UNIVERSITY OF LA VERNE
LA VERNE, CALIFORNIA

IMPLEMENTING EFFECTIVE TEACHING STRATEGIES TO TEACH AUTISTIC/ASPERGER’S SYNDROME STUDENTS

A Paper Prepared for the Graduate Seminar
In Partial Fulfillment of
The Requirements for the Degree
Master of Education

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December 2010
Abstract

The reality has been that autism and other syndromes considered to be under the autism spectrum have established themselves in our educational system as a threat to academic success. This literature review focuses on autism and Asperger’s syndrome by providing background on these two topics and their implications in education. The idea of overcoming these two issues in the classroom has been an afterthought until research provided insight into successful teaching strategies that have proven to be beneficial for teachers and parents. The debate of being successful in the classroom at all costs is nothing new. Our educational system has long been plagued with issues that have been tough to overcome. Many of the issues in education are related to money. However, this topic is just as important to due to rising identification of students with autism and Asperger’s syndrome. Can good teaching provide a foundation for these students with autism and Asperger’s syndrome to succeed? This question will be addressed based on research that has been conducted in the classroom and in other educational settings.
Section 1: The Problem

Introduction

The rise of autism in children has caused great concern among parents. However, parents are not the only ones dealing with a disorder named autism or what many call the “Autism Spectrum.” The other people sharing this problem with parents are educators who teach these children with autism. Both groups, parents and educators, have dealt with the disorder that we now know as autism together. Autism has been a challenge for the parent at home and the teacher in the classroom. This disorder has caused a great deal of attention with the number of cases rising very rapidly among school age children.

Today, school psychologists are better adept to diagnose autism in a child. Many school psychologists have seen a rise of potential autistic children being diagnosed. This rise of autism continues with more and more children being diagnosed with autism.

Autism has grown very rapidly in the past decade. Autism is not a disease, but it is a syndrome that has affected many children at home and in school. As mentioned, one of the places that is being impacted by this syndrome is our education system. In the past few years, educators have scrambled to find out how this syndrome impacts our schoolchildren and how we can minimize the impact of this syndrome in the classroom.

The importance to recognize and diagnose a child with autism or an autistic classified syndrome (i.e. Asperger’s Syndrome) is very important and critical to insure a quality education for the any student that has been diagnosed or is considered an at-risk student. By now, someone is probably asking themselves the same question that many psychologists, educators, and parents have been asking themselves for years. What is autism or what is an autistic syndrome? Well, there is not a definite answer to this
question. Many psychologists have been divided for a number of years on this topic. Some psychologists believe that Asperger’s Syndrome is a syndrome that is related, but yet, separate from autism. Other psychologists believe that autism and Asperger’s Syndrome are too closely linked to be separated into two different syndromes. For the purpose of this literature, any syndrome related to autism will be included in the term: autism spectrum disorder (ASD).

Just like parents, many teachers share this great concern because of the growing number of autistic students that attend our public or private school system. Autism has demanded the need of new teaching strategies that can be effective for the autistic student. What can a teacher do to effectively teach a child with autism? The first problem with autism is being able to identify the characteristics of this disability. The problem continues with the teacher implementing teaching strategies that will effectively produce quality teaching and learning in the classroom. This literature review goes in-depth into what is autism and the growing demand to find effective teaching strategies to meet the needs of the autistic student.

Statement of the Problem

This paper discusses the importance of identifying students with autism and what can be done in the classroom to help the student succeed academically. The rise of autism has created a difficult learning environment in the classroom. It is with great need that educators meet the needs of the autistic child to help ease the learning difficulties and bring the child into a setting that is beneficial to the academic growth of each individual. The need to teach students effectively has brought the topic of autism into the research world that will continue to help pave the way to develop appropriate teaching strategies.
The purpose of identifying, creating, and implementing effective strategies is to slow the curve of the growing learning difficulties based on autism. The growth of autism has become a hurdle in the classroom that can be an obstacle too high to overcome for many unprepared educators. Teachers have used different techniques implemented on students with different learning modalities. The challenge with autism is that it affects a few key areas that are used in learning strengths to become successful. These key areas range from behavior, oral communication, to a lack of social skills. These key areas are very important to develop into a student with successful academic achievements.

**Purpose of the Literature Review**

The purpose of this study was to find the most comprehensive and in-depth research that can provide background on autism to provide teaching strategies to any teacher that has an autistic student in his or her classroom. The teacher has to be prepared to implement teaching strategies that fit the needs of the target student. By implementing different teaching strategies to help the autistic student, the teacher has addressed the importance of serving the student with the up-most attention and care. The teaching strategies implemented in the classroom help to develop the students' academic learning skills become learning strengths.

**Importance of the Literature Review**

The study of autism is a topic that has been growing the Unites States every passing year because of the rise of identified children with autism. The importance to study autism comes from the great number of students that need extra attention from educators in the classroom. The need for teaching to students with autism more effectively comes from
the rising numbers of students failing to meet year-end academic goals set by the teacher through each state’s content standards. The relevant issue of autism has the educational world working hard to join the students with autism and their struggle to stay successful everyday during the school year.

**Scope of the Literature Review**

The scope of this study ranges from identifying autism’s characteristics to the research at-hand that focuses on the implementation of successful teaching strategies. This range builds comprehension for any parent or teacher interested in autism. The scope is designed to help give background about autism and what can be done to help make autism a smaller problem in the classroom.

Section II: Literature Review

**Introduction**

One the biggest phenomenon in education is the diagnosis of a child with a disorder known as autism. This disorder has caused a great deal of debate recently with the yearly rise of estimates of children with the disorder. As a result, this has caused a huge problem in education. We now have accepted autism and the other disorders associated with autism as a part of a classroom’s characteristics. Just two decades ago, educators and parents were not aware of the difficulties that autism can bring into a child’s life. To make progress, educators, doctors, and parents have worked really hard to make adjustments in a child’s life to improve the quality of education. With this said, it is paramount for any educator and parent to be fully aware of the autism scope in and out of the classroom. How is it possible for a relatively new disorder to be such a nuisance in a
child’s education and provide some many difficulties at home? This is what today’s children are dealing with when a child is diagnosed with autism. Many people will agree that autism affects a student to perform in the classroom, but it does not mean that the student is dumb. Many children with autism have succeeded in the classroom due to the fact that most have average to above average intelligence. When testing, accommodations have to be made to ensure that a child with autism has been fully tested to his or her capabilities to get an authentic reading on the child’s comprehension.

**Literature Review**

In the article, “A Cat Goes in the Garage Like a Can of Peas Goes in the Refrigerator: Do Deficits in Real-World Knowledge Affect the Assessment of Intelligence in Individuals with Autism?” writer, Meredyth Goldberg Edelson, discusses some of these discrepancies found when testing individuals with autism. For example, some tests suggest that a child with autism may be classified as retarded. On the other hand, these same tests may be administered differently and yield different results. Many schools test children with an intelligence test when there is a strong belief that the child may be autistic. This norm created by the educational system suggests that children with autism are retarded if the individuals do not test well on the intelligence test. Edelson quoted in her article numerous studies that have found discrepancies in testing children with autism with an intelligence test. “Much of the literature regarding the cognitive level of individuals with autism suggest that most individuals who have autism are also mentally retarded” (Happe, 1995; Lincoln, Courchesne, Kilman, Elmasian, & Allen, 1998; Mash and Wolf, 2002; Perry & Factor, 1989, p.). The norm has been changing as a result of further studies being conducted that have found that a child with autism can
succeed with the proper environment and accommodations being made by the teacher and parents. Edelson continues to report more finding through research conducted by other articles on autism regarding the intelligence test discrepancy.

Moreover, there is evidence to suggest that the level of intelligence in individuals with autism reported in the literature may depend on the nature of the test used to measure intelligence. Most researchers agree that it is often difficult to determine the true level of intelligence in individuals with autism unless the possible interference of the symptoms of autism is recognized and controlled for in the assessment process (Koegel, Koegel, & Smith, 1997).

This research further complicates the findings of earlier research because of the further understanding of the symptoms associated with autism. Autism has been linked to provide difficulty in the following three areas: language, attention, and motivation. These three areas are key areas for any individual to score well on an intelligence assessment. As a result, many students with autism have performed poorly on these assessments. “Much research has shown that symptoms of autism do affect the assessment process. For example, there are consistent findings in literature that language, attentional, and motivational difficulties are often present in individuals with autism and that these difficulties can affect the outcome of their intellectual assessment” (Carr, 1976; Courchesne, Townsend, & Akshoomoff, 1994; Garretson, Fein, & Waterhouse; 1990; Leekam, Baron-Cohen, Perret, Milders, & Brown, 1997; Mundy, & Neal, 2001; Volden, & Johnston, 1999; Wainwright, & Bryson, 1996, p.). Many researchers rely heavily on assessments that are heavy with language questions. These assessments have been targeted as assessments that may be invalid as a result of the symptoms associated with
autism. The practice of these tests will most likely need to be changed in order to better serve a student with autism. The reasoning for this account is due to the findings that language and cognitive intelligence can be assessed as two different independent assessments. “However, research has shown that language deficits can occur independent of cognitive functioning in individuals with autism” (Lord & Paul, 1997, p. ).

This leads me to another issue that has been brought up in other studies by researchers. Why do we use intelligence assessments that have a large section for language? Many assessments can be used and are used to assess a child with autism. But there are a few tests that are used more commonly than some of the others. Edelson found research indicating that assessments have been misused to assess a child with autism. In simple terms, we are using an assessment that may contain many discrepancies in the results due to the fact that adjustments are not being made as new research is confirmed.

Researchers have argued that two of the tests most commonly used to assess the intelligence of individuals with autism (the Stanford-Binet and the Weschler scales) may be inappropriate for assessing the intelligence of individuals with autism because of those instruments’ emphasis on verbal ability (Carr, 1976; Goldstein, and Lancy, 1985; Mittler, 1966). As many as 50 percent of the individuals with autism may be functionally nonverbal (American Psychiatric Association, 2000), and, there are frequently serious language deficits present in the remaining individuals with autism (Rutter, 1978, p. ).

Edelson’s purpose of study was to determine whether a person with autism has real-world knowledge. In order to conduct the study, Edelson used two measures that limit the person’s use of language. The two measures were the Test of Nonverbal Intelligence-
Third Edition (TONI-3; Brown, Sherbenou, & Johnson, 1997) and the Universal Nonverbal Intelligence Test (UNIT; Bracken, & McCallum, 1998). The TONI-3 is a test that uses visual stimuli through abstract geometric shapes. The TONI-3 is not timed, which allows the individual time to make his or her selection, and the individual chooses an answer without responding verbally. The UNIT also shows a stimuli pattern with a portion missing. The individual has to choose the missing portion correctly through four choices that are provided. Edelson goes on to hypothesize that the individuals tested will score better on these tests due to the nonverbal responses. The study was conducted in Italy and the United States. In all, 35 participants were able to complete the three year study. 29 participants were from the United States and six were from Italy. 12 girls and 23 boys participated from ages ranging from four to 18 years of age. The two tests had the participants assessed in abstract knowledge and real-world knowledge. To further the assessment, the participants were randomly assessed in both assessments with some starting the TONI-3 first and the others with the UNIT. The two assessments were then correlated together by computing a Pearson product-moment correlation coefficient of \( r^{(35)} = .56 \). This helped correlate the assessments with a comparable determination of intelligence for the participants in this study. Since these assessments had real-world knowledge questions, the younger participants had less of these questions and a percentage was calculated from the assessment as being the best measurement. The UNIT had 60 percent real-world questions compared to only 40 percent abstract knowledge questions. The percentages for the TONI-3 were not provided, but the participants scored better on the TONI-3 than the UNIT. The study found that the two assessments had different scores, which suggest that the two may not be correlated. The differences in the
scoring may also be a result of the TONI-3 having six possible responses and the UNIT having only four choices. Obviously, this makes for a discrepancy that should be acknowledged. The author did discuss limitations to the study due to the fact that the sample was relatively small. A further study would need to be conducted to verify the findings from this study. Edelson goes on to state that “The present findings have significant implications for the assessment of individuals with autism. As Atwood (1998) noted, individuals with autism seem as if they would perform better on tests of intelligence than they actually do, because of the interference of symptoms of autism” (Edelson, 2005, p. ).

**Diagnosing Autism and Asperger’s Syndrome**

For further clarification, the current and accepted definition for autism and Asperger’s syndrome is from The American Psychiatric Association’s *Diagnostic and Statistical Manual of Mental Disorders 4* (DSM-IV) criteria for diagnosing a child with autism must include impaired conversational speech or repetitive, stereotyped, or idiosyncratic speech (or both) (Dickerson, et al). In other words, a child must show oral communication problems. Notice that I did not mention anything regarding a child’s intelligence or Intelligence Quotient (IQ). Neither a child’s intelligence nor IQ is a characteristic that is used to diagnose the child with autism. A child with autism may very well have a normal to above normal intelligence.

The child needs to show evidence of problems in the following areas: social interaction, communication, and stereotyped patterns of behavior. The teacher needs to look for different characteristics during observation. First, is there a delay in or a lack of spoken language development in the child while he or she is conversing with another
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student in a normal setting? Second, are there any impairments in conversational skills exhibited by the student? Third, is there any repetitive or stereotypical use of the language that can be easily identifiable? Fourth, is there a lack of spontaneous age-appropriate make-believe or social imitative play when you observe the child during class time or recess? These four questions are ways, in which, the teacher can observe and record developmental issues that need to be addressed. The diagnosing of autism is quite common when the child is in day care or preschool because of the amount of hours that a professional can observe a child individually.

A professional is needed to diagnose a child with autism because a child may exhibit preoccupation with one repetitive stereotypical behavior that may seem normal to someone. A child can also have an inflexible attachment to nonfunctional routines or rituals, repetitive mannerisms, and preoccupation with parts of objects (www.autism.org/dsm.html). The focus to identify autism thus lies on three key areas: impaired social interaction, restricted and repetitive behavior or interests, and communication impairment.

**Defining Asperger’s Syndrome**

Asperger’s syndrome first came to light when its namesake, Hans Asperger, researched children with what was believed to be Autism. From the studies of these children, Asperger came up with five narrative descriptors: “(1) Impairment in social interaction  (2) Impairment in communication (3) Restrictive and repetitive behavior and interests (4) Associated features (i.e. unusual sensory responses, difficulty with attention, behavior problems, and special abilities) (5) Intelligence: Ranged from genius to mentally retarded” (Calhoun, Crites, & Dickerson, 2001, p. 2). When Asperger first published in
German his findings in 1944, his research did not take flight in the United States. It was not until 1991, when Asperger’s research was translated into English, that people in the United States started to become aware of what became known as Asperger’s syndrome. This is why the average American knows very little of the syndrome, or nothing at all, named after Hans Asperger.

As a result of this new syndrome, the DSM-IV has setup a similar criteria to diagnose children with Asperger’s syndrome:

A. Qualitative impairment in social interaction.

B. Repetitive and restrictive stereotyped patterns of behaviors, activities, and interests.

C. Clinically significant social, occupations, or other functioning impairment.

D. Absence of a clinically significant general language delay.

E. Absence of a clinically significant delay in cognitive development or in development of age-appropriate adaptive behavior (other than social interaction), self-help skills, and childhood curiosity about the environment.

F. Failure to meet diagnostic criteria for schizophrenia or other types of pervasive developmental disorders (Fine & Myers, 2004, p. 3).

The DSM-IV criteria to diagnose a child with Asperger’s syndrome also found in “Understanding Students with Asperger’s Syndrome “(Fine & Myers, 2004). Fine and Myers (2004) make reference to the DSM-IV criteria for Asperger’s syndrome and provide insight on how to teach a child with Asperger’s syndrome. This includes tips on how to use homework, behavior management, note taking, accommodations, and classroom management. An intriguing part of the article is the use of SOCCSS (Situation,
Options, Consequences, Choices, Strategies, Simulation) strategy as a classroom management plan. The SOCCSS strategy provides the students with an opportunity to sequence problem situations involving interpersonal relationships and to analyze options based on consequences (Fine & Myers, 2004, p.). This is an explicit behavioral management plan for the student and a classroom management plan for the teacher.

**Autism v. Asperger’s Syndrome**

There has been a push for many years to either place Asperger’s syndrome into the autism spectrum or, just simply, give it its own category or identity. The fact is that autism has dominated the headlines through the years. Yes, Asperger’s syndrome has received attention from media, education, and parents. However, many will agree that it has not received the same level of attention that autism has been allotted. Many have argued in both directions regarding this hot topic, but this argument has been as old as the existence of either autism or Asperger’s syndrome. The debate started from the moment both, autism and Asperger’s syndrome, were conceived. One of the first to write about autism was Leo Kanner. Kanner wrote an article titled “Early Infantile Autism” in 1943. His report suggested that some children classified as mentally retarded were quite capable of demonstrating knowledge, but these children did not quite fit into the categories that had been identified at the time. The term “autism” has been given credit to another researcher named Eugen Bleuler. Autism meant “escape from reality.” Through the years the word autism has evolved to mean “variable developmental disorder that appears by age three and is characterized by impairment of the ability to form normal social relationships, by impairment of the ability to communicate with others, and by stereotyped behavior patterns (Webster’s New World College Dictionary,
http://www.merriam-webster.com/dictionary/autism). By 1944, an Austrian by the name of Hans Asperger published an article in German titled “Autistic Psychopathy in Childhood.” This article is credited with the birth of Asperger’s syndrome, not autism as one might presume from the title. Very similar research was found in both articles written by Kanner and Asperger. The most striking piece of information comes from Asperger’s article due to the year of publication in English. One might agree that this translation time period coincides with the Asperger’s syndrome identification in the America. Much of the American research conducted took place after the English publishing of Asperger’s work.

Asperger’s influence can still be felt to this day when one considers “the DSM-IV’s three diagnostic criteria for autism: ‘impairment in social interaction,’ ‘impairments in communication,’ and ‘restricted, repetitive, and stereotyped patterns of behavior, interests, and activities’ (American Psychiatric Association, 1994, pp. 70-71), as well as symptoms considered by the DSM-IV to be associated features of autism” (Mayes, Calhoun, Crites, 2001, p.).

Hans Asperger’s work came to be valued many years after his 1994 article on what he considered autism. His importance rose with the translation to English. “Asperger’s 1994 publication received very little attention outside of Germany and was overshadowed by Kanner’s (Kanner, 1943) description of autism” (Wing, 1981, p.). The rise of Asperger as an important figure in the autistic world finally came to fruition when an English lady by the name of Lorna Wing first used the term “Asperger’s syndrome.” This rise of Asperger came from 1981 publication from Wing, in which she wrote that
“children and adults who have autistic features, but who talk grammatically and who are not socially aloof” (Wing, 1981, p. 124).

In the article, *Does DSM-IV Asperger’s disorder exist?* (Mayes, Calhoun, & Crites, 2001), the debate about the differences between Asperger’s syndrome and autism are brought front and center through an analytical findings explanation. A variety of authors have tried to propose the differences between autism and Asperger’s syndrome. In general, individuals with Asperger’s syndrome had (1) more social and language skills, (2) uncommon interests from other individuals, (3) less stereotypes, (4) reduced sensory abnormalities, (5) generally higher IQ scores, and (6) noticeable gross-motor incoordination. (Mayes, Calhoun, & Crites, 2001, p. ).

These differences really hurt the research world due to a non-agreement as to what symptom is attached to autism and, or, Asperger’s syndrome. Many years of research have been conducted without a uniform classification for either autism or Asperger’s syndrome. As a result, researchers use each others’ work as a way to gauge their definition of autism or Asperger’s syndrome. The DSM-IV finally makes a firm commitment to classify the symptoms for autism and Asperger’s syndrome, even though both overlap considerably. These overlaps do not take into consideration the universal agreement that Asperger’s syndrome and autism are different. Mayes, Calhoun, and Crites make an attempt through their analytical research to create pre-DSM-IV definition for Asperger’s syndrome.

Differing relationships between Asperger’s syndrome and autism were also postulated, including that Asperger’s Syndrome was: (1) ‘on a continuum with autism’ (Klin, 1994, p. 139), (2) not a separate diagnostic entity but on the autism
The debate between autism and Asperger’s syndrome continues embedded in the written articles of researchers. Researchers have had their say as to what their findings have led them to believe. Many people still believe that autism and Asperger’s syndrome are the same, while many others still consider the opposite to be true. This debate has been ongoing since Kanner (1943) and Asperger (1944) first published their work in the autism spectrum. Little did these two know how their published work would forever change the landscape of science, psychology, education, and parenthood. Their work will continue to be debated in a non-hostile manner. The guidelines placed forth by the DSM-IV have increased the debate among researchers. “Following the inclusion of Asperger’s syndrome in the ICD-10 (World Health Organization, 1992), Szatmari (1992) prepared a literature review for the American Psychiatric Association’s DSM-IV committee that supported the DSM_IV’s inclusion of Asperger’s syndrome” (subsequently referred to as Asperger’s disorder by the DSM-IV) (Mayes, Calhoun, & Crites, 2001, p. ). Even though many agree with Szatmari, many still disagree with the DSM-IV definition of Asperger’s syndrome. “Authors continue to maintain that individuals with Asperger’s syndrome are less severely affected than are individuals with autism and have better social and language skills (Eisenmajer, et al., 1996; Myhr, 1998; Siegel, 1996; Szatmari, et al.,
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1995), have language abnormalities (Ghaziuddin, Weidmer-Mikhail, & Ghaziuddin, 1998; Gillberg & Ehlers, 1998; Klin & Volmar, 1995; Siegel, 1996), may function in the mentally retarded range (Klin & Volmar, 1995; Siegel, 1996), and may have delayed speech” (Eisenmajer & et al., 1996; Manjiviona & Prior, 1995; Siegel, 1996; Twachtman-Cullen, 1998) (Mayes, Calhoun, & Crites, 2001, p.).

The Timeline

Mayes, Calhoun, and Crites (2001) continue their article by following the timeline to when the road between Asperger’s syndrome and autism converge and diverge between experts of the two disorders. “In 1985, Schopler proposed that Asperger’s syndrome was synonymous with high-functioning autism and recommended that the term Asperger’s syndrome be discarded” (Mayes, Calhoun, & Crites, 2001, p.). The reports continue to come in from articles suggesting that maybe Asperger’s syndrome and high-functioning autism are really two different disorders, and not the same disorder as Schopler found. This further puzzles the debate between the two disorders into a whole different argument that many have researched and challenged. Mayes, Calhoun, and Crites continue to write “In 1997, Miller and Ozonoff published a study that analyzed Hans Asperger’s original four cases (Asperger, 1944/1991) and demonstrated that all met the DSM-IV criteria for autism and not the Asperger’s disorder” (Mayes, Calhoun, & Crites, 2001, p.). The article continues by giving two further studies that found children in one study being diagnosed with autism and the other study had children diagnosed with Asperger’s syndrome. The result of finding so much evidence against Asperger’s syndrome and autism being different led to Mayes, Calhoun, and Crites (2001) conducting a study. The study’s purpose was to analyze a large group of children
diagnosed with autism or Asperger’s syndrome and evaluate whether they fall into the DSM-IV category as having Asperger’s syndrome. The researchers used a psychiatric evaluation before placing the children in the study. The study included five parts:

The evaluation included (1) analysis of questionnaires and behavior rating scales completed by the child’s parents and teacher; (2) intelligence testing; (3) clinical observations of the child; (4) parent interview focusing on the child’s social, emotional, and behavioral functioning, current and previous symptoms, and developmental history; and (5) review of historical data, including early intervention and school records and prior evaluations (Mayes, Calhoun, & Crites, 2001).

The study used “The Checklist for Autism in Young Children” (Mayes & Calhoun, 1999a) as a standardized means to collect their data to help them apply it to the DSM-IV diagnostic criteria. The checklist was implemented to 143 children that had anywhere from 23 to 30 symptoms in the autism spectrum. The total number of children totaled 157 when the study was concluded. The range of age for the participants was 1.6 to 14.4 years. The data collected from this study were sufficient to determine whether the DSM-IV criteria for Asperger’s syndrome was diagnosed correctly based on the DSM-IV criteria.

The results, from the conclusion of studying the 157 students, were surprising. “There was 100 percent diagnostic agreement between the psychologist conducting the evaluations and the child psychiatrist who independently reviewed each child’s chart. All 157 children met the DSM-IV criteria for autistic disorder and none met the criteria for Asperger’s disorder” (Mayes, Calhoun, & Crites, 2001, p. ). This result came from the
identification of all the children having a social impairment and restricted and repetitive behavior and interests. This criteria is stated in the DSM-IV as characteristics of autism. This concludes that the criteria used in the DSM-IV to classify children as autistic or Asperger’s syndrome has too many overlapping variables. These characteristics need to be readdressed and aligned more closely if a particular disorder like Asperger’s syndrome is going to continue as a separate entity from autism. If further research concludes that Asperger’s syndrome is too closely aligned to autism, than an adjustment should be made to rewrite autism as the “autism spectrum.” Mayes, Calhoun, and Crites argue that further research is needed to better identify different variables that exist among children with autism and Asperger’s like the “age of onset of symptoms” (Mayes, Calhoun, & Crites, 2001, p. ).

**Does Asperger’s Syndrome Exist?**

The DSM-IV criteria raises a red flag because it is a very similar criteria used to determine whether a child has autism. This argument was put to the test in the article *Does DSM-IV Asperger’s disorder exist?* Calhoun, Crites, and Mayes (2001) put the DSM-IV criteria to the test in their study of 157 children ranging in age from 19 months to 14.4 years. The purpose of this study was to challenge whether the DSM-IV criteria for Asperger’s syndrome is distinct and separate from autism. For this to be true, Asperger’s syndrome should have noteworthy characteristics in diagnosing this syndrome that make it different from autism. The researchers noted that Schopler’s *Convergence of learning disability, higher-level autism, and Asperger’s syndrome* (1985) recommended the term Asperger’s syndrome stopped from being used (Calhoun, Crites, & Mayes, 2001, p. 4). Other researchers have followed suit with this claim. The study of the 157 children turned
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out to be very informative. The results from the study suggested that Asperger’s syndrome be included with the term Autism because of overlapping characteristics in the criteria for Autism and Asperger’s syndrome.

**Helping Students with Autism**

Helping students with Autism is no easy task since autism is relatively new in the psychological and medical field. This has not prevented teachers and parents to seek out strategies to help students with autism succeed. One approach that may be very appealing to any parent is to enroll the child with autism in Project DATA (Developmentally Appropriate Treatment for Autism). “Project DATA was started with the intention to develop a school based program for young children with autism that would be effective and acceptable to consumers” (Boulware, McBride, Schwartz, & Randall, 2004, p.1). The students that participated in Project DATA were enrolled in preschool for the first time. All of the participants had already been diagnosed with autism from a professional in the community, referred by the school district, and available space in the program for the child was needed.

Project DATA started as a federally funded study that continues today in the state of Washington. The initial study from Project DATA revealed what many educators believe to be important for children with autism; low class sizes bring results. These preschoolers were placed an in intimate setting that featured support from various sources. Each class had a mixture of school children that either had autism, or not, a head teacher, assistant teacher, two classroom aides, and additional therapy services. One person from each classroom served as a liaison between school and home to relay information.
Project DATA also established five interdependent components:

A. High Quality Inclusive Early Childhood Program
B. Extended Instructional Time
C. Technical and Social Support
D. Collaboration and Coordination Across Services
E. Transition Support (Boulware et al, 2004, p.)

The students were assessed in six developmental domains: adaptive, cognitive, social communication, social, fine-motor, and gross-motor. Each child had a pre- and post-assessment in each domain and each domain showed significant gains. Achievement among the students jumped 22 percent for adaptive, 11 percent for cognitive, 21 percent for social communication, 24 percent for social, 30 percent for fine-motor, and 15 percent for gross-motor. The parents loved the results of Project DATA after the initial year.

Parent requests to join Project DATA jumped as a result.

Project DATA provided personnel that is unheard of in many school districts like the ones in southern California. A teacher can use an alternative to the personnel and, instead, train students to be peer mediators in the classroom. ‘Peer training to facilitate social interaction for elementary students with autism and their peers” (Dugan, Kamps, Kravits, Royer, et al, 2002, p.) discusses two studies that found trained peers to be very effective in improving participation in the classroom with autism students. These two studies open the door to potential rewards for teachers that can train one person per group to be the “Trained peer” when discussions are needed. The discussions were measured by the number of interactions and the duration of these discussions. The results showed that
trained peers increased the participation of other classmates. Autism students were found to be more engaged in the discussions as a result of having a trained peer.

Providing the best setting for a child with autism can be quite a challenge for any teacher. A teacher must know about autism and how to minimize the characteristics of the syndrome in the classroom. The learning environment is vital to any child, but even more so to a child with autism. The learning environment can be a safe heaven where the child feels safe and willing to learn. The classroom environment can also exacerbate symptoms of autism (Allen, Matthews, & Shriver, 1999). The way a child acts in his or her environment, and in and out of the classroom, can provide information to the teacher. A teacher must use three principle methods for gathering information: observation of behavior, direct interaction, and interviewing people of interest like parents or psychologists. Every piece of information can provide clues to the best teaching method for a teacher’s class.

The article *Does DSM-IV Asperger’s disorder exist?* is a very interesting article because it places the Asperger’s syndrome believers against the wall. Using 157 schoolchildren in a study and finding all of them to have autism and not Asperger’s syndrome sends a shockwave to many people who have believed that Hans Asperger actually did find a so-called high-functioning autism disorder. This study brings to light the trouble of having what we believe to be two different disorders and placing both into just one. If this is the case, new research must be brought to the limelight for analysis. This will strengthen the term “Autism Spectrum” more than it will strengthen autism itself. The link between autism and Asperger’s syndrome is so close that it is more like a grey line between the two. We do not know where one ends and the other begins.
Project DATA is a good reason why more funding needs to be pumped into education to make our future bright. A class that has a head teacher, assistant teacher, and two class aides is very likely to succeed. In today’s classrooms, small class sizes seem to hold the key to success. Classrooms with small class sizes make it easier for any teacher to teach instead of focusing on behavioral problems that take away from instructional time. Project DATA’s success has led a school district in the state of Washington to pursue the program even without the federal government’s funding. This article spurned me into my other three articles that deal with understanding the autism student.

**Understanding Asperger’s Syndrome**

“Understanding Students with Asperger’s Syndrome” (Fine & Myers, 2004) provided key insight into the world of Asperger’s syndrome. Yes, the phrase said was “Asperger’s syndrome.” The term autism and Asperger’s syndrome are closely aligned and, for now, are equal as they are different until a new study will tell us the differences, if there are any between the two. The importance of having knowledge about the topic is invaluable. This article did not have a study but provided the reader with many important strategies to help teach a child with Asperger’s syndrome due to implementation through practice that provided personal insight and helpful strategies to help the student with Asperger’s syndrome. This article addresses the importance to identify the difficulties associated with Asperger’s syndrome and how we can make adjustments in the classroom and at home to help facilitate the growth and development of the child as a student in a classroom. We have clearly read about how Asperger’s syndrome and autism are very likely the same, but we also know how they are continually classified as being different. This literature review will focus on both, Asperger’s syndrome and autism, as being the
same disorder since many of their characteristics overlap. Fine and Myers make clear statements as to what to look for in a child with Asperger’s syndrome in the classroom.

“The Asperger’s syndrome in a child has difficulty understanding human relationships and acceptable social behaviors, which often makes the child a social outcast, however, the intelligence of the Asperger’s syndrome child is normal to exceptional, and rote memorization skills are exceptional. Other symptoms may include:

A. Difficulties with transitions and a preference for sameness.
B. Preoccupation with subjects that interest the child.
C. Difficulty interpreting nonverbal body language and establishing appropriate body space.
D. Over-sensitivity of the auditory, olfactory, optical, and digestive system”


The fact is that Asperger’s syndrome and autism are now a part of our lives in education and in parenthood. Asperger’s syndrome alone has been identified as being more common than multiple sclerosis, Down’s syndrome, and cystic fibrosis, according to the Asperger’s Coalition of the United States’ 2001 study. During this study in 2001, 20 to 25 children were found to have Asperger’s syndrome from every 10,000 children.

The study conducted by Fine and Myers goes on to suggest that some factors may be to blame for the rise of Asperger’s syndrome in children. These factors make sense but need to be carefully studied since we may now have the technology to conduct analysis of children with Asperger’s syndrome. “Recent studies suggest that other factors that may cause the increased incidence of Asperger’s syndrome include older maternal age at pregnancy, growing transient populations, contracting of exotic infections during
pregnancy and infancy, and environmental toxins that may affect brain development or cause metabolic abnormalities” (Fine & Myers, 2004, p.). There are other indicators that may help identify Asperger’s syndrome in the child. “For example, more males are diagnosed with Asperger’s syndrome than females” (Ozbayrak, 1996, p.). Many ratios have been used through the years, but we will use the four to one ratio as it is one of the most commonly used ratios in the research field in Asperger’s syndrome. This ratio comes from the overwhelming amounts of identification of Asperger’s syndrome in males than females. This may be due to the perception that females are better in developing their social skills at a younger age than males. This does not mean that girls will go unnoticed by trained professionals who diagnose children with Asperger’s syndrome or autism. “However, as understanding of the disorder increases, scientists have identified the disorder in females who are able to disguise inadequate social skills more easily than can males” (Atwood, 2000, p.).

The understanding, which Asperger’s syndrome has continued to run through families, has been a place of focus when discussing the diagnosis of a child with autism. A question that is now asked is whether this syndrome runs in the family of the person being diagnosed? It may seem illogical to address this concern through a gene perspective, but evidence is suggesting that a closer looked is needed to find out if this syndrome may be genetically linked. “Genetic correlations reveal that one parent, most frequently the father, exhibits the traits of Asperger’s syndrome or, at minimum, such temperamental traits as acute and narrow interests, habitual and rigid mannerisms, social ineptness, and tentativeness” (Bauer, 1996, p.) (Fine & Myers, 2004, p.). This identifies, more and more, the necessity to track families with the diagnoses of Asperger’s
syndrome in a member of the family. For example, Yale conducted a study that had a whopping 46 percent of the children diagnosed with Asperger’s syndrome having a positive family history in what they called first-degree relatives” (Atwood, 2000, p. ) (Fine & Myers, 2004, p. ). The disorder seems to have to some extent passed itself along as part of a gene. How can we identify this gene? Only further research will help. Genetic research is very costly to many families and only the use of huge private and publicly funded companies can provide the resources to find the Asperger’s gene.

The current view of Asperger’s syndrome in the classroom is that a teacher will do everything possible to make sure the classroom environment is in place for the student to succeed. But the fact is that many teachers are inadequately prepared for a student with Asperger’s syndrome or autism. Fine and Myers (2204) address this issue in their article by pushing teachers to do their research and it may be in the best interest of the teacher to receive the proper training to help the student have a successful school year in the classroom.

Teachers must address the comprehensive needs of their students and must provide the appropriate emotional, social, and academic support. The first step for teachers is to acknowledge that Asperger’s syndrome is a developmental disorder that influences the behavior of the students. Unfortunately, theory and practice are not always congruent. For example, students are often held accountable for crises situations, which is unfair to the student with Asperger’s syndrome. Educators should become knowledgeable about Asperger’s syndrome research and develop an understanding of the needs of the students (Fine & Myers, 2004, p. ).
Fine and Myers (2004) continue to point out some helpful pieces of information for teachers like reducing the number of transitions, provide a routine that the child can get accustomed to and prosper, minimizing surprises, make announcements of changes ahead of time, and clearly communicate with the student of any adjustments. A student with Asperger’s syndrome should be in a controlled environment for the duration of the day. The social gatherings at school should be avoided like assemblies, eating in the cafeteria, pep rallies, concerts, chorus shows, and other school functions that place a student with Asperger’s syndrome in a difficult setting. The student should be allowed to make adjustments as she or he begins to feel comfortable with peers. This gradual process of acceptance eventually made lead to an environment that may be a comfortable setting in the future. However, every student is different. Thus every student requires unique focus and attention. Each teacher should get to know his or her student and make rational decisions based on the student’s best interest. With this said, a teacher has to be aware of this changing of the guard in fairness. Fairness is a tricky word to play around students because every student wants to feel and believe that a teacher is being fair and objective. This fairness will be placed in question when a student diagnosed with the Asperger’s syndrome or autism is placed into your class. The situation may seem unfair to other students, but communication and nurturing from the teacher will definitely help in creating a classroom atmosphere that any student can succeed in, even though, after a few adjustments are made to the class structure and routine. “Successful classroom achievement for the Asperger’s syndrome student depends on strict external structure, persistent teacher feedback, guided direction, and individualized assignments. Classwork and homework requirements may need to be customized to compensate for the weak
concentration skills, deficient handwriting abilities, and extreme disorganization” (Fine & Myers, 2004, p. ).

The list of things to consider for a child with Asperger’s syndrome continues with the student’s placement in the classroom. Many students with Asperger’s syndrome are better seated near the front of the class to keep an eye on their attentiveness in each lesson. Nonetheless, a student with Asperger’s syndrome may feel overwhelmed being seating with too many other students in the front of the class. The best option is to remove some desks around the student and leave him or her in an area that gives space for everyone. This reduces the amount of times an Asperger’s syndrome student may become distracted, but it also limits another student from having in easy task of bothering the student daily. This form of classroom management will help facilitate that lessons run smooth and effectively.

**Which Seat is Best?**

A teacher needs to make sure not to place a child with Asperger’s syndrome with just any student. A teacher must find students who will be willing to help their Asperger peer and make contributions to the success of the student in the classroom. This means that the students must be very understanding and mature enough to handle the extra responsibility of a student in need. This may even include a student who will be willing to be a partner in the classroom for their peer. “Pairing the Asperger’s syndrome student with a peer buddy who may have a calming effect and offer assistance in transitioning also is beneficial. Asperger’s Syndrome Coalition spokeswoman Rosalyn Lord recommends securing a Special Support Assistant to aid the Asperger’s syndrome child in the classroom and other social settings” (ABC News 2000) (Fine & Myers, 2004, p. ).
The idea to have someone help is very helpful if implemented correctly. Many school districts had funds to pay for a personal aide that would follow an Asperger’s syndrome student throughout a school day. Now with all the budget cuts, these students are not likely to have a personal aide help them with their daily needs. The cuts in funds in education have affected many students and will continue to do so until a firm commitment is made to help students in need succeed.

The classroom is a place of learning for any student. In order to make a classroom a place of learning, students must feel safe and classroom rules must be in place to provide the necessary structure for all students to succeed. This is no different for an Asperger’s student who is trying to do the same as every child in the classroom: succeed. Classroom rules must be strategically created and implemented into the class for every child’s sake.

Creating a learning environment using a proactive approach to behavior development requires teaching precise behaviors expected for compliance with classroom rules. First the teacher should establish the rules essential to promote learning and specifically identify the rules necessary for the safety, well-being, self-esteem, and success of all students. Next, the teacher should recognize the strengths and weaknesses of the Asperger’s syndrome student, paying particular attention to the student’s personal and environmental challenges and resources. Then the teacher should develop a plan to teach positive behavior, using methods that correspond to the student’s learning style and needs. The typical method is to teach the behavior, develop cues for the behavior, practice the behavior, and reinforce good behavior (Fine & Myers, 2004, p. ).
The SOCCSS Strategy

The focus of attention on the Asperger’s syndrome student may cause a distraction to the class at first. But practice and implementation early in the school year can provide a foundation from where the class becomes a better place for all students as simple routine takes hold. The teacher can have help from other students and the Asperger’s syndrome student to maintain an atmosphere of ownership in the classroom for all students. A teacher that shares ownership of the classroom with the students usually has the better classroom environment since the students buy into the community feel that is contagious. This community feel can increase with the teacher implementing a behavior plan that Fine and Myers discuss in their article from the researchers Myles and Simpson. The plan discussed by Fine and Myers can guide a student to become an effective member of the classroom. The student can walk away from a behavior plan and have a good feeling from contributing, monitoring, and implementing good behavior into every school day. Fine and Myers discuss the behavior strategy as the following: “The SOCCSS strategy (Situation, Options, Consequences, Choices, Strategies, Simulation) provides students with an opportunity to sequence problem situations involving interpersonal relationships and to analyze options based on consequences” (Myles & Simpson, 2001, p. ). Myles and Simpson (2001) describe the SOCCSSs steps as follows:

1. “Situation. When social problem arises, the teacher helps the student to understand the situation by first identifying (a) who was involved, (b) what happened, (c) the date, day, and time of occurrence, and (d) reasons for the present situation.
2. **Options.** The student with the assistance of the teacher, brainstorms several options for the behavior. At this point, the teacher accepts all student responses and does not evaluate them. This step encourages the student to see more than one perspective and to realize that any one situation presents several behavioral options.

3. **Consequences.** Then the student and teacher work together to evaluate each of the options generated. The teacher is a facilitator, helping the student to develop consequences for each option rather than dictating them.

4. **Choices.** The student selects the option or options that will have the most desirable consequences for him or her.

5. **Strategy.** Next the student and teacher develop an action plan to implement the selected option.

6. **Simulation.** Finally the student is given an opportunity to role-play the selected alternative. Simulation may be in the form of (a) role play, (b) visualization, (c) writing a plan, or (d) talking with a peer” (Myles and Simpson, 2001, p. 7) (Fine & Myers, 2004, p. ).

The SOCCSS strategy is a plan that may be very successful for students with Asperger’s syndrome. This plan gives the child an opportunity to correct negative behavior into positive behavior with self-input. The ownership of a person’s behavior is very important for any child. The SOCCSS behavior plan can give a child ownership over their behavior and provides a structure for future success.

Fine and Myers continue with other areas of note for the teacher to be aware in case of student exhibiting traits of a student with Asperger’s syndrome. These areas are
skills that teachers and students take for granted like penmanship. Most students with Asperger’s syndrome have poor penmanship. However, visuals tremendously aid the student because of the rote memorization specialty mentioned before in the review. Asperger’s syndrome students need to be allowed to take their time to produce good quality work for the teacher. The teacher and the student need to establish guidelines based on the quality of work that will be allowed to be turned-in for credit. The deficiencies of an Asperger’s syndrome student are not limited to the classroom. These deficiencies can also be exhibited outside the classroom during physical education. Students may have poor coordination in various activities, but the area of limited ability may the gross motor skills. Many students find sports to be difficult due to the need to excel in gross motor skills that many Asperger’s syndrome students do not possess at an adequate level to succeed without practice. A student must be given ample opportunity to succeed through various scaffold exercises designed to make the student feel more self-worth.

Another way to increase student awareness and responsibility is to design a “Power Card” that can guide the student to use reminders to help deal with issues outside of the classroom. “When the child must deal with a problem situation, he or she may refer to the Power Card for reminders or the step-by-step instructions. For example, a child who has difficulty carrying on a conversation with others might carry a Power Card with the following instructions:

1. Look at the person to whom you are speaking.
2. Answer and ask questions politely.
3. End the conversation positively and politely” (Fine & Myers, 2004, p.).
The teacher can provide the student with such “Power Card” to help remind the student of how to deal with common situations that arise during recess or passing periods. The student will feel more comfortable knowing that a card can help him or her engage another student and have a positive and fulfilling conversation that the “Power Card” can empower him or her to have daily.

Even though the “Power Card” is a very useful tool, the teacher still has to contribute with making the classroom norms in easy task for the Asperger’s syndrome student. A teacher has to be very clear as to what expectation every child in his or her class will be held accountable. Every teacher can have a classroom goal and an individual goal for every student. The individual goal can give a teacher the flexibility to make a difference in the child’s life through personalization of coursework. The idea that every child is different comes into play at this point. How can the teacher use personalization to increase student achievement? Well, this has to be done on different fronts. Any student will give effort to a teacher as long as the teacher will ask. As the saying goes, “The more you ask, the more you will receive.” This is very evident in learning. A teacher can help push a student to become better by making expectations clear to the student from the very beginning of the school year. By listening to the teacher, the student will embed the expectations of the teacher into themselves and try their hearts out to reach that goal. In order for the students to accomplish an individualized goal, the teacher must give an advanced notice on what the students will be learning, how they will be learning the concept, and how will they be assessed. By making these areas clear to any student, the teacher is preparing his or her students for success. “Priming is a preview strategy that familiarizes students with upcoming academic material, thus reducing the stress and
anxiety associated with newly introduced units of study and increasing the success of mastery” (Wilde, Koegel, & Koegel, 1992, p. ) (Fine & Myers, 2004, p. ).

Another way to help students in the classroom is make a set of graphic organizers the most commonly used to get the students accustomed to seeing and using them regularly. The more the students practice using the organizers, the more likely they will use them and learn. For example, Asperger’s syndrome students can learn a story through pictures-in-sequence. This strategy will take time due the penmanship involved, but this exercise can fall into the strength of a student who uses rote memorization regularly. The visuals will help the student memorize the story even if he or she had difficulty with the vocabulary in the story. “Graphic organizers are an effective instructional tool for highlighting principle concepts and displaying conceptual relationships. Graphic organizers arrange abstract information in a concrete form” (Fine & Myers, 2004, p. ).

The fact that many students have different modalities in learning concepts can help a teacher differentiate his or her instruction provide the enrichment a lesson can use to be better. Many different teachers are already using differentiated teaching strategies to their advantage in general and special day classes with success.

**Good Classroom Management**

The good teaching that a teacher can provide to his or her class can carry over into having less problems with discipline. Every class will have discipline issues, but a class that has an effective classroom management plan in place can help make the learning in class more effective. A teacher can use different strategies to promote positive behavior in the classroom. Positive behavior can be contagious when a teacher can implement different strategies to keep building the positive behaviors. However, another challenge
can present itself when students who are accustomed to showing negative behavior try to continue down the same path. A teacher must catch a student and reverse or correct that negative behavior so it may change to positive behavior. Once the behavior becomes positive, the teacher must acknowledge the behavior to keep reinforcing the positive behavior for the student. Fine and Myers found a study conducted in 1995 that had studied the behavior in children with Asperger’s syndrome. “Williams (1995) proposes that teachers impose restrictive guidelines regarding these intense fixations (referring to a typical negative behavior). Positive reinforcement to promote desired behavior, definite expectations for completing work, and expecting students to comply with the teacher directives are effective behavior modification strategies. Teachers may attempt to capitalize on a child’s area of fixation to expand the student’s academic interests” (Fine & Myers, 2004, p. ). The teacher can impose a simple plan to engage the student into positive or wanted behavior with different incentives. Fine and Myers (2004) continue by keeping the behavior management plan to something as simple as the acronym ABC. The ABCs of behavior management, as Fine and Myers address to in the article, are simple for any teacher to attempt to memorize. “A represents the antecedent, what happens prior to the misbehavior. B represents the behavior, what is the appropriate and expected behavior. C represents the consequences, what happens after the inappropriate behavior” (Fine & Myers, 2004, p. ). The constant cycling of the ABCs of behavior management can help promote the positive behavior in any student be consistent and acceptable for any classroom.

Since Asperger’s syndrome is still fairly new in the United States, Fine and Myers (2004) suggest to teachers to keep the best interest in mind for all students, but especially
for the student with Asperger’s syndrome. Since students have been over diagnosed, undiagnosed, and misdiagnosed, there may be only one person that can help the child succeed. This person is the teacher of the student. Just like any parent would look after his or her offspring, a teacher has to be the child’s educational advocate to make sure all the available resources are being used to help the child succeed. There is still a growing list of students that come to school diagnosed with Asperger’s syndrome, so it is imperative for parents and teachers to work with diligence for the child’s future. Fine and Myers argue that Asperger’s syndrome needs to be addressed early in a child’s education to the fact that there is no cure for the disorder. This can feel overwhelming for any parent or educator, but the current resources are available to help any child succeed in the classroom. An educator needs to be aware that early intervention is key to any student’s success. Making adjustments early and setting into a regular routine will help facilitate the transitions in the classroom to become enjoyable and tolerable for the Asperger’s syndrome student(s) in the classroom.

**Understanding Autism**

Learning about autism through research, even if we rely on trial and error, will tremendously help educators and parents guide students with autism to future successes. How much do we know about autism? *Effective assessment of the shared and unique characteristics of children with autism* (Allen, Matthews, & Shriver, 1999) shared the idiosyncrasies of the students with autism. The article was easy to read because the headings were clear cut and dry. The method of assessment used was typical in that any teacher would use observations, interviews, and direct interaction as a means to gain
information on a student. Any teacher that does not do this, he or she does not know the student well enough.

Since more students are diagnosed with autism, more parents become better educated about the disorder. Few parents are really knowledgeable about the disorder until a family member is diagnosed with the disorder. The realization of a family member being autistic sends the family into a whirlwind of fact finding. The idea behind autism is that every family will do what is best for their autistic child. However, many educators and parents do not find themselves on the same page when education is the focal point of the discussion. Many educators and parents have been able to find a successful median to address the issue of autism and how to implement effective strategies in the classroom and at home. These constant routines at home and school can help make the day monotone for the student, but a so-called monotone day for an autistic child can be a successful day of learning. “Autism is a low-incidence disorder that has received increasing attention within educational systems in the past decade as parent groups have organized, seeking effective educational programming and treatment for their children with autism. Many school systems are in a difficult position as they attempt to balance parental demands for more intensive and specialized services for children with autism with the limited knowledge or experience school staff may posses about children with autism” (e.g. external validity; Gresham & MacMillan, 1997, p. ) (Shriver, Allen, & Matthews, 1999, p. ). With this in mind, it is very important for any teacher to consider school psychologists as a human encyclopedia who can provide the necessary information to address any parental concerns. A teacher may have the possibility of being able to attend workshops or informational meetings regarding autism, but not every
teacher will have the luck of attending such important meetings. The teacher has to be resourceful and plan accordingly with colleagues that have dealt with autistic students in the past and current term.

The demand to get potential autistic children tested has grown exponentially through that last decade. This explosion has been met successfully to some degree. The challenge does not lie with the diagnostic of an autistic student. The challenge lies with the implementation of a curriculum to address the autistic student’s needs. “School psychologists, however, can and should consider their assessments to be the core components of each of three aspects of educational programming: (a) verification—producing an accurate verification (e.g. diagnosis, special education, eligibility); (b) programming—developing appropriate, realistic instructional objectives and interventions, and (c) evaluation—establishing baselines against which measures of progress can be compared” (Shriver, Allen, & Matthews, 1999, p. ). A teacher should be aware that a psychologist is a trained professional that may have a lot of input into a student’s education in his or her class. With the help of a psychologist, a teacher will be prepared to meet the challenge and demands from teaching an autistic child.

To make sure that all the needs of every child are met, a teacher will go down a checklist of items that need to be addressed before the school year begins. One such item is to check the cumulative folder that contains all the students’ personal information. The cumulative folder has insight as to where the student might be in education and how the student behaves in class. This information is very important because many different pieces of information may point to having a potentially autistic child in the classroom.

**The IDEA Act and Autism**
One piece of information that a teacher should always review is the IDEA Act. The IDEA Act is nationally recognized as the protector of the educational rights of students with special needs. A child with autism falls into the category of special needs. Autism means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three that adversely affects a child’s educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotypical movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences. The term does not apply if a child’s educational performance is adversely affected because the child has an emotional disturbance. (sec, 300.7) This definition, and every other definition, of autism is a description of symptoms. As such, autism is recognized as a syndrome, not a disease in the traditional sense of the word. Although autism is defined and assessed by observing behavioral characteristics, it is not considered a behavioral, an emotional, or a conduct disorder, or a mental illness” (Schopler & Mesibov, 1988, p. ) (Shriver, Allen, & Matthews, 1999, p. ).

The IDEA Act is followed very closely by education since it was created with the purpose to address the needs of the children in the classroom. The IDEA Act’s definition is very clear, but, yet, it confuses people due to the characteristics associated with the syndrome.

**Autism Spectrum**

Autism is part of what is called the autism spectrum. The autism spectrum is a
A group of five disorders with very similar characteristics. Even though some characteristics are shared, each disorder is very different and unique.

Autism is actually one of five disorders that share varying degrees of impairment across three different domains; social functioning, communication, and behavioral variability. The other disorders are Rett’s disorder, childhood disintegrative disorder (CDD), Asperger’s disorder, and pervasive developmental disorder- not otherwise specified (PDD-NOS). Because each of these disorders share varying degrees of impairment across these three domains, they are considered to fall within a spectrum of disorders called pervasive developmental disorders (PDD) (American Psychiatric Association, 1994, p.).

These disorders have been commonly found in males four times more than females. There is not enough evidence to suggest why there are more males being diagnosed with a pervasive disorder than females. These pervasive disorders have not been linked through any “racial, ethnic, or socioeconomic groups” (Bristol et al., 1996, p.) (Shriver, Allen, & Matthews, 1999, p.). The sense that autism has been not been linked to any group in particular, except males, had led doctors and psychologists to label the autism as a “lifelong neurodevelopmental disorder that affects the functioning of the brain (Minshew, 1996), however, there are no medical tests that can be used to diagnose autism” (Shriver, Allen & Matthews, 1999). The diagnoses of autism are further complicated by the numerous amounts of other disorders that share the same characteristics as autism. The complication of diagnosing autism is due to a child being diagnosed by more than one disorder. This means that a child may possibility have more
than one disorder that has been identified through clinical study, observations, or intelligence testing. “The two most difficult to differentiate, especially in early childhood, are mental retardation and receptive and/or expressive language impairment. Since 75 percent of children with autism are reported to function within the Mentally Retarded range (American Psychiatric Association, 1994, p. ) differentiation may not be possible or appropriate. That is, a child may be impaired both by mental retardation and autism” (Shriver, Allen & Matthews, 1999, p. ) The probability of a child having two or more disorders is very high and probable.

With an autistic student, a teacher must pay close attention to two areas to get an idea of the student’s capabilities. The two areas are social and behavioral competence based on the article written by Shriver, Allen, and Matthews (1999). These two areas are focal points to identify the autistic student’s capabilities and limitations in the classroom and outside the classroom. Social competence and behavior make up two of the core domains in identifying an autistic student. The other domains are environment influence, physical functioning or motor skills, education or academic skills, and self-help or independent-living skills. These are the key areas for identifying a child with autism. To help facilitate the process of identifying a student with autism through the six core domains, one must use three methods of assessment. The three methods of assessment are behavior observations, verbal reports, and direct interaction.

In behavior observation, one must look for evidence from the six core domains mentioned. “Observation of behaviors within each of the domains should comprise the primary source of information in the assessment of autism. The assessment should involve direct observation of child/teacher interactions, child/peer interactions, and...
child/ object relations in the classroom” (Shriver, Allen & Matthews, 1999, p. ). This part can be completed by the assistance of the school psychologists who is better trained to observe key areas of importance in identifying behavior synonymous with autism.

The verbal report also requires a school psychologist to be the one dictating the procedure. In this method of assessment, the school psychologist may ask parents, guardians, or teachers about certain behaviors that the student may exhibit in other settings that may have been overlooked. For example, a student may act a certain way around family members and not have that behavior carry over to the classroom, or vice versa. The child may act different based on the reversal of environment. “Parents and teachers provide important information about children that may not be directly observable by the school psychologist” (Shriver, Allen & Matthews, 1999, p. ) The use of a verbal report can provide an overall analysis of the student’s personality and character.

The last method of assessment is direct interaction. This is an assessment that is very personal and insightful. The directive is to make time to work with the student in a naturally school setting. “Direct interactions with the student may consist of student interview, direct skills assessment, standardized testing, reinforce assessment, or functional assessment/ analysis” (Shriver, Allen & Matthews, 1999, p. ) The interview portion is really informal. There is no assessment that is highly used, but there may be a possibility of having a guided interview established eventually with the process of research taking place. The direct skills assessment can provide a school psychologist with skill strength and deficits. The skill strength and deficits need to be noted to establish a specific educational plan for the student to succeed. A formal assessment, which is in place to analyze student with autism, such as the “Psychoeducational Profile-Revised
(PEP-R; Schopler, Reichter, Bashford, Lansing & Marcus, 1990) is another instrument that provides information on developmental functioning in Imitation, Perception, Fine Motor, Gross Motor, Eye-Hand Integration, Cognitive Performance and Cognitive Verbal areas” (Shriver, Allen & Matthews, 1999, p. ) This assessment uses a grading scale with either “passing, emerging, or failing” marks applied to assessment.

Two of the areas of importance discussed by Shriver, Allen and Matthews (1999) are Cognitive Assessment and Functional Assessment/Analysis. These two areas are important for different reasons. The Cognitive assessment is given to try to determine whether the child is mentally retarded aside from being potentially autistic. This exam is given primarily for this reason only. As a result, a student may very well be autistic since many are high-functioning students. The Functional Assessment/Analysis is given to students as part of a requirement based on the 1997 reauthorization of the IDEA Act of 1997 (Shriver, Allen and Matthews, 1999). This assessment is important to determine the type of educational plan the autistic student should use.

Any student that has qualified as a student with special needs (autistic, or any other disorder that affects learning) will have an Individualized Education Plan (IEP) to help monitor the student’s progress in class and at home. The IEP is a common procedure used in schools to document student progress, implementation of recommendations, additions or changes to the student’s educational plan for present and future goals.

The teacher, parents, autistic student, and school psychologists make up a very important team that needs to work together for the purpose to lead an autistic student towards success in the classroom and life. Of the four group members, the school psychologist is the most highly qualified person to make decisions that is in the best
interest of the student. “Essentially, the school psychologists must apply his/her knowledge of the unique and shared characteristics of children with autism when making clinical judgments based on objective assessment information regarding verification, educational programming, and evaluation decisions” (Shriver, Allen & Matthews, 1999, p. )

An important part of combating autism is to find strategies that current teachers are using to help students with autism. One of these strategies is peer training. Peer training refers to a teacher training students to be investigators. These students are in charge of making their peers talk during discussions to make the lessons more meaningful and rich. I thought about this concept and have imagined students that feel more comfortable of knowing what to ask instead of knowing what to know. Without knowing what to ask, how are you supposed to know what to learn?

**Pivotal Response Training**

Being a parent of a child with autism can be a daunting task. Getting help to address autism becomes a necessity to the parents. What can a parent do in this situation? A response can be getting trained in Pivotal Response Training (PRT). PRT was written in a manual titled “How to Teach Pivotal Behaviors to Children with Autism: A Training Manual” (Koegal, et al, 1989, p. ) PRT describes different motivational techniques that can help parents with their child.

The techniques included the following components: (a) The adult provides a clear, uninterrupted instruction to the child while maintaining the child's attention, (b) The instructions that the adult provides vary frequently and maintenance tasks (tasks that the child has already mastered) are interspersed with acquisition tasks
(targeted skills). For example, if the child spontaneously and appropriately says the word "ball," saying "ball" is considered to be a maintenance task; saying a new word, such as "bounce," is considered an acquisition task, (c) The child has significant input in the selection of toys and activities; however, adult and child must share control over the items and activities, (d) Rewards are functional and are administered immediately and contingently following the child's behavior, (e) Reinforcers are directly and naturally related to the child's response. For example, if the child says "dog," the parent immediately reinforces the child by handing him or her the dog figurine; if the child says "swim," the parent rewards the child by letting him or her jump into the swimming pool, (f) Reinforcers are administered to the child following clear attempts, as well as correct responses” (Koegel, et al, 1989, p. )

The PRT was used in normal everyday activities like playing games or teaching a particular skill. To do this, the parents had to videotape their child for three consecutive days doing normal activities at home. The PRT was used as an intervention program that the parent can use at home in a normal environment. The parents were only trained to understand the overview of the program and not as a way to train or become experts in the field. This type of training took five hours long for five straight days. The hours of training did range from three to 25 hours because of the availability of time for each family. The training only had parents with educational degrees and Caucasian backgrounds. This limited the study’s conclusion that it would be effective because of the little diversity in the parent’s background.

 Peer Training
There is increasing evidence that peer training may be very effective in helping students with autism participate more in natural settings. This evidence was provided in an article titled *Peer training to facilitate social interaction for elementary students with autism and their peers* (Kamps et al., 2002, p.) This article looked into the use of peers as a way to help build social skills for autistic students. The research of this article looked into three areas that seem to address the build up of social skills. “Research-validated, effective educational programming has been forthcoming with a consensus for (a) early and intensive one-to-one language intervention (e.g., Lovaas, 1987, p.); (b) the used of small groups, peers, and individualized instruction in functional and academic skills (e.g., Gessler alerts, Caldwell and Wolery, 1996; Kamps et al., 1995, p. , 1997, p. ); and (c) inclusive education and accommodations and supports for the students progressing in the academic curriculum” (e.g., Koegel, Harrower and Koegel, 1999, p. ) (Kamps et al., 2002, p. ). The article used two different studies to assess whether peer trained groups will benefit an autistic student.

The first study use the three different conditions: social skills, cooperative learning, and control groups in which forms of peer training were embedded within the intervention. These conditions were analyzed based on the effects and generalizations.

The second study used a similar approach, but a few changes were made. This study focused more on the generalization effects of the group on the autistic student. This study used three areas of focus: “(a) those who participated in cooperative learning groups with students with autism, (b) those who participated in social skills groups with students with autism, and (c) a group of peers who were familiar with students with autism but had not received training”. (Kamps et al., 2002, p. ) The two studies conducted
had five students with autism and 51 general education students. The groups were video
taped to measure the length of interaction time between trained and untrained peers with
autistic peers in the groups. The results concluded with autistic peers improving their
social skills with trained peers. The trained peers were better able to make adjustments
and mentor a student with autism. The untrained peers had less interaction time with their
autistic peers and had a difficult time making adjustments. (Kamps et al., 2002, p. )

**Classroom Environment**

The classroom environment must go along with the learning environment of the
classroom. The teacher must place a child around positive environmental influences that
lead to success. The positive environmental influences needed include placing a peer-
trained tutor next to the child and keeping materials like books, realia, visuals, or objects
used nearby during the modeling of the lesson. The classroom environment must remain
intact throughout the school year because of the precocious abilities demonstrated by the
students in one skill and the significant impairment in another skill that may be closely
related. A student may demonstrate precocious ability to add numbers, but he or she may
demonstrate impairment in the skill of measuring numbers. The classroom environment
can also help develop independent living skills in the student. Students can take care of
the classroom by having “clean up” jobs that are explicit and easy to follow.

**Summary**

The idea of providing all students with a quality education regardless of each
student’s background is the most important philosophy in America’s educational system.
Autism and Asperger’s syndrome have recently threatened this theology with new
problems that many teachers, educators, and parents were not ready to combat. Through
research and studies conducted on these two areas, students identified under the autism spectrum have been better served in their schools due to the increased knowledge and practice of good teaching strategies. Many educators have learned which teaching strategies and skill building activities work and what do not work for a student with special characteristics from autism and Asperger’s syndrome. Many students are not alike, but the identification of general characteristics has helped educators gain tremendous amount of knowledge in teaching students with autism. The progress made cannot be overlooked as false or inaccurate. The inclusion of studies and good teaching practices by educators has enabled teaching to evolve into an engaged and choreographed learning experience for all students in the classroom. The benefits of good teaching have been felt by all students in the classroom. The increase in knowledge by autistic aware people has really provided insightful information that is relevant and thoroughly used in many classrooms.

Section III: Conclusion

**Position of the Author**

The implications from the literature review suggest that autism can be dealt with successfully in the classroom. Teachers have many research sources that have placed the autistic child first and can be beneficial when used appropriately. The primary source of information at any school sight should be the school psychologist. He or she is the best trained person adept to handle a case load regarding students that fall into the autism spectrum.

The results from various studies show that any student with characteristics of autism should be addressed by the teacher early in the school year. Early intervention is
important to provide a successful school year for any autistic student. Schools should have a plan in place to make sure the identification of autistic children is place along with the procedures and assessments. A quick school response will keep parents happy of the services provided for their child. Any parent will be happy and receptive in making contributions to their child’s education when their child is placed in such high priority. The collaborative effort by the parent, student, teacher, and school psychologist can create a team that uses assessments to guide implementation of an educational plan that is personalized for the individual student. The student is a product of his or her environment; so it is imperative for the environment to be suitable for the student to succeed and learn. Another important implementation by the teacher can be the Pivotal Response Training (PRT). The PRT can be used in the classroom or at home. Teachers and parents can work together to understand the process to get autistic student on the right path for positive behavior.

A teacher must use different classroom management techniques to help any autistic student succeed. First, the teacher must start observations early and get support and feedback from parents, the student, and school psychologist. Next, after observing and analyzing data from the psychologist, an educational plan needs to be put in place with input from parents and the student. Last, the teacher must use his or her classroom management skills to execute changes, adjustments, and modifications in class. For example, the teacher may want to train a group of students at a time to help an autistic student in class. This means that the students need to be prepared to deal with expected and unexpected behavior from their autistic peer. Also, the teacher must provide extra space for the student to work effectively in class. During lessons, the teacher must be
clear with any transitions and changes ahead of time to allow the student to process the
information needed for the objective. A teacher must take time to teach proper behavior
for the autistic student and reinforce the positive behavior when it is exhibited. The
negative behavior must be corrected properly to minimize further use. The use of visuals
should be used to help with the diverse learning modalities in class. The use of visuals
will help an autistic student use his or her rote memorization that most typical autism
students rely on to learn and retain concepts.

The reauthorization of the IDEA Act (1997) helped establish guidelines for
students with autism. These guidelines can be very useful since assessments are required
for all students who qualify. The assessments lead the teacher to address the areas of
concern with the help of a specialist like the schools psychologist. The use of assessments
helps facilitate how to implement an effective Individualized Education Plan (IEP) for the
student with autism. This document can guide student instruction and progress for the
teacher and parent. The IEP has become an important tool that cannot be ignored and
should be emphasized for success.
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