Chapter 12
Autism

12.1 Overview

The prevalence of autism within the general population is estimated at approximately 0.47 % (Boyle et al., 2011). Certain states, such as New Jersey, report a considerably higher prevalence at 2.22 % (Baio, 2014). Within the DSM, the definition of autism spectrum disorder has recently been revised and eliminated Asperger's and Rhett's Disorder from the fifth edition. Individuals previously classified with Asperger's will now likely receive the classification of high functioning autism. The authors of the DSM reported that the change reflected a more empirically sound approach despite the disapproval of some in the lay and practitioner community.

12.2 Definition of Autism Within IDEA

(i) 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 stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences.
(ii) Autism does not apply if a child's educational performance is adversely affected primarily because the child has an emotional disturbance, as defined in paragraph (c)(4) of this section.
(iii) A child who manifests the characteristics of autism after age three could be identified as having autism if the criteria in paragraph (c)(1)(i) of this section are satisfied.

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The IDEA definition of autism does not furnish detailed guidance regarding classification. It still lacks a specific description of the characteristics of ASD. Because of this, some psychologists look to the DSM-5's definition and diagnostic approach to assist with the classification of autism with the understanding IDEA/state procedures drive classification decisions in the public schools. Be cautious about the temptation to be overly reliant on the DSM. The classification decision should still be predicated upon the IDEA definition when working in a public school district (Zirkell, 2011).

12.3 Definition of Autism Within DSM-5

The DSM-5 definition and diagnostic approach may be referenced as a resource to assist with the classification of ASD under IDEA. It may help to clarify decision-making as it furnishes additional details and examples of ASD. When making a private practice, clinic-based or agency diagnosis the DSM-5 is the resource that is customarily referenced.

Autism Spectrum Disorder 299.00

A. Deficits in social communication and social interaction across multiple contexts as manifested by the following (May be other examples):

   1. Deficits in social-emotional reciprocity, ranging, for example from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.
   2. Deficits in nonverbal communication used for social interaction (e.g., poorly integrated verbal and nonverbal communication; abnormalities in eye contact and body language; deficits in understanding and use of gestures; a total lack of facial expressions and nonverbal communication).
   3. Deficits in developing, maintaining, and understanding relationships (e.g., difficulties adjusting behavior to suit various social contexts; difficulties in sharing imaginative play or in making friends; absence of interest in peers).

B. Restricted, repetitive patterns of behavior, interests, or activities as manifested by at least two of the following:

   1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypies, lining up toys or flipping objects, echolalia, idiosyncratic phrases).
   2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior (e.g., extreme distress at small change, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat same food every day).

3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).
4. Hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).

C. Symptoms must be present in the early developmental period and cause clinically significant impairment in social, occupational, or other areas of functioning.

Source: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, American Psychiatric Association (2013).

One of the considerations for a classification of ASD is whether the child is higher or lower functioning. This is often demarcated by the child's level of cognitive ability and adaptive behavior. Children with higher functioning autism spectrum disorders generally have IQ's above the ID range (i.e., IQ > 70) with a similar level of adaptive functioning (>70). Children with moderate to severe ASD often will have a co-occurring or comorbid classification of ID as IQ's and adaptive behavior results are generally lower than 70.

12.4 Identification of Autism

The definition of autism within IDEA guides classification within US public schools. There may be instances where a child receives a classification of autism within the schools but who may not have received a diagnosis from an outside clinic or medical professional. This typically occurs in instances of higher functioning ASD where the child's language, cognitive, and academic achievement are generally intact. The converse could also be true. A child may have an outside classification of autism from his pediatrician or from an outside agency, but not receive a classification in the schools. This situation is likely rare and largely theoretical though it is possible. A child may receive a DSM-5 diagnosis but not experience an adverse impact on educational performance. In this circumstance, the child may not be found eligible for a classification under IDEA since IDEA and state regulations drive classification in the schools. (The child could be found eligible for a Section 504 plan. See Chap. 15).

Presented in the following table is each of the classification characteristics found in the IDEA definition followed by example signs and symptoms of autism that might be indicative of an ASD. These examples are not contained in the federal guidelines and are not exhaustive, but may assist the psychologist in arriving at a school-based classification decision.

IDEA 2004 Classification Criteria for Autism		
Communication (verbal and nonverbal) • Displays echolalia (i.e., saying words and phrases repeatedly) • Provides tangential answers to direct questions • Experiences delayed speech and language skills • Does not respond to gestures such as waving good bye • Reverses pronouns (e.g., says "you" instead of "I") • Gives unrelated answers to questions • Uses few or no gestures (e.g., does not wave hello or goodbye) • Talks in a flat, robot-like, pedantic or sing-song voice • Does not understand jokes, sarcasm, or teasing • Does not use or fully understand gestures, tone of voice or body language • Facial expressions and gestures may be incongruent with what is said	**Social interaction** • Does not acknowledge or respond to their names by 10–12 months • Does not share objects that the child finds interesting (e.g., show a toy; point out a train passing by) by 14 months • Does not engage in symbolic play (i.e., pretend to feed a baby; pretend to shave) by 18–24 months • Does not play games like peek-a-boo or patty cake • Prefers to play alone • Avoids eye contact • Only interacts to achieve a desired goal • Has flat or inappropriate facial expressions • Does not understand personal space boundaries • Is not comforted by others during distress • Has trouble understanding other people's feelings or talking about own feelings • May seek friendships but not know how to get or maintain them • Difficulty taking turns and sharing	**Repetitive activities and stereotyped movements** • Flaps hands, makes rocking movements, or spins in circles • Has obsessive interests in toys, cartoon characters, video games, or television shows • Has perseverative and even obsessive interests • Lines up toys or other objects • Likes parts of objects (e.g., wheels)
Unusual response(s) to sensory experience • Has unusual sensory reactions to sounds, smells, tastes, sights, and textures (e.g., does not like tags on shirts; will not eat vegetables; cannot tolerate bright lights) • Restricted food interests • Displays underreaction or overreaction to pain • Become distressed by loud noises • Have unusual sleeping habits (e.g., need for only 5 h of sleep per night) • Avoids, resists or is sensitive to physical contact such as cuddling or being touched	**Environmental change and change in daily routines** • Plays with toys the same way every time • Becomes upset by changes in routines (e.g., dropping off or picking up from school) • Gets upset by minor changes • Has to follow certain routines	

Because IDEA only offers a generalized definition of autism, it might be helpful to refer to the above chart when making a classification of autism within a U.S. public school setting.

12.5 General Guidance Regarding Psychoeducational Assessment of ASD

When possible, the child with suspected ASD should be assessed across multiple domains of functioning including cognitive, adaptive, achievement, speech-language, gross and fine motor, sensory and medical. The speech pathologist, occupational therapist, and physical therapist are often critically important professionals who participate in the evaluation and treatment planning of children with ASD. The speech-language pathologist will conduct an evaluation of the child's expressive, receptive and pragmatic communication abilities. The occupational therapist and physical therapist will evaluate fine and gross motor coordination skills.

A comprehensive evaluation should include a problem-solving approach that uses multiple methods of assessment and multiple sources of data. These assessment sources include a detailed developmental history, review of medical and early school records, interviews (caregivers, parents, teachers, and other personnel), observations, standardized cognitive, academic, adaptive, social-emotional, motor, speech/language, and behavioral functioning.

Children with ASD present with numerous behavioral issues that may require both broad and narrow band measures of behavior. These behaviors may range from self-stimulation and pica to noncompliance, aggression and self-injury. Norm-referenced (e.g., BASC; CARS-2) instruments are often used to better understand a child's functioning across multiple domains. The assessment of adaptive behavior is also critically important when the presence of ASD is suspected. Measures such as the Vineland-II and ABAS-II are two of the more commonly used measures for this purpose. Performance on cognitive ability and adaptive behavior is often used to demarcate the line between high functioning and moderate/low functioning ASD. In addition to the traditional psychoeducational assessment, a functional behavioral assessment may be necessary for intervention planning when ASD is suspected. There are numerous resources for this purpose (e.g., O'Neil, Albin, Storey, & Horner, 2014; Watson & Steege, 2003).

An exploration of the child's early developmental and medical history becomes extremely important when assessing for ASD since selected signs and symptoms are generally present within the first 2 years of life and there are various medical and genetic conditions that are associated with ASD including seizures (Filipek, 2005), tuberous sclerosis (Harris, 2010) and Fragile X syndrome (Harris, 2010). Often, the child's pediatrician will have identified the child as having an ASD and the child will have received early intervention services. If a child enters the school system without a classification of autism, and a multidisciplinary team suspects an ASD, then the school

psychologist may be charged with overseeing the evaluation. In certain states such as New Jersey the school system requires a neurologist or a developmental pediatrician to furnish a classification to the school before the child will be classified with an ASD so state regulations must be considered. There are additional considerations regarding the psychoeducational assessment of children with ASD.

12.5.1 Consider Comorbidity and Rule Out Selected Disorders

ASD does not exist in isolation. Individuals with ASD often experience co-occurring or comorbid disorders including anxiety disorders, intellectual disability, and Tourette's/tics. Anxiety disorders are one of the most frequently observed comorbid conditions. Children with ASD may experience obsessive compulsive disorder, separation anxiety, panic disorder, and agoraphobia (Saulnier & Ventola, 2012). This comes as little surprise as individuals with ASD experience distress in social situations, when routines are changed, or when placed in new environments. Children with ASD may respond functionally, but inappropriately to such changes. For example, a child may respond aggressively when placed in a novel environment with new children. Children with ASD also sometimes experience tic disorders or Tourette's disorder. Tic disorders involve the presence of either motor or vocal tics while Tourette's disorder contains both motor and vocal tics. An additional consideration when evaluating children with ASD is to determine whether the child has an ID exclusively or in combination with ASD. This is sometimes difficult to differentiate and the psychologist must consider social and language features when ruling out one or the other conditions. Sometimes children with ASD are thought to have a variant of ADHD (Gadow, DeVincent, & Pomeroy, 2006; Matson & Nebel-Schwalm, 2007). Be cautious about misconstruing fixation with inattention and poor response to social cues with impulsivity. Certainly, some children with ASD have higher activity levels and react impulsively but it will be important to distinguish between inappropriate response to social/environmental stimuli and organically based inattention/impulsivity when ruling in or out ADHD (Saulnier & Ventola, 2012). Previously, the DSM-IV did not allow comorbid autism and ADHD diagnosis. The DSM-5 removed this prohibition and now permits a concurrent autism and ADHD classification. A final consideration when evaluating for suspected ASD is a communication or language disorder. This is where the expertise of the speech-language pathologist is needed. The language impairment may be consistent with ASD's communication impairment, but the child will not experience the relational and social skills deficits common in children with ASD.

12.5.2 Cognitive Ability

The assessment of intellectual ability in children with ASD may provide useful information. Expressive language and communication deficits may preclude the administration of the verbal portion of an IQ test, resulting in a purely nonverbal

evaluation of the child's cognitive ability. At other times, the child's cognitive ability may not be able to be evaluated using standardized tests of cognitive ability. Commonly used IQ tests should be incorporated into a comprehensive evaluation of a child with ASD. At times, these children may only be assessed using the verbal portion of the IQ test or may require the use of a nonverbal IQ test (e.g., UNIT or TONI-3). When attempting to evaluate a child with ASD the process may need to be spaced out or attempted when it is perceived that the child will be able to participate in the process.

12.5.3 Academic Achievement

Certain children with higher functioning autism will require that their progress in academic achievement is assessed. This should involve the assessment of a child's reading, writing, mathematics, oral comprehension and listening comprehension abilities. Some children with higher functioning ASD may display hyperlexia (Grigorenko, Klin, & Volkmar, 2003) wherein their word decoding abilities are much higher than reading comprehension and cognitive ability. They also tend to be precocious, and almost obsessive, readers (Saulnier & Ventola, 2012). Generally, children with higher functioning ASD will perform better on rote academic activities but struggle when faced with the requirement to synthesize information and comprehend more abstract content.

12.5.4 Communication and Language

An impairment in the ability to communicate and use language is a core feature of ASD. Particularly in younger children the question of a speech-language impairment versus an ASD arises. Speech-Language impairments are defined by deficits in expressive and receptive language abilities. However, children with speech-language impairments will not experience the delays in social communication that are common in children with ASD. Children with speech-language deficits struggle with communicating and using language but their understanding of relationships and the social world around them is intact. A speech-language evaluation will assist when seeking to understand communication and language abilities and when desiring a differentiation between the two conditions.

12.5.5 Adaptive Functioning

The assessment of adaptive behavior is a critical aspect when evaluating a child with ASD. It is important to understand what a child can do independently in their daily lives. For instance, does a child reciprocate in conversation when spoken to.

Does the child acknowledge and appreciate compliments? There are several measures of adaptive behavior including the Vineland Adaptive Behavior Scales II (Sparrow, Cicchetti, & Balla, 2005) and the Adaptive Behavior Assessment System, Second Edition; Harrison & Oakland, 2003). The Vineland is one of the more widely used and researched measure of adaptive behavior. The Vineland-II has a teacher rating form and a parent or caregiver semi-structured interview to assess the areas of socialization, communication, and daily living skills. With a child with suspected ASD, including higher functioning children with solid cognitive capacity, research suggests that adaptive functioning may be a more important predicator of independent living and life success than IQ (Howlin, Goode, Hutton, & Rutter, 2004).

12.5.6 Fine and Gross Motor Skills

Children with ASD often struggle with gross motor skills. For instance, they may be clumsy or demonstrate an awkward gait or posture. These children may also find it difficult to write or draw. Therefore, an occupational and physical therapy evaluation is a critical component of the comprehensive evaluation.

12.6 Conclusion

A thorough evaluation is necessary for accurate diagnosis and appropriate treatment planning. ASD is a disorder with heterogeneous presentation with no two individuals alike. There are common core features of ASD that include deficits in socialization and communication and often difficulties with stereotyped movements. Multiple stakeholders should be involved in the multidisciplinary evaluation including the school psychologist, the speech-language pathologist, and the occupational and physical therapists.

Appendix: Sample Report 1: High Functioning Autism Example

Psychological Report
Confidential

Name: Noah Puckerman
Date of Birth: 5/22/2008
Grade: Kindergarten

Date of Report: January 10, 2014
Chronological Age: 5 years 6 months
School: McKinley Public School

Parent Name and Address: Mrs. Puckerman
Lima, OH 12345

Phone: (609) 555-1234

Name of Examiner: Stefan C. Dombrowski, Ph.D.

Reason for Referral:
Noah understands selected basic academic skills but struggles with comprehension and processing of abstract information. Noah also struggles with communicating and relating to other children. He was referred for a comprehensive evaluation to determine his present level of functioning and whether he might qualify for specially designed instruction.

Assessment Methods and Sources of Data

Stanford–Binet Intelligence Scales—Fifth Edition (SB5)
Woodcock–Johnson Tests of Achievement, Fourth Edition (WJ-IV)
Bender Visual Motor Gestalt, Second Edition (Bender II)
Behavior Assessment System for Children, Second Edition (BASC-2)

- Mr. Shuester
- Mrs. Pukerman

Gilliam Autism Rating Scale—Second Edition (GARS-2)

- Mr. Shuester
- Mrs. Puckerman

Childhood Autism Rating Scale, Second Edition (CARS 2)

- Stefan C. Dombrowski, Ph.D.

Teacher Interview
– Mr. Will Shuester (Kindergarten Teacher)
– Mrs. Emma Pillsbury (Teacher's Assistant)
Parent Interview
– Mr. Jacob Puckerman
– Mrs. Natasha Puckerman
Student Interview
– Noah Puckerman
Classroom Observations (11/20/13; 1/8/14)
Review of Academic Grade Reports
Review of School Records

Background Information and Developmental History
Noah Puckerman is a 5-year-old kindergarten student at the McKinley Public School (MPS). He struggles with the academic, behavioral, and social aspects of the kindergarten curriculum and was referred for an evaluation as a result.

Prenatal, Perinatal, and Early Developmental History: Mrs. Puckerman noted that her pregnancy with Noah was normal. Noah was born at term and without complication. She explained that all early developmental milestones were within normal limits with the exception of communication. Mrs. Puckerman stated that Noah would point instead of say what he wanted and did not start talking in sentences until about age three. Mrs. Puckerman explained that Noah would also mispronounce words. Instead of saying \milk\, he would say \mook\. Noah received early intervention services.

Medical: Mrs. Puckerman noted no medical concerns with Noah. Noah's vision and hearing are intact. He has never experienced a head injury or a major infection.

Cognitive, Academic, and Language Functioning: Noah receives speech-language support for difficulties with expressive language and communication. Noah did not start talking until approximately 3 years of age. His communication difficulties persist. His speech is difficult to understand and sometimes unintelligible. He also tends to respond in a tangential way to questions asked of him. Although Noah has an understanding of rote kindergarten academic information (e.g., sight word knowledge spelling; number sense), Noah faces difficulty with aspects of the academic curriculum in kindergarten that require higher level processing (e.g., retelling

basic aspects of a story he just read; basic emergent writing skills; basic addition and subtraction).

Social-Emotional and Behavioral Functioning: Mr. and Mrs. Puckerman describe Noah as an affectionate child who is impatient and who struggles with attention, communication, and processing of information. Mrs. Puckerman expressed that Noah gets along with other children and that she does not have any concerns about his social progress. She commented that Noah sometimes does not realize when somebody wants to stop playing. Mr. and Mrs. Puckerman explain that Noah has difficulty with focusing. Background information and evaluation results revealed that Noah struggles with social, behavioral, and communication functioning.

Strengths: Noah has been described as an affectionate and compassionate child. He takes pride and responsibility in his classroom job of being the door holder. He knows he is the first one in line, and does not forget. Math has been described as an area of strength for Noah.

Summary: Noah experiences difficulties with communication, socialization, and processing of information particularly more abstract information. Further details in support of this classification and the need for specially designed instruction are offered in the body of this report.

Interview Results

Parent Interview (December 11, 2013): Mrs. Natasha Puckerman, Noah's mother, was interviewed regarding her perspective on Noah's academic, behavioral, social, emotional, and adaptive progress. Mrs. Puckerman commented that Noah does not seem to process information the way other children his age process information. For instance, when Mrs. Puckerman helps Noah with homework and with letters, he struggles to struggles to comprehend what he was just taught. Mrs. Puckerman wondered whether his struggles are related to a lack of focus. She will tell him to look on the paper and he will look somewhere else. When he doesn't want to focus on something she noted that it is very difficult for him. When he takes his time he does it correctly. Mrs. Puckerman also mentioned that Noah struggles with waiting for what he wants and will get upset if he does not get it. She noted that he will persistently ask for something until he gets it. Mrs. Puckerman explained that Noah's main difficulty is that it takes him additional time to calm himself and get focused. She explained that she sees this at home and his teachers also report this difficulty.

Mrs. Puckerman commented on Noah's social progress. She noted that he gets along with other children and that she does not have any concerns about his social progress. Mrs. Puckerman commented that Noah sometimes does not realize when somebody wants to stop playing. Mrs. Puckerman described Noah as an affectionate child who enjoys giving hugs. She noted that he is affectionate toward her and asks how her baby is doing. Mrs. Puckerman explained that Noah jumps into groups situations and participates. She explained that he is able to imitate others. Mrs. Puckerman commented that when Noah misses directions or instructions, he will imitate others and follow along. Mrs. Puckerman reiterated that Noah does not have issues socially. She noted that his issues are related to a lack of focus and difficulty with communicating. Mrs. Puckerman explained that Noah gets frustrated really quickly when things don't go his way. She noted that he does not have issues with transitions or novelty. Mrs. Puckerman explained that Noah has always had difficulty with communicating. She explained that he did not speak in sentences until about age three. Noah received early intervention services. Mrs. Puckerman explained that Noah will use the phrase "all the time" in many sentences. Mrs. Puckerman indicated that Noah makes a clicking noise with his mouth when he is engaged in an activity and will hum as he eats. Otherwise, Mrs. Puckerman indicated that Noah does not engage in echoing of words. She noted that he generally uses his pronouns properly, but will occasionally say \him\ instead of \he\. He also will occasionally confuse pronoun usage (e.g., "I'm not her sister anymore' for 'She's not my sister anymore").

Mrs. Puckerman indicated that her pregnancy with Noah was normal. She also noted that all early developmental milestones were within normal limits with the exception of communication. Mrs. Puckerman explained that Noah would point instead of say what he wanted and did not start talking in sentences until about age three. Mrs. Puckerman explained that Noah would also mispronounce words. Instead of saying \milk\, he would say\mook\. Mrs. Puckerman commented on Noah's strengths. She indicated that his strengths include his inquisitiveness. She explained that he is very interested in where babies come from. He is also curious about Christmas time. Mrs. Puckerman explained that Noah has an outgoing personality. Mrs. Puckerman expressed that Noah needs to focus better. She also explained that he struggles with writing including handwriting and he does not show too much interest in reading. Mrs. Puckerman explained that Noah's mathematics progress is pretty good, but he sometimes skips numbers. Mrs. Puckerman was asked whether an outside classification such as ADHD or autism was ever mentioned. She noted that she "does not see autism. I see it as a big issue with focus and communication." Mrs. Puckerman indicated that she works for the Center for Autism in Philadelphia.

Parent Interview (January 6, 2014): Mr. Jacob Puckerman, Noah's father, was interviewed regarding his perspective on Noah's academic, behavioral, social, emotional, and adaptive progress. Mr. Puckerman indicated that his biggest concern is attention span. He noted that Noah has difficulty keeping focus, loses interest easily,

and struggles with sitting with the rest of the class. Mr. Puckerman explained that listening is a constant struggle for Noah. He noted that Noah struggles with following directions. Mr. Puckerman also explained that speech is an area of concern, but indicated that Noah has been making a lot of progress lately especially a home. Mr. Puckerman next commented that Noah does find socially. He noted that he has not been able to observe him much at school, but explained that outside of school he interacts a lot with his younger sister and they seem to get along. Mr. Puckerman indicated that when Noah is around cousins and friends, he seems to play for hours without issues. Mr. Puckerman explained that he has not heard any reports about Noah having any problems in the social arena. Mr. Puckerman indicated that Noah is into rhythm and music so he will make sounds with his mouth when he is actively engaged (e.g., clicking, humming sounds rhythmically). Mr. Puckerman next discussed Noah's early childhood. He stated that speech and communication was the biggest concern. Mr. Puckerman indicated that Noah was allowed to gesture and not use words for such a long time. Or he would communicate with one word (e.g., milk) and Mrs. Puckerman and I would just infer what he wanted. Mr. Puckerman explained that Noah continues to struggle with communicating, but it is related to the clarity of his speech. Mr. Puckerman indicated that Noah received services around age 3 from Elwyn because it was difficult to understand what he was saying. Mr. Puckerman commented on Noah's strengths which include being aware of his environment, his memory, and his caring and compassionate way. Mr. Puckerman indicated that Noah can also be empathetic noting that when someone is hurt, he will say, "are you okay?" He explained that Noah is very helpful and is always offering to help out. He noted that Noah's hobbies include toys, cars, and playing video games.

Teacher Interview (November 30, 2013): Mr. Will Shuester, Noah' kindergarten teacher, was interviewed regarding Noah's academic, behavioral, emotional, and social functioning. Mr. Shuester provided the following information. Noah recognizes and identifies all of his letters and most of his sounds. He occasionally mixes up a few of the commonly confusing ones: b/d, g/q, etc. He has basic concepts of print awareness (e.g., which way to open and read a book; where to find letters on the page). He is starting to read small sight word books with approximately 50–70 % accuracy. In writing, Noah writes down letters and his name and some sight words, but he does not necessarily carry meaning along with his writing. He does not say what he wants to say, write it down, and then read it back. In math, he identifies and writes his numbers and counts with one to one correspondence. Mr. Shuester indicates that Noah cannot follow along with us when we break numbers into parts like saying "7 is 4 and how many more?"

Behaviorally, Mr. Shuester explained that Noah has a difficult time recognizing what the group is doing and following along with them. In any transition, he often lingers around the classroom, looking for things, talking about something else he wants to do, or seeking people out to play with. Mr. Shuester explained that she has been working with him to look at her and say "I'm listening" when she says his name because he often doesn't look when his name is called. He noted that he does

not see Noah's behavior as oppositional or defiant, just unfocused and a little unaware of what is exactly being expected from him. He explained that when the class is working together on the carpet Noah is usually actively talking to others, poking them with little things he finds on the rug, or if he is self-contained he is making constant noises and usually moving his face or hands in a repetitive motion. During independent work, he sometimes follows along, but for a much smaller portion of the task than the rest of the students. If most of the class writes for 20–30 min, he can usually write for about 5-10 and once he is done. Mr. Shuester explained that she has not found a way to prompt him to extend his work further. During clean up or other transitions where there is a lot of moving around, he starts waving his head back and forth or running in circles or making noises with more intensity.

Socially and emotionally, he seeks out students who are also playful and easily distracted. He will typically focus on one thing for a few weeks. Right now, whenever he has an opportunity he will say "feet" to other people to get them to laugh. He doesn't understand when other people are helping him. For example, if we are cleaning up and someone puts away his crayons so that their table gets cleaned on time, he will cry and say "They're mean. They took my crayons." Sometimes, when he needs to transition he will cry and say "but I don't want to." He was sick a few weeks ago and since then he says "But I don't feel good" after nearly every direction he is given. Sometimes he does not understand the need to put things away and move on and will take it as a punishment. If he is really engaged in something and we all clean up from it, occasionally he will cry and wail as though all of his privileges were taken away. In terms of communication, he often answers questions with a number a response that he thinks will get him what he wants, instead of expressing what's really going on (like the "I don't feel good" comment). He does a pretty good job with his own name and gender pronouns. Sometimes he mixes up negative prefixes like "Can you untie my shoes please?"

He does a good job taking care of his belongings and keeping track of where they are. He does a nice job in his illustrations, making them clear and remembering what is what. When he is able to follow directions in math, his work is accurate. In terms of areas of need, he needs to be able to meet his physical needs for movement and noise, in a way that helps him focus on what the class is doing instead of distracting from it.

Teacher Assistant Interview (December 11, 2013): Ms. Emma Pillsbury, Noah's teaching assistant, was interviewed regarding Noah's academic, behavioral, emotional, and social functioning. Ms. Pillsbury noted that she taught Noah last summer in the Springboard program so she has been able to observe his behavior since that time period. Ms. Pillsbury provided the following information. Academically, Noah knows the letters and sounds, can count to 100 and knows the numerals. He can retell parts of a story. He does not complete worksheets or writing assignments. He has poor writing and coloring skills. His classroom behavior keeps him from attending to the lessons. Noah really struggles academically.

Behaviorally, Noah is unable to focus for more than 30–45 s. He is loud and exhibits anger when sent to his seat or take a break in the form of feet stomping,

yelling, telling us he hates school, he won't be here tomorrow or to shout that so and so got him in trouble. He calls children names and hits them or throws things at them, like pencils, small pieces of paper, or a block. He used to keep calling out the word "feet" to make people laugh but has since changed his word choice to "dookie." Noah is not always aware of what the other students are doing. When asked what the students are doing he is not always sure. If asked to do what the other students are doing he doesn't always know what he should do. When he is sent back to his seat or to take a break he doesn't understand why, even if he is told something like "you were calling out again, so you'll have to go back to your seat." He likes to blame others and say that they got him in trouble. During recess he engages in inappropriate play, such as throwing sand at people, knocking people to the ground, name calling and hitting things or people with sticks. Most of the time when given a direction that he doesn't want to do, like put your crayons away, he will generally comply with the request with a count down from 3. He usually follows the direction by the time I get to 0. Noah requires help with focus, treating peers with kindness, and self-control of his body and language.

Student Interview (December 4, 2013): Noah was interviewed to ascertain a sense of his progress at MPS. When asked, "How do you like going to school at MPS?" Noah responded "there was not school yesterday" even though there was school. He was next asked whether he likes going to kindergarten to which he replied, "I like going to kindergarten." He was then asked his favorite thing to do in kindergarten. Noah indicated that he enjoys playing activities like dinosaurs, cars, and snacks. At one point during the interview, Noah expressed that he must hurry up because he is "late for morning meeting." Noah was asked who his friends are at school. He replied "I don't know." He was then asked to name several classmates and he was able to name a few. Noah indicated that he does not get into trouble at school. He explained that his hobbies including playing with cars and his Buzz Lightyear doll. Noah also explained that he enjoys playing Angry Birds on his father's iPad. He explained that he likes recess at school and plans to play soccer. Noah explained that "soccer is for children while football is for grown-ups." At times Noah was difficult to understand and required numerous attempts clarify questions for him to directly respond.

Observations

Observation (November 20, 2013): Noah was observed for 50 min during kindergarten class. The class was transitioning from quiet time following lunch to an activity at the carpet. Mr. Shuester instructed the class to go and sit at the carpet. Noah ignored the first request. He was offered individual instruction to head to the carpet. Noah replied, "I don't feel like it." After about 1 min, he joined the class at the carpet. While sitting at the carpet, Noah picked up a string and started playing with it. The teacher asked the class to show three fingers. Noah was not focusing on this request and instead continued playing with the string. He also attempted to talk to another student seated near him. At that point, Noah was instructed to turn and face the chart that the teacher

was using to present a topic. Noah complied but was observed to be rock back and forth and be active as he was seated. He also found a rock on the floor and started playing with that object. Noah was also observed to make sucking noises with his teeth. Ms. Pillsbury was instructing the class how to draw a picture of a leaf. Underneath the picture of the leaf students were to write a letter. Mr. Shuester asked the class what part of a letter goes on the line. Noah replied out loud, "a tiger." After about 10 min into the presentation Noah started focusing on the teacher guided instruction. There was one additional time when another child lifted up the carpet where Noah was sitting and Noah screamed at the child to stop.

Observation (January 8, 2014): Noah was observed during lunch, transition back to class, and then during class time. The observation occurred over a span of 2 h. During lunch, Noah was observed to be wearing gloves, one blue with a facial design of a cartoon bear, and the other, solid red. During lunch, Noah seemed quite interested in playing with the blue glove with the design. He would hold it up in front of his face and look at it. He also played with a drink bottle that had a toy figure as part of the cap. At one point, Noah approached the psychologist and pointed out the hat on the figure. At other times, Noah would attempt to interact with other students at his lunch table. His interaction was observed to be physical where he would poke and touch the other student. One student imitated Noah's nonverbal interactional style and engaged by poking and prodding Noah in return. Next, Noah transitioned to his classroom. When his table was called to line up, Noah was observed to cut in front of other students and head to the front of the line. Noah entered the classroom and stood by the examiner and started at him. This occurred for a period of about 2 min after which point the examiner reminded Noah to return to his seat. Noah stated that he was going to play in the sand tray table. Mr. Shuester acknowledged that it was Noah's turn to play with the sand tray. Noah took off his gloves, placed them in his cubby, and began playing in the sand table. While he was running his hands through the sand, Noah was observed to make a humming and clicking noise. At one point, Noah mentioned to the examiner that he recognizes a character on a lunch box (e.g., Mater from the movie, *Cars*). For the next 10 min, Noah was observed to continue to make loud vocalizations, talk to himself, and generally play loudly with the sand tray. The class was engaged in quiet time, but Noah seemed unaware of the need to be quiet. Instead, he would make vocalizations and talk to himself. His also seemed unaware of the requirement to keep noise to a low level since it was quiet time. When Mr. Shuester indicated that the class was finished with quiet time, Noah remarked out loud, "I'm done now." He then proceeded to his cubby and put his gloves back on. After that, Noah joined the rest of the class at his desk. Mr. Shuester instructed the class to float over quietly to the carpet. Noah remained at his desk, stared at his gloves raised up in front of his face, and made vocalization sounds (e.g., \ee\, \ah\; \ee\, \ah\, \you\, \your\) over and over. Noah was given a warning to head to the carpet. He expressed frustration over such request and protested on his way to the carpet. As he entered the carpet area, he slides into another student who protested. He also punched a second student who was seated in front of him. Noah was told to sit down, and he screamed out, "I don't want to sit." Noah complied with this request for

approximately 1 min at which point he got up from the carpet and began to play with a shelf near the carpet. Noah was instructed to return to the carpet and he complied. However, he sat too close to another student in the class, and that student expressed annoyance and moved away from Noah. Noah then picked up the carpet underneath another student, prompting that student to scream out in frustration. That student was sent to take a break away from the carpet area. Mr. Shuester asked the class to sit "like a student" (e.g., pretzel style). Noah was able to comply with this request. While Mr. Shuester instructed the class, Noah screamed out, "rocket ship." It is unknown what prompted this vocalization, but Noah seemed to be engaged in solitary imaginative play. Noah was requested to face the teacher as he spent approximately 50 % of the time with his back to her. He complied for several minutes, but was observed to roll around on the floor. At one point, Noah was observed to sit with his back to the teacher and stare for approximately 90 s. Noah got up and attempted to wander the classroom. He was instructed again to sit at the carpet. Noah responded by saying, "I don't want to sit on the carpet." Noah complied after prompting for about 20 s. He then resumed playing with his hands (gloves on them). At one other point, Noah attempted to engage with another student. He did so by making fairly unintelligible vocalizations and through the use of taunting gestures with his hands. The other student become upset and moved away from Noah. Noah then began playing with a pebble on the carpet.

Since Noah seemed preoccupied with the gloves and playing with them, the examiner took Noah out to the hallway to discuss the gloves. Noah commented that he makes ice cream with the blue glove. He communicated that there are buttons on this glove. He demonstrated how this occurs. Noah also indicated that he uses this glove to "bring his fish." Noah also indicated that his red glove on his other hand is a razor. He demonstrated how it works as a razor by moving his red gloved hand across his blue gloved hand. Noah and the examiner returned to the classroom. The class was engaged in a writing activity where the class was asked to sound out and write several words (e.g., bug). Noah seemed uncertain what to do, so he looked at other students and was then able to complete this task. Impressions of the observation were that Noah experienced considerable difficulty following classroom rules and remaining focused. He was quite active and struggled with communicating and interacting in an age appropriate manner with other students, at times poking and prodding them in an effort to get their attention or a reaction from them. Impressions of the observation were that Noah requires considerable prompting, structure and support.

Observation during Assessment: Noah was active and inattentive and required significant redirection and support during the testing session. He made eye contact and smiled. However, his responses to direct questions were often tangential. Occasionally Noah would stare off into space and require redirection. Noah also observed a particular doll (e.g., a superhero) in the room. He perseverated on playing with this doll to the extent that it had to be removed from the room. Although Noah required structure, support and occasional redirection, his testing session is considered a valid and accurate representation of his abilities.

Cognitive and Academic Functioning

Stanford-Binet Intelligence Scales-Fifth Edition (SB5)

Noah was administered the Stanford–Binet Intelligence Scales—Fifth Edition (SB5). The SB5 is an individually administered measure of intellectual functioning normed for individuals between the ages of 2 and 85+ years. The SB5 contains five factor indexes for each the VIQ and NVIQ: Fluid Reasoning, Knowledge, Quantitative Reasoning, Visual Spatial, and Working Memory. Fluid reasoning represents an individual's ability to solve verbal and nonverbal problems and reason inductively and deductively. Knowledge represents the accumulated fund of general information acquired at home, school, work, or in life. Quantitative reasoning reflects facility with numbers and numerical problem solving, whether with word problems or figural relationships. Quantitative reasoning emphasizes problem solving more than mathematical knowledge. Visual-spatial processing reflects the ability to see patterns, relationships, spatial orientation, and the connection among diverse pieces of a visual display. Working memory is a measure of short-term memory processing of information whether verbal or visual, emphasizing the brief manipulation of diverse information.

The SB5 provides three intelligence score composites and five factor indices with a mean of 100 and a Standard deviation of 15. Scores between 90 and 110 are considered average.

	Standard	95 % Conf.	Descriptive	
	Score	Percentile	Interval	Classification
IQ scores				
Full scale IQ (FSIQ)	85	16	81–89	Low average
Nonverbal IQ (NVIQ)	86	15	82–90	Low average
Verbal IQ (VIQ)	82	13	78–86	Low average
Factor index scores				
Fluid reasoning (FR)	81	12	77–85	Low average
Knowledge (KN)	80	11	75–85	Low average
Quantitative reasoning (QR)	78	9	74–82	Below average
Visual spatial (VS)	88	22	84–92	Low average
Working memory (WM)	89	24	85–93	Low average

The above table may be referenced to obtain Noah's performance in each of these areas while the following is a description of each of the factor index scores. Fluid reasoning represents an individual's ability to solve verbal and nonverbal problems and reason inductively and deductively. Knowledge represents the accumulated fund of general information acquired at home, school, work, or in life. Quantitative reasoning reflects facility with numbers and numerical problem solving, whether with word problems or figural relationships. Quantitative reasoning emphasizes problem solving more than mathematical knowledge. Visual-spatial processing reflects the ability to see patterns, relationships, spatial orientation, and the connection

among diverse pieces of a visual display. Working memory is a measure of short-term memory processing of information whether verbal or visual, emphasizing the brief manipulation of diverse information.

The SB5 includes ten subtest scores with a mean of 10 and a Standard deviation of 3. Scores between 8 and 12 are considered average. Noah's individual subtest scores were as follows:

Nonverbal tests		Verbal tests	
Fluid reasoning	7	Fluid reasoning	16
Knowledge	7	Knowledge	6
Quant. Reasoning	6	Quant. Reasoning	7
Visual spatial	8	Visual spatial	8
Working memory	8	Working memory	7

On testing with the SB5, Noah earned a Full Scale IQ of 85. On the SB5, this level of performance falls within the range of scores designated as low average and exceeded the performance of 16 % of individuals at Noah's age. His Verbal IQ (Standard Score = 82; 12th percentile) was in the low average range and exceeded 12 % of individuals Noah's age. Noah's Nonverbal IQ (Standard Score=86; 13th percentile) was in the low average range, exceeding 13 % of individuals Noah's age.

Woodcock-Johnson Tests of Achievement-IV (WJ-IV)

The WJ-IV is an achievement test used to measure basic reading, writing, oral language, and mathematics skills. The Reading subtest includes letter and word identification, vocabulary, and comprehension skills. The Writing subtest includes spelling, writing fluency, and simple sentence writing. The Mathematics subtest includes calculation, practical problems, and knowledge of mathematical concepts and vocabulary.

Brandon obtained the following scores in each of the areas of measurement:

	Standard	Descriptive	
	Score	Percentile	Classification
Brief reading	94	35	Average
Letter-word ID	101	53	Average
Passage comprehension	77	6	Below average
Brief writing	96	39	Average
Writing samples	96	39	Average
Spelling	98	44	Average
Brief mathematics	79	8	Below average
Applied problems	78	7	Below average

Standardized achievement test results revealed below average passage comprehension and applied mathematics problems skills with average writing and letter word identification skills.

Bender Visual-Motor Gestalt Test, Second Edition (Bender-II)
The Bender-II measures visual-motor integration skills, or the ability to see and copy figures accurately. A quantitative and qualitative analysis of Noah's drawings suggests that his visual-motor integration abilities (e.g., fine motor skills for paper and pencil tasks) are below average (Copy Standard Score = 75; 5th percentile).

Social, Emotional, and Behavioral Assessment

Behavior Assessment System for Children, Second Edition (BASC-2)
The Behavior Assessment System for Children, Second Edition (BASC-2) is an integrated system designed to facilitate the differential diagnosis and classification of a variety of emotional and behavioral conditions in children. It possesses validity scales and several clinical scales, which reflect different dimensions of a child's personality. *T*-scores between 40 and 60 are considered average. Scores greater than 70 ($T > 70$) are in the Clinically Significant range and suggest a high level of difficulty. Scores in the At-Risk range (*T*-Score 60–69) identify either a significant problem that may not be severe enough to require formal treatment or a potential of developing a problem that needs careful monitoring. On the Adaptive Scales, scores below 30 are considered clinically significant while scores between 31 and 35 are considered at-risk.

	Mr. Shuester		Mr. Puckerman	
Clinical scales	*T*-score	Percentile	*T*-score	Percentile
Hyperactivity	73**	96	58	80
Aggression	60*	86	55	75
Anxiety	55	76	50	54
Depression	63*	89	51	55
Somatization	67*	93	54	72
Atypicality	73**	95	54	70
Withdrawal	56	77	53	70
Attention problems	66*	93	55	75
Adaptability	37*	11	41	33
Social skills	45	34	50	52
Functional communication	45	35	45	35
Activities of daily living	–	–	45	35
Externalizing problems	67*	94	53	55
Internalizing problems	64*	91	52	57
Behavioral symptoms index	70**	96	56	62
Adaptive skills	41	18	45	42

*At-risk rating
**Clinically significant rating

The ratings of Noah on the BASC-2 by Mr. Schuester and Mrs. Puckerman produced different results. Mrs. Puckerman rated Noah in the average range across all composites and clinical scales. Mr. Schuester's ratings on the BASC-2 ratings

suggested a clinically significant elevation on the behavioral symptoms index composite with an at-risk rating on the internalizing and externalizing behaviors composites. Mr. Schuester's BASC-2 rating also suggested a clinically significant elevation on the hyperactivity and atypicality clinical scales with an at-risk rating on the aggression, depression, adaptability, somatization, and attention problems clinical scales.

Gilliam Autism Rating Scale-Second Edition (GARS-2)

The GARS-2 is a screening instrument used for the assessment of individual's ages 3–22 who have severe behavioral problems that may be indicative of autism. The GARS-2 is composed of three subscales that are based on the definition of autism: stereotyped behaviors, communication, and social interaction. The Social Interaction subscale comprises items that describe social interactive behaviors, expression of communicative intent, and cognitive and emotional behaviors. The stereotyped behavior subscale comprises items that describe restricted and stereotyped behaviors that are characteristic of Asperger's. The social interaction subscale contains items that evaluate the individual's ability to relate appropriately to people, events and objects. An Autism Index of 85 or higher indicates a very likely presence of autism. An index score of 70 to 84 indicates a possible classification of autism while a score below 70 indicates an unlikely presence of autism

	Teacher	Father
	Std. Score	Std. Score
Stereotyped behaviors	7	4
Communication	11	6
Social interaction	10	4
Autism index	96	61

Ratings of Noah by his teacher on the GARS-2 suggest a very likely probability of Autism. Mr. Scheuster's ratings suggest a low probability of autism.

Childhood Autism Rating Scale, Second Edition (CARS 2)

The CARS 2 is a behavior rating scale developed to identify children across the autism spectrum. Children are rated on fifteen characteristics including relationship to others; body use; emotional response; adaptation to change; taste, smell and touch response; fear or nervousness; visual response; object use; imitation; verbal and nonverbal communication; intellectual ability; activity level and listening response. Children (ages 2–12) with scores on the CARS below 30 generally do not receive a classification of an autism spectrum disorder. Children with scores between 30 and 36.5 are considered to have mild to moderate autism while scores above 37 reflect severe autism. Noah's rating on the CARS 2 was 30, suggesting mild to moderate symptoms of an Autism Spectrum Disorder.

Conceptualization and Classification

Multiple data sources and methods of assessment inform the conceptualization of Noah's cognitive, academic, social-emotional, and behavioral functioning including whether he qualifies for special education support. Details in support of these findings are offered below.

Cognitive and Academic Functioning: Noah's present performance on a measure of cognitive ability was in the low average range (SB5 FSIQ = 85; 16th percentile). His performance on standardized measures of academic achievement suggest that he struggles with reading comprehension and applied mathematics problems. His progress on rote academic tasks including spelling and sight word recognition was in the average range. Within the classroom, Noah recognizes and identifies all of his letters and most of his sounds. He occasionally mixes up a few of the commonly confusing letters: b/d, g/q. He has basic concepts of print awareness including which way to open and read a book and where to find letters on the page. Mr. Shuester notes that Noah is starting to read small sight word books with 50–70 % accuracy. He writes down letters and his name and some sight words, but he struggles with carrying meaning along with his writing. In math, he identifies and writes his numbers and counts with one-to-one correspondence. Mr. Shuester notes that Noah cannot follow along with us when we break numbers into parts (e.g., saying "7 is 4 and how many more?") Noah struggles with expressive language and communication and receives speech-language support as a result.

Social, Emotional, and Behavioral Functioning: Multiple data sources and methods of assessment including interview results, classroom observations, and rating forms indicate that Noah struggles with communication, socialization, following classroom rules, and overactivity. When asked a direct question, Noah experiences difficulty with producing a clearly understood verbal response. Sometimes this occurs because his speech can be difficult to understand and even unintelligible. At other times Noah responds with a tangential statement that is unrelated to the question asked of him. Noah receives speech services for his communication difficulties. Noah struggles with relating to other children in an age expected manner. He seeks out other children with whom to play, but does so primarily in a way that tends to alienate him from them. Noah can also be physical with other children (e.g., hitting, punching, sliding into, or pushing them) sometimes intentionally and at other times accidentally. Additionally, Noah struggles with interpersonal boundaries and will encroach upon children's personal space or will get up in their face with his hands. Sometimes he engages in this behavior to play with them. At other times he engages in this behavior to get their attention or to get a response from them. This interactional style tends to alienate him from other children in the classroom. Although Noah seeks out social opportunities, he struggles with developing peer relationships at a developmentally appropriate level. Mr. and Mrs. Puckerman note that Noah can be a compassionate and helpful child. Noah can be quite active in the classroom and frequently darts from one location to another. He loses focus easily and struggles with low task persistence for activities that he does not prefer. Noah is more responsive to adult instruction when in a one-on-one situation than when in a group setting. At these

times he is more readily redirected. Noah seems to enjoy playing in the sand tray including the sensation of feeling the sand on his hands. Over the past few days, Noah has been also observed to play with his hands while wearing a glove with the face of a cartoon bear (i.e., talk to his hands; interact with his hands). Noah has been wearing his gloves throughout the entire class day over the past several days. At other times, Noah will show his gloves to peers in the classroom. During one observation, most of these peers did not share Noah's excitement and interest in his gloves. Noah has been observed to elicit noises repeatedly (e.g., "ee-ah-ee-ah-you-your") and laugh while looking at his hands. Noah was asked about his gloves and he revealed that they can make ice cream or bring in fish. Noah struggles with following classroom and teacher rules. He will protest when requested to do something he does not prefer. These protests are much more intense than that of a typical kindergarten child. However, with considerable prompting, structure and support, Noah eventually complies. Still, his behaviors can be disruptive to other children around him and at times the entire class. Noah often can be observed with his back to the teacher and therefore the activity being discussed in class. At other times, he has been observed to stare blankly or play with an object such as a pebble or a string on the floor. This causes him to miss much of what is being discussed in the classroom.

Summary: Noah's cluster of symptoms are impairing his social and behavioral functioning and also contributing to difficulties with his academic functioning. Noah will benefit from accommodations for symptoms consistent with a classification of autism.

Summary and Recommendations

Considering multiple data sources and methods of assessment, Noah will benefit from accommodations for the host of academic, behavioral, social, emotional, and communication deficits that are associated with a classification of an autism spectrum disorder. Selected recommendations are offered below.

1. *Accommodations for Academic Tasks*: Noah will benefit from accommodations for academic skills including reading, writing and mathematics.
2. *Occupational Therapy Evaluation*: Noah struggles with fine motor skills for paper and pencil tasks and will benefit from an occupational therapy evaluation.
3. *Speech-Language Therapy*: Noah struggles with verbal communication. At times his speech can be difficult to understand. At other times his speech is unintelligible. Noah's communication style can also be tangential when he is asked a direct question and then responds with an unrelated comment. His communication difficulties interfere not only with his academic progress, but also with his social progress. He will benefit from continued speech-language support as indicated in the speech pathologist's report.
4. *Social Skills Training including Stories and Social Pragmatics Interventions*: Noah may benefit from exposure to social stories, role plays and behavioral modeling as a way to improve social skills and increase more appropriate engagement with peers during interaction with them.

5. *Behavioral Support*: Noah may benefit from support for the following behaviors associated with his classification:
   (a) Low frustration tolerance when required to engage in an activity he does not prefer.
   (b) Difficulty with following directions from teachers.
   (c) Peer interaction including how to engage in a more appropriate manner than grabbing, poking, or hitting other children.
   (d) Difficulty with transition from one activity to another.
   (e) High activity level and low task persistence.

Stefan C. Dombrowski, Ph.D.
Licensed Psychologist (PA and NJ)
Certified School Psychologist (PA and NJ)

Sample Report 2: Low to Mid Functioning Autism

Psychological Report
Confidential

Name: Eric Berry
Date of Birth: 6/5/20011
Grade: Kindergarten
Name of Examiner: Stefan Dombrowski

Date of Report: December 14, 2016
Chronological Age: 5
School: Washington Public School

Parent Name and Address: Shelby Berry

Phone: (609) 555-1234

Reason for Referral:

Eric faces significant struggles with communicating and socializing in an appropriate manner. He is generally a nonverbal child and rarely produces verbal responses to questions asked of him. Eric has an outside classification of Autism from his pediatrician. He was referred for a comprehensive evaluation to determine his present level of functioning and whether he might qualify for specially designed instruction. Recommendations and accommodations appropriate for Eric will also be offered.

Assessment Methods and Sources of Data
Universal Nonverbal Intelligence Test (UNIT)
Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4)
Behavior Assessment System for Children, Second Edition (BASC-2)

– Ms. Mary Corcoran
Gilliam Autism Rating Scale—Second Edition (GARS-2)
– Ms. Mary Corcoran
Vineland Adaptive Behavior Scale, Second Edition (Vineland-II)
– Ms. Mary Corcoran
Childhood Autism Rating Scale, Second Edition (CARS 2)
– Stefan C. Dombrowski, Ph.D.
Teacher Interview
– Ms. Mary Corcoran (Kindergarten Teacher)
– Ms. Britney Pierce (Teacher's Aide)
Parent Interview
– Ms. Shelby Berry
Classroom Observations
Review of Academic Grade Reports
Review of School Records

Background Information and Developmental History
Prenatal, Perinatal, and Early Developmental History: Eric was born prematurely at 34 weeks gestation weighing 4 pounds 4 ounces. His mother's pregnancy was complicated by gestational diabetes and problems with weight gain (only 15 pounds during pregnancy). Ms. Berry was 39 years old at the time of Eric's birth. Delivery was uncomplicated although Eric was admitted to the Neonatal Intensive Care Unit (NICU) at Albert Einstein Medical Center for 1 week due to poor oral intake and insufficient weight gain. Eric walked at 15 months and said his first words at less than a year. Background information revealed that Eric may have lost other sounds by the time he was nearly 3 years old. Eric has always been a picky eater avoiding meat or vegetables. He used to choke and gag on food, but background results revealed that he no longer does so. Eric drools a lot and often protrudes his tongue out of his mouth. Eric attended a daycare where he received speech therapy two times per week. Eric is still primarily nonverbal.

Medical: Eric experiences asthma and a peanut allergy. He also suffers from seasonal allergies primarily during the fall. Eric has never experienced a head injury. His hearing and vision are intact. No further medical history is available.

Cognitive, Academic, and Language Functioning: Prior evaluation results from April 2010 revealed that Eric's receptive and expressive language was at about a 12 month level. Recent speech language results revealed higher receptive language abilities (PPVT-4 Std. Score = 94; average range). His expressive language abilities were lower (Expressive One Word Vocabulary Picture Vocabulary Test Std. Score = 78; below average). Background information revealed considerable difficulties with all aspects of the kindergarten curriculum.

Social-Emotional and Behavioral Functioning: Eric has always struggled in his interaction with peers. He is primarily nonverbal and will only occasionally use simple language to communicate his needs. Eric rarely participates in group activities. He sometimes attempts to engage other children in the classroom, but does so in an inappropriate fashion that alienates him from them. For instance, Eric has been observed to hit, poke or bump into other students to get their attention. Eric also struggles with the reciprocal aspects of communication, does not participate in group activities, and can throw extreme temper tantrums when denied his own way. Additionally, Eric struggles with overactivity and needs structure, support, and prompting for periods of transition. At the beginning of the academic year, Eric had intensive behavioral difficulties. He struggled with his adjustment to Washington Public School but with behavioral support has now adjusted to the new environment and routines of the classroom.

Strengths: Eric is described as a sweet child who enjoys making other people laugh. He has demonstrated a degree of resiliency in his capacity to adjust to an entirely new school environment.

Summary: Prior evaluation results indicated likelihood of an autism spectrum disorder (see Consultation Report from ABC Healthcare Network; April, 2, 2010). This consultation report also recommended early intervention services including speech-language therapy. Eric continues to struggle with difficulties with socialization, communication, and understanding the perspective of others.

Interview Results

Parent Interview (October 22, 2016): Ms. Shelby Berry, Eric's mother, was interviewed regarding her impressions of Eric's functional in the cognitive, academic, social, emotional, adaptive, and behavioral arena. Ms. Berry explained that Eric has an outside classification of autism and received early intervention services. Ms. Berry commented that Eric rarely participates in conversations with other children and adults. She mentioned that he says only a few words. Ms. Berry noted that Eric said his first words by 12 months of age, but lost most language abilities by age three. Ms. Berry commented that Eric seeks to interact (nonverbally) with other children, but struggles in his interaction with them. She noted that he is unaware of his body and frequently runs into other children and objects. She noted that he is clumsy. Ms. Berry explained that when things do not go his way or when Eric is introduced to a

new environment, then he has a tendency to throw temper tantrums. She mentioned that this occurred when he first arrived at Washington Public School, but that Eric has since adjusted to the school and its routines. Ms. Berry commented that her pregnancy with Eric was complicated by gestational diabetes. She indicated that Eric was born prematurely at 34 weeks gestation. Eric required a stay in the NICU. Ms. Berry explained that Eric's hearing and vision are intact. She noted that he has never experienced a head injury or major infection.

Teacher Interview (October 26, 2016): Ms. Mary Corcoran, Eric' kindergarten teacher, was interviewed regarding Eric's academic, behavioral, emotional, and social functioning. Ms. Corcoran first discussed Eric's behavioral progress. She noted that Eric has struggled with transitioning to a new school and the associated people in his life at school. Ms. Corcoran explained that Eric would enter a new classroom and would require about 30 min to finally settle down. She explained that Eric is a wanderer and would walk around the classroom and be disruptive. Ms. Corcoran explained that one time he wrote all over the white board with regular markers and ripped down the calendar. Ms. Corcoran explained that she gave him something to chew was has helped him. She explained that Eric has sensory issues. He likes to play in the sand table. He also likes sensory stimulation and does well when writing with shaving cream. Ms. Corcoran explained that it is difficult for Eric to stay in one place. He has extreme difficulty sitting in a chair or on the carpet. Ms. Corcoran indicated that Eric can be aggressive toward other students. She indicated that he sometimes hits other children for no reason. Ms. Corcoran noted that his behavior has improved since the beginning of the school year, but that he still struggles. Ms. Corcoran indicated that Eric has been sent to the CARES office on a number of occasions. Ms. Corcoran stated that Eric loves physical education. She noted that Eric faces social struggles. For instance, she explained that he drools a lot and seems to get a kick out of getting other children's reaction. Ms. Corcoran noted that Eric faces difficulty with making friends. Academically, Ms. Corcoran indicated that Eric writes on a 2–3-year-old level. She explained that he can only consistently make the /J/ in his name. Ms. Corcoran explained that on some days, Eric can count to ten and name the alphabet. Ms. Corcoran indicated that Eric can recognize some colors although he cannot draw shapes.

Teacher Interview (November 13, 2016): Ms. Mary Corcoran, kindergarten teacher, was interviewed again to better understand the perceived functions of Eric's behavior. Ms. Corcoran noted that Eric struggles with following classroom rules and when required to conform, he can act out by throwing a tantrum. She noted that this also occurs when he does not get his way. Ms. Corcoran indicated that Eric prefers to do what he chooses and will become upset when asked to change his routine. She reiterated that Eric has a hard time following classroom rules and procedures. Ms. Corcoran further indicated that Eric struggles with sitting in one place. She noted that he attempts to avoid academic work and tries to play with something so he wanders and then starts getting into things. On one occasion, Ms. Corcoran reiterated that Eric used regular markers on the white board. Ms. Corcoran explained that Eric seeks to

escape from academic tasks. She also explained that Eric he wishes to do what he wants and will protest when denied his own way. Additionally, Ms. Corcoran explained that Eric finds certain activities such as sitting in one place distressing because it may be hard for him. On these occasions, Ms. Corcoran noted that Eric will get up and wander. Finally, Ms. Corcoran explained that Eric's behavioral difficulties intensify later in the day when he becomes tired.

Teacher's Aide Interview (November 13, 2016): Ms. Britney Pierce, teacher's aide, was interviewed for her impressions of the functions of Eric's behavior at school. Ms. Pierce explained that Eric struggles during transitions, later in the day, and when required to engage in a task that he does not prefer. She also noted that sitting on the carpet without some kind of support (i.e., someone to lean against) can be difficult for him. Ms. Pierce explained that Eric sometimes will display tantrums when denied his own way. She also noted that this has improved since the start of the school year. Ms. Pierce noted that transitions are difficult for Eric and he requires advanced prompting and cues to successfully make transitions from one activity to another. She explained that Eric also seeks attention from other students in the classroom, but can seek this attention in an inappropriate way. For instance, he has been observed to hit or poke other students rather than use his words. Ms. Pierce also noted that Eric enjoys the attention of selected adults in the classroom. Ms. Pierce further explained that Eric enjoys playing in the sand table, with his "chewy," and his coat. Apparently, he obtains sensory stimulation from these objects or activities. Ms. Pierce further noted that Eric attempts to escape from selected activities or settings including mathematics where he is required to sit on the carpet. When denied his own way, Eric has been observed to tantrum, although this has improved since the beginning of the school year. Ms. Pierce noted that during the first few weeks of school, Eric was completely nonverbal and would just grunt. At present, Ms. Pierce indicated that Eric uses a few words to express his needs. She commented that he is responsive to intervention.

Observations

Observation 1 (November 13, 2016): Eric was observed for 20 min during lunch. He was accompanied by a student teacher who assisted him in retrieving his lunch and finding his seat. Eric was observed to carry his lunch tray from the lunch line to his table. The student teacher assisted Eric in locating his seat. For the next 10 min Eric was observed to eat his meal and occasionally interact nonverbally with the student teacher. On one occasion, the student teacher opened a drink container for Eric.

Observation 2 (November 13, 2016): Eric was observed during his evaluation session with the occupational therapist and the psychologist. During the evaluation with the occupational therapist, Eric was initially reluctant to engage with the therapist, but warmed up and interacted with her in a nonverbal manner. He would attempt to comply with requests from the therapist, but was generally nonverbal. He

was noted, however, to smile when she would joke and play with him. During this session, Eric seemed engaged and interested in the tasks, but rarely spoke to her.

Observation 3 (November 28, 2016; 11:15–11:30 AM): Eric was observed during the occupational therapist evaluation. He was noted to comply with requests to put beads on a small string, zip up his jacket, and put on gloves. He faced considerable difficulty responding to verbal requests such as what is the color of this toy and how many toys are there in this pile. Eric appeared engaged in the activity though he rarely looked to the examiner for reinforcement. On several occasions, Eric was asked to demonstrated excitement over completing a task by raising his arms and saying "yeah," but Eric never imitated these gestures. During the course of the physical therapist evaluation, Eric's attention sometimes drifted. He would then start moving toward an object of interest until redirected.

Observation 4 (November 28, 2016; 12:15–12:45 PM): Eric was observed in Ms. Corcoran's kindergarten classroom during whole group mathematics and language instruction. The class was initially requested to count to 100 along with the teacher. During a good portion of this observation, Eric was noted to stare in the direction of the teacher or a classmate who just responded to a teacher's request. He did raise his hand when Ms. Corcoran asked a question of the class, but when called upon he did not respond. For the remainder of the observation Eric never appeared to be following along. The class activity next switched to a verbal analogy game. Several minutes after the start of this game, Eric laid down on the floor. After 5 min, he sat back up with his jacket draped over his left shoulder. The class activity ended and students were instructed to line up by the door when they heard the first letter of their names. Eric waited until he heard his letter, which was offered after everyone else's name was called.

Observation 5 (November 28, 2016; 12:45–1:05 PM): Eric was observed as he entered library for instruction by Ms. Parker. As he walked to the library, Eric followed the directions to walk in line. Open arriving at the library, Eric proceeded to disregard teacher's rules to proceed in order to a table. Instead, he cut ahead of every class mates and sat down at a table in the library. Throughout instruction by Ms. Parker, who was discussing the arrival of the Scholastic Book Fair, Eric sat appropriately in his seat. However, he did not participate in the whole class discussion nor did he seem interested in engaging in the activity.

Observation during Assessment: During the assessment session with the psychologist, Eric struggled with and was reluctant to participate in verbal activities. As a result, an evaluation of his verbal cognitive ability via a standardized measure is not available at this time. However, Eric readily engaged in nonverbal portions of a cognitive ability test. Eric seemed to enjoy the one-on-one attention he received during the assessment process. Following verbal instructions to draw a picture of himself, Eric attempted to draw a picture. He also attempted to draw a picture of a rainbow. At one point, Eric even attempted to initiate conversation with the psychologist. Eric

asked a question of the psychologist which was not understood by the psychologist. When Eric did not receive an answer, he said "asked you a question." Eric was very active and required considerable redirection, structure and support throughout the evaluation session.

Observation during Assessment: Eric was a bit slow to warm up during the assessments. He complied with all requests during assessment but faced considerable difficulties with the language portions and began to grow frustrated. He required a 5 min bathroom break and when he returned complied throughout the rest of the assessment.

Cognitive and Academic Functioning

Universal Nonverbal Intelligence Test (UNIT)

The UNIT is an individually administered nonverbal test of intelligence that is given with only pantomime instructions. All items are nonverbal and require no speech. It is made up of four subtests that provide four Quotient Scores and a Full Scale IQ score.

The following are the results of Nick's performance on the UNIT. The UNIT quotients provide scores with a mean of 100 and a standard deviation of 15. Scores between 85 and 115 are considered average.

	Full scale IQ	Memory	Reasoning	Symbolic	Nonsymbolic
UNIT quotient	79	82	79	87	81
Percentile	8	11	8	19	10
Confidence interval (95 %)	76–82	76–87	76–82	80–94	74–87

The UNIT subtests provide scores with a mean of 10 and a standard deviation of 3. Scores between 7 and 13 are considered average.

UNIT subtests	Scaled score
Symbolic memory	5
Cube design	6
Spatial memory	4
Analogic reasoning	5

Eric's overall performance on the UNIT (FSIQ=79; 8th percentile) was in the below average range suggesting that he performed better than 8 out of 100 children his age.

Peabody Picture Vocabulary Test, Fourth Edition

The Peabody Picture Vocabulary Test, Fourth Edition, Form B is a norm-referenced instrument that measures the receptive vocabulary of persons age ranging from 2 years and 6 months to 19 and above. The PPVT-4 scale measures the understanding of the spoken word in standard American English, assessing only receptive vocabulary.

Assessment results	Standard score	95 % CI	Percentile rank
PPVT-4	82	78–87	11

Eric obtained a Standard Score of 82 (11th percentile) placing him in the low average range.

Social-Emotional and Behavioral Functioning

Behavior Assessment System for Children, Second Edition (BASC-2)

The Behavior Assessment System for Children, Second Edition (BASC-2) is an integrated system designed to facilitate the differential diagnosis and classification of a variety of emotional and behavioral conditions in children. It possesses validity scales and several clinical scales, which reflect different dimensions of a child's personality. *T*-scores between 40 and 60 are considered average. Scores greater than 70 ($T>70$) are in the Clinically Significant range and suggest a high level of difficulty. Scores in the At-Risk range (*T*-Score 60–69) identify either a significant problem that may not be severe enough to require formal treatment or a potential of developing a problem that needs careful monitoring. On the Adaptive Scales, scores below 30 are considered clinically significant while scores between 31 and 39 are considered at-risk.

Ms. Corcoran

Clinical scales	*T*-score	Percentile
Hyperactivity	83**	99
Aggression	84**	99
Anxiety	42	21
Depression	56	78
Somatization	40	14
Atypicality	65*	91
Withdrawal	70**	95
Attention problems	66*	93
Adaptability	30**	1
Social skills	32*	3
Functional communication	36*	6
Externalizing problems	85**	99
Internalizing problems	45	35
Behavioral symptoms index	77**	98
Adaptive skills	30**	2

*At-risk
**Clinically significant

BASC-2 ratings suggested a clinically significant elevation on the externalizing problems, adaptive skills and behavior symptoms index composites. BASC-2 rating suggested a clinically significant elevation on the hyperactivity, aggression, withdrawal, and adaptability scales with a rating in the at-risk range on the atypicality, attention problems, functional communication, and social skills scales.

Vineland II Adaptive Behavior Scales

The Vineland measures a student's performance of the daily activities necessary for taking care of oneself, socializing, and getting along with others. Ms. Lord completed the teacher rating form that assesses Doug's functioning in the areas of Communication (receptive, expressive, and written), Daily Living Skills (personal, academic, school community), and Socialization (Interpersonal relationships, Play and leisure time, coping skills).

	Ms. Corcoran		
Domain	Std. Score	Percentile	95 % CI
Communication	60	<1	±7
Daily living skills	68	1	±8
Socialization	67	1	±5
Motor skills	66	1	±10
Adaptive behavior composite	61	1	±4

Results indicate that Eric is performing in the significantly below average range on the Vineland-II across all adaptive skills composites.

Gilliam Autism Rating Scale-Second Edition (GARS-2)

The GARS-2 is a screening instrument used for the assessment of individuals ages 3–22 who have severe behavioral problems that may be indicative of autism. The GARS-2 is composed of three subscales that are based on the definition of autism: stereotyped behaviors, communication, and social interaction. The Social Interaction subscale comprises items that describe social interactive behaviors, expression of communicative intent, and cognitive and emotional behaviors. The stereotyped behavior subscale comprises items that describe restricted and stereotyped behaviors that are characteristic of Asperger's. The social interaction subscale contains items that evaluate the individual's ability to relate appropriately to people, events and objects. An Autism Index of 85 or higher indicates a very likely presence of autism. An index score of 70–84 indicates a possible classification of autism while a score below 70 indicates an unlikely presence of autism.

Ms. Corcoran

	Std. Score
Stereotyped behaviors	8
Communication	9
Social interaction	10
Autism index	94

Ratings of Eric on the GARS-2 suggest a very likely probability of Autism.

Childhood Autism Rating Scale, Second Edition (CARS 2)
The CARS 2 is a behavior rating scale developed to identify children across the autism spectrum. Children are rated on fifteen characteristics including relationship to others; body use; emotional response; adaptation to change; taste, smell and touch response; fear or nervousness; visual response; object use; imitation; verbal and nonverbal communication; intellectual ability; activity level and listening response. Children (ages 2–12) with scores on the CARS below 30 generally do not receive a classification of an autism spectrum disorder. Children with scores between 30 and 36.5 are considered to have mild to moderate autism while scores above 37 reflect severe autism. Eric's rating on the CARS 2 was 33, suggesting that he experiences mild to moderate symptoms of an Autism Spectrum Disorder.

Conceptualization and Classification
Multiple data sources and methods of assessment inform the conceptualization of Eric's cognitive, academic, social-emotional, and behavioral functioning including whether he qualifies for special education support. Details in support of these findings are offered below.

Cognitive and Academic Functioning: Eric's present cognitive ability performance could only be partially ascertained. Eric scored in the below average range on the UNIT, a measure of nonverbal ability (Standard Score = 79; 8th percentile). Eric faces considerable struggles with verbal expression and it is likely that his significant difficulties with these abilities contributed to his inability to produce a verbal response. Generally, Eric presents as a nonverbal youngster, so his struggles with the verbal portions of tests of cognitive ability are consistent with these overall difficulties. An evaluation by the speech-language pathologist revealed that Eric's receptive vocabulary understanding is higher than his expressive abilities. Eric's performance on the Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4) was in the low average range (Std. Score = 84; 11th percentile). This test suggests that Eric has superior receptive than expressive verbal understanding.

Social, Emotional, and Behavioral Functioning: Multiple data sources including interview results, classroom observations, and rating forms indicate that Eric struggles with communicating and interacting in a socially appropriate fashion. For instance, when asked a direct question, Eric is generally unable to produce a verbal response. He also finds most academic (e.g., alphabet principle) and behavioral (e.g., sitting in class) requirements difficult. There has been improvement since Eric arrived at the beginning of the year. He is better able to wait his turn, sit in a whole group setting, and avoid temper tantrums when denied his own way or denied access to a preferred activity. Still, Eric struggles with developing peer relationships at a developmentally appropriate level and displays a lack of social and emotional reciprocity.

Summary: Eric's cluster of behavioral, communication, and social-emotional difficulties are impairing his social and behavioral functioning and also contributing to difficulties with his academic functioning. Eric will benefit from accommodations for symptoms consistent with a classification of autism.

Summary and Recommendations

Eric faces significant struggles with the academic curriculum. He also faces challenges with expressing himself orally and with the fine motor aspects of writing. Eric was not able to be evaluated on a standardized measure of academic achievement due to significant deficits in verbal understanding and expression. This is consistent with his with classroom based performance where he struggles with producing a response to written or orally furnished questions. Eric will require specially designed instruction to make gains in the academic curriculum.

Considering multiple data sources and methods of assessment, Eric will benefit from accommodations for the host of academic, behavioral, social, emotional, and communication deficits that are associated with a classification of an autism spectrum disorder. Selected recommendations are offered below while additional recommendations are presented in the functional behavioral assessment that accompanies this report.

1. *Accommodations for Academic Tasks*: Eric struggles with most academic tasks in the kindergarten curriculum and will benefit from intervention for very basic academic skills including letter, number, shape and color recognition. He will also benefit from guidance regarding how to write his numbers and letters, a task he finds difficult.

2. *Speech-Language Therapy*: Eric is a nonverbal child who generally speaks softly and produces only a few words. This interferes not only with his academic progress, but also with his social progress. He will benefit from speech-language support as indicated in the speech pathologists report.

3. *Social Skills Training including Stories and Social Pragmatics Interventions*: Eric may benefit from exposure to social stories, role plays and behavioral modeling as a way to improve social skills and increase more appropriate responses to peers during interaction with them.

4. *Behavioral Support*: Eric may benefit from support for the following behaviors associated with his classification:
   (a) Transition to new activities or environments.
   (b) Low frustration tolerance when required to engage in an activity he does not prefer.
   (c) Difficulty with following multistep directions.
   (d) Peer interaction including how to engage in a more appropriate manner than grabbing or poking other children.
5. *Support for Caregivers*: The following website provides useful information regarding children with an autism spectrum disorder classification: http://www.autism-society.org . Ms. Stokeham may wish to reach out to resources in the community for families with a child on the autistic spectrum.
6. *Functional Behavioral Assessment*: Additional recommendations are offered in the accompanying functional behavioral assessment report.

Stefan C. Dombrowski, Ph.D.
Licensed Psychologist (PA and NJ)
Certified School Psychologist (PA and NJ)

Sample Report 3: Lower Functioning Autism

Name: Mike Smith
Date of Birth: 1/24/2010
Grade: K
Name of Examiner: Stefan Dombrowski

Date of Report: November 7, 2016
Chronological Age: 6
School: San Juan Unified School District (SJUD)

Parent and Address: Maria Smith

Phone: (609) 555-1234

Reason for Referral

Mike is a nonverbal child with an outside classification of autism. He makes only a few sounds that are reminiscent of words. Mike experiences considerable difficulty with all aspects of the kindergarten curriculum including cognitive, academic, behavioral, social-emotional and adaptive. Mike was referred for a comprehensive evaluation to determine his present level of functioning and whether he might qualify for specially designed instruction. Appropriate recommendations and accommodations are offered.

Assessment Methods and Sources of Data
Behavior Assessment System for Children, Second Edition (BASC-2)

– Mrs. Tina Norbury
Vineland Adaptive Behavior Scale, Second Edition (Vineland-II)
– Mrs. Tina Norbury
Childhood Autism Rating Scale, Second Edition (CARS 2)
– Stefan C. Dombrowski, Ph.D.
Teacher Interview
– Mrs. Tina Norbury (Kindergarten Teacher)
– Mrs. Evelyn Crabtree (Therapeutic Support Staff)
– Mrs. Sue Sylvester (Learning Support Teacher)
Parent Interview
– Mrs. Maria Smith and Mr. Matthew Smith
Classroom Observations
Review of Academic Grade Reports
Review of School Records

Background Information and Developmental History
Mike Smith is a 6-year-old kindergarten student at the San Juan Unified School District (SJUD). He struggles with all aspects of the kindergarten curriculum and was referred for an evaluation as a result.

Prenatal, Perinatal, and Early Developmental History: Mike was born prematurely at 32 weeks gestation. He was the product of a multiple birth and his twin brother is in kindergarten. Mike spent 30 days in the Neonatal Intensive Care Unit (NICU) following his birth. Mrs. Smith notes that Mike was delayed by about 6 months in most early developmental milestones including walking, saying his first words, rolling over, and sitting up. Mike received early intervention speech, occupational therapy and physical therapy through Elwyn. He has an outside diagnosis of Autism. Mike is still primarily nonverbal and continues to walk on his toes.

Medical: Mike's hearing and vision are intact. He experienced a fall down the top of the stairs at 3 years of age and experienced a concussion. Mike also contracted influenza at age 4 and required a 2-week hospitalization. Mike has an outside classification of Autism. Mr. and Mrs. Smith reported additional medical concerns at this time.

Cognitive, Academic, and Language Functioning: A test of cognitive ability including a nonverbal test of cognitive ability was not able to be administered to Mike at the present time. Mike did not appear interested in the evaluation. Because of Mike's interest in using a pointer within the classroom, he was asked to point to specific letters and numbers on a large board. Mike was not able to comply with this task.

Mike occasionally uses his Picture Exchange Communication Systems (PECS) to communicate his needs. Mike has no additional standardized cognitive or academic achievement results. Classroom information indicates extreme difficulties with communication and with understanding basic academic skills.

Social-Emotional, Behavioral, and Adaptive Functioning: Mike has always struggled in his interaction with peers. He is primarily nonverbal and will only occasionally use simple language to communicate his needs. For instance Mike has been observed to vocalize approximately three words at school (e.g., \muh\ for \more\; \wah\ for \ walk\ and \bye-bye\). Mrs. Smith and Mr. Smith indicated that Mike can vocalize about ten words. Mike rarely participates in group activities. Instead, he plays alone or plays in parallel with other children. If a peer has something that interests Mike, then he will just walk over and attempt to grab the object. Mike likes the feeling of selected items over his head such as leaves, mulch, and blocks. He walks on his toes. Mike pumps his arms/fists when excited. He wears a pull-up because of a lack of independent toileting skills. Mike is better with urination than defecation. He is assisted at least twice daily with trips to the bathroom at school. Mike has recently been darting out of the classroom.

Strengths: When asked about Mike's strengths, Mrs. Norbury described Mike as a kind and sweet child. Mrs. Sylvester indicated that Mike can be sweet, kind, and affectionate and has a very agreeable disposition. Mrs. Crabtree explained that Mike does respond to redirection from her. She noted that he can be charming through his use of smiling and seems to enjoy one-on-one attention.

Summary: Mr. Smith and Mrs. Smith report that Mike has an outside classification of autism. The present evaluation indicates that Mike faces considerable struggles with communication, socialization, academic, and adaptive skills.

Interview Results

Parent Interview (November 6, 2016): Mrs. Smith and Mr. Smith were interviewed together regarding Mike's functioning. Mrs. Smith noted that Mike is a twin and was born prematurely 8 weeks early; he had a stay in the NICU for 30 days. Mrs. Smith explained that Mike was approximately 6 months behind his twin brother in all early developmental milestones. She noted that this prompted her to seek consultation and ultimately receive early interventions support (e.g., OT, PT, Speech). Mrs. Smith explained that Elwyn provided the Picture Exchange Communication System (PECS) for Mike. Mr. Smith and Mrs. Smith explained that Mike has an outside diagnosis of autism. Mrs. Smith explained that Mike can approximately vocalize 10 words. Mr. Smith explained that Mike can independently spell several words using his finger including cat, dog and stop. Mrs. Smith and Mr. Smith

explained that Mike is a generally happy child. They noted that whether he engages in a particular task depends upon his mood. Mr. Smith explained that if Mike wants the computer or iPad then that is what he wants and it is hard to break him away from that activity. Mrs. Smith explained that Mike tends to play by himself. She noted that he will not share with others. Mrs. Smith explained that Mike. Mr. Smith and Mrs. Smith noted that Mike's needs include being independent. They noted that he is capable of doing many things, but needs a one-on-one assistant. Mr. Smith and Mrs. Smith explained that Mike's strengths include being a quick learner (i.e., he adjusted well considering being placed in a totally different environment). Mr. Smith indicated that Mike has adjusted to a new routine at HCS. Mrs. Smith stated that once Mike he learns a routine, he will comply. Both parents noted that Mike needs assistance in the bathroom particularly with defecating. Mrs. Smith explained that Mike will notify when he needs to use the bathroom through his PECS system or will take folks by the arm. Mrs. Smith and Mr. Philips explained that Mike needs "sameness" in routines and assistance with transitions. Mrs. Smith and Mr. Smith spent a considerable amount of time discussing possible options for services. Mrs. Smith and Mr. Smith commented that if the recommendation is to change Mike's placement, then they would need some time to discuss and consult with other experts. They discussed the pragmatic aspects of having to get three different children to three different places and were concerned about Mike's adjustment to another placement considering that his transition to HCS has gone pretty well.

Teacher Interview (October 11, 2016): Mrs. Mary Norbury, Mike's kindergarten teacher, was interviewed regarding Mike's academic, behavioral, emotional, adaptive, and social functioning. Mrs. Norbury indicated that Mike is primarily nonverbal. She noted that he does not show what he can do or know. Mrs. Norbury explained that Mike has a picture book describing different activities, but he does not always use it. She noted that he cannot demonstrate his knowledge through words or using the picture book to show his knowledge. During whole group instruction, Mrs. Norbury indicated that it seems like Mike is sometimes listening. She mentioned that he uses noise and utterances to communicate, but it is hard to decipher. Mrs. Norbury explained that Mike tends to wander the classroom but is getting better at sitting. She explained that Mike constantly needs a board book in hand and often turns through the pages. Commenting on Mike's social progress, Mrs. Norbury explained that Mike will play alongside other children but will not have much interaction with them. She noted that he does not initiate with other children. Mrs. Norbury explained that Mike does not communicate his need to use the bathroom. She explained that he wears pull-ups because of this. Mrs. Norbury noted that Mike needs constant monitoring.

Teacher Interview (November 13, 2016): Mrs. Sue Sylvester, Mike's learning support teacher, was interviewed regarding Mike's academic, behavioral, emotional, adaptive, and social functioning. Mrs. Sylvester first discussed Mike's communication abilities. She noted that Mike has very little verbal communication. Mrs. Sylvester expressed that Mike's communication is mostly through vocalizations. She indicated that Mike is starting to sign the word \more\ but it takes prompting.

Mrs. Sylvester indicated that Mike will make a vocalization that approximates \more\ but it is often with the preceding \m\ sound. Mrs. Sylvester indicated that Mike knows his letters and numbers. She indicated that he can write the letters of the alphabet but cannot do so on a line. Mrs. Sylvester indicated that Mike can also click on a computer numbers in proper order. Mrs. Sylvester noted that Mike can spell words such as \Super Why\ (one of the PBS shows), \sit\ and \comp\ for \computer\. Mrs. Sylvester explained that Mike understands the connection between \comp\ and \computer\ but does not write \sit\ when he wants to sit. Beyond that, Mrs. Sylvester expressed that Mike has limited communication abilities. She noted that he still does not communicate his need to go to the bathroom and does not recognize when he has just gone to the bathroom. For instance, Mrs. Sylvester discussed how Mike urinated in the classroom and his pants were wet and there was a pool of urine around him. She explained that Mike did not seem to notice. Commenting next on Mike's social abilities, Mrs. Sylvester explained that Mike seems unaware of other children in the classroom. She noted that Mike will interact with her only when she has directed the interaction; otherwise, he will wander off and do something else. Mrs. Sylvester explained that she is working on being less impulsive with clicking on the computer. She indicated that Mike now understands that he may have to wait for an application to load and less frequently clicks. Still, Mrs. Sylvester explained that the use of the computer is highly reinforcing for Mike. Mrs. Sylvester indicated that Mike has recently taken to getting up and wandering out of the classroom. She expressed concerns about Mike's safety because of this behavior. Mrs. Sylvester expressed that Mike needs more functional skills that focus on feeding, bathroom skills, use of utensils, and basic communication skills.

Therapeutic Support Staff Interview (TSS; October 23, 2016): Mrs. Evelyn Crabtree, Mike's TSS worker, was interviewed for her impressions of Mike's behavior at school. Mrs. Crabtree explained that Mike faces significant communication struggles. She noted that she has only heard him say three words and these words are not very clear (e.g., "muh" for /more/; "waaa" for /walk/; and "bye-bye"). Mrs. Crabtree explained that he will not be verbal every day. Mrs. Crabtree explained that Mike is getting better at using his picture book. She noted that 2 weeks ago he started using it and learning. Mrs. Crabtree explained that Mike has the capacity to communicate with his picture book, but must feel like using it to do so. Mrs. Crabtree explained that last week, for the first time, Mike used the picture book to explain that he has to go to the bathroom, but we do not know when he has to go until after he goes to the bathroom. As a result, Mrs. Crabtree indicated that Mike is taken to the bathroom two times per day. Mrs. Crabtree explained that Mike has limited interactions with other children in the classroom. She noted that he will either play alongside the other children and will only interact with them when he wants something, at which point he will just grab the toy or book. Mrs. Crabtree explained that Mike puts everything in his mouth. She also noted that he likes to put items over his head and hair. She explained that this includes mulch, leaves, and blocks. Mrs. Crabtree noted that Mike has no sense of routines or boundaries within the classroom. She noted that he walks on his toes and will arm/fist pump when excited. Mrs. Crabtree further

explained that everything has to be done on Mike's left side. For instance, if his right shoe is untied, then she must take off and tie his left shoe first before tying the right shoe. Mrs. Crabtree explained that Mike sometimes breaks down and cries. She mentioned that she is uncertain why, but suspects he is frustrated.

Observations

Observation 1 (October 23, 2016): Mike was observed for 20 min while seated at his desk, during center time, and then during transition to recess. The rest of the class was working on a literacy activity. Mike was observed to be playing with a hard cover book along with a wooden, yellow truck. Mike attempted to get out of his seat on three occasions during seat work, but was redirected by Mrs. Crabtree. Mike complied with this request, but he was never engaged in any of the work the rest of the class was working on. Denoting a transition to center time, the student teacher asked students to put their heads upon their desks. Mike required prompting from Mrs. Crabtree, but complied with this request. Students were then asked to move to the carpet to begin center time. Mike needed considerable prompting to comply with this request. He moved to the carpet area while the student teacher provided a lesson on reading, but he had his back to the teacher. He needed prompting to face where the teacher was seated. Mike did not appear interested in this lesson. Instead, he was focused on his hard cover book along with his yellow, wooden, small truck. He was noted to make vocalizations during the center time and was observed to get up and wander the classroom on four occasions. Mike was then redirected by Mrs. Crabtree to return to the carpet.

Observation 2 (October 23, 2016): Mike was observed for 30 min during transition to recess and then during one-on-one time with the TSS worker and the psychologist. As the class transitioned from carpet time to recess, Mike did not seem aware of the transition and continued to play with his book and small, yellow truck. To ensure that Mike was in familiar surroundings, this psychologist attempt to conduct an evaluation of Mike's nonverbal cognitive ability. Mike was not interested in participating. Instead, Mike was interested in a pointer that his teacher uses to count numbers on the counting board. Mike used the pointer and uttered a sound as he pointed to each number. Since Mike seemed interested in using the pointer and the counting board, the psychologist asked Mike to point to specific numbers on the board. Mike was unable to complete this task. Mike was also asked to use the pointer to identify letters of the alphabet requested of him. Again, he was unable to complete this task. As the psychologist spoke with the TSS worker, Mike wandered the room. He would attempt to go through various items, but when redirected to stop, he complied. Mike became visibly upset when his right shoe became untied. Mrs. Crabtree started to tie the right shoe, but Mike made a sound and wanted her to untie his left shoe first and then move to the right shoe. Toward the end of the observation and evaluation, Mike started to utter crying like sounds and place his hands on his head. Mike then left with Mrs. Crabtree to finish the remainder of recess.

Observation 3 (October 30, 2016): Mike was observed for 20 min when the student teacher was demonstrating how to write \qu\ words. After approximately five attempts to get Mike to trace the letters, Mike attempted to trace the letters on the worksheet using his finger. He required considerable prompting and support to engage. Following completion of this activity, Mike used the picture system to roughly communicate that he wanted to leave the classroom with the speech-language pathologist. (Mike selected "outside" and then took the speech-language pathologist by the arm). The activity then switched to a whole group reading lesson. The entire class was prompted to go to the carpet. Mike continued turning the pages of a book and failed to regard the prompt. His TSS worker then prompted Mike to move to the carpet. Mike was able to comply, but sat with his back facing the rest of the class and the teacher. He had to be prompted again to turn and face the teacher.

Observation during Assessment: Mike was accompanied to the testing session by his TSS worker. Mike was unable to complete a nonverbal test of cognitive ability. Mike could not produce a verbal response to any questions asked of him. He attempted to emulate his teacher's use of a pointer to count or name letters of the alphabet. However, when Mike was asked to point to specific letters and numbers, he was unable to do so. Mike rarely used his PECS systems. It appeared to be cumbersome, cluttered and difficult to use. After approximately 20 min, Mike attempted to leave the testing session by taking the TSS working by the hand. The testing session ended at that time.

Cognitive and Academic Functioning

Due to Mike's significant struggles with communication and related symptoms of an autism spectrum classification, he was not able to participate in a conventional or a nonverbal test of cognitive ability.

Social-Emotional and Behavioral Functioning

Behavior Assessment System for Children, Second Edition (BASC-2)

The Behavior Assessment System for Children, Second Edition (BASC-2) is an integrated system designed to facilitate the differential diagnosis and classification of a variety of emotional and behavioral conditions in children. It possesses validity scales and several clinical scales, which reflect different dimensions of a child's personality. *T*-scores between 40 and 60 are considered average. Scores greater than 70 ($T > 70$) are in the Clinically Significant range and suggest a high level of difficulty. Scores in the At-Risk range (*T*-Score 60–69) identify either a significant problem that may not be severe enough to require formal treatment or a potential of developing a problem that needs careful monitoring. On the Adaptive Scales, scores below 30 are considered clinically significant while scores between 31 and 35 are considered at-risk.

Mrs. Norbury

Clinical scales	*T*-score	Percentile
Hyperactivity	53	70
Aggression	55	78
Conduct problems	56	78
Anxiety	39*	9
Depression	59	84
Somatization	42	19
Attention problems	67*	95
Learning problems	70**	94
Atypicality	79**	97
Withdrawal	69*	95
Adaptability	30*	1
Social skills	30*	1
Leadership	31*	1
Study skills	29**	1
Functional communication	21**	1
Externalizing problems	55	75
Internalizing problems	46	38
School problems	70**	97
Behavioral symptoms index	67*	94
Adaptive skills	25**	1

*At-risk
**Clinically significant

BASC-2 ratings suggested a clinically significant elevation on the school problems and adaptive skills composites with an at-risk rating on the behavioral symptoms index. BASC-2 rating suggested a clinically significant elevation on the learning problems, atypicality, study skills, and functional communication clinical skills with an at-risk rating on the attention problems, adaptability, anxiety, social skills, leadership skills, and withdrawal clinical scales.

Vineland II Adaptive Behavior Scales

The Vineland measures a student's performance of the daily activities necessary for taking care of oneself, socializing, and getting along with others. Mrs. Norbury completed the teacher rating form that assesses Mike's functioning in the areas of Communication (receptive, expressive, and written), Daily Living Skills (personal, academic, school community), and Socialization (Interpersonal relationships, Play and leisure time, coping skills).

Following are the results on the Vineland-II:

	Mrs. Norbury		
Domain	Std. Score	Percentile	95 % CI
Communication	38	<1	±7
Daily living skills	44	<1	±7
Socialization	55	<1	±5
Motor skills	43	<1	±11
Adaptive behavior composite	38	<1	±4

Results indicate that Mike is performing in the significantly below average range on the Vineland-II across all adaptive skills composites.

Childhood Autism Rating Scale, Second Edition (CARS 2)

The CARS 2 is a behavior rating scale developed to identify children across the autism spectrum. Children are rated on fifteen characteristics including the following: relationship to others; body use; emotional response; adaptation to change; taste, smell and touch response; fear or nervousness; visual response; object use; imitation; verbal and nonverbal communication; intellectual ability; activity level and listening response. Children (ages 2–12) with scores on the CARS below 30 generally do not receive a classification of an autism spectrum disorder. Children with scores between 30 and 36.5 are considered to have mild to moderate autism while scores above 37 reflect severe autism. Mike's rating on the CARS 2 was 40 (*T*-score = 52; 58 percentile), suggesting that he experiences severe symptoms of an Autism Spectrum Disorder.

Conceptualization and Classification

Multiple data sources including interview results, classroom observations, and rating forms indicate that Mike struggles with symptoms of an autism spectrum disorder. Details in support of these findings are offered below.

Cognitive and Academic Functioning: Mike faces considerable difficulty relating to people in a typical manner. He only minimally imitates sounds, words or movements from others. He is able to approximately communicate the sounds of only a few words including /muh/ (for more) and /wah/ (for walk). Mike is primarily nonverbal in his communication, but still struggles to use the picture communication system he brings to school.

Social, Emotional, Behavioral, and Adaptive Functioning: Mike experiences considerable social, emotional, behavioral, and adaptive difficulties. He walks on his toes. When needing to put on articles of clothing or have his shoes tied (or retied), Mike needs to have that occur on the left side first. He insists that if it is only his right shoe that is untied, then the left be first untied and then retied before the right.

Mike enjoys the physical sensation of items (e.g., leaves, blocks, hands) touching his head. Mike generally does not reciprocate communication and plays alone. Background information indicates that his play with other children is entirely parallel when he happens to engage near them. If Mike wants an item from another child, he will simply walk over and grab the item. Mike wears a pull-up and requires assistance when going to the bathroom. When excited he will do a fist/arm pump motion. With prompting and considerable one-on-one support, Mike is able to follow selected classroom rules such as sitting at the carpet, putting his head on his desk, and heading to recess. However, if left without such support, Mike would remain unable to follow along.

Summary: Mike symptoms are significantly impairing his functioning in all domains at school. He will benefit from accommodations for symptoms consistent with a classification of autism.

Summary and Recommendations

Considering multiple data sources and methods of assessment, Mike will benefit from accommodations for the host of academic, behavioral, social, emotional, adaptive, and communication deficits that are associated with a classification of an autism spectrum disorder.

1. *More Intensive Intervention*: Mike's functional academic, behavioral, communication, socialization, and adaptive needs are not being met in the present setting. He will require more intensive programming and functional intervention for the host of struggles he faces. Additionally, it is recommended that Mike be evaluated for a new PECS system as his present one appears to be disorganized and difficult to use.
2. *Support for Caregivers*: The following website provides useful information regarding children with an autism spectrum disorder classification: http://www.autism-society.org. Mr. Smith and Mrs. Smith may wish to reach out to resources in the community for families with a child on the autistic spectrum.

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