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Characteristics of Inclusive Learning Environments for Students with Autism Spectrum Disorder

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Introduction

As Autism Spectrum Disorder (ASD) diagnoses steadily increase in the United States ("Research," 2016), an increasing number of individuals associated with the diagnosis are faced with overcoming abundant, everyday challenges in their lives. Not only do these challenges affect the individual with the diagnosis, but these challenges also greatly affect the lives of the individuals' families. For most individuals and families with ASD, the challenges associated with receiving appropriate education are the most impactful to their future success and growth. For students with an ASD diagnosis, it is imperative that their learning environments be designed with abundant, meaningful opportunities to foster their academic, social, emotional, and developmental growth. Such opportunities and supports for students with ASD diagnoses should be encompassed in all learning environments, including the general curricula, extracurricular activities, and community-based programs. While many educational environments maintain the necessary characteristics of supportive and inclusive learning environments for students with ASD, there are still some that are ill-prepared to provide adequate support for these students despite current educational laws and policies. Therefore, it is crucial that future educators, current educators, and schools explore literature regarding the necessary characteristics, so that they may restructure their plans and programs with a design that can better support the success and growth of students with ASD.

By combining and reviewing literature related to Autism Spectrum Disorder (ASD) and the challenges associated with the diagnosis and education of students with ASD, this paper will serve as a guide for creating an effective, inclusive learning environment for students who have an ASD diagnosis. This guide may be used by parents, educators, and other persons associated with the everyday and educational challenges of students with ASD to support their future

growth and success. I will begin by defining ASD and the challenges associated with the diagnosis for individuals and their families. I will then discuss our current laws and policies concerning its role in education, as well as the challenges associated with appropriately educating individuals diagnosed with ASD. Lastly, I will discuss and exemplify in practice nine characteristics to implement to create an inclusive learning environment for students with ASD.

Autism Spectrum Disorder (ASD)

Throughout several decades, Autism spectrum disorder (ASD) has been diagnosed by using varying names and criteria. Initially, the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM)* did not provide a standardized definition of autism. Instead, the word autism only appeared in the *DSM-I* (1952) as a part of the schizophrenic reaction, childhood type description ("Diagnostic Criteria for Autistic Disorder Through the Years," n.d.). Likewise, the *DSM-II* (1968) did not discuss diagnostic criteria for autism, but included the word in the description for schizophrenia ("Diagnostic Criteria for Autistic Disorder Through the Years," n.d.). According to the text "Diagnostic Criteria for Autistic Disorder Through the Years" (n.d.), autism was not actually given a standardized definition until the *DSM-III* in 1980 when diagnostic criteria for infantile autism was discussed. In addition to adding infantile autism, the *DSM-III* (1980) also added a similar category for pervasive developmental disorder for those who did not completely meet the autistic disorder criteria, but exhibit similar symptoms. In 1987, the *DSM-III* revision further described autism under the autistic disorder category. When the *DSM* was updated to the *DSM-IV* in 1994, Asperger's syndrome was added as a separate disorder, though many professionals considered Asperger's syndrome to be a less severe form of autism ("Asperger's Syndrome," n.d.). While the related disorders existed as separate disorders in the *DSM* for several years, the *DSM-V*

decided to replace the separate disorders with the umbrella term, autism spectrum disorder (ASD) in 2013 ("Asperger's Syndrome," n.d.). Much like the separate, but similar pervasive developmental disorder and Asperger's syndrome criteria in previous *DSM* versions, social communication disorder was created in the *DSM-V* to attempt to classify individuals with extremely mild autism-like symptoms (Rudy & Forman, 2018).

Since the merge of disorders under the umbrella term, autism spectrum disorder (ASD), the Centers for Disease Control and Prevention (CDC) defines ASD as a "developmental disability that can cause significant social, communication, and behavioral challenges" ("Basics About ASD," 2018). ASD is a disorder that begins before the age of 3 and lasts for the entirety of a person's life ("Signs and Symptoms," 2015). The severity of ASD symptoms can vary from needing minimal support to needing significant support. With this varying range of severity, no two individuals diagnosed with ASD appear or behave the same way (Copeland, 2018). Copeland (2018) suggests that "early diagnosis and treatment are important to reducing the symptoms of autism and improving the quality of life for people with autism and their families" ("Diagnosis and Risk Factors", para. 1). Because of the variant qualities of the condition and the need for early diagnosis, it has been imperative that the American Psychiatric Association create diagnostic criteria that encompasses the range of symptoms affecting an individual's social, communication, and behavioral functions.

Diagnostic Criteria

The following sections will discuss the steps to receiving a medical diagnosis for autism spectrum disorder (ASD). Typically, this is done in a two-part evaluation through a checklist screening and more thorough diagnostic evaluation by a psychologist.

Medical diagnosis. With ASD being a disorder that appears before age 3, the Centers for Disease Control and Prevention (CDC) have compiled a list of possible "red flags" that children under the age of 3 may exhibit. Some children may exhibit behaviors such as avoiding eye contact, not responding to their name, inability to play "pretend" games (e.g., "feed" a baby doll or "talk" on the phone), repeating words and phrases, and "stimming" (e.g., flapping hands, rocking their body, or spinning in circles) ("Signs and Symptoms," 2015). They may also have delayed speech and language skills, an inability to point at objects to show interest, obsessive interests, unusual reactions to the way objects look, feel, tastes, smell, or sound, and difficulty handling minor changes ("Signs and Symptoms," 2015). Since these "red flags" are helpful in identifying early signs of ASD in infants and toddlers, they have been formulated into questions as a part of a modified checklist to be used by pediatricians to screen for ASD between 18 and 24 months of age at well-child visits ("Diagnosis," n.d.).

Once a screening has been completed during a well-child visit and indicates that a child may have ASD, a more thorough diagnostic evaluation will be required to determine whether the child meets the criteria for having ASD. The IRIS Center at Vanderbilt University states that because there is no medical test for ASD, medical diagnosis is based on information gathered from various sources ("Diagnosis," n.d.). Such information includes interviews from family members or other caregivers, behavioral observations, and systematic testing (e.g., tests that examine the child's overall development, adaptive behavior, fine and gross motor skills, social and communication skills, and the presence of autism-related symptoms) ("Diagnosis," n.d.). After the appropriate information and data from testing has been gathered, a medical professional (e.g., doctor or psychologist) determines whether a child meets the *DSM-V* criteria for a medical diagnosis of ASD ("Diagnosis," n.d.).

DSM-V criteria. When the *DSM* updated to its fifth edition and merged the distinct

diagnoses for autistic disorder, Asperger's syndrome, and pervasive developmental disorder

under the umbrella term, autism spectrum disorder (ASD), the diagnostic criteria was also

updated and changed.   With the new criteria, diagnoses are made based on two main categories:

social communication impairments and restricted, repetitive patterns of behavior ("Diagnostic

Criteria," 2016).   For social communication impairments, deficits must be persistent across

multiple contexts and are exemplified in the *DSM-V* in three various ways. The *DSM*'s examples

suggest that the social communication impairments look like difficulties in typical back-and-

forth conversation, challenges in understanding or responding to social cues, difficulties in

creating and maintaining relationships, and difficulty in sharing interests or emotions with others

("Diagnostic Criteria," 2016). Regarding restricted, repetitive patterns of behavior, the *DSM*

states that such behavior must be manifested by two of the illustrative examples. The examples

of restricted, repetitive behaviors include self-stimulatory behaviors, unusual use of objects or

toys, and repetitive speech (e.g., flapping hands, lining up toys, or repeating the same words or

phrases). Other illustrative examples under the criteria for restricted, repetitive patterns of

behavior include insistence on the same patterns of verbal or nonverbal behavior or routine,

extremely restricted, fixated interests that are abnormal (e.g., strong attachment to an unusual

object), and hyper- or hypo-reactivity to sensory input or sensory aspects in an environment (e.g.,

intense reaction to sounds or textures, indifference to pain, fascination with lights or movement)

("Diagnostic Criteria," 2016).   In addition to meeting the criteria for social communication

impairments and restricted, repetitive patterns of behavior, individuals must also have had

symptoms present during the early developmental period and symptoms must cause significant

impairments in social, occupational, and other pertinent areas of functioning. These disorder

symptoms must not also be better explained by an intellectual disability or global developmental

delay ("Diagnostic Criteria," 2016). To coincide with the two categories, the *DSM-V* includes

three levels of support to describe in detail how individuals across the spectrum exhibit varying

symptoms and require various levels of support. A table with further information on the three

levels of support can be found in Appendix A. Professionals must also distinguish certain

criteria if ASD is co-morbidly occurring with another disorder or medical condition. The

Centers for Disease Control and Prevention (CDC)'s "Diagnostic Criteria" article from 2016

does not discredit those with an established diagnosis from the *DSM-IV*. In fact, the site states

that those with an established *DSM-IV* diagnosis of autistic disorder, Asperger's syndrome, or

pervasive developmental disorder should be given the new diagnosis of autism spectrum

disorder. The note also states that those individuals who have social communication deficits, but

do not meet the criteria for ASD, should be evaluated for social communication disorder

("Diagnostic Criteria," 2016).

Characteristics of ASD

        Given that ASD is an umbrella term that encompasses individuals exhibiting a variety of

symptoms that affect their needs, the same variant range is also applied to the strengths and

abilities of these diagnosed individuals. While all diagnosed individuals exhibit behaviors

related to the two major criteria in the *DSM-V*, the coinciding level of support and how severely

their needs are affected is what makes this disorder unique for everyone affected. As Appendix

A provides more information on the levels of support defined in the *DSM-V*, I will provide

examples for what each level may appear like in an individual. An 8-year-old child experiencing

language difficulties, as well as difficulties initiating conversations and understanding social cues

with peers, who is also extremely obsessed with a specific movie and repeatedly quotes or acts

out scenes from that movie would be a prime example of ASD level 1 of support because this individual would only require some supports to function typically. A toddler who only communicates to express his or her wants, shows no interest in peers or age-appropriate activities, lines up toys, and throws tantrums during transitions would be an example of ASD level 2 of support because this child would require substantial support to function typically. Lastly, a non-verbal child who is uninterested in peers, has no functional play skills (e.g., does not pretend to feed the doll), and engages in self-injurious behaviors when asked to transition to a new activity would be an example of ASD level 3 of support because this child would require very substantial support to function typically. Though ASD is a complex developmental disability, understanding the characteristics of an individual's level of support alongside their diagnosis can help caregivers and specialists provide more individualized support and care for the individual's needs.

Causes

While the Centers for Disease Control and Prevention (CDC) states that several causes of ASD are unknown, there has been enough research to suggest that "there are likely many causes for multiple types of ASD" ("Basics About ASD," 2018). Research compiled by the CDC also suggests that many different factors, such as environmental, biologic, and genetic factors, play a role in causing ASD, but "most scientists agree that genes are one of the risk factors that can make a person more likely to develop ASD" ("Basics About ASD," 2018). Specifically, ASD tends to occur more frequently in individuals with certain genetic or chromosomal conditions. Throughout the years, many individuals have suspected vaccinations as a cause of ASD. Although ASD diagnoses can often align with a child's vaccination schedule, extensive research

has been conducted over the last two decades to show that vaccines are not a cause of ASD

("What Causes Autism?" n.d.).

Prevalence

Since ASD is a disorder that does not discriminate in terms of race, gender, or

socioeconomic status, it affects individuals across varying demographic populations. However,

ASD is almost four times more common in boys than in girls. Overall prevalence per the CDC's

most recent data in 2014 states that 1 in 59 children have been identified with ASD ("Data &

Statistics," 2018).

Treatment

Unfortunately, there is no cure for ASD, nor do individuals outgrow their diagnosis.

However, symptoms can be manageable with early diagnosis and treatment (Copeland, 2018).

Because ASD presents itself in a unique way with each individual experiencing their own variety

and severity of symptoms, there is not a sole treatment for ASD. For children from birth to 3-

years-old, early intervention services provide a wide array of treatments, such as speech therapy,

occupational therapy, physical therapy, and home visits to help children hone pertinent

developmental skills that may be delayed due to their disorder. Once children become too old

for early intervention services, they may still be eligible for therapies, such as speech,

occupational, and physical, via the school system or outside providers. Other treatments include

music therapy, sensory integration, dietary changes, medication, and behavioral therapy

("Treatment," 2015). When discussing treatments, the CDC strongly notes that it is important to

understand that no medication treats the core symptoms of ASD and that children's behavior

may not be directly related to their ASD diagnosis, but an unrelated health issue, thus an

important part of treatment is to ensure that children are receiving regular medical and dental exams to monitor all aspects of healthy development ("Treatment," 2015).

Challenges with an ASD Diagnosis

As a result of ASD being a diagnosis that effects individuals throughout the entire lifespan, many challenges are faced by individuals and their families as they cope with the effects of ASD symptoms. It is also worth noting that since each individual experiences ASD symptoms differently, individuals will not always deal with the exact same challenges when it comes to their diagnosis or a loved one's diagnosis. In the following sections, I highlight the continuous challenges experienced by individuals and families affected by ASD.

For individuals. Corresponding with the ASD diagnostic criteria, the largest challenges reported by individuals with a diagnosis are difficulties with social communication, social interaction, and restricted, repetitive patterns of behavior and interests. Because of this, an individual may have difficulty initiating and maintaining conversations, developing and maintaining friendships, and understanding social cues. The individual may also exhibit self-stimulatory behavior (e.g., hand-flapping, rocking, spinning), have difficulty with becoming extremely obsessed and focused on one interest, and have the inability to stray from routines. Aside from the typical challenges stemming from the symptoms explained in the ASD diagnostic criteria, individuals with ASD experience other challenges that are either related to the symptoms or exacerbate the symptoms, like co-morbidities.

Co-morbidities. Research Autism UK (2017) states that co-morbidities are conditions and/or syndromes that coexist with ASD and have their own symptoms which may worsen the ASD symptoms (para. 2). Alongside ASD, individuals may experience cognitive problems, such as an inability to hold attention or difficulties with executive function. They may also be

diagnosed with neurological disorders (e.g., epilepsy, attention deficit hyperactivity disorder (ADHD)), genetic conditions (e.g., fragile X syndrome, Cornelia de Lange syndrome, and tuberous sclerosis), and learning disabilities. Individuals with ASD may have sensory processing disorders to intensify the potentially existing hyper- or hypo-reactivity to sensory stimuli in ASD, gross and fine motor difficulties, behavioral problems, feeding or eating difficulties, sleep disorders, and gastrointestinal issues (e.g., indigestion, constipation, and diarrhea) (Research Autism UK, 2017, para. 2). Lastly, individuals with ASD may experience co-morbid mental health issues through depression, anxiety, and obsessive-compulsive disorder (OCD) ("Associated Medical Conditions," n.d.).

Other challenges. Additionally, individuals with ASD experience challenges that are not directly related to the diagnostic criteria or co-morbid conditions, but rather everyday life. Per Research Autism UK (2017), individuals with ASD struggle with challenges of enjoying travel and leisure opportunities that their typical peers can almost effortlessly enjoy, possibly due to sensory processing issues and other symptoms that hamper independence (para. 3). Research Autism UK (2017) also states that individuals may face difficulties with other independent activities such as transitions to post-secondary education, employment, and living, maintaining overall health, and finding the appropriate education or school (para. 3). To coincide with the various other struggles that these individuals face in their daily lives, they may also face the largest challenge of all, which is self-advocacy when they may face exclusion, prejudice, or bullying.

For families and caregivers. ASD is not a diagnosis that only affects the individual being diagnosed, but families and caregivers are also affected with challenges stemming from the disorder. Ludlow, Skelly, & Rohleder (2011) conducted a study regarding the challenges faced

by parents of children diagnosed with autism and the most notable challenge faced by parents

was dealing with the challenging behaviors of their diagnosed children (p. 1). Parents in the

article discussed how the aggression exhibited during their children's challenging behaviors

targeted siblings and themselves in extreme violent manners (Ludlow et al., 2011, p. 3). While

discussing the severity of their children's aggressive behaviors, the parents describe how the

violent situations that arose escalated in stressful calls for police intervention (Ludlow et al.,

2011, p. 3). The excerpt about aggression and challenging behaviors from the Ludlow et al.

(2011) helps to exemplify an even greater, overall challenge that families and caregivers

experience with ASD – stress.

     Stress. While everyday life is generally stressful for any parent or caregiver, a parent or

caregiver of an individual with ASD experiences stress in situations that are typically not

stressful for typical individuals. A major aggravator of stress stems from ASD's ability to

significantly impact the communication of individuals. When a child cannot effectively

communicate their most basic wants and needs, parents or caregivers are left to make continuous,

frustrated guesses while possibly dealing with aggressive or self-injurious behaviors until the

child's needs are eventually met ("Stress," n.d.). Added stressors may also stem from a child

with ASD's inability to stray from routines, understand social cues and norms, feeding or eating

difficulties, and sleeping difficulties. Because of the added stressors from the ASD symptoms,

parents or caregivers may feel multiple types of stress, including emotional and financial stress,

as they scour for reliable, respite care or money to pay for therapies and treatments to cope with

the symptoms. Parents and caregivers may also feel stress when taking their child with ASD into

the community because of judgmental comments or stares from others who do not understand the

situation ("Stress," n.d.). Not only does the stress of caring for an individual with ASD affect

parents or caregivers, but stress and challenges can also affect the siblings of individual's with ASD.

Siblings. Since parents and caregivers typically exhaust most of their resources into ensuring that their child with ASD is receiving the best care to aide in coping with ASD symptoms and challenges, siblings of individuals with ASD may often feel slighted and experience their own stress and challenges. Per Harris (n.d.)'s "Siblings," siblings may experience jealousy, embarrassment, frustration from not having a sibling who engages in typical play and communication, and concern over their parents' stress and their possible future role in caregiving (para. 5). Similarly to the parents in Ludlow et al. (2011)'s excerpt on challenging behaviors and aggression discussing how they and the siblings were targeted by the aggression, Harris (n.d.) also supports this claim by suggesting that an added stressor is being a possible target of aggressive behavior (para. 5).

Other Challenges. Aside from dealing with challenging behaviors and stress from ASD symptoms, parents or caregivers may deal with feelings of grief and depression because they harbor a lot of blame for the disorder and feeling that they may not be parenting to their best ability (Brazier, 2016). They may also feel anger when they do feel like they are receiving adequate support from therapy providers and educators or encounter individuals with exclusionary mindsets. In regard to support from therapy providers and educators, another major challenge that parents or caregivers face is to find the most appropriate, supportive educational environment for their child with ASD.

Education of Individuals with ASD

Since 1975, the education of individuals with disabilities has been protected by governing legislature that ensures a free, appropriate public education, along with many other rights from

ages 3-21. However, not all who had disabilities that significantly impacted their daily life and education were protected at this time. At the time P.L. 94-142, or the Education for All Handicapped Children Act (EAHCA), was enacted in 1975, autism had not even been explicitly defined in the *DSM*. It was not until 1990 that autism was added as a disability category to the EAHCA ("Timeline of the Individuals with Disabilities Education Act (IDEA)," n.d.). The following sections will examine the laws and policies governing the education of individuals with ASD since the 1990 addition of the autism disability category. I will also discuss current educational challenges that still occur despite the governing laws and policies that are supposed to protect and ensure an individual's right to a free, appropriate public education.

Laws and Policies.

After the 1990 addition of the autism disability category, individuals with autism were able to receive educational eligibility with their diagnosis under the EAHCA. With this new educational eligibility, individuals with autism and their families now had educational rights that were protected under the provisions of the governing law. Seven years later, President Bill Clinton reauthorized the EAHCA and change the name to the Individuals with Disabilities Education Act of 1997 (IDEA 97) while reauthorizing provisions that provided more access to the general education curriculum for students with disabilities ("Timeline of the Individuals with Disabilities Education Act (IDEA)," n.d.). Again in 2004, IDEA 97 was reauthorized and changed to the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA). This latest reauthorization of the law in 2004 included pertinent changes that suggested earlier intervention for students through response-to-intervention (RtI), more accountability through progress monitoring, and the need for highly qualified special educators. However, through the

multiple reauthorizations, the main provisions of the law which govern the educational rights of students and their families remained constant.

Part B provisions of IDEIA. Under IDEIA, there are eight major educational provisions in IDEIA Part B, which govern the free, appropriate education of qualifying students with disabilities within the United States. In the following sections, I will discuss the different provisions and their impact on the education of individuals with ASD.

Zero reject. The zero-reject principle is a provision that ensures all students with disabilities receive a free-appropriate public education, regardless of the severity of their disability. Not only does it require that students with disabilities receive a free, appropriate public education regardless of their disability, but it also ensures that students with communicable diseases (e.g., AIDS) are not excluded. Zero-reject also contains a section that requires that states locate, identify, and evaluate students with disabilities using a child-find system (Yell, 2015). For students with ASD, to have a provision this strongly worded is imperative as some students have severe communication deficits that significantly impact their ability to communicate their most basic wants and needs and they would most likely be excluded without such a law.

Identification and evaluation. The provision of identification and evaluation created a set of protections in evaluation procedures, or PEPs (Yell, 2015). With these protections under this provision, fair and appropriate evaluations are ensured, allowing for proper placement. This provision also allows for parents, local educational agencies (LEAs), and/or state educational agencies (SEAs) to request initial evaluations. Under this provision, eligibility for services must be determined by LEAs within 60 days or within the state's specified timeline if less than 60 days (Yell, 2015). Through fair evaluation and proper placement under this provision, students

with ASD can be ensured that they are being placed in the proper educational environment to flourish.

     Free appropriate public education (FAPE). The free appropriate public education (FAPE) provision is the basis of the governing law as IDEIA requires policies that ensure that all qualifying students with disabilities receive a FAPE (Yell, 2015). Under the FAPE provision, there are two components: substantive and procedural. The procedural component is what protects the rights of students and parents while supporting meaningful parent involvement. The substantive component targets the requirements of the education providers and sets standards for the education that is being provided. This component states the education be provided at no cost to students and their families, as well as it must meet the specific state's special education standards and occur within an appropriate preschool, elementary, or secondary school in the state involved (Yell, 2015). Lastly, the substantive component of the FAPE provision states that the education must conform to the student's individualized education program (IEP). Since this is the basis of the governing law, this is an extremely crucial provision for students with ASD as part of their treatment includes receiving appropriate services within the school system via an IEP.

     Least restrictive environment (LRE). The least restrictive environment (LRE) provision requires that schools educate students with disabilities with their typical peers to the maximum extent appropriate per the IEP (Yell, 2015). The provision notes that if students are segregated, they must be given opportunities for peer interaction in "specials" classes (e.g., physical education, art, music). The bulk of this provision also requires that schools maintain a continuum of placement options (e.g., resource rooms, special classes, homebound instruction) to ensure that students are always in the appropriate, least restrictive environment (Yell, 2015).

This is another provision that is imperative for students with ASD as the disorder varies for each student in terms of strengths, abilities, and needs and each student with ASD have a unique set of circumstances regarding their appropriate LRE.

Procedural safeguards. With the procedural safeguards provision, parents must be notified within a reasonable time prior to meetings. Parents must also give consent for evaluations and/or placement changes under this provision. This provision also allows for parents to request an outside evaluation at no cost if they do not agree with the school. Students who are a ward of the state or have no parents are appointed surrogate parents under the procedural safeguards provision to protect the student's best interest. Procedural safeguards are also in place to offer dispute resolution through an impartial due process hearing if a major disagreement occurs. During the dispute resolution, the student will remain in his or her current educational placement, unless the parents and school agree otherwise (Yell, 2015). The procedural safeguard provision is important as some of the challenges to parenting a student with ASD is dealing with meetings or disputes and it is reassuring to know that the IDEIA law has a provision that supports students and their families, as well as the school throughout such processes.

Technology-related assistance. Technology-related assistance is a provision that states assistive technology and related services must be provided and used in conformity with the student's IEP (Yell, 2015). Not only does this provision require that assistive technology and related services be provided, but it also requires IEP teams to consider the need for use of assistive technology and related services for all students with disabilities. However, schools do not have to maintain or provide surgically added technology (e.g., cochlear implants) (Yell, 2015). The 2004 reauthorization is responsible for this provision's required use of assistive

technology for transitions, extra help and support for assistive technology loans, and an overall public awareness of assistive technology importance (Yell, 2015). For students with ASD, this provision is also crucial as some with significant communication impairments require assistive technology to communicate effectively in an educational setting and receive access to the general curriculum.

Personnel development. The personnel development provision requires states to compile a list of personnel needed to meet the IDEIA goals for the United States Department of Education (Yell, 2015). As a part of the 2004 reauthorization, states must also ensure that special educators and related service providers be highly qualified. Along with ensuring highly qualified educators and providers, states must also provide the educators and providers with professional development opportunities. Because of this provision, school districts must also send a list of personnel needed to ensure FAPE to the state to receive funding (Yell, 2015). Though this does not seem like a provision that would greatly affect the education of students with ASD, having highly qualified educators and related service providers who are consistently given professional development opportunities to continuously learn about effective special education is imperative to receiving the most effective FAPE.

Parent participation. Parent participation is a provision that states that parents must be present for IEP meetings, evaluations, and be involved in placement decisions. This provision also states that progress reports be sent as regularly as report cards or notes about progress in the general curriculum (Yell, 2015). For students with ASD, the parent participation provision requires that parents be invited as active participants in their child's FAPE, as well as holds the educators accountable for showing progress through requiring frequent progress reports.

Current Challenges in Educating Individuals with ASD

Though it is ideal to think that all of the provisions from part B of IDEIA are followed to their best ability, there are still many unfortunate situations where the requirements are not being met effectively. Despite the governing laws, students with ASD and their families are still faced with overcoming challenges to receiving the most effective FAPE. In the following sections, I will discuss five current challenges hindering the education of students with ASD.

Lack of resources. As stated previously, there has been a consistent increase in ASD diagnoses over the years ("Basics About ASD," 2018). With this consistent increase, more students are requiring special education resources and services within school systems. Unfortunately, this increase in student population has not come with an increase in funding, special educators, and related service providers and is presenting various challenges in providing an effective FAPE for students with ASD.

Lack of funding. At one time, IDEIA and its provisions covered over one-third of the cost of educating students with disabilities. Since 2014, the IDEIA contribution dropped to less than one-half of what it was originally covering (Keates, 2017). Because of this, Keates (2017) states that local districts are struggling to cover more than 85% of the costs needed to provide quality FAPE to its qualifying students. Many states are using unregulated formulas to determine what amount of funding goes towards special education services and consequently, not effectively meeting the needs of the students, nor the provisions under part B of IDEIA. With this lack of funding, it is increasingly difficult to effectively educate the consistently growing population of students with ASD due to the inability to afford the proper resources (e.g., tools for accommodations and modifications, related services).

Lack of special educators and related service providers. With the previously discussed lack of funding also comes a lack of special educators and related service providers (e.g., speech-

language pathologist, occupational therapist, physical therapist). Per "About the Shortage"

(2014), 49 states reported a shortage of special education teachers and related service providers.

The site also states that 82% of special educators and related service providers claim that there

are not enough professionals to meet the needs of students with disabilities within their schools

("About the Shortage," 2014). With a lack of special educators and related service providers to

effectively provide for all students with disabilities, there is also a lack of effectively meeting the

part B provisions of IDEIA as the caseloads are becoming overcrowded and students are not

receiving adequate time with educators and providers.

       Lack of teacher preparedness. Another challenge to educating individuals with ASD

would be a lack of prepared teachers. An article by Mader (2017) discusses the plight of a

general education teacher who felt clueless when it came to educating both students with

disabilities and general education students in the same classroom, as well as managing the

behaviors of students with disabilities. The purpose of exemplifying a clueless educator in this

particular situation was to show how unprepared teachers are for handling students with

disabilities in general education classrooms without the support from a special education co-

teacher. Mader (2017) continues the article by suggesting that teacher preparation programs

need to restructure to include more education and preparation on teaching students with

disabilities in order to provide efficient inclusion in the general education classroom. Coinciding

with Mader (2017)'s plea for the restructuring of teacher education programs, a study conducted

by Chitiyo and Brinda (2018) examined 77 educators from various career backgrounds and

found that despite years of service and levels of education, there was a clear need for more

preparation and training in effectively co-teaching and reaching students with disabilities within

the general education classroom.

Lack of individualized education. Throughout the years as the Common Core State Standards (CCSS) have been adopted in schools, it has become evident how this form of standardized education is not working for special education as achievement gaps have widened ("The Challenges of Common Core for Special Education," 2016). Because of the standardized nature of CCSS assessments, teachers are finding it hard to provide individualized education within this "one-size-fits-all" approach to education. Beals (2014) supports this claim by discussing the problems of a teacher attempting to assess a student with ASD using the CCSS reading passages that were above the student's level of understanding. With the lack of individualized education using solely the CCSS approach, it is a great disservice to students with ASD and prevents them from truly accessing and engaging with the general curricula to achieve the most effective FAPE.

Overcrowded classrooms. With the increase in students with ASD being placed into general education, inclusive classrooms, the sizes of classrooms are becoming larger and more crowded. Bailey (2018) describes difficulties that occur when class sizes are too large, such as limited teacher-student interaction, behavioral disturbances, and lack of individualized assistance. Claims by Bailey (2018) suggest that overcrowding stems from a lack of resources, such as funding. With the overcrowding challenge, it is obvious that though students with ASD may be included in the general education classroom alongside typical peers, they are still being shortchanged in other areas when the student-teacher ratio is too high.

Unclear and outdated interpretations of inclusion and LRE. Often many educators believe that inclusion and LRE are synonymous. With this belief, educators may also support the misbelief that inclusion and LRE mean that students should always be mainstreamed into the general education classroom. Saggers (2018) states that when inclusion is interpreted this way,

students are at risk for not being able to access accommodations and modifications that address their individual needs. The challenge of unclear and outdated interpretations of inclusion and LRE can severely hinder the progress and education of students with ASD as they may need more frequent breaks from the mainstream classroom environment. Without a continuum of placement options that coincides with an IEP, students with ASD are being deprived their right to an effective FAPE in their LRE.

Characteristics to Implement for an Inclusive Learning Environment

After reviewing the intricacies of an ASD diagnosis and the everyday challenges associated with the diagnosis for individuals and families, it is evident that life with ASD is not easy. In addition to discussing everyday challenges, a discussion of educational laws and current practices suggests that there are many educational challenges faced by individuals with ASD and their families. Because of this, it is apparent that there needs to be a review of literature associated with best educational practices for students with ASD. In this section, I will discuss nine characteristics that will create and support an inclusive learning environment for students with ASD. In addition to discussing the characteristics in detail, I will also be exemplifying them to show how they can be used for classroom use.

Classroom Environment

To combat one of the main challenges to educating students with ASD, the classroom environment must be one that is conducive to the learning of these students. Since students with ASD experience the world differently than their typical peers, extra consideration should be given when designing an inclusive classroom environment for these students. Considerations include the overall classroom arrangement, manipulation of the setting to lessen the possibility of sensory overload and disruptive behaviors, and lowering the student-to-teacher ratio. Though

each student with ASD will have a different response and experience to the environment, making such considerations that will cater to a variety of the challenges faced by students with ASD is a helpful first step in creating an inclusive learning environment for all.

       Classroom design. For students with ASD, certain aspects of their environments, such as lighting, scents, or arrangement, may trigger them to exhibit disruptive behaviors. Because of this, it is imperative that their primary learning environment at school, the classroom, be designed and manipulated in ways that decrease or prevent disruptive behaviors. Guardino & Fullerton (2010) suggest assessing student behaviors during a baseline period to determine what elements of the classroom environment are triggering the disruptive behaviors. This data will also allow educators to determine what specific modifications should be made to benefit the classroom, increase academic engagement, and decrease disruptive behaviors.

       In the article, "How to Set Up an Autism Classroom (n.d.)," several tips are given to setting up the most efficient classroom for teaching students with ASD. The article initially suggests focusing on the physical layout by arranging furniture to be conducive for small group and whole group instruction, as well as to create efficient walkways for smooth transitions. To complement the classroom's flow and daily routine, the article suggests to design a layout that supports the classroom schedule by using furniture as partitions for centers, colored tape to define boundaries, and labels, or visuals, on each work center, shelving unit, or cabinet. It is important to also remember the facets of the classroom that contribute to sensory stimulation for students with ASD, such as lighting, windows, and flooring. The article suggests using shades for windows, turning down the overhead lights, using carpets to reduce floor noise, and facing desks away from windows and doors to avoid distraction ("How to Set Up an Autism Classroom," n.d.). In the event that the school does not have a specifically designed sensory

room for students with ASD (See Appendix B), educators should consider implementing a calm

down, or sensory, area within their classroom (See Appendix C).   Lastly, the article strongly

suggests to remove any clutter caused by furniture and materials (e.g. posters, books, unused

supplies) that are not pertinent to enhancing instruction, as well as clutter on the teacher's desk,

because students with ASD may focus on a "nonteaching item instead of [the teacher]" ("How to

Set Up an Austim Classroom," n.d.) and miss important parts of instructional time.

Student-teacher ratio. While it is ideal to combat the issue of overcrowding in

classrooms by adding more classrooms to reduce the student-teacher ratio, a lack of resources

often makes that ideal situation impossible. Therefore, educators must find ways to lessen the

student-teacher ratio within the classroom environment. Meador (2018) states that the best way

to do this is by utilizing small group instruction throughout lessons. When dividing the whole

class into five to six small groups, it can lower the student-teacher ratio, allow for ability

grouping, make students less overwhelmed, and give the teacher an opportunity to assess student

work and provide feedback more closely (Meador, 2018). The article by Meador (2018)

suggests that using small group instruction as a part of other engaging independent or peer-

supported center work activities can allow this model to be used effectively with minimal

behavior management issues.

Future classroom use. As an educator, a top priority is to create a classroom

environment that is conducive to learning styles and abilities of all students. Having students

with ASD means that this environment may have to be structured differently than a traditional

classroom. For future classroom use, I would suggest a layout that is open with tables that can

be used for both small group and whole group instruction, as well as options for alternative

seating (See Appendix D) as some students with ASD may prefer a different type of chair or

seat. Classroom materials for instruction, as well as the teacher's desk items, should also be stored appropriately and organized neatly to provide easy access and less distraction. Since many students with ASD require visual supports, I suggest using many visual labels for centers, materials, and cabinets, as well as visual schedules to display the daily routine. I also suggest using light covers (See Appendix E) if dimming the fluorescent lights is not an option and adding a calming area in a quiet corner of the classroom where students can relieve themselves in the event of sensory overload or a meltdown. Lastly, I would suggest altering instruction to include more small group instruction to lessen the student-teacher ratio and to provide closer teaching and feedback to students. Overall, making such adjustments to the classroom environment should help to create an inclusive, effective learning environment for all, especially those with ASD.

Adequate Teacher Preparation

Another challenge to creating an inclusive learning environment for students with ASD is having adequately prepared teachers to work with these students. Previously discussed research by Chitiyo and Brinda (2018) and Mader (2017) suggests that educators are not feeling adequately prepared to teach in inclusive classrooms, regardless of their years of service. Typically, students with ASD are thought to be the priority of a teacher trained in only special education. However, as our classrooms are becoming more inclusive, general educators will begin to serve more students with ASD. Therefore, it is imperative that all general educators receive adequate training and preparation to effectively teach these students.

One idea to adequately prepare teachers to effectively teach students with ASD comes from the article by Mader (2017) and suggests that teacher education programs offer and push for more dual-certification programs that certify in both special education and a subject-level or

grade-level.   The article suggests that this model prepares pre-service educators to be hired as

either general education or special education teachers while equipping them with the knowledge

to fulfill the roles of educating both typical and atypical students in an inclusive classroom.   For

students with ASD, this is pivotal as it diminishes the idea that they are the sole responsibility of

a special education teacher who may not primarily serve them throughout the day. The study

conducted by Chitiyo and Brinda (2018) led to results that agree with Mader (2017) and suggests

that there is an immediate need for teacher education programs to offer more mandatory

coursework related to teaching pre-service educators about the collaborative teaching, or co-

teaching, model. It is also suggested that schools offer more frequent in-service training sessions

regarding co-teaching and the best strategies to use for reaching students with disabilities within

the general education classroom.

Future use. With the recognized need for more teacher preparedness, it is important to

consider suggestions for future use. As students with ASD require varying degrees of support,

the training of pre-service educators, as well as both general and special educators, should

contain information regarding strategies for supporting students on all levels of the spectrum.

For the training of pre-service educators, I suggest that more teacher education programs

incorporate more strategies and training for supporting students with ASD within the

coursework, specifically for pre-service teachers pursuing general education. The training and

coursework on strategies and supports should specifically highlight strategies for supporting all

levels and not treating ASD with a "one size fits all" mentality. In addition, I suggest that all

teacher education programs include more training and coursework regarding the use of the

collaborative teaching model. As more classrooms become inclusive classrooms, more schools

are moving to co-teaching models to meet the needs and support all students within the general

education classroom and it is imperative that both general and special education teachers can effectively implement this style of teaching. current educators in both general and special education, I suggest more opportunities for in-service training that is focused on the education of students with ASD. This training could be done in person as a professional development session or by assigning training modules on the IRIS Center at Vanderbilt website. I suggest that training on students with ASD for current educators be continuous and also extend to support staff, such as paraprofessionals, so that educators and their assistants can receive the most up-to-date strategies and information about supporting those with ASD in the general education classroom.

Individualized Education

As previously discussed, qualifying students with ASD are eligible to receive a free appropriate public education governed by the provisions under IDEIA (2004). This allows them to receive appropriate services and supports throughout successful implementation of the student's IEP.   However, individualized education is much more than implementation of an IEP. Because ASD is a spectrum disorder containing various levels and various characteristics in each individual student, the needs of students with ASD cannot be met with a "one size fits all" approach and requires a more individualized approach from educators to truly meet the needs of these students and provide adequate supports. To combat some of the major challenges hindering individualized education, educators need to form positive relationships and have an ultimate understanding of their students' needs and schools need to appropriately understand the ideas of least restrictive environment (LRE) and offer a continuum of placement options that best suit the students' needs.

Forming positive relationships. Marzano (2011) states that "positive relationships between teachers and students are among the most commonly cited variables associated with effective instruction" (p. 82). The results of research by Marzano (2011) suggests that positive relationships are solely based on student perception. Though an educator may not have negative feelings toward a student, the student may not perceive their relationship as positive because the educator does not do anything specific to promote positive perceptions. Marzano (2011) provides a list of teacher actions that can foster a positive student perception. The list includes showing interest in students' lives, being an advocate for students, being friendly, and never giving up on students (Marzano, 2011).

Understanding LRE. While it is believed that the best inclusive learning environments for students with ASD originate in the general education classroom, this is far from the best practice to support these students. As previously discussed, one provision under IDEIA (2004) states that students with disabilities should be provided with a continuum of placement options to coincide with what is considered their least restrictive environment (LRE). Because students with ASD experience a variety of challenges that vary in severity each day, it is imperative that educators fully understand and discuss the best placement options to maximize instruction for these students. The LRE provision states that students must begin in the general education and be placed in alternative environments as determined necessary by the IEP team. A chart showing a continuum of placements can be seen in Appendix F.

Future classroom use. Though laws govern individualized education for students with disabilities through implementation of an IEP, educators must do more than just provide services and supports through the IEP to provide true individualized education. One of the most important things an educator can do is build positive teacher-student relationships. I suggest that

this be done through getting to know students through student questionnaires, parent input, and reviewing their IEP to understand the supports and services being received. Other actions that can foster positive student perceptions and should be exhibited are personal greetings and goodbyes, treating each student with respect, advocating for and believing in the students, listening to their opinions and allowing them to have a voice, and sharing personal stories that are relatable to teaching and allow students to get to know their teacher. Lastly, I suggest attending extracurricular activities that the students may be participating in. Because ASD does cause several daily challenges, participating in extracurriculars can sometimes mean extra challenges, but an educator's presence can show the student how much their participation and success is cared for.

Not only is it important to build a positive teacher-student relationship, but it is also important to understand the students' best and least restrictive learning environment. By having a positive and understanding relationship, an educator can determine whether or not the environment is hindering the student's ability to learn. Therefore, the educator can make more effective decisions on curriculum and placement adjustments. In agreeance with the IDEIA (2004) law, I suggest starting a student with ASD in the general education classroom with supports and services. If the student cannot handle the general education classroom with accommodations and modifications, placement adjustments should be made accordingly using a continuum of placement options (See Appendix F). I suggest that both the general and special education teachers work closely together to ensure that the student with ASD, who is removed from the inclusive general education classroom, is included in as many activities as he or she can tolerate alongside typical peers. By doing so, the teachers will be creating a more inclusive

learning environment throughout the entire school while also respecting and honoring the student's LRE.

Variant Learning and Teaching Approaches

To complement the variant nature of ASD, students with ASD often require variant learning and teaching approaches to effectively understand instruction. One of the most obvious ways to implement variant approaches is to use the collaborative teaching, or co-teaching, model. With co-teaching, a general education and special education teacher work closely together on planning lessons and providing instruction for all within the inclusive general education classroom. For students with ASD, this is crucial due to the direct support received from having two educators who understand what it takes for the student to learn the content. Not only does this teaching model allow for students to experience two teaching styles in one classroom, it also allows for two teachers to manage classroom behaviors and minimize disruptions during instruction and lessen the student-teacher ratio, which allows for more small group or one-on-one learning.

Another way to complement ASD's variant nature is to differentiate the content through the use of technology. Mahoney and Hall (2017) state that the "academic success of every student in the inclusion classroom depends upon the preparedness of the general education teacher and the support service provided by the special education teacher" (p. 301). With this idea, it is imperative that the two find ways to differentiate content, as well as how to evaluate student learning, while increasing participation. For students with ASD, their everyday challenges may hinder their ability to participate to their fullest potential in the inclusive general education classroom. By using an array of technological applications, students with ASD, as well as their typical peers, can become more actively engaged with the content. Mahoney and

Hall (2017) suggest that the Padlet application allows students with disabilities to collaborate with their typical peers without needing to use paper and pencil. As some individuals with ASD may have fine-motor difficulties, the use of technology to collaborate can alleviate that challenge and allow them to reach the curriculum. The article by Mahoney and Hall (2017) also includes applications, such as Kahoot! and Plickers, that allow students to respond anonymously, but still be active participants in the lesson. With the social difficulties that occur with ASD, technology can lessen another challenge that students with ASD face everyday in the inclusive general education classroom. As our society continues to move through the Information Age and more applications are created, students with ASD deserve variant approaches that provide them with access to the same curriculum and content as their typical peers and it is imperative that both general education and special education teachers incorporate the various applications into lessons.

Future classroom use. In an ideal situation, both general education and special education teachers would have received extensive training on efficient use of the co-teaching model. However, co-teaching may not always work perfectly. Therefore, I suggest that team teachers spend time developing a positive and open relationship where ideas can be discussed without judgement, give each other equitable power within the classroom, and create classroom goals that can be focused on and worked toward together. Much like a positive teacher-student relationship, students are more likely to feel more comfortable and the instruction is more likely to be effective if team teachers exhibit a positive working relationship.

Whether in a co-teaching situation or not, technology should be used to help students with ASD access and engage in the content. For students with fine-motor difficulties, text-to-speech applications can allow them to dictate their thoughts and produce knowledge. As

students with ASD often have difficulty communicating, applications like Plickers or

PollEverywhere allow teachers to gain responses while students remain anonymous. Similarly,

using applications like Kahoot allow students with ASD to answer using a tablet, phone, or

computer application instead of having to verbally respond. Lastly, for students with ASD who

have reading difficulties, I suggest finding applications that read books and stories that are on the

student's appropriate instructional level to them as they follow along.

Inclusive Grading Model

Whether students attend public or private learning institutions, both utilize a variety of

ways to communicate students' progress to their families. The most utilized is the use of report

cards and letter grades. Jung and Guskey (2007) states that "one of the most important functions

of report cards and [letter] grades is to give families information on their children's progress in

school" (p. 48). For students with ASD, it is imperative that their families receive information

regarding their strengths and weaknesses within the classroom, so that extra support may be

provided at home to foster their success. With this idea, educators and schools must realize that

meaningful progress cannot be effectively communicated through a standard letter grade on a

report card.

Research by Jung and Guskey (2007) suggests that teachers within the inclusive general

education classroom utilize a more inclusive grading model as "most students in special

education continue to receive low passing [letter] grades, placing them at high risk for low self-

esteem and dropping out of school" (p. 49). For students with ASD, dropping out can be a huge

setback to the care and treatment of their disability. To combat this issue, Jung and Guskey

(2007) suggest that teachers provide narrative feedback on grade-level standards where students

receive accommodations. However, for students receiving modifications, Jung and Guskey

(2007) state that educators should provide feedback on the developmentally appropriate, modified standard for that subject. To keep the grading model inclusive, Jung and Guskey (2007) state that assessment practices must be fair and equitable. In an effort to make things fair and equitable, students receiving accommodations should be assessed the same as their typical peers. Students receiving modifications must be assessed on the modified standards or the educators will be in violation of the student's IEP and their rights (Jung and Guskey, 2007). Though narrative feedback seems like an arduous task compared to standard letter grades, Kohn (2011) states that offering narrative summaries of students' progress is not "a utopian fantasy" (p. 32) and that many positive effects can stem from deleting, or diluting, standard letter grades.

Future classroom use. To fully support students with ASD in the inclusive general education classroom, effective reports of their progress must be communicated to their families, as well as service providers. To keep practices fair and equitable, I suggest assessing typical and atypical students with narrative feedback. While this may be difficult to "delete" standard letter grades when the entire school district uses the traditional letter grade system, narrative feedback can still be provided with the letter grade. In addition to providing written narrative reports, I suggest that educators have conferences with their students. I believe that the use of narrative feedback would help students with ASD, as well as their families, better understand their progress towards mastery of the content as it is more meaningful than a standard letter grade.

Peer Interaction and Support

When considering the characteristics of an inclusive learning environment for students with ASD, Winterman and Sapona (2002)'s article suggests that peer interaction and support are major tenets of an inclusive classroom for students with ASD. The article "Peer-Based Intervention and Autism Spectrum Disorders" states that using peers can facilitate social

interactions, as well as target and support students with ASD in the areas of "communication skills, interpersonal skills, and play skills" (p. 1). To create effective peer interaction and support through peer intervention, educators must select peers that meet a certain criterion. The article suggests that students be of similar age and share similar interests to the student with ASD, be motivated to participate in the process, exhibit strong social and communication skills, and have low absenteeism ("Peer-Based Intervention," n.d.). Educators should train the chosen peers to "recognize and appreciate similarities and differences" ("Peer-Based Intervention," n.d., p. 1) and clear the air of any misconceptions the peers may have regarding students with ASD. The bulk of the training includes sharing information about the student with ASD, such as their preferences, strengths, challenges, and their goals, with the peers. Trained peers should also be taught various individualized strategies for effectively communicating and supporting the student with ASD who they are working with. Once peers have been trained, educators can facilitate and support social activities and interactions between the trained peers and students with ASD. Eventually, supports and structure should be faded to where educators are periodically reinforcing appropriate social interactions between the peers and students with ASD with praise.

To complement the model discussed in "Peer-Based Intervention," Bambara, Thomas, Chovanes, and Cole (2018) suggests using fidelity checklists (See Appendix G) to monitor the interactions between the peers and the focus students, as well as whether the peer mediated intervention strategies are working. The use of the checklists can be great ways to assess the peer interaction and support from older students who have the ability to give a more in-depth analysis of their interactions and communications with the focus students. With any peer intervention model, Bambara et al. states that students with ASD must be provided opportunities to socialize and be integrated with their peers so that they can better generalize the social skills

learned through peer interaction and support. Lastly, research by Bambara et al. (2018) supports

the idea that peer interaction and support is a major tenet of the inclusive classroom by

explaining the meaningful results this intervention has on both typical peers and the focus

students and by showing how imperative it is to find as many opportunities to integrate the

students instead of exclude them due to their disability.

Future classroom use. Since peer interaction and support are such important facets of

the inclusive learning environment for students with ASD, I suggest including multiple

opportunities for students to practice using their conversational skills. At any grade level,

educators should observe students' conversational skills and attendance habits to select the most

appropriate peer mentors. After training and briefing the students on their new role, educators

can plan and facilitate opportunities for interaction between the typical peers and the focus

students with ASD. This can be done during a specific morning time, recess, and meal or snack

time. In addition, opportunities for specific types of peer support and intervention can be

integrated into instruction time during small groups and peer learning. Scaffolding and

monitoring with the use of the fidelity checklists (See Appendix G) will vary with grade level as

older typical peers may not need as much scaffolding to efficiently provide support and

interaction with the focus students. After students with ASD become comfortable with peer

interaction and support within the classroom, I suggest that educators create new opportunities

outside of the classroom for the students with ASD to generalize the use of their communication

skills.

Inclusive Extracurricular Activities

Typically, the quintessential learning environment for students with ASD is thought to be

the classroom. Contrary to this belief, research by Vinoski, Graybill, and Roach (2016) has

shown that inclusive extracurricular activities and programs can provide students with learning experiences that influence their lives in a similar way to the influence of inclusive classroom instruction. Specifically, inclusive extracurricular programs can enhance self-determination and "goal setting, self-awareness, self-regulation, and decision making" (Vinoski et al., 2016, p. 259) for students with disabilities. Unfortunately, the provisions of IDEIA (2004) do not extend to all school-related activities, such as extracurricular activities. Since such inclusion in extracurricular activities could prove to be beneficial for students with ASD, it is important that educators review the research and guide provided by Vinoski et al. (2016) on how to effectively create, implement, and sustain such programs that will extend the inclusive ideas of IDEIA (2004) legislature to encompass more school-related events and benefit students with disabilities, especially those with ASD.

Vinoski et al. (2016) suggest that educators looking to create such programs must consider several factors before implementation. Initially, Vinoski et al. (2016) suggest that it is crucial to receive approval of establishment of the inclusive extracurricular program from school administrators. After approval is secured, educators should begin building the program's foundation with club sponsors and a leadership team. The article by Vinoski et al. (2016) states that club sponsors should be comprised of a team of one special education and one general education teacher or one individual with experience working in inclusive settings with all students. Likewise, the article states that educators should comprise the leadership roles using both typical and atypical students. To have a successful inclusive extracurricular program, club sponsors must work with leadership teams to schedule events and activities that allow students to work on self-determination skills through planning, preparation, execution, and participation in the events. Lastly, Vinoski et al. (2016) states that those creating and implementing the

extracurricular programs must be knowledgeable about fundraising programs (e.g. bake sales, craft fairs, rebate nights, candy sales) and educational grants to properly fund and sustain the program.

Though it seems like startup and sustainability are arduous tasks, the research and guide by Vinoski et al. (2016) strongly implies that the successful implementation of inclusive extracurricular programs can provide meaningful learning opportunities for all students, including those with ASD and other disabilities. For students with ASD, having meaningful learning opportunities is one of the best treatments for the disability. Additionally, inclusive extracurricular activities would allow students with ASD to generalize their classroom skills in new environments. As educators tackle the arduous tasks to create inclusive learning environments, inside and outside of the classroom, for their students, students are provided successful models of self-determination and shown actions that make them feel included and important. Since students with ASD learn in various ways, they also learn in various contexts. Therefore, the inclusive learning environment should not be solely limited to the inclusive general education classroom and should extend to include inclusive extracurricular programs.

Future use. With the consideration that IDEIA (2004) does not govern inclusion in extracurricular activities, educators of students with ASD must survey their school climate and assess whether or not a truly inclusive extracurricular program exists. If a program does not exist, I suggest finding another educator who is knowledgeable and passionate about working with students in an inclusive environment to be a co-sponsor and approaching school administrators about starting a program. If the administration seems indifferent about the plan, use the research by Vinoski et al. (2016) as evidence to show how effective inclusive extracurricular programs can be for all students, especially those with ASD and other disabilities.

Once the program is approved for startup, hosting an event with an established program is a great way to boost membership. When it is time to elect leadership roles, the roles should be split between students with disabilities and students without disabilities. These leaders should practice self-determination skills through planning, prepping, executing, and participating in events, such as going on field trips that provide meaningful experiences (e.g. outings to sporting events, museums, and service activities within the community) and monthly meetings where students discuss events pertaining to the program. Self-determination skills should also be practiced through fundraising events that sustain the club, such as bake sales, craft fairs, silent auctions, and candy sales. If the proceeds from fundraising events are not enough to sustain the program, educators serving as sponsors should apply for educational grants provided by community leaders as a means of funding. While there may be challenges associated with startup and sustainability, I suggest finding ways to overcome the challenges as the influence of meaningful opportunities provided by inclusive extracurricular programs can greatly aid in the lifelong treatment of students with ASD.

Collaboration of School and Community

For students with ASD, the ultimate long-term goal is to have years of effective instruction that prepares them for smooth postsecondary transitions. This could be transitioning to an institution of higher learning, employment, or simply living within a community. Despite the transition choice, middle and high school students with ASD must be properly prepared for their postsecondary options. The most effective way to prepare students with ASD for postsecondary transitions is to effectively collaborate with community resources. Research by Steere and Dipipi-Hoy (2012) states that students with disabilities are better able to generalize skills when given opportunities to connect with their community, as well as learn and practice

life skills throughout the community. Though the ideas of community-based instruction (CBI) discussed in Steere and Dipipi-Hoy (2012) are typically used for students with intellectual disabilities to practice functional skills throughout their community, high school students with ASD who experience from mild-moderate communication deficits may receive great benefits from practicing postsecondary life skills in this way. Not only could this instruction be used to practice everyday living skills within the community, but it could also be used to teach self-advocacy to high school students with ASD as they apply for jobs, train for jobs, and apply and attend institutions of higher education. Since CBI is more useful for high school aged students, educators must find other ways to collaborate with community partners to bring community experiences to the classroom for middle school students with ASD, as well as younger students with ASD. By making such community connections, conducting transitional IEP meetings and creating transitional goals for students with ASD should be smoother and allow for a more effortless transition to postsecondary life.

Future classroom use. To aid students with ASD in achieving smooth postsecondary transitions, community collaboration is vital. I suggest that educators begin community involvement by bringing community partners into the classroom with elementary-middle grades to provide meaningful opportunities to learn more in-depth about various facets of the community. It can also provide an opportunity to connect content being taught and provide real-life application. Educators could also take their middle-high school grade students on field trips to various community places to explore higher education institutions, workplaces, and various community supports for individuals with disabilities. For students with ASD who have mild-moderate deficits in social skills and self-help skills, community-based instruction should be used as part of the curriculum and transitional goals to allow these students to practice daily

living skills within the community. I suggest that educators compile a list of community partners

that are inclusive to individuals with disabilities to invite to transitional IEP meetings and other

school events, such as college and career fairs. By collaborating the curriculum with the

community, students with ASD can be better prepared to function within their community and

communities can become better prepared to include students with ASD, as well as students with

other disabilities.

Parent and Family Involvement

To effectively provide inclusive education for students with ASD, the environment must

be welcoming for all students and their families. Staples and Diliberto (2010) state that parent

and family involvement are "essential for the optimal success of the [students]" (p. 63). The

article by Staples and Diliberto (2010) suggests that parent and family involvement "consists of

two subtypes: home-based and school-based" (p. 59). While educators have little control over

how much home-based involvement occurs, there are certain things that can be done to boost

school-based involvement. Much like building teacher-student relationships, educators must

spend time building a positive rapport with parents and families. In addition to building a

positive rapport, an effective communication system must also be in place to discuss the

student's progress as needed. Lastly, opportunities for special school events should be provided

so that students and their families can create positive, shared memories in the learning

environment. As these actions are all actions that allow for positive perceptions to be created,

educators completing these actions are more likely to make parents and families feel included in

their child's inclusive education and an equal partner is fostering the student's success.

Future classroom use. Since parent and family involvement is a key factor in student

success, educators must come up with creative ways to include families in the school. I suggest

that educators focus on building a positive rapport before school officially begins. Before the

school's open house night, educators should prepare packets of information that include a

welcome note, short "about me" section, contact information, and information about classroom

expectations and routines. Parents should also be given questionnaires to provide their contact

information and pertinent information about their child. For younger students with ASD,

communications regarding behavior should be daily, as well as any other relevant progress

information. In regard to older students with ASD, educators should communicate daily to

parents about homework assignments, relevant progress, and behavior challenges, if necessary.

To complete the steps to creating successful parent and family involvement, I suggest that

educators team up and host various family night events, such as reading night, math night, and

themed game nights, at the school to allow students and their families to create positive

memories together within their learning environment that will help foster academic engagement

and success.

Conclusion

After reviewing literature related to Autism Spectrum Disorder (ASD) and the lifelong,

everyday challenges associated with the diagnosis, it is evident that students with ASD require a

variety of intensive supports regardless of how severe their exhibited characteristics may be.

Specifically, the discussed challenges associated with the education of students with ASD

suggest that the bulk of supports be provided within the diagnosed individual's learning

environment. Therefore, it is imperative that parents, educators, and other persons associated

with the everyday and educational challenges of students with ASD review this literature to

better understand adequate supports for creating an inclusive learning environment. By

effectively understanding and implementing the nine characteristics of an inclusive learning

environment outlined within this paper, educators of students with ASD will be creating

environments to foster inclusion, academic engagement, student success, and meaningful

opportunities that are vital to the lifelong treatment of ASD.

Appendix A

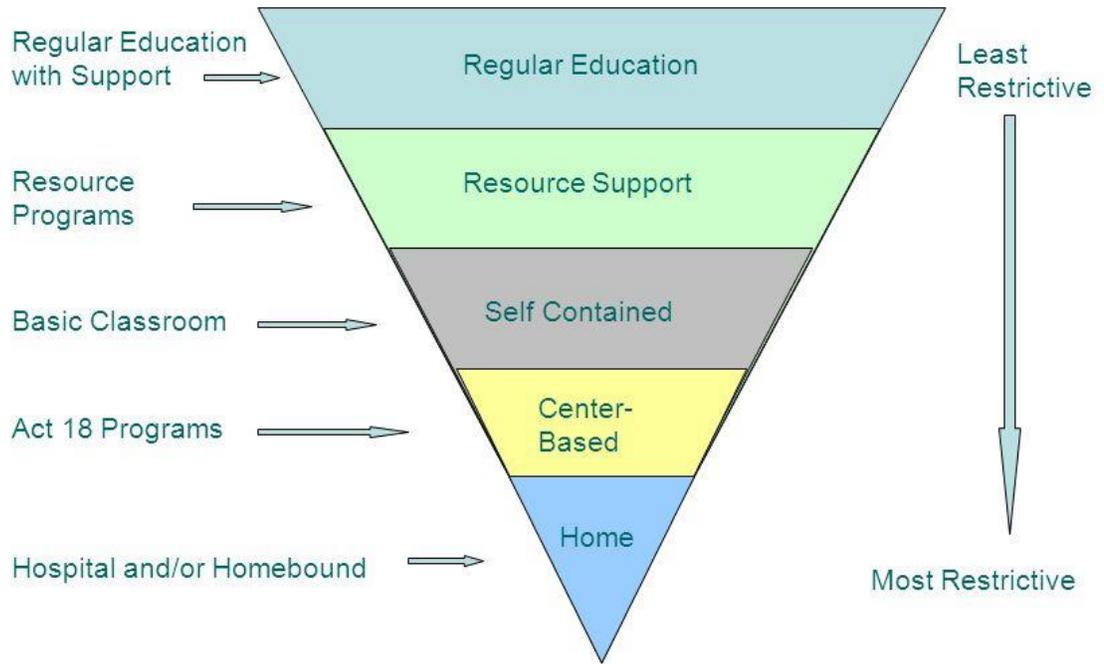|	Social/Communication	Repeated, Restrictive Behaviors
LEVEL 1 "Requiring Support"	• Deficits in social communication that cause noticeable impairments without supports • Difficulty in initiation of social interactions • Atypical responses to social advances from others • May appear uninterested in interaction	• Inflexibility of behavior interferes with functionality • Difficulty with transitioning between activities • Organizational and planning problems that hinder independence
LEVEL 2 "Requiring Substantial Support"	• Evident deficits in verbal and nonverbal communication skills • Social impairments are apparent even with supports • Limited initiation of social interactions • Reduced or abnormal responses to social advances from others	• Inflexibility of behavior • Difficulty coping with transitions • Exhibits specific restricted/repetitive behaviors frequently enough to be casually observed and interfere with functionality (e.g. rocking, tapping fingers, swaying, routines) • Shows distress when required to change focus or action
LEVEL 3 "Requiring Very Substantial Support"	• Severe deficits in verbal and nonverbal communication skills • Extremely limited initiation of social interactions • Minimal responses to social advances from others	• Inflexibility of behavior • Extreme difficulty coping with transitions • Exhibits specific restricted/repetitive behaviors that interfere with functionality (e.g. self-injurious behaviors, routines, rocking, swaying, tapping) • Shows extreme distress when required to change focus or action

Appendix B

Appendix C

Appendix D

Appendix E

Appendix F

Least Restrictive Environment (LRE)
Continuum of Services

Regular Education with Support → Regular Education — Least Restrictive

Resource Programs → Resource Support

Basic Classroom → Self Contained

Act 18 Programs → Center-Based

Hospital and/or Homebound → Home — Most Restrictive

Appendix G

Peer Fidelity Checklist			Focus Student Fidelity Checklist		
Did the peers...			Did the FS...		
Encourage conversation by using the conversation helpers?	Yes □	No □	Respond to the peers' conversational helpers?	Yes □	No □
Did they: • Show interest? • Keep the conversation going? • Help their friend respond?			• Is the focus student participating more?		
Create opportunities to use the target skill(s)?	Yes □	No □	Use the target skills (e.g., initiating, commenting, and asking questions) spontaneously or with peer prompts?	Yes □	No □
• Did they provide sufficient opportunities?			Use the visual support(s) successfully?	Yes □	No □
Prompt the student to use the target skill (s) when necessary?	Yes □	No □	• Are modifications needed?		
Something the peers did well was...			Something the FS did well was...		
Something the peers could improve on...			Something the FS could improve on...		

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