Understanding and Implementing Scientifically Based

Best Teaching Practices for Students with ASD

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Chapter 1 - Introduction

Background:

As a preschool teacher during the past two years, I have had several students in my classroom who have been diagnosed with Autism Spectrum Disorders (ASD). As the prevalence of Autism Spectrum Disorders (ASD) increases, more and more children with ASD present for services in public school classrooms (Yeargin & Allsopp, 2003).

Addressing the needs of children with Autism in the school context is an essential component of facilitating the success of these students (The California School Psychologist, 2008, cited in Yeargin & Allsopp, 2003). Currently, the administration and educators at the school where I am employed, are interested in learning about evidence based intervention and instructional strategies for students with Autism Spectrum Disorders in order to ensure that those students receive the best education for their specific needs.

As an educator, it is important to me to provide the best possible education for my students. Over the past two years, I have recognized a knowledge deficit in myself and in my colleagues on the topic of best teaching practices that are founded on research for students who have ASD, and on the topic of common characteristics associated with children who have ASD. Even though most educators express a desire to provide evidence-based interventions, results indicate both researched-based and non-research-based practices are used (Hume & Odom, 2006).

Significance of the Study:

In 2002, President George W. Bush signed the No Child Left Behind Act (NCLB). This act has four main components which greatly affect the way that schools operate and how educators work with students. The four components include: use of educational methods proven
through scientific research, increased parental choices in enrollment, freedom for states in their use of federal monies, and increased accountability for academic achievement.

NCLB emphasizes the use of educational programs and practices that have been demonstrated to be effective by rigorous scientific research (Yell, Drasgow, & Lowery, 2005). My colleagues and I are under-trained in the scientifically based best practices for students with ASD. Therefore, we need to be educated on this topic in order to comply with NCLB. Education will only see progress if we build a knowledge base of educational practices that have been proven effective by rigorous research (Coalition for Evidence-Based Policy, 2002, cited in Yell, Drasgow, & Lowery, 2005).

NCLB demands accountability from schools and educators to ensure that significant academic progress is being made by each student. Adequate Yearly Progress (AYP) is expected for students with disabilities including ASD. Students with disabilities are measured and reported with the entire student body and as a separate group. Congress’s purpose for including students with disabilities in the total student body, as well as separately as a sub group was to ensure that schools would be held accountable for the achievement of students with disabilities and would pay close attention to the instruction and educational progress of students with disabilities (Drasgow, Lowery, & Yell, 2005). If school districts do not meet AYP, they will receive penalties by way of decreases in funding.

Statement of the Problem:

The purpose of this project is to learn research-based, best teaching practices for students with Autism Spectrum Disorders, understand common characteristics of children with Autism Spectrum Disorders, and to deliver a school-wide staff training with the information that I obtain through this research project.
An explosion of literature has occurred regarding the treatment of ASD, although this information is a mix of science, anecdotes, and unproven theories (Olley, 1999). While early identification and diagnosis of Autism is considered the work of the health care provider, delivering treatment is largely in the hands of public educators, and school districts are responsible for the interventions necessary to address the core social, communication, and behavioral challenges of affected students (Olley, 1999). My principal recognizes the growing number of students with ASD and the need for her staff members to know and use research-based, best practices for students with ASD and the common characteristics of children with ASD. Last spring, she inquired if I would be interested in researching different intervention strategies and best practice teaching strategies for children with ASD, and provide a professional development training regarding the findings from that research. Eager to learn how to be a more effective teacher for children with ASD, I gladly accepted her request.

The goal of the staff training will be to provide staff members with concrete knowledge of common characteristics of children with ASD, provide information on research-based specialized interventions for children with ASD, and give information on the best teaching practices that teachers can use in their general education classrooms.

**Questions for Focus:**

1) What are the most common characteristics of children with ASD?

2) What are some of the specialized interventions that are used by school psychologists and special education teachers on children with ASD?

3) What are the best, research-based, teaching strategies that general education teachers should use when teaching children with ASD?

**Delimitations:** This project is limited to students with ASD in my district.
Definition of Terminology:

**Autism.** A pervasive developmental disorder characterized by deficits in social interaction and communication by a limited range of activities and interests, and often by the presence of repetitive behaviors (Ruble & Ashoomoff, 2010).

**Autism Spectrum Disorders (ASD).** A series of disorders often called Pervasive Developmental Disorders that most markedly involve some degree of difficulty with communication and interpersonal relationships, as well as obsessions and repetitive motor behaviors (Ruble & Ashoomoff, 2010).

**Adequate Yearly Progress (AYP).** The measure at which schools, districts, and states are held accountable for student performance under Title 1 of the No Child Left Behind Act of 2001 (Yell, Dragslow, & Lowery, 2005).

**Best Teaching Practices.** Methods of teaching that are believed to be the most effective at delivering the particular outcome of student achievement than any other method (Francke & Geist, 2003/2004).
Chapter 2 – Literature Review

Introduction

The purpose of this literature review will be to answer the question: What are the best teaching practices for children with ASD in the general education classroom? In order to truly understand these practices, I will also review the history of ASD and common characteristics of children with the disorder. Another element that I will review is the specialized interventions that are commonly used by school psychologists and special education teachers.

The first question that I will explore in the literature review is: what are common characteristics of children with ASD? I will begin to explore this question by stating a short history on ASD, including: who the first researchers were to study the disorder, and the original meanings of the term according to those researchers. I will compare the first meanings of the term to the current meaning. Another area of focus under the first question will be discussing the most common characteristics of children with ASD, which are: deficits in communication, both verbal and non-verbal, deficits in socialization skills, and a tendency toward repetitive behaviors. There is little controversy surrounding the characteristics of children diagnosed with ASD.

The next question that I will seek answers to in the literature review is: what are some of the specialized interventions for children with ASD that are used in school settings? There are four interventions strategies that I will review. They include: Peer Training, Picture Exchange Communication System (PECS), Social Stories, and Peer and Self Video Modeling. The previously listed interventions are primarily used by specialists within the educational setting. However, it is valuable for general education teachers to be informed about the skills and strategies that are being utilized by specialists in order to gain a deeper understanding of the best
practices that they can use in their own classrooms. It is also important for general education teachers to reinforce the strategies that special education teachers use in their classrooms.

The final question that I will examine in the literature review is: what are the best practice teaching strategies commonly used in the general education classroom for children with ASD? This section will compare research on the following techniques: self-monitoring, family involvement, individualized supports, and the structured learning environment.

**History of Autism Spectrum Disorders (ASD)**

The syndrome of Autism was initially described by the Swiss psychiatrist Eugen Bleuler, who also was primarily concerned with a description of the different forms of schizophrenia, but the complete definition of Autism as a different syndrome was made by Leo Kanner, who worked at the John Hopkins University Hospital of Baltimore in 1943 (Syriopoulou-Delli, 2010). He based his discovery on 11 children whom he observed between 1938 and 1943. The children had withdrawn from human contact at as early as age one (Autism-PDD.NET, 2003-2005). Bleuler’s term for Autism originally referred to a basic disturbance in schizophrenia, in short, an extreme withdrawal of oneself from the fabric of social life, but not excluding oneself (Williams, 2000, cited in Levy, Mandell, &Schultz, 2009). Kanner chose the word Autism to describe the children he observed in reference to thealoneness experienced by schizophrenic patients who seemed unable to entertain normal relationships with people (Williams, 2000, cited in Levy, Mandell, &Schultz, 2009). Autism is no longer considered a form of schizophrenia. Currently, Autism is defined as a neurodevelopmental disorder in the category of pervasive developmental disorders, and is characterized by severe and pervasive impairment in reciprocal socialization, qualitative impairment in communication, and repetitive behaviors (Levy, Mandell, & Schultz,
2009). It is a "spectrum disorder" that affects individuals differently and to varying degrees (Autism-Society.org, 2008).

**Characteristics of Children with ASD**

**Social Deficits**

A common agreement among researchers who study Autism is that children with the disorder lack common social skills. It is accepted as a logical fact that children and adults with Autism demonstrate some delays, deficits, or atypical characteristics in the frequency, type, and quality of social interactions and social relationships with other individuals (Kanner, 1943) and social skill observations are a common feature of virtually all diagnostic systems (McConnell, 2002). Social Dysfunction, a primary feature of Autism, may be its most defining characteristic (Rogers, 2000). A common element of individuals with Autism is an obvious divergence from the expected socially correct behavior (Syrilou-Delli, 2010). Autism is characterized by significant impairments in social interaction (American Psychiatric Association, 2000, cited in Rogers, 2000).

There are some specific characteristics of social dysfunction that researchers have noted. General characteristics of children with ASD often observed by parents and educators include:

- difficulty understanding social rules such as taking turns and sharing
- difficulty perceiving and understanding the emotions of others
- difficulty initiating and maintaining interactions
- difficulty responding to the social overtures of others
- inappropriate conversations with others (Ruble, Akshoomoff, 2010).

Some common social characteristics of children with ASD include:

- impaired use of non-verbal behaviors to regulate interactions
• delayed peer interactions, few or no friendships, and little interaction
• absence of seeking to share enjoyment or interests
• delayed initiation of interactions (Levy, Mandell, & Schultz, 2009).

Communication Deficits

The majority of researchers who study ASD agree that a key component of the disorder is a marked deficit in communication. Students with Autism frequently demonstrate language delays (American Psychiatric Association, 2000, cited in Rogers, 2000). Delayed development of language is an early and persistent marker of Autism (Lord, Risi, & Pickles, 2004). No more than a quarter of children with Autism have language skills in the normal range (Kjelgaard & Tager-Flusberg, 2001).

Language development in children with ASD often includes:

• difficulty with conversation skills
• delayed grammar usage, frequent use of echolalia
• difficulty with social use of language skills

According to Ruble and Akshoomoff (2010), children with ASD may exhibit the following communication difficulties in:

• responding to verbal information
• understanding multiple step commands given verbally
• expressing wants and needs
• needing verbal information to be repeated
According to (Autism-Society.org, 2008), children with Autism could typically exhibit the following traits:

- difficulty in expressing needs; using gestures or pointing instead of words
- repeating words or phrases in place of normal, responsive language
- non-responsive to verbal cues; acts as if deaf, although hearing tests are in normal range

**Repetitive Behaviors**

There is a clear presence of restricted and repetitive range of interests and activities and at times of stereotypic behavior in children with ASD (American Psychiatric Association, 2000, cited in Rogers, 2000). Autism is a neurodevelopmental disorder in the category of pervasive developmental disorders, and is characterized by repetitive or unusual behavior (Levy, Mandell, & Schultz, 2009). Repetitive motor behavior (e.g., body rocking, hand flapping, finger tapping, etc.), cause a myriad of difficulties for individuals with Autism (Loftin, Odom, Lantz, 2007). Restricted repetitive behaviors and stereotypic behaviors count among the key symptoms of Autism (Pediatr, 2006, cited in Loftin, Odom, Lantz, 2007). Children with Autism thrive on predictability and when observing a child with Autism at play, one may notice the following things:

- tendency to line up objects
- symmetry and order are important
- playing with the same toys or watching the same video over and over again
- eating the same food or wearing the same clothes (Iseminger, 2009).
According to Pediatr (2006), the following types of repetitive behaviors may be exhibited by children with ASD:

- lip or tongue movements, opening the mouth, mouth stretching, or licking
- body rocking or spinning
- hand or arm flapping
- shaking, tapping or banging of fingers
- gait consisting of pacing, running, jumping, spinning, or skipping
- humming, tongue clicking, or echolalic words and phrases

Specialized interventions for children with ASD in school settings

The goal of the second question is to gain an understanding of a variety of interventions that are used by specialists within a school setting in order to receive a better understanding of the best practices that general education teachers can use in their own classrooms. Students have a greater opportunity of learning if general education teachers reinforce the interventions that special education teachers use in their classrooms. The outcome of this goal should assist teachers in providing the best-research based techniques for students with ASD in their classrooms.

The increase in the number of students with ASD along with an increase in the quality of ineffective interventions converge to create a critical need to examine the nature, type, and frequency of educational services provided to students with ASD enrolled in public schools (Hess, Morrier, Hefflin, & Ivey, 2007). Recognizing national and state-wide increases in the prevalence of individuals identified with Autism during the past decade (Tidmarsh & Volkmar, 2003), it is important that school psychologists and other educational professionals are prepared to address the needs of these students (Williams, Johnson, & Sukhodolsky, 2005).
A central principle of NCLB is that federal funds will support only those educational procedures, materials, and strategies that are backed by scientifically based research, this requires teachers to use procedures and strategies endorsed by scientifically based research findings and offers a great opportunity to bring evidence-based practices to elementary and secondary classrooms (Yell, Draslow, & Lowrey, 2005). Furthermore, current legalization in general and special education mandates that all educators implement evidence-based programs (Individuals with disabilities Education Improvement Act [IDEA] 2004; No Child Left Behind, 2001). Unfortunately, many interventions and treatments being used for children with ASD do not have empirical evidence to substantiate their effectiveness (Hefflin & Simpson, 1998).

**Peer Training**

Peer-mediated instruction and intervention is based on principles of behaviorism and social learning theory, and in this intervention approach, developing peers are typically taught ways to interact with and help children and youth with ASD acquire new social skills by increasing social opportunities in natural environments (Sperry-Neitzel, & Wells, 2010). Through direct instruction, adult modeling, and prompt/reinforcement, peers are taught to facilitate social interactions for children with ASD (Tsoa & Odom, 2006). Peer interactions may take several forms. Peers may be taught to initiate the interaction, or they may be taught to respond to the child with Autism whose initiation is prompted by another person, and peers may be taught to be tutors for both schoolwork and recreational activities (Rogers, 2000).

According to Rogers (2000), peer-mediated strategies have resulted in the greatest long-term effects that generalized across people and across settings. However, research has demonstrated quantitative changes in social interactions between students with Autism and their peers when peers are trained to make requests and comments to their peers with Autism.
(Morrison 2001, cited in Owen-Deschryver, Carr, Cale, & Blakely-Smith-2008); to prompt students with Autism to verbally request items and engage in turn taking (McGee 1992, cited in Owen-Deschryver, Carr, Cale, & Blakely-Smith-2008); and to prompt students with Autism to imitate actions and follow simple instructions (Gonzales-Lopez & Kamps, 1997).

A multiple-baseline design study across subjects was conducted by Owen-DeSchryver, Carr, Cale, and Blakely-Smith (2008), in order to evaluate the impact of a peer training intervention on social interactions among three students with ASD. Subjects for this study included two students diagnosed with Autism and one student diagnosed with Asperger Syndrome. Typical peers were selected to participate in the peer-training intervention based on recommendations from teachers.

The study was conducted across the span of six months. For each student with ASD baseline data collection occurred for three to six weeks (baseline phase), followed by approximately two weeks during which the peer training intervention occurred. After completing peer training, data was collected during lunchtime and recess for 14 weeks to determine the effects of the intervention. Observations lasted between 10 to 15 minutes, and the researchers stayed far away from the students while ensuring that they could hear and record any verbal interactions. The students with ASD were not aware that their peers received any training.

Results of the study found that peer initiations increased for all three students with ASD. The rate of responses made by the students with ASD toward their typically developing peers increased for all three participants. The number of responses made by the children with ASD increased significantly after the peer training intervention.
There are several limitations present in this study. First, the size sample size of the group was small with only three participants. Second, gender of the peer trainers may have played a role in the effectiveness of their influence on the children with ASD. One of the participant’s teachers recommended that he have all boys in his group of peer trainers. The other two students with ASD had a mix of boys and girls as their peer-trainers.

A similar multiple-baseline design study was conducted by (Harper, Symon, & Frea, 2008) across subjects, and was used to assess the social skill gains of two elementary school children after a peer-mediated intervention was given. Before any information was given to the peer-trainers, baseline data was collected at recess for the two children with ASD. No prompts were given to any of the children. The children were observed for 10 minutes at a time over an 18 day period until the data showed a stable pattern. Peer training took place at recess after the baseline data was collected. The peers were introduced to the five components of Pivotal Response Training (PRT). These strategies include: gaining attention, varying activities, narrating play, reinforcing attempt, and turn taking.

Results of the study showed that both participants improved their social peer interaction during recess, following the peer-mediated intervention. During the baseline, both participants engaged in social interactions at low levels. They each demonstrated improved skills during intervention and maintained the skills during the generalization phase. Both students increased in their turn-taking behavior, initiations, and gained more peer attention than at baseline.

Limitations of this study include the sample size of participants with ASD and the fact that one of the participant’s results was greater than the other. In the future it may be important to consider prerequisite skills, interests, and abilities of the participants. Finally, conducting
research in a natural setting such as a school, the researchers encountered many external variables that factor into the experiment but were difficult to control.

**Picture Exchange Communication System (PECS)**

The Picture Exchange Communication System is a widely used intervention strategy designed to teach social-communicative skills to children with developmental delays, including Autism (Jurgens, Anderson, & Moore, 2009). Ease of implementation for both children and interventionists is one of the features that helped PECS to become a widely popular social-communication-training system for children with ASD (Flippin, Reszka, & Watson, 2010). PECS is an empirically sound method that has excellent utility in developing communication skills in students with Autism (Heflin & Simpson, 1998).

In the PECS program, a child’s expressive communication abilities are shaped via the use of reinforcement, delay, and generalization across settings and trainers (Flippin, Reszka, & Watson, 2010). According to Flippin, Reszka, and Watson (2010), PECS training consists of six phases that include: 1) a physical exchange where two trainers prompt a child to exchange a picture for a preferred item, 2) expanding spontaneity where a communication book is introduced, 3) picture discrimination where the child discriminates between two pictures, 4) sentence structure where a child chooses two pictures to form a sentence, 5) after the child requests the sentence strip, he or she is prompted by the trainer with the words, “I want,” the trainer uses time delay, and the child replies with what he or she wants, 6) the final phase continues the time delay, and responsive and spontaneous commenting where comments are trained via the exchange of a sentence strip in response to the communicative partner’s questions.
Descriptive reports have suggested that the PECS method leads to increased functional communication in a relatively short amount of time, and sometimes speech development in children with ASD (Flippin, Reszka, & Watson, 2010). Lancioni and colleagues (2007) reviewed literature of the effectiveness of the PECS interventions. In that review, authors concluded that 170 out of 173 children who participated in studies of PECS or other pictorial exchange communication interventions showed improvement in their ability to make requests. Another synthesis of 13 studies of PECS conducted by Tien (2008), reached similar conclusions that PECS appears to be an effective intervention for improving functional communication skills for participants with ASD. However, limitations of PECS include: the restrictive range of communication functions targeted in the approach, and PECS does not include steps in the program to specifically guide the child to initiate with picture communication symbols to share the interests of others (i.e., the type of communicative acts generally considered as “commenting” (Flippin, Reszka, & Watson, 2010).

A study conducted by Travis and Geiger (2010) investigated the effects of introducing the PECS on the frequency, requesting, and commenting length of verbal utterances of two children with ASD who presented some spoken language, but limited use of communicative exchanges. A mixed research design was used, including a quantitative component—a single subject multiple-baseline design across three behaviors, repeated with two participants—and a qualitative component. Data was collected in the PECS pre-training, post-training, and follow-up stages in both structured and unstructured settings. The participants in the study were two males, both nine years old. The acquisition of PECS phases I – VI, took nine weeks.

The findings of this study confirmed that PECS training had a desired effect on the targeted behaviors in the sequence that they were introduced. Both participants marked rapid
vocabulary growth, an increase in requesting behavior, increase in length of utterance, and increases in commenting.

Limitations of the study included a small number of participants and the possibility that the participants learned the routine. Measures were repeated many times throughout the process. It is known that children with ASD respond positively to routines. Another possible limitation of the study was the amount of time that the researchers spent with the participants. The dependent variables could have been influenced by the personal attention and reinforcement that was given to the participants by the researchers.

Another study on the effect of teaching PECS to a child with Autism was conducted by Jurgens, Anderson, and Moore, (2009). The aim of the study was to assess the acquisition of PECS with a three year old boy with Autism, and evaluate changes in spoken language and social-communicative behaviors.

A three-year-old boy who was diagnosed with moderate Autism was the participant involved in the single-subject changing criterion design study. All training and free-play observations were conducted in the child's home, and happened three to five times a week for 20 minutes. The independent variables were the PECS training protocols for each phase. The dependant variables were the child’s behaviors in response to the training. During the baseline sessions the following behaviors were recorded: mands, verbal mands, verbal initiations other than mands, and functional play.

Results of the study included generalized increases in verbal, social-communicative behaviors, namely verbal mands and verbal initiations (other than mands). Another result of the study included an increase in observed vocabulary and in the mean length of utterance in the
generalized setting. The child also spent more time in developmentally appropriate play after the intervention was introduced.

There was one main limitation within the study. The study was conducted in the child’s home. The home is a naturalistic setting which may have made it easier for the participant to gain the skills that were being taught.

**Social Stories**

Social stories are written narratives developed by trained parents or professionals to improve the social understanding of individuals with ASD. The stories provide the students with ASD developmentally appropriate information regarding the rules and expectations for specific situations and troublesome social scenarios (Gray, 2000). A social story is a short story written in the first person, and used to teach children with ASD social expectations of situations in which they have presented behavioral difficulties (Schneider & Goldstein, 2009). Social Stories are taught using repetition, priming, opportunities to practice, and corrective feedback (Barry & Burlow, 2004).

Evidence of Social Stories effectiveness has been limited by weakness of the study designs (Brunner & Seung, 2009). This could be related to Social Stories being combined with other interventions (Schneider & Goldstein, 2009). Current literature on Social Stories describes potential benefits, but cautions that there is little empirical evidence demonstrating the effects of the strategy for children with Autism (Elder, 2002).

Schneider and Goldstein (2009) examined the on-task behaviors for three elementary-aged children who had impaired language and challenging behaviors that compromised their classroom participation and inclusion. They used a multiple baseline design across participants. Three Caucasian boys, grades first to third, from a middle income background, were the
participants in the study. The children’s teachers and a school psychologist identified individual problem behaviors for each of the participants. All of the sessions took place in the classroom environment. The behaviors targeted in the study were consistent with the children’s individualized education plans.

The primary variable was appropriately participating in the target activity. During the baseline, each participant was read a regular children’s book, and then participated in his classroom routine. The intervention was introduced after no apparent trend in target behavior was evident. During the intervention, the Social Story was read and the child was asked comprehension questions. After the child responded to the questions correctly, he returned to his regular routine.

Results of the study demonstrated that Social Story interventions were effective in increasing three children’s positive on-task behavior in their classrooms. The amount of behavior change varied across children. Nevertheless, each participant showed clear improvements and maintained the improvements over time and generalized them to different situations.

The results of this study were consistent with Sansosti and Powell-Smith (2006), who also used a multiple-baseline design across participants with children with ASD. The amount of behavior change varied across children. Similar to Sansosti and Powell-Smith, a combination of visual and verbal styles were used in the stories.

Limitations of the study included a single-participant design which made it applicable to individuals rather than to a population (Kazdin, 1982). The author of the Social Story read to the participants during baseline, intervention, generalization, and maintenance. Her presence alone may have influenced the participant’s behavior. Furthermore, each child was removed from the
classroom. Having the participants being moved from their routine, could have affected their behavior.

Another study that examined the effectiveness of Social Stories as an effective intervention for children with Autism was conducted by Barry and Burlew (2004). In this study, a special education teacher used Social Stories in her classroom to teach two children with severe Autism how to make activity choices, play appropriately with the chosen materials, and play appropriately with peers in an Exceptional Student Education classroom (ESE).

An ABCD multiple-baseline design across two participants was used. The study consisted of a baseline phase, teacher instruction phase, focusing on choice-making and appropriate play with materials, play with peers, and the final phase in which the Social Stories remained available, but all teacher help was removed to assess gains.

During the baseline phase, the participants were unable to make independent choices. After the intervention was administered, both participants demonstrated gains in the ability to make independent choices and play appropriately during free play in the ESE classroom environment. The study extends the research base by applying the intervention to children with severe Autism.

The study was limited because only two students in a single classroom were assessed. The two students demonstrated different levels of behavioral skill. Finally, the intervention was implemented by a teacher and her aide. The dual role is a limitation of the study.

**Video Modeling**

Video modeling interventions involve a child watching videotapes of positive examples of adults, peers, or him or herself engaging in a behavior that is being taught, and consistent with Bandura’s (1969) social learning theory, video modeling is a versatile intervention that focuses
on the potency of observational learning and is well suited to address the educational needs of children with Autism (Delano, 2007).

A number of studies have shown that video modeling can be used to effectively teach a variety of skills to children with Autism (Delano, 2007). These include social skills (Wert & Neisworth, 2003), play skills (D’Ateno, Mangiapanello, & Taylor, 2003), and purchasing skills (Haring, Kennedy, Adams, & Pitts-Conway, 1987). Video Modeling is advantageous for many reasons including: it can be used in a variety of settings, it’s low cost, it can be taken anywhere and played at any time, it can be played repeatedly (giving the child a chance to watch the video more closely and practice a skill), and finally, tasks on the video can be taught in a standardized way, which may make a skill easier to learn (Charlop-Christy, Le, & Freeman, 2000).

A study conducted by Marcus and Wilder (2009) compared peer video modeling to self video modeling to teach three children with Autism to respond appropriately to identify the label of novel letters. A combination multiple-baseline and multi-element design was used to compare the two interventions. During the self video modeling intervention, the children observed themselves performing the targeted behavior, and in the peer modeling they observed someone they knew performing the task.

Sessions took place in the children’s homes. To control for prior exposure to the stimuli being taught, Greek and Arabic letters written on index cards were used. Two video tapes were created for each child. A correct trial was defined as a correct response to a question asked by the therapist. Ten letters were chosen. Five were assigned to the self video condition and five to the peer. Parents were given a viewing schedule and told which tape to play. Children watched the videos for four days. Data recorders recorded the number of correct responses made by the participants when the therapist asked them to identify various Greek and Arabic letters.
Results of the study indicated that all three participants reached the criterion in the self modeling condition, whereas only one participant reached the criterion in the peer modeling condition. This data suggested that self modeling may be more effective than peer-modeling for teaching textual responses. However, a study by Sherer (2001) compared peer video modeling to self video modeling to teach conversation skills to five children with ASD, and found that one of the children performed better after watching self video modeling, while the another performed better after watching a peer. The other three students performed the same after watching peer and self video responses. A common concern of peer video modeling is the use of a peer who is not similar to the student with ASD. Individuals are more likely to imitate what they see when the model is very similar to the learner (Bandura, Ross, and Ross, 1961).

Delano (2007) reviewed 19 studies that used some kind of video modeling for children with ASD. Fifteen of the 19 studies had fewer than four participants. All but six of the participants were under 12 years old. Thirteen of the studies were conducted in a school setting. Self modeling was used in five of the 19 studies. Twelve studies focused on social communicative behaviors. According to Delano (2007), 50 out of the 55 participants who were included in the studies experienced positive gains in one or more targeted skills by participating in peer or self video modeling. Greater gains were made in self video modeling. Three participants did not make gains in social initiations (Nikopoulos & Keenan, 2003).

**Best Practice Teaching Strategies for Children with ASD in a General Education Classroom**

Children with Autism present a unique set of challenges to caregivers and educators. Consequently, identifying effective educational interventions for this population is a critical task for researchers and practitioners (Delano, 2007). Educationally based programs are often the
only form of intervention given to children with ASD, and are often the only form of support that families receive (Reed, Osbourne, & Corness, 2007).

There has been a significant increase in the amount of literature regarding the treatment of ASD, although this information is a mix of science, anecdotes, and unproven theories. This confusing state of information and misinformation has been evident in education (Olley, 1999). Many professionals enthusiastically support and consume unverified or limited-utility interventions for children with ASD (Lee, Simpson, Shogren, 2007). Longstanding differences of opinion about what constitute appropriate programs for children with ASD have led to debates over which interventions are most effective (Simpson, 2005).

There is a strong move toward evidence-based practice in recent years (American Speech-Language-Hearing Association, 2006, cited in Flippin, Reszka, & Watson, 2010). An examination of ASD literature yields treatment approaches quite diverse in their philosophies, methods, and outcomes, which renders the task of identifying the most appropriate practices rather daunting (Rogers, 1998). According to Koegel and Carter (1999), any ASD intervention method should be effective, practical, and transportable; should lead to substantial gains in multiple areas of development; and should facilitate generalization and spontaneous use of acquired skills.

State department personnel, school administrators, principals, and educators must understand the difference between science and fads, experts and entrepreneurs, and they must ensure that research-based practices are used to educate students (Yell, Dragslow, & Lowery, 2005).

Self-Management
The term self-management, also referred to as self-monitoring, generally refers to a procedure in which individuals are taught to discriminate their own behaviors and to record the occurrence or absence of that target behavior (Koegel & Carter, 1999). Self-monitoring is different from self video modeling. In self video modeling students watch a video of themselves completing a desired task. Self-monitoring is a skill that general education teachers can teach students with ASD to help them become more responsible. Self-management may facilitate the successful inclusion of students in general education classrooms by permitting teachers to spend more time on instruction rather than behavior management (McDougall, 1998).

Students with ASD require a curriculum that promotes independence and skills needed for adult functioning (Hume & Odom, 2006). Curricular goals should focus on assisting students in working and playing independently, managing their own behavior, and motivating students through meaning and natural consequences (Olley, 1999). According to Koegel and Carter (1999), self-monitoring has several advantages as a means of facilitating generalized and independent responding for children with ASD. First, the procedures allow the child to take an active role in intervention, reducing the need for constant clinical vigilance. Second, by teaching the child the skill of self-monitoring, an indefinite number of behaviors can be targeted in virtually any environment the child enters. Third, many factors that have been included in self-monitoring programs have previously shown to be successful in promoting generalization, including the administration of delayed rewards. Fourth, the use of self-monitoring techniques may initiate a favorable cycle of steadily improving environmental interactions.

In self-monitoring, individuals learn to discriminate the occurrence of a target response; reliably self-record one or more elements of the target response in accordance with some standard or scale; evaluate their behavior relative to an agreed-upon standard; and subsequently
deliver contingently self-selected rewards and reinforcement (Maag, 2004; McConnel, 1999; Myles & Simpson, 2003; Reid, Trout, & Schartz, 2005).

Morrison, Kamps, Garcia, and Parker (2001) taught 44 students with ASD to self-monitor their social interaction skills while playing games with non-disabled peers. The results of this study showed that the students with ASD increased their peer initiations and responses and decreased their inappropriate behavior as a direct result of the self-monitoring intervention.

The specific learning characteristics of students with ASD include: difficulty with organization, distractibility, sequencing, and generalization, require that an intervention be designed around their particular strengths (e.g., visuospatial organization) and needs (e.g., structure and predictability) of students on the Autism Spectrum (Mesibov, Shea, & Schopler). Rankin and Reid (1995) developed a system for self-monitoring that fits those specifications.

Rankin and Reid (1995) identified five basic steps for implementing a self-monitoring system for children with ASD. First, the teacher chooses the target behavior that needs to be improved, and it must be described in a way that is measurable and attainable to the adult and student. Second, the teacher must take baseline data on the occurrences of the behavior. Third, the teacher discusses the advantages of the system with the student, including the previous use of the system with others to improve their behavior, and the rewards the student might receive. Fourth, the teacher teaches the student to self-monitor. The system must be designed with consideration of the student’s functioning. It may be a tally sheet, snap blocks to add for each occurrence of the behavior, or tokens. The teacher and student should practice identifying examples and nonexamples of the behavior and practice using the system. Finally, the teacher gradually fades support and the student continues to self-monitor independently. At first, the
student and teacher should both collect data and compare it daily. Then the teacher fades his or her support to every other day, then once a week, then periodically.

Wilkinson (2008) came up with another way for teachers to implement a self-monitoring system for children with ASD in their classrooms that is different from the previously listed steps in that it includes a reward system and family collaboration. Wilkinson’s system includes nine steps. First, the teacher and student must identify the preferred behavior targets. Second, the teacher and student will determine how often the student will self-monitor his or her behavior. Third, the teacher will meet with the student to explain self-monitoring, identify goals, and establish preferred rewards contingent upon achieving those goals. Fourth, the student will be given a self-recording sheet. Fifth, the teacher will model the plan, and allow the student time to practice. Sixth, the plan will be implemented into the regular classroom routine. Seventh, the teacher will meet with the student to make sure that the behavioral goals were attained. Eighth, the teacher will provide any awards that have been earned. Finally, the teacher will incorporate the plan into a school-home collaboration scheme by sending the self-recording sheet home for the parents to review.

Family Involvement

The law recognizes that parents are their children’s first and most important teachers, and for students to succeed in school, parents must participate actively in their children’s academic lives. Parents need to become involved early and stay involved throughout the school years (DePlany, Coulter-Kern, & Duchane, 2007). Parental involvement is now recognized as essential not only within the world of education, but by lawmakers as well. The U.S. Department of Education, 1994 stated that, “Policy makers recognized the importance of involving parents in schools by incorporating federal legislation into the Goals 2000 Education
Act” (Kohl, Lengua, & McMahan, 2000). According to the eighth U.S. educational goal in Goals 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children (U.S. Department of Education, 1994). Most recently, parent involvement is one of the six targeted areas in the NCLB Act of 2001 (Mattingly, Prislin, McKenzie, Rodriguez, & Kayzar, 2002).

Several studies have shown statistically significant relationships between parent involvement in education and student success. Longitudinal studies show that parent involvement in education has lasting effects on children’s success in school regardless of class, race, ethnicity, gender, or age (Jimerson, Egeland, & Teo, 1999). Fantuzzo, Davis, and Ginsburg (1995) found that parent involvement in education is a consistent predictor of children’s academic achievement.

Some researchers do not agree that involving parents in children’s education is a research-based best educational practice. Mattingly, Prislin, McKenzie, Rodriguez, and Kayzar, (2002) analyzed evaluations of 41 parent involvement programs aimed at school aged children (K-12) in the United States. The results provided little support for the widespread belief that parent involvement programs are an effective means of either improving student academic achievement or changing parent, teacher, and student behavior. They did not state that parent involvement programs were not effective. However, they pointed out flaws in the existing evidence upon which academic and political support for these programs is sometimes biased. Some of the flaws in the research include: failure to report crucial information, a lack of a control group to account for maturation and history effects, and a reliance on highly subjective indicators of effectiveness.
Iovanne, Dunlap, Huber, and Kincaid (2003) published a synthesis on effective instructional practices for students at the elementary and secondary levels with ASD. The analytic review resulted in identifying six core elements of effective instruction regardless of age that are supported by empirical research. One of the six elements was family involvement. According to Iovanne, Dunlap, Huber, and Kincaid (2003) family involvement improves programming because family members know their child the best, spend the most time with him or her, and have an immense influence on their child. It is crucial that they are active participants in developing and implementing their child’s educational programming.

Powers (1992) provided one of the first sets of core components of effective instructional practices for students with ASD. He identified a set of best practices that should be included in programs for students with ASD. One of the six elements that he identified was parent involvement. Another review of the literature on best teaching practices for students with ASD was conducted by Dawson and Osterling (1997). They concurred with Powers, identifying family involvement as one of the vital components of best practice. The National Research Council (2001) formed a committee of renowned experts to examine research related to Autism and synthesize findings in the field of early education of children with ASD. They formed a consensus of the characteristics of effective interventions used in programs for children with ASD. They also identified that one of the characteristics of the most effective programs was family involvement.

Hoover-Dempsey and Sandler (1995) have strong ideas about family involvement. They said that parents who are involved in their children’s education in ways that create or reinforce direct experiences of educational success offer verbal persuasion intended to develop attitudes, behaviors, and efforts consistent with school success, and that students of parents who are
involved are more likely to develop a strong sense of efficacy for successfully achieving school-related tasks than students of parents who are not involved.

Due to the ubiquitous nature of Autism and its effect on the individual’s functioning in school, home, and the community, schools should include parents as active partners in developing their child’s educational plan (Dunlap & Fox, 2002). Parents offer a unique perspective on the child and bring individual expertise to developing an appropriate individualized educational plan, as well as instructional techniques to help children meet those targets (Hart & Whalon, 2008). Educational practices and strategies have a better chance of being effective if they are implemented across all settings, including the home and community. Iovanne, Dunlap, Huber, and Kincaid (2003) believe that consideration of family participation should include determining the optimal level of participation based on family characteristics, stressors affecting the family, and the needs of the individual child.

According to Francke and Geist (2003/2004), the collaborative efforts between parents and professionals made a significant contribution to a case study participant’s academic and social progress. They stated that frequent communication between school and home with periodic home visits, helped maintain an attitude of mutual problem solving and collaboration. Francke and Geist (2003/2004) also stated that educators need to be open and available to work with the family as a whole, because it is the entire family that is affected by Autism, not just the individual child.

Deplany, Coulter-Kern, and Duchane (2007) stated that the goal of schools should be to persuade parents to participate in the activities that schools identify as important. They suggested that the goal could be implemented through a variety of ways. First, schools could host workshops that focus on the benefits of parent involvement and those parent behaviors that
are the most important ones. Another implementation idea for their goal was to send home brochures or pamphlets that would inform parents about parent involvement. Finally, they suggested that teachers should talk with parents about involvement.

As stated by Staples and Diliberto (2010), the fundamentals of parent involvement needed for successful parent-teacher collaboration within a school environment included: building parent rapport, developing a communication system with a maintenance plan, and creating additional special event opportunities for parent involvement.

Staples and Diliberto (2010) recommend a few ways to build rapport with parents. First, they suggest that rapport building needs to begin the first day of school (Scully & Howell, as cited in Staples & Diliberto 2010). They also stated that teachers should call parents the week before open house, and invite parents to attend. Next, they suggested that during the initial conversation, it is important to emphasize an open-door policy for communication throughout the school year. They recommend creating a monthly parent newsletter to inform parents about what is happening, invite them to attend, and list important dates. Finally, they suggested sitting down with the parents to review the child’s IEP goals, and come up with ways for the parents to support the goals at home.

Developing a communication system encompasses daily, weekly, and quarterly contacts. Teachers can create a parent-teacher journal to use daily for communicating student’s agenda, a summary of student performance or behavior, and any IEP progress. Weekly communication can include a weekly newsletter that includes the schedule for the week and other classroom news. Monthly communication can include a telephone call or a one-on-one visit. Quarterly communication should include specific progress with IEP goals as well as academic progress in
other areas. The special education teacher should include his or her report with this report (Staples & Diliberto, 2010).

The purpose of special event activities is to provide opportunities for parents and students to share memories in an educational setting. Without these memories, parents and students begin to develop separate memories (Scully & Howell, as cited in Staples & Diliberto 2010). Special event activities include: field trips, cultural traditions, guest speakers, academic themed game nights, and literature nights.

Schools engage parents by going beyond the narrow definitions of involvement, and they start with the belief that student success is a shared interest of both school and family. They envision parents as partners in the learning process, and identify concrete ways that the partnership can be activated (The Center for Comprehensive School Reform and Improvement, 2005). According to the Center for Comprehensive School Reform and Improvement (2005), there are concrete ways to foster parent involvement that include: improving communication, offering parent workshops, and personalizing parent involvement by reflecting on the unique needs and interests of each family.

**Individualized Supports**

Students with ASD are heterogeneous in their presentation of behaviors and in their unique preferences, interests, and learning styles requiring individualized instructional support (Dunlap & Fox, 2002). Educational personnel are required, through the Individuals with Disabilities Education Act (IDEA) Amendments of 1997, to provide a continuum of individualized supports, services, and placements to students, ranging from inclusion in general education with varying levels of supports to extremely specific services and instruction in specialized settings.
The Autism Society of America (ASA) takes the position that there is no one treatment or educational plan appropriate for all individuals with Autism. According to Heflin and Simpson (1998), there is not a single method that should be exclusively used to meet the varied needs of children with ASD and their families, and the most effective programs for students with ASD are those that incorporate a variety of best practices. Professionals need to be prepared to use a variety of strategies best suited for each individual child, taking into consideration his or her personal strengths and challenges (Francke & Geist, 2003/2004).

Iovanne, Dunlap, Huber, and Kincaid (2003) gave recommendations of the core elements of effective educational practices. They listed six elements that were consistently effective. One of the elements that they listed was individualized supports and services. They stated that services received by students with ASD must be tailored to meet the unique individual needs and family characteristics of each student. An individualized program includes: considering family preferences when selecting curriculum, developing programming that reflects a student’s preferences and interests, and determining the appropriate level of instruction on the basis of the student’s strengths and weaknesses.

Hurth (1999) reviewed research on best practices for teaching students with ASD, and identified six common components in all of the programs. One of the common components was the individualization of services for children and families. In (2001) the National Research Council formed a committee of renowned experts to examine the research related to best practices in teaching children with ASD. A consensus of the characteristics of effective interventions used in programs for children with ASD was determined. One of the effective interventions that they listed was setting individualized goals for children with ASD. These goals are the same as the ones set during the child’s IEP meeting. Francke and Geist
(2003/2004) stated that when a teacher identifies a child for special education services, he or she has to look at what the child cannot do and determine what areas of deficit exist, but must also examine what the child’s strengths are and make educational plans using the child’s interests and abilities.

A critical key to success in educating children with ASD is for school personnel to find ways to match specific practices, supports, and services with each student’s unique profile and individual family’s characteristics (Dunlap, 1999). According to Dunlap, individualized supports and services should include the following: consideration of family preferences when determining the goals to be taught and the methods by which instruction is to be delivered, incorporating the child’s preferences and special interests into the instruction program, and focusing on the child’s strengths and weaknesses to determine the most appropriate intensity and level of instruction to meet the child’s individual goals.

A key aspect of individualization for students with ASD, according to Dunlap (1999), involves approaches that support a high level of engagement. Engagement has been cited as one of the predictors of positive student outcomes (Logan, Bakeman, & Keefe, 1999). Incorporating a child’s idiosyncratic interests into instructional activities has proven to be an effective method to enhance engagement in activities (Baker, Koegel, & Koegel, 1999).

One of the most vexing issues facing contemporary educators involves the seemingly competing imperatives of meeting high stakes accountability standards while addressing individual needs and strengths of diverse learners (McTighe & Brown, 2005). McTighe and Brown (2005) stated that effective instruction accommodates differences in learner’s readiness levels, interests, and learning profiles. These differences can be accommodated through using differentiated instruction.
McTighe and Brown (2005) claimed that teaching to standards and differentiation can coexist. They recommended a three stage method to achieve meeting standards and differentiating instruction. First, the teacher must establish goals such as content standards. Second, teachers determine the assessments that will provide the evidence for the identified knowledge. Finally, the teacher will develop a teaching and learning plan to help students achieve the desired results of stage one through considering the readiness, interests, and preferred learning modalities of the students.

When developing the plan for learning, the researchers proposed a set of principles embedded in the acronym “W.H.E.R.E.T.O.” W - How will I help the learners know where are we going? Why are we going there? What ways will they be evaluated? H - How will I engage the learners? In what ways will I help them connect desired learning to their experiences and interests? E - How will I equip learners through experience-based learning activities to succeed in mastering identified standards? How will I encourage them to assume an active role in their own learning process? R - How will I encourage the learners to revisit and reflect? How will I support their self-monitoring as they learn? E - How will I promote student self-evaluation? T - How will I tailor the learning activities and my teaching to address the different readiness levels, learning profiles, and interests of my students? O - How will the learning experiences be organized (McTighe & Brown, 2005)?

**Structured Learning Environment**

A program is considered structured when the curriculum (activities, schedule, environment) is clear (i.e., comprehensible) to both the students and the educational personnel (Iovanne, Dunlap, Huber, & Kincaid, 2003). A structured classroom for students with ASD is one that is arranged in such a way as to elicit, facilitate, enhance, or support the acquisition of
specific skills such as language acquisition, appropriate behavior, social interactions, and targeted academic goals (Earles, Carlson, & Bock, 1998).

Children with ASD respond more favorably to structured rather than unstructured settings (Schopler, 1995). Recent literature indicates the need for comprehensible structured learning environments for students with ASD (Heflin & Alberto, 2001). Structuring the environment and implementing structured teaching continue to be regarded as instrumental in educational programs for students with ASD (Heflin & Simpson, 1998). Structure, predictability, and consistency are essential for students on the Autism Spectrum (Iseminger, 2009).

Iovanne, Dunlap, Huber, and Kincaid (2003) reviewed literature on the best practices for educators to use while working with students with ASD. They comprised a list of six core elements of effective educational practices for students with ASD. Comprehensive and structured learning environments were one of the elements on their list. According to them, these types of environments allow students to predict their daily routine and respond appropriately to behavior expectations during different activities.

Specific characteristics of students with Autism, which include: difficulty with organization, distractibility, sequencing, and generalization, require that an intervention be designed around the particular strengths (e.g., visuospatial organization) and needs (e.g., structure and predictability) of students with ASD (Mesibov, Shea, & Schopler, 2005). According to Mesibov, Shea, and Schopler (2005), there are four components of structured teaching. Those components included: 1) the physical structure (organization of the classroom), 2) schedules (visual information depicting where/when the activity will be), 3) work systems (visual information informing a student what to do while in a work or play area, and 4) task organization (visually clear information on what the task is about).
According to Iovanne, Dunlap, Huber, and Kincaid (2003) strategies to assist educators in structuring the environment for children with ASD included: organize the instructional setting, provide a visual schedule of activities, carefully plan and provide choice-making opportunities, provide behavioral support, define specific areas of the classroom and school settings, and facilitate transitions, flexibility and change.

Dawson and Osterling (1997) reviewed literature on the best practices of educating students with ASD. They found that the programs they reviewed had several key elements in common. One of the elements was having a highly supportive and structured teaching environment. Similarly, the National Early Education Technical Assistance System (NECTAS) examined seven effective programs for young children with ASD. They found six areas of agreement for best practices between the programs. One of the elements was having a structured teaching environment.

It is imperative to understand what things about the learning environment are problematic or pose barriers for children with ASD (Carnahan, 2006). Decreasing the reliance on verbal instruction and increasing the use of visual learning materials created opportunities for students with ASD to engage in joint attention activities and increase attention to learning materials (Carnahan, 2006). General education classrooms often use verbal language as the dominant means of instruction (Wilkinson & Silliman, 2001). Verbal teaching strategies create a discrepancy between the learning needs of students with ASD and the learning context because many children with ASD have weaknesses in verbal language (Council for Exceptional Children, 2005). In contrast, visually structured learning environments promote learning and engagement for students with ASD (Mesibov, 2005).
One thing that a teacher should consider when he or she sets up a structured learning environment for children with ASD is the sensory related issues that may affect those children. Children with ASD have distinct and varying sensory needs – textures, sounds, visual stimulation, and other sensory input can overwhelm students and cause them to misbehave (Iseminger, 2009).

When setting up a structured academic environment for children with ASD, educators should consider the core deficits common to those children, which are deficits in communication and social interaction (Iovanne, Dunlap, Huber, & Kincaid, 2003). According to them, specialized curriculum should include systematic instruction in social engagement skills, including initiating and responding to social bids, appropriate leisure skills, and language comprehension and communication. Curriculum for students with ASD must address the special social and communication problems associated with the disorder (Olley, 1999).

**Summary**

There has been a recent increase in the number of children with ASD in public school systems. School districts and their employees are required by law to provide effective, research-based supports for these children. There is a plethora of literature on the topic of interventions and best teaching practices for children with ASD. However, only some of the literature has been scientifically proven as effective. Children with Autism typically present some common characteristics which include: deficits in social skills, deficits in communication, and the presence of repetitive behaviors. It is useful for educators to be aware of these characteristics in order to be effective. There are a number of effective specialized interventions that are used by school psychologists and special education teachers. It is also essential for general education teachers to know about these interventions in order to be more effective when teaching students.
with ASD. Finally, there are a number of best teaching practices that teachers can use when teaching children with ASD in a general education classroom.
Chapter 3 – Professional Development

Introduction

I designed a slide show presentation based on the research that I examined in my literature review. The purpose of the power point will be to use it as a teaching tool to educate the teachers in my building about the best educational practices that they can use to teach children with ASD. This chapter includes four sections. They are: 1) target audience of the presentation, 2) content to present, 3) strategies to deliver the presentation, and 4) evaluation of the presentation.

Target Audience

The target audience for my presentation includes the following educators from my building at Ritzville School District: preschool through eighth grade general education teachers, paraprofessionals, and the building principal. Ritzville School District has approximately 365 students. About six percent of those students receive services through special education. Of that six percent, some of the students have Autism. The teachers in the district have a great need for this presentation. None of the teachers in the district, other than the special education teacher has received any training on ASD. We have students in our district with ASD in the lower elementary grades. Teachers must be educated on the best teaching practices for those students. Every student deserves the best education that he or she can get, and the law requires teachers to provide a research-based, quality education for all students.

Presentation Content

The content of the presentation is mainly based on the information that I gained through the literature review. The presentation will include 12 slides. I will start by answering the following question: “Why is this training important”? The reason is that there are growing
numbers of children with ASD in public schools and in Ritzville School District. I will also talk about some of the characteristics that are common in children with ASD, and why it is particularly important for educators to receive training on the best teaching methods to educate those children. Next, I will have an opening activity that will be designed to have teachers take a few minutes to write down what they already know about ASD, and share it in small groups.

After the commencement of the opening activity, the presentation will have 13 areas of focus:

**Legislation on Autism:** In this section I will review: 1) elements of No Child Left Behind (NCLB) and the Individuals with Disabilities Education Act (IDEA). 2) specific sections of the legislation that mandate educators to use scientifically based teaching methods, individualize instruction, and demand that families be involved in their children’s education. 3) Adequate Yearly Progress and the ramifications of not meeting those guidelines.

**Social Deficits in Children with ASD:** Children with ASD commonly demonstrate delays and deficits in socially appropriate behavior. Teachers need to be aware of these deficits and know what may look like in their classrooms. I will highlight some of the typical social issues for children with ASD.

**Communication Deficits in Children with ASD:** Children with ASD are known to present verbal and nonverbal communication deficits. I will give a list of what those communication deficits could look like in students with ASD in their classrooms.

**Repetitive Behaviors:** Children with ASD often have repetitive or stereotypic behaviors. I go into detail to describe the most common repetitive behaviors.

**Interventions used by Specialists:** Special education teachers and school psychologists use a variety of intervention methods when working with children who have ASD. I will present four
commonly used strategies: Social Stories, PECS, Peer and Self Video Modeling, and Peer Training. I will outline particular elements of each program that can be transferred to the general education classroom.

**Self-Monitoring:** First, I will explain what self-monitoring is, and discuss why it is a useful tool. Finally, I will share strategies on how to set up a self-monitoring system in general education classrooms for children with ASD.

**Parent Involvement:** Teachers need to know what research says about involving parents in their child’s education, so those will be the first things that I explain. Next, I will describe why it is especially important for families of autistic children to collaborate with teachers. Last, I plan to suggest some ways for teachers to involve parents, based on my research.

**Individualized Supports:** This section will start with me showing what it means to offer individualized supports to children. Then I will explain why children with ASD need them. Finally, ideas will be offered on how to individualize instruction by using a portfolio system to gain awareness of the child’s strengths, weaknesses, and interests, and incorporate them into an individualized instructional support system.

**Structured Learning Environment:** First, the presentation participants must know the necessity for children with ASD to have predictable and consistent routines. Next, I will talk about how verbal processing skills are typically an area of weakness in children with ASD, although they generally have strong visual skills. I will also discuss the sensory issues that children with ASD often have, and how teachers should be aware of them when setting up the learning environment. Lastly, I will discuss the need for teachers to include some kind of social and communication-based curriculum for students with ASD.

**Strategies to Deliver the Presentation**
The presentation will be fun and interactive. It will appeal to a variety of learning styles. Bright colorful pictures and words will be used in my power point presentation for the visual learners. I will speak about ASD and best practice strategies for the auditory learners. The kinesthetic learners will enjoy meeting with small groups, discussing, writing, and walking around the classroom for a gallery walk. The special education teacher that I work with has insight and strategies that could be a great compliment to my presentation. I am going to ask her if she would like to collaborate with me and provide information to strengthen the presentation.

**Group Activity:** First, the participants will be asked to get into groups of three or four people. Next, they will write down two things on large post-it paper that they can implement in their classrooms based off of the training that they just received. Then they will hang their posters around the room after they finish.

**Gallery Walk:** During the gallery walk, teachers will walk from poster to poster and read what their colleagues have written. Each teacher will carry a reflection sheet to write down the ideas of other teachers that they would like to use in their own classrooms.

**Additional Resources:** I have listed five websites for teachers to use if they would like to extend the knowledge that they have obtained through the training. The first website is for the Autism Society of America. It has general information about Autism. The second website is for the National Education Association. It has a surplus of wonderful resources that are specifically tailored to meet the needs of teachers who work with Autistic children. Another resource is for a website with free teaching activities and materials. I also found a website that teaches teachers how to make their own Social Stories. The last website that I listed contains general information on educating children with Autism.
**Reflection:** During this time I will ask teachers to write down 3 things that they learned from the training, 2 things that they want to learn more about, and 1 question that they have.

**Evaluation of the Presentation**

To evaluate the effectiveness of my presentation, I designed a short survey for the presentation participants. The survey contains six questions that gather information on: 1) what strategies the audience gained from my presentation 2) what they learned about the characteristics of children with ASD, 3) whether or not they felt the information was presented in a way that was clear and easy to understand, 4) if they felt the length of the presentation appropriate, 5) Were their questions answered, and 6) are they interested in learning more about the topic? The participants will use the likert scale to give their feedback. I also indicated that they could leave additional comments at the bottom of the evaluation for my improvement in future professional development activities.

**Conclusion**

Teachers in my district, myself included, generally have a lack of knowledge in regard to autism and how to teach autistic children. I see a critical need for this training in my school district. Educators must be aware of and use research-based teaching methods to reach each student. This presentation will be a good start toward developing the knowledge base necessary to effectively teach children with Autism.
Chapter 4 – Reflections and Recommendations

Reflections

Researching Autism was an eye opening and rewarding experience for me. I feel confident that I will be able to take what I learned and apply it in my classroom. I am thrilled to be able to share my newly acquired knowledge with my colleagues. It is my hope that they, too, will be able to use the information from the presentation in their classrooms. We have a growing number of children in our district who are being diagnosed with ASD. These children deserve to be taught by teachers who are highly informed about ASD and the research surrounding the best practices for teaching them.

Along my journey through the research process, I encountered many people, educators and non educators included, who were highly interested in learning about my findings. It was fascinating to me to see just how little people knew about Autism in general. This surprised me because of how common it has become. It gives me joy to know that people do care about these children, and want to know more about the disorder.

Next year, I will have some children with Autism in my classroom, and I am eager to try a variety of strategies that emerged from the research in the literature review. In the past, the feeling of helplessness discouraged me while working with children with Autism. I desperately wanted to help them in the best way possible, but I never felt like I was doing a great job in meeting their specific needs. That was a direct result of not having the knowledge to do so. In the future, my studies of Autism will be extended by continuing to seek the most effective strategies for teaching children with Autism.

I am going to try using Social Stories in my classroom next year. There is a website that offers a resource for teachers to use to create and personalize Social Stories for children in their
classrooms. The template includes a wide variety of pictures to choose from. The design of the stories is the same as the research-based models that I studied.

Another element of my teaching can be adjusted by adding more pictures to my classroom and routine. I will create picture schedules for my students with Autism, and go over the schedule with them at the beginning of the day. They can move a clothes-pin down the list after each activity is finished. These visual aides will be a huge support for the students with ASD in my classroom.

I would like to include the parents of all of my students in more ways and more often than before. In years past, I have hosted a few parent education and family nights, but I would like to plan more. It is my belief that children greatly benefit from a positive relationship between parents and teachers. I think that when children know that their parents care about their education, it makes the children care more than if their parents were not involved. Another way to include parents is to write a weekly newsletter. The newsletter will contain things that the students are learning for the week, and important dates of school events.

I took the research on individualized instruction to heart. After reviewing the positive effects that it has on student achievement, I have decided to create a portfolio system to use for children with special needs. The portfolio will consist of observations related to individual children’s strengths, weaknesses, and interests. When the child transitions into the next grade, the portfolio will be given to his or her new teacher to study and get to know what worked and didn’t for that particular child. The process will repeat year after year. I would like to involve parents in this process, but am unsure of exactly what that will look like.

**Recommendations**

*Teacher Education*
Researching Autism led me to the understanding that most teachers are not currently using research-based intervention techniques and best teaching practice strategies for children with ASD. According to the information in the literature review, they are using a variety of methods that may or may not be founded in research. I think that teachers are using these methods because of the surplus of literature and fads on the topic.

School districts must ensure that the teachers they employ receive training on Autism and how to teach Autistic students. This is important for two reasons. First, children deserve the best possible education. Second, the NCLB and IDEA require schools to provide individualized, best practice supports to all children. I realize that school districts are presently faced with economic hardships, but there are ways to work around that problem. One idea would be to send a few teachers to training on autism, and have them share what they learned with the rest of the educational team when they get back.

I also think that universities should increase the requirements for students to complete more course work centered on students with specific disabilities such as Autism. This is particularly important because of the trend of an increase in the number of children with Autism in school districts.

Future Research

There is a lot of really solid research about effective ways for educators to work with children with Autism. However, there is a divide in that research and its availability to educators. In the future, I would be really grateful if someone would take that research and disseminate it into methods that are easy and readily available for teachers to implement. Researchers need to continue to explore effective ways to educate children with Autism, but also focus on methods to deliver that research to educators.
Curriculum

Children with Autism must receive specialized curriculum for social skills and communication. I think that teachers should include activities that promote social growth daily. I am going to use a curriculum called Second Step next year with my preschoolers. This is a program designed for preschool age children to build awareness of emotions. It uses pictures and a structured format to help children identify feelings in themselves and in others. I think that the curriculum will be extremely beneficial for my students with Autism and their typically developing peers. I do not have a specific curriculum to enhance the communication skills of children with Autism. However, I plan to include a variety of activities that will promote language acquisition including: picture books, music, free choice centers, art, science, and finger plays.
References


Appendix A – Presentation Slides

Opening Activity

- Write down a few things that you know about children with autism and the best practices when teaching them. Then compare ideas in small groups.

Agenda

- Autism & Legislation
- Common Characteristics of Children with Autism
- Social Deficits
- Communication Deficits
- Repetitive Behaviors
- Interventions used by Specialists
- Best Practice Interventions for the General Education Classroom
- Self-Monitoring
- Parent Involvement
- Individualized Supports
- Structured Learning Environment
- Group Activity
- Gallery Walk
- Additional Resources
- Reflection

Autism and Legislation

- No Child Left Behind (NCLB)
- Individuals with Disabilities Education Act (IDEA)
- Adequate Yearly Progress (AYP)

Common Characteristics of Children who have Autism

- Social Deficits
- Communication Deficits
- Repetitive Behaviors
Common Social Deficits May Include:

- Difficulty understanding social rules
- Perceiving and understanding the emotions of others
- Initiating and maintaining interactions
- Delayed peer interactions or few friendships

Common Communication Deficits May Include:

- Difficulty with conversation skills
- Delayed grammar usage
- Difficulty responding to verbal information
- Difficulty expressing wants or needs

Common Repetitive Behaviors May Include:

- Playing with the same toys
- Tendency to line up objects
- Eating the same food or wearing the same clothes
- Symmetry and order are important
- A variety of physical repetitions

Interventions used by Specialists:

- Social Stories
- Peer-Training
- Peer and Self Video Modeling
- Picture Exchange Communication System (PECS)
Best Practice Teaching Strategies for Children with Autism in a General Education Classroom:

- Self-Monitoring
- Parent Involvement
- Individualized Supports
- Structured Learning Environment

Self-Monitoring

- What it is
- Why it is important
- How to set up a self-monitoring system

Individualized Supports

- What they are
- Why children with autism need them
- Ideas on how to use individualized supports in your classroom

Parent Involvement

- What research says
- Especially important for families with autistic children
- Ways to involve Parents
Structured Learning Environment

- Need for predictable routines
- Verbal deficits and visual strengths
- Sensory issues
- Need for social and communication supplementary curriculum

Group Activity

- Get into groups of three or four people
- Write down 2 things that you can implement in your classroom based off of today's training
- Hang up your poster when you are finished

Gallery Walk

- Walk around the room and spend a few minutes reading each poster
- Write down any ideas that you would like to use in your classroom on your reflection sheet

Additional Resources

- The Autism Society of America Website http://www.autism-society.org
- National Education Association's Website http://www.nea.org/home/15151.htm
- Website for free activities and materials http://www.dotelearn.com
- Free info on how to make your own Social Stories http://www.polyzo.com/socialstories/introduction.html
- General info on educating children with autism http://www.nap.edu/openbook.php?isbn=0309072697
Reflection

• Write down 3 things that you learned

• Write down 2 things that you want to learn more about

• Write down 1 question that you have
Appendix B – Presentation Evaluation Form

Best Practice Teaching Strategies for Children with Autism

Presentation Survey

Please take a few minutes to complete this short survey on the effectiveness of the presentation.

Circle 1 if you strongly disagree.
Circle 2 if you disagree.
Circle 3 if you do not have a strong opinion.
Circle 4 if you agree.
Circle 5 if you strongly agree.

1.) I gained strategies that I will use in my classroom? 1 2 3 4 5

2.) I learned about the characteristics of children with ASD. 1 2 3 4 5

3.) The information was presented in a way that was clear and easy to understand. 1 2 3 4 5

4.) The length of the presentation was appropriate. 1 2 3 4 5

5.) The presenter answered my questions. 1 2 3 4 5

6.) I would like to learn more about best practice teaching strategies for children with Autism. 1 2 3 4 5

Additional Comments: