the room for five minutes. After collecting data about the frequency of target behavior, Ms. Collins and paraprofessionals were excited to see how Ashley’s self-injurious behavior, as well as emotional meltdowns, had decreased.

**TIPS FOR MODIFICATION**
AAC devices can be very useful, especially for students who have difficulties using verbal communication skills to make their choices. Based on students’ abilities, pictures, symbols, and tangible objects may be used.

**SUMMARY**
Choice making is an effective and commonly used strategy to decrease problem behavior and increase participation in activities. Teachers and parents can use choice making in various situations based on the child’s level of language or needs. Prompting is used to encourage the student to perform appropriate responses.

(www.txautism.net/docs/Guide/Interventions/ChoiceMaking.pdf)
Helpful Websites for Choice Making

Choice Boards

Choice boards are a visual tool with two or more choices for an individual. It varies with samples to print out and view. Or even to suggest parents can print out these choice boards as well.


Choice-Making Strategies

Article is written to parents but it could be used for teachers as well.

http://cecp.air.org/familybriefs/docs/Choice_at_home.pdf
BRIEF INTRODUCTION
The majority of students with autism experience social and communication challenges that require direct intervention. Strategies that are positive and fit within the child’s typical environments have been shown to increase student skills in this area.

DESCRIPTION
- Functional communication is a positive behavior support (PBS) intervention designed to reduce problem behaviors by replacing them with meaningful or functional communication – whether verbal or gestural. In other words, rather than students having a tantrum or displaying other disruptive behaviors when frustrated at not getting their needs met, they communicate their needs in a more socially acceptable way through the use of words, alternative communications systems, such as the Picture Exchange Communication System (PECS), or gestures, such as pointing.
- The emphasis of the communication is on functionality as opposed to form. Functional communication training relies on an accurate understanding of the function behind the problem behavior (attention seeking, access to preferred items, escape/avoidance, etc.) in order to effectively eliminate it.

STEPS
The following steps should be used when implementing a functional communication approach.
1. Identify why the behavior is occurring of the problem behavior through: (a) interview with the student, teachers, and parents; (b) observation of the student on several occasions in a variety of settings; and (c) collection of data regarding the frequency and specific circumstances under which the behavior/s occur. At this point a hypothesis is formed about the cause or function of the behavior.
2. Match the function of the behavior to the message of the alternative communication that will be taught. For example, if the function of a student’s tantrum is determined to be escape/avoidance, offer the student an effective way to signal the need for a break.
3. Prompt the use of the communication and reinforce the desired behavior with the desired outcome (attention, access to preferred items, breaks). Use ABA/PBS and other strategies to support the communication of individuals with autism.
4. Ignore the problem behavior and prompt the use of the appropriate communication.

BRIEF EXAMPLE
Andrew is a 10-year-old with autism who has few verbal skills and communicates by using objects instead of pictures. His speech-language pathologist and parents wanted to provide additional communication options for him at home and at school. Andrew’s speech-language pathologist created a “What Did You Do in School Today?” packet that contained actual items representing Andrew’s day. At the end of the day, Andrew and his paraprofessional reviewed the packet, and when Andrew got home, his parents and he were able to communicate about the day’s events by referring to the objects in the packet.

(www.txautism.net/docs/Guide/.../FunctionalCommunication.pdf)
Examples of Differential Reinforcement

Directions: Work in group of three to four teachers and create an alternative behavior based on the examples below.

Example #1: Johnny is constantly disrupting the class by yelling out his responses to the teacher when the teacher is addressing the class. What alternative behavior(s) can you come up with for this situation?

Example #2: Tara is out of her seat every five minutes and cannot seem to sit still in the class. What alternative behavior(s) can you come up with for this situation?

Example #3: Kevin interrupts the teacher when the teacher is giving the class directions. What alternative behavior(s) can you come up with for this situation?

Example #4: Ashley gets easily frustrated with math problems and yells out and often disrupts the entire class. What alternative behavior(s) can you come up with for this situation?
Possible Answers to Examples of Differential Reinforcement

Answers may vary with individuals but here the answers are below:

Answer to Example #1: Alternative behavior is hand raising.

Answer to Example #2: Alternative behavior is giving Tara a seat without a chair so she can stand and move around.

Answer to Example #3: Alternative behavior is hand raising.

Answer to Example #4: Alternative behavior is taking a break.
DIFFERENTIAL REINFORCEMENT OF AN INCOMPATIBLE OR ALTERNATIVE BEHAVIOR

FUNCTION OF INTERVENTION:
This intervention was designed to increase rates of appropriate behavior and decrease rates of problem behavior by selectively providing reinforcement only to the desired behavior. There have been many empirical demonstrations of the effectiveness of differential reinforcement (DR) interventions (Cooper, Heron, & Heward, 2007).

BRIEF DESCRIPTION:
- Children will continue to engage in problem behaviors that are reinforced. Therefore, it is important to minimize reinforcement for disruptive behavior to reduce disruptive behavior. Unfortunately, simply removing reinforcement often results in an “extinction burst”.
- Data tell us that about 40% of the time, when an adult makes adjustments to the environment to stop reinforcement for a problem behavior (e.g., ignoring disruptive behavior that the child has been exhibiting to obtain adult attention), the child will escalate disruptive behavior in an attempt to bring back the reinforcement.
- Extinction bursts are very problematic in classroom environments. As such, DR interventions have been developed to concurrently remove or reduce reinforcement for the problem behavior while reinforcing a functionally similar replacement behavior. Thus, the problem behavior diminishes while the child is provided with an alternative (more acceptable) means to access the desired reinforcement.
- To understand DR interventions, consider a child who calls out inappropriately in class for teacher attention. It is understood that the calling out behavior is maintained by the resulting teacher attention.
- Using DR procedures, the teacher would ignore the calling out behavior and only call on the child when she raises her hand (an alternative behavior). Over time the DR procedures will result in higher rates of hand raising and lower rates of calling out. In the end, the child is trained to exhibit the desired behavior when he or she wants teacher attention.
- For example, in-seat behavior is incompatible with out-of-seat behavior. Selecting an incompatible behavior as the replacement behavior minimizes the risk of inadvertently reinforcing the problematic behavior.
- For example, it is possible that the child may raise his or her hand while also calling out. Because hand raising is reinforced with teacher attention, the reinforcer is provided even though the problematic behavior also occurred and is similarly reinforced. If an incompatible behavior cannot be identified, then an alternative behavior will suffice (see 4a below).
PROCEDURES:
1. Identify the consequence that is reinforcing the inappropriate behavior (e.g., verbal praise, escape).
2. Identify an incompatible or alternative behavior that can access the same consequence. Note, identification of an incompatible appropriate behavior is preferred.
3. Begin with a continuous fixed ratio (CFR) DR schedule. The goal of this step is to ensure the child is reinforced for the alternative behavior in the initial stages of the DR intervention.
4. Once the DR schedule has been initiated, the teacher is instructed not to respond to the target problem behavior if it is presented.
   a. If using a DRA procedure and the child exhibits both the problem and alternative behaviors concurrently, the teacher is suggested to reinforce the child but note that the reinforcement it is due to the alternative behavior.
5. After a number of intervention days or sessions (for more severe cases) applying the DR (e.g. 5 days or 20-25 sessions) showing a marked reduction in the problem behavior, start to fade in reinforcement schedule. Note that after the intervention period is complete the desired behavior should continue to be reinforced at an appropriate level for the child and environment. If the desired behavior is not reinforced the child will return to the problem behavior (or some new behavior) to access the desired reinforcement.

CRITICAL COMPONENTS THAT MUST BE IMPLEMENTED FOR INTERVENTION TO BE SUCCESSFUL:
• Successful identification of the reinforcer for the problematic behavior.
• Identification an appropriate incompatible/alternative behavior that the child is capable of doing.
• An initial schedule of DR that ensures that the child will be reinforced when they exhibit the desired behavior. A continuous fixed-ratio schedule is preferred whereby the student receives reinforcement each time the alternative behavior occurs.
• The problem behavior should be ignored once the DR schedule is initiated.
• A fading process of the DR schedule that is gradual enough to not result in the child reengaging in the problem behavior. One way to accomplish this is to make the reinforcement intermittent (so every so many occurrences of the desired behavior are reinforced) and unpredictable or variable such that the child knows that the alternative behavior will be reinforced periodically but is not sure exactly which instance of the desirable behavior will occasion reinforcement.

Chaining Data Sheet

Target skill or behavior:

____________________________________________________________________

Describe each step, in order, for the chained behavior. Then, for each date on which the behavior is practiced, record the level of independence for each step of the chained behavior. Use the following symbols for your records:

| + | Correct, unprompted | V | Verbally Prompted  |
| M | Modeled | P | Physically Prompted (shaped) |

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(http://www.polyxo.com/resources/pdf/chaining_data_sheet.pdf)
Shaping Exercise

Directions:

Please use the student example below when filling out the chaining steps on the blank Chaining Data sheet.

Jasmine is a fourteen year old girl with high functioning autism. She struggles with algebra and solving for x. Here is the problem $3x-5=22$.

Once you are done you will discuss with a partner your findings.
APPENDIX C

WORKSHOP THREE: INTERPRETING VISUAL SUPPORTS

OBJECTIVES

1. Learn valuable visual supports.
2. Learn to implement the visual supports.
3. Learn to teach other colleagues skills learned from the visual supports.

MATERIALS NEEDED

Handouts on Visual Supports

INSTRUCTIONAL FORMAT

Welcome all participants

Welcome all participants to the workshop and discuss with them the objectives.

Activity one

Explain visual supports and how it increases child’s independence rather than adult support and gives the child control in the decision making process.

Go over the Handout on Visual Supports.

Have teachers work in groups of two or three people and discuss when to use visual supports and any examples of successful attempts of using visual supports in the past.

Discuss in whole group the discussion in the groups about visual supports and answer any questions as they come up.

Activity two

Explain visual schedules and how effective it is in creating a schedule for the student with autism.

Have teachers work in groups of two and have them brainstorm appropriate ways of having the schedule visible or accessible so the student does not need to ask any adult for the class agenda.

Closing thoughts

Discuss how the teachers felt about the workshop and answer any questions they might have.
VISUAL SUPPORTS AND AUTISM SPECTRUM DISORDERS

INTRODUCTION
What are visual supports?
- A visual support refers to using a picture or other visual item to communicate with a child who has difficulty understanding or using language.
- Visual supports can be photographs, drawings, objects, written words, or lists.
- Research has shown that visual supports work well as a way to communicate. Visual supports help parents communicate better with their child, and they help their child communicate better with others.

Why are visual supports important?
- The main features of ASD are challenges in interacting socially, using language, and having limited interests or repetitive behaviors.
- Visual supports can help teach social skills and help children with ASD use them on their own in social situations.
- Visuals can promote appropriate, positive ways to communicate.
- Visuals can help them understand what to expect and will happen next and also reduce anxiety.

IF-THEN BOARD
- What is it?
  A First-Then Board is a visual display of something your child prefers that will happen after completing a task that is less preferred.

- When is it helpful?
  - A First-Then Board is helpful in teaching children with ASD to follow directions and learn new skills.
  - A First-Then Board motivates them to do activities that they do not like and clarifies when they can do what they like.
  - A First-Then Board lays the language foundation needed to complete multi-step directions and activities and to use more complex visual systems.

- How do I teach it and use it?
  - Decide what task you want your child to complete first (what goes in the “first” box) and the preferred item or activity (what goes in the “then” box) that your child can have immediately after the “first” task is done.
  - This preferred item/activity should be motivating enough to increase the likelihood that your child will follow your direction. Put the visuals on the board (e.g., photos, drawings, written words) that represent the activity you identified. Present the board to the child with a brief, verbal instruction.
  - Try to use the least amount of words possible.

- What if challenging behaviors occur?
• If challenging behaviors occur, continue by physically prompting your child to complete the “first” task.
• Keep your focus on the task rather than on the challenging behavior.
• If challenging behaviors become more difficult to control, it may be appropriate to consider behavioral consultation with a professional to address these behaviors directly.

VISUAL SCHEDULE

What is it?
• A visual schedule is a visual representation of what is going to happen throughout the day or within a task or activity.

When is it helpful?
• A visual schedule is helpful for breaking down a task that has multiple steps to ensure the teaching and compliance of those steps.
• It is also helpful in decreasing anxiety and rigidity surrounding transitions by communicating when certain activities will occur throughout the day or part of the day.

How do I teach it and use it?
• After your child understands the concept of sequencing activities through the use of a First-Then Board, you can develop a more complex schedule for a series of activities during the day.
• Choose activities that really will happen in that particular order. Try to mix in preferred activities with non-preferred ones.
• The schedule can be portable, for example, on a binder or clipboard.
• When it is time for an activity on the schedule to occur, cue your child with a brief, verbal instruction. For example, say “Check the schedule.”
• At first, you may need to physically guide your child to check the schedule (e.g., gently guide by shoulders and prompt your child to point to the next activity on the schedule). You can gradually decrease physical prompts as your child begins to use the schedule more independently.
• When a task is completed, cue your child to check the schedule again, using the procedure described above, and transition to the next activity.
• Provide praise and/or other positive reinforcement to your child for following the schedule and for transitioning to and completing activities on the schedule.
• Mix variability into the schedule by introducing a symbol that represents an unknown activity (e.g., “oops” or “surprise activity”).

What if challenging behaviors occur?
• Keep your focus on the task rather than on the challenging behavior.
• Then transition to the next activity as communicated by the schedule and still provide the reinforcing item or activities indicated on the schedule, since the
focus of the schedule is on completing the tasks, and not on addressing challenging behaviors.

- If you think challenging behaviors may happen, begin by introducing the visual schedule during tasks that your child usually completes willingly and successfully.

**VISUALLY SETTING PARAMETERS**

- **What is it?**
  - Setting parameters involves using visuals to set clear boundaries around items or activities and to communicate basic expected behaviors, like waiting.

- **When is it helpful?**
  - Visually setting parameters is helpful in communicating limits that are part of an activity and that may seem unclear to your child.

- **How do I teach it and use it?**
  - Begin to teach the use of these visuals in situations that have clear, defined, brief parameters. As your child understands these visuals better, gradually increase their use in more long-term activities and with more abstract parameters.

- **Examples:**
  - **Physical boundaries:** Place the visual on physical boundaries that already are defined (e.g., a door) and refer to it when the rule is followed.
  - **Limited availability:** Decide the number of times or length of time that the item or activity is available.
  - **Wait:** Begin by presenting the symbol for “wait” for a very brief amount of time before your child can have a preferred item or activity.

As the child learns to use visuals for setting parameters, gradually increase the length of time or the number of situations in which the child is expected to wait for items or activities.

**RESOURCES FOR USING VISUAL SUPPORTS:**

- [www.do2learn.com](http://www.do2learn.com)
- [card.ufl.edu/content/visual.html](http://card.ufl.edu/content/visual.html)
- [www.kidaccess.com/index.html](http://www.kidaccess.com/index.html)
APPENDIX D

WORKSHOP FOUR: ASSESSING BEHAVIOR AND APPLIED BEHAVIOR ANALYSIS

OBJECTIVES

1. Learn the history of applied behavior analysis.
2. Learn to implement the three term contingency.
3. Learn to teach other colleagues skills learned from assessing behavior.

MATERIALS NEEDED

Sheet on A-B-C Analysis Sample

Handout on A-B-C Chart

Sheet on Examples of A-B-C Analysis

Sheet on Answers to A-B-C Analysis

INSTRUCTIONAL FORMAT

Welcome all participants

Welcome all participants to the workshop and discuss with them the objectives.

Explain the history of applied behavior analysis and the key pioneers who have provided the framework of Applied Behavior Analysis.

ABA

ABA is evidence based and the Association for Behavior Analysis reports that ABA has been the treatment for behavior problems for over sixty years.

Theorists

- Discuss Pavlov’s study on classical conditioning.
- Talk about B.F. Skinner’s study on operant conditioning.
- Describe the study by Ivar Lovaas who implemented the early intensive behavioral intervention which consisted of 40 hours per week of intervention with curriculum of language skills, and intensive applied behavior analysis.

Activity one

Explain the three term contingency which is antecedent, behavior, and consequence, and how effective it is in assessing the function of the behavior. A is antecedent. What happens right before the problem behavior. B is target behavior. What is the child doing that is disruptive or noncompliant? For example, try phrasing the behavior with any
action verb like yelling, hitting, eloping, etc. C is consequence. After the behavior occurred what was the consequence for the behavior.

Have teachers work in groups of two to three and have them identify the antecedent, behavior and consequence of Examples of A-B-C.

**Activity two**

Have teachers work in groups of three to four and have the group members’ chose a scenario and act out one appropriate way to deal with the scenario and one inappropriate way to deal with the scenario.

**Closing thoughts**

Discuss how the teachers felt about the workshop and answer any questions they might have.
## A-B-C ANALYSIS SAMPLE

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
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<tbody>
<tr>
<td>Demands placed on Derek in classroom.</td>
<td>Derek hits and kicks peers.</td>
<td>Peers avoid Derek.</td>
</tr>
<tr>
<td>Teacher initiates classroom transition. “Circle time is finished. It’s time to go to the water table.”</td>
<td>Derek says, “No, I don’t want to” and then kicks peer.</td>
<td>Peer cries and runs away, teacher reprimands Derek, and gives him a timeout.</td>
</tr>
<tr>
<td>Class begins water table activity.</td>
<td>Derek hits peer.</td>
<td>Teacher gives Derek a timeout.</td>
</tr>
<tr>
<td>Teacher gives Derek choice of different classroom activities.</td>
<td>Derek chooses preferred activity (e.g., blocks versus water table).</td>
<td>Derek participates in preferred block activity without hitting or kicking peers.</td>
</tr>
<tr>
<td>Derek consistently participates in activities without hitting or kicking peers.</td>
<td>Derek participates appropriately in classroom activities.</td>
<td>Peers begin asking Derek to play with them.</td>
</tr>
</tbody>
</table>

(https://docs.google.com/viewer?a=v&q=cache:6ziyyeljukoj:myweb.usf.edu/~aheindel/a-b-c%2520analysis%2520sample.doc+antecedent+behavior+consequence+chart+example&hl=en&gl=us&pid=bl&srcid=adgeesicch8d91ji-_yrwckgiarrahiw3peziyps7_hzlwf4b4d4o-v1akkt3pnsAeld4pqycaolegxg2ddzroh-fiqx3ntup6arcashrhnpxwhub_exifgvd69ogqlbygmaddebz&oacute;sig=ahietbtqhfmofof-i95pbbmqtmv50gsfoxq)
ABC ANALYSIS

Date _____/____/_____  Name of Person Observed: ________________________________

Observer: ________________________________

Behavior(s):

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
<th>Possible Function</th>
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(http://abama.webs.com/datasheets.htm#.T5sJSZC4YcA.email)
EXAMPLES OF A-B-C ANALYSIS

Directions: Figure out the antecedent, behavior and consequence in the scenarios given below.

Scenario 1: Chris walks into classroom, sees a student in his seat, and pushes the student out of his seat and the teacher gives Chris and the boy lunch detention.

Scenario 2: Camille is finished with class work and sits at desk singing. The teacher asks Camille to stop and she sings louder.

Scenario 3: Jack is playing a game of soccer and another kid steals the ball from him. So Jack hits the kid in the stomach to get the ball and score a goal for his team. The coach blows the whistle and has Jack sit on the bench for the remainder of the game.

Scenario 4: Nina is at lunch in the cafeteria and Brian walks by and she starts pulling his shirt because she has a crush on Brian. Brian asks her to stop then she hits Brian.

Scenario 5: Eddy is on the bus and he always stands up and jumps around when the bus stops at a stop sign. The bus driver tells Eddy to sit down but Eddy shouts louder.

Scenario 6: At P.E. Stefan would take off his shoes and walk barefoot when the class is outside on the grass. The P.E. coach asks Stefan to put his shoes on and Stefan would run away from the P.E. coach.
Answers to the Examples of A-B-C Analysis

Scenario 1: Chris walks into classroom, sees a student in his seat, and pushes the student out of his seat and the teacher gives Chris lunch detention.

Answer: Antecedent: Chris comes in classroom, Behavior: Chris Pushes the student, and Consequence is Chris gets lunch detention.

Scenario 2: Camille is finished with class work and sits at desk singing. The teacher asks Camille to check her work.

Answer: Antecedent: Camille finished with class work, Behavior: Camille is singing, and Consequence is the teacher reminds Camille to go over her class work.

Scenario 3: Jack is playing a game of soccer and another kid steals the ball from him. So Jack hits the kid in the stomach to get the ball and score a goal for his team. The coach blows the whistle and has Jack sit on the bench for the remainder of the game.

Answer: Antecedent: Kids playing soccer Behavior: Jack hits another kid and Consequence is Jack sits on bench for rest of the game.

Scenario 4: Nina is at lunch in the cafeteria and Brian walks by and she starts pulling his shirt because she has a crush on Brian. Brian asks her to stop then she hits Brian.

Answer: Antecedent: Nina sees Brian, Behavior: Nina pulls Brian’s shirt, and Consequence is Nina hits Brian.

Scenario 5: Eddy is on the bus and he always stands up and jumps around when the bus stops at a stop sign. The bus driver tells Eddy to sit down.

Answer: Antecedent: Bus stops at a stop sign, Behavior: Eddy stands and jumps around, and Consequence is Eddy is asked to sit down.

Scenario 6: At P.E. Stefan would take off his shoes and walk barefoot when the class is outside on the grass. The P.E. coach asks Stefan to put his shoes on.

Answer: Antecedent: At P.E. class, Behavior: Stefan takes off his shoes, and Consequence is Stefan is asked to put his shoes on.
APPENDIX E

PRE PARTICIPATION QUESTIONNAIRE

1. Do you think you need to learn more about such topics as behavior interventions and instructional strategies for children with autism?  Y  N
2. Do you know about applied behavior analysis?  Y  N
3. Do you know about the three term contingency (ABC)?  Y  N
4. Do you know about the works of Pavlov, Skinner and Lovaas?  Y  N
5. Can you think of three behavior interventions used for students with autism?  Y  N
6. Can you think of three instructional strategies used for students with autism?  Y  N
7. Have you ever used positive reinforcement or punishment in the classroom?  Y  N
8. Have you ever offered choices when working with children with autism?  Y  N
9. Do you know about functional communication training?  Y  N
10. Do you know about differential reinforcement of alternative behavior?  Y  N
11. Do you use visual schedules in the classrooms?  Y  N
APPENDIX F
POST PARTICIPATION QUESTIONNAIRE

1. Do you think you learned a good amount of information about such topics as behavior interventions and instructional strategies for children with autism? Y N

2. Do you know about applied behavior analysis? Y N

3. Do you know about the three term contingency (ABC)? Y N

4. Do you know about the works of Pavlov, Skinner and Lovaas? Y N

5. Can you think of three behavior interventions used for students with autism? Y N

6. Can you think of three instructional strategies used for students with autism? Y N

7. Will you use positive reinforcement or punishment in the classroom? Y N

8. Have you ever offered choices when working with children with autism? Y N

9. Do you know about functional communication training? Y N

10. Do you know about differential reinforcement of alternative behavior? Y N

11. Will you use visual schedules in the classrooms? Y N
How do you feel about the lessons learned?

________________________________________________________________________

________________________________________________________________________

Is there anything that we did not discuss that you wish we did?

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________________________________________________________________________

________________________________________________________________________

Would you recommend other colleagues to attend this workshop?

________________________________________________________________________