SUPPORTING STUDENTS WITH AUTISM

IN THE SECONDARY CLASSROOM

by

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This project is submitted in partial fulfillment of the
requirements for the degree of

Master of Science in Curriculum and Instruction

Ferris State University
School of Education
College of Education and Human Services

December, 2013

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SUPPORTING STUDENTS WITH AUTISM
IN THE SECONDARY CLASSROOM

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ABSTRACT

With the continuing increase in prevalence of children with autism spectrum disorders (ASD), classroom teachers are being presented with new challenges. Teachers often feel unprepared for the integration of students with autism into the general education setting, reporting feelings of inadequacy and frustration. Teachers can reduce frustration levels and increase their effectiveness in working with students with ASD by taking the following steps: Developing an understanding of the characteristics of autism, gaining an understanding of how the characteristics of autism can impact the student with ASD in the classroom, and gaining an understanding of evidence-based strategies for working with students with ASD. This knowledge will allow teachers to be better prepared to provide a supportive learning environment for individuals with ASD which will, in turn, help reduce challenging behaviors and increase student learning. This project has been designed as a three-hour professional development opportunity for general education teachers at the secondary level. The goal of this project is to provide general education teachers information on the characteristics of autism, their impact on teaching and learning, and strategies to use with students with ASD in the secondary school setting. It includes a presentation, a resource guide, as well as a pre-test and post-test.

This work is dedicated to my wonderful children, Gavin and Savannah Anderson. Gavin, you are an amazing individual. Without you, I would not have been provided with the opportunity to develop the knowledge, perspective, perseverance, and patience needed to work with individuals with autism that you have introduced. Watching you grow and learn as you face numerous challenges on a daily basis has been instrumental in my desire, not only to continue to learn more about autism, but also to share that knowledge with others. Savannah, I want to thank you for the support you have provided to your big brother and to myself, not only through this process, but on an ongoing basis. You demonstrate a level of compassion, patience, support and understanding that go far beyond your years. Thank you both!

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CHAPTER 1

INTRODUCTION

Introduction of the Project

This project consisted of exploring the multiple aspects of autism spectrum disorder (ASD) and using relevant information that applies to teachers at the secondary level to create a presentation to be used as a three-hour professional development opportunity for secondary general education teachers. It involved the creation of a PowerPoint to be used as a tool to present critical information to teachers to enhance the instruction of students with ASD. The presentation includes information about diagnostic criteria and feature characteristics of autism as well as how students are impacted by those characteristics. It also provides strategies for teachers to assist them in addressing common challenges presented with the inclusion of students with autism in the secondary classroom setting. As part of this project, a resource guide containing teaching and behavioral strategies was also created. It is intended to serve as a tool for teachers to keep on hand for quick reference as they work with students with ASD. The resource guide also contains a pre-test and a post-test that teachers will complete prior to and following the presentation. These tests will assist the presenter in assessing individual teacher's prior knowledge and in monitoring the effectiveness of the presentation.

Purpose of the Project

This project involved the creation of a tool for presenting information to teachers to increase their awareness and understanding of students with autism spectrum disorders. It is intended to provide secondary teachers necessary information that will allow them to better understand and utilize practices to enhance the educational experiences of high school students affected by autism. The first part of this project involved the creation of a presentation intended to assist in the delivery of critical information to secondary teachers to increase their knowledge and understanding of autism. The presentation portion of the project was divided into three parts to provide information on the background of autism, the nature of autism, and supporting students with autism. The second part of this project resulted in the creation of a resource guide. The resource guide is intended to provide teachers a quick reference to strategies to support students in the classroom that are discussed throughout the presentation. The resource guide also contains the pre-test and post-test intended to assess individual teacher's prior knowledge and serve as a tool for the presenter to determine the effectiveness of the presentation. The entire project was created with the intention of maximizing the effectiveness of instruction of teachers in the secondary school setting, leading to improvements in school experiences and outcomes of students with Autism Spectrum Disorder (ASD).

Rationale for the Project

With the increase in prevalence of children with autism spectrum disorder, general education teachers are being presented with new challenges. Autism is a very complex disorder with characteristic features that can present challenges in multiple areas of functioning and behavior. A lack of knowledge and access to support related to

students with ASD has left teachers often feeling unprepared for the integration of students with autism into the general education setting, reporting feelings of inadequacy and frustration (Naylor, 2002; Glashan, Mackay & Grieve, 2004). An understanding of the characteristics of autism, strategies to reduce challenging behaviors and the ability to provide a supportive environment for these students will help to increase self-efficacy and reduce frustration levels of both school staff as well as those affected by ASD. The rise in estimated prevalence rates of individuals diagnosed with ASD indicates that more students than ever before will be found in our schools and in the general education classrooms, creating a critical need for general education teachers, as well as all school personnel, to increase their understanding of ASD and how to best serve those affected by the challenges of ASD.

This project was designed to prepare secondary general education teachers for the inclusion of students with autism into their classrooms. The information included in the presentation is intended to provide teachers with critical information they will need to be prepared for and better meet the needs of students with autism in their classrooms. It will assist them in understanding learning, movement, behavior, communication and social differences while decreasing behavior problems and promoting the learning of all students. Prior knowledge of individual teachers will be assessed by the presenter immediately prior to the presentation in the form of a 25 question pre-test in multiple choice format. The pre-test will assess participants' knowledge of the characteristics of ASD, impacts of ASD on behavior and learning, and strategies for working with students with ASD. The acquisition of knowledge related to the information presented will be assessed with a post-test immediately following the presentation. The post-test consists

of the same questions found in the pre-test, presented in a different order. Individual participants' scores from the post-test will be compared to their scores on the pre-test to determine the effectiveness of the presentation. A resource guide will be provided to each participant. This guide contains the strategies discussed in the presentation and will serve as a quick reference tool for teachers following the presentation.

Project Contents

Professional development presentation for secondary general education teachers on supporting students with autism in the secondary classroom, including a pre-test, post-test, and a resource guide.

Presentation Topics.

- Background information on autism spectrum disorders
- Understanding the nature of autism
- Supporting the inclusion of students with autism

Significance of the Project

Autism spectrum disorders (ASD's) present early in development, affecting critical and multiple components of behavior, including social interaction, communication, expression of ideas and emotions, as well as the development and maintenance of relationships (Klose et al, 2012). Different learning styles, difficulty communicating, resistance to change in routines, repetitive body movements, sensory issues, and speech difficulties are some of the characteristics associated with ASD that can cause stress and a wide variety of challenges for both students and educators in the school setting. Children with autism display unique patterns of strengths and

weaknesses, creating challenges when making a diagnosis, planning for education, and monitoring progress. Autism spectrum disorders are considered to be lifelong disabilities affecting adaptive behavior which often create challenges in school and work, the need for supported living conditions and can result in extreme behavior.

General education teachers would benefit from a professional development opportunity which would enhance their knowledge and understanding of autism as well as one that would provide strategies and techniques for working with students with autism spectrum disorders. Not only does this information have the potential to improve the quality of education for students with autism, but also fosters better relationships between these students, teachers and peers, resulting in improvements in collaboration and consultation, educational planning, and ultimately, improvements in post-school outcomes. Creating a supportive and accepting environment within the school will have positive outcomes for all.

Through the creation of this project, teachers will have the opportunity to participate in a three-hour professional development that will increase their knowledge and understanding of students with autism which they can use to create supportive learning environments for their students. The presentation will provide secondary teachers with background on autism, characteristics of autism and how those characteristics impact children with ASD, as well as teaching strategies for use in the classroom.

Key terms - Autism, Evidence Based Practices

CHAPTER 2

LITERATURE REVIEW

Background on Autism - Clinical and Educational Diagnoses

One of the first individuals to use the term autism was the psychiatrist, Leo Kanner. In 1943, he used the term autistic when describing eleven children with characteristics similar to the present definition of autism. The characteristics Kanner (1943) described in them included the inability to relate to others in a typical way, an extreme aloneness that isolates them from the outside world, an apparent resistance to being picked up or held by the parents, deficits in language and, on occasion, an excellent rote memory, specific food preferences, severe reactions to loud noises, repetitive behavior and adherence to routine, inflexibility, few spontaneous activities, unusual and repetitive physical movement and normal physical appearance. In 1944, Hans Asperger, an Austrian pediatrician, used the term autistic to describe a group of children who demonstrated characteristics of what is referred to as Asperger's Syndrome today. These characteristics used to describe the children included clumsiness, the inability to form friendships, lack of reciprocal conversations, intense interests or obsessions, as well as a lack of empathy (Grandin & Panek, 2013).

Although autism was recognized as a unique condition as early as 1943, it was

not included in the first edition of the Diagnostic and Statistical Manual of Mental

Disorders (DSM-I), released in 1952. At that time, children who demonstrated autistic-

like symptoms were diagnosed under the schizophrenic reaction, childhood type label. In

the 1950's, psychiatrist Bruno Bettelheim claimed the symptoms of autism were related

to mothers who were detached and uncaring, resulting in the removal of children from

their mothers (Hall, 2013). In 1964, Bernard Rimland, a psychologist and parent of a

child with autism, disputed Bettelheim's claim and destroyed the myth. Rimland argued

that autism was a biological disorder rather than a "hopeless, incurable emotional

disorder brought on by unloving 'refrigerator' mothers" (Seroussi, 2000, p.12). As a

parent of a child diagnosed with autism, Rimland founded the Autism Society of America

(ASA) in 1958. The ASA was the first parent-driven organization to provide information

and support to parents and professionals. In 1968, the second release of the Diagnostics

and Statistics Manual of Mental Disorders was released. However, children with autism

continued to be diagnosed as schizophrenic, childhood type. With the release of the

DSM-III in 1980, came the first identification of autism as a separate diagnostic category,

infantile autism. In 1987, the category title was changed but no changes were made to

the diagnostic criteria. However, with the release of the DSM-IV in 1994, significant

changes occurred in the diagnostic criteria. Changes involved the addition of the

categories Asperger's Disorder, Rett's Disorder, Childhood Disintegrative Disorder, and

Pervasive Developmental Disorder- Not Otherwise Specified (PDD-NOS). Further

changes have been under way and will be clarified with the release of the DSM-5 in

2013. According to the American Psychiatric Association (2000), prior to the release of

the DSM-5, the criteria required to be met for an individual to meet criteria for a diagnosis of ASD, include persistent deficits in social communication and social interaction across contexts that cannot be explained by general developmental delays. Deficits were required in each of the following areas: social-emotional reciprocity; nonverbal communicative behaviors used for social interaction; and developing and maintaining relationships at the child's appropriate developmental level. In addition, the individual was required to display restricted, repetitive patterns of behavior, interests, or activities in at least two of the following areas: Stereotyped or repetitive speech, motor movements, or use of objects; excessive adherence to routines, ritualized patterns of verbal or nonverbal behavior, or excessive resistance to change; highly restricted, fixated interests that are abnormal in intensity or focus; and hyper-or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment. In addition to the above, it was also required that symptoms present before age 3 and the symptoms limit and impair daily functioning (Lohr, 2011). The DSM-IV-TR specifies that for a diagnosis of Asperger Disorder, one must present with impaired social interaction which includes a minimum of two of the following criteria: Restricted, repetitive, and stereotypical behaviors, Limited or restricted interests with a minimum of one of the following: significant impairment in important areas of function; no overall delay in language; no significant delay in cognitive development or adaptive skills; and that criteria are not met for autism or schizophrenia (Lohr, 2011).

According to Lohr (2011), the proposed changes to the diagnostic criteria for autism in the DSM-5 include combining Asperger's Disorder, PDD-NOS and Autism into a single category and combining requirements. The social and communication

criteria found in the DSM-IV-TR will be combined. Sensory symptoms will be included

in the DSM-5. In addition, the DSM-5 would require that two or more symptoms related

to restricted, repetitive behaviors must be present for a diagnosis of autism (Lohr, 2011).

In comparison to the Individuals with Disabilities Education Act (IDEA) 2004,

the DSM-IV-TR criteria for diagnosis of autism spectrum disorders are much more

specific, focusing more on the discrete symptoms and characteristics. The IDEA first

recognized autism as a covered disability in 1990 (Moores-Abdool, 2010).   IDEA

eligibility criteria for autism focus specifically on how symptoms impact daily

functioning. This creates a critical need for multidisciplinary evaluation teams to not

only evaluate the diagnostic criteria, but also the impact of symptoms on a child's daily

functioning (Klose, Plotts, Kozeneski, & Skinner-Foster, 2012). To receive an

educational diagnosis of autism as specified by IDEA 2004, a child must meet the

following criteria (Klose et al., 2012):

- Have a developmental disability which significantly affects verbal and
  non-verbal communication as well as social interaction

- Symptoms before age three

- Symptoms negatively impact the child's educational performance.

Other characteristics often associated with autism are:

- Engagement in repetitive activities and stereotyped movement,

- Resistance to changes in routines and environments

- Unusual responses to sensory stimuli.

In addition, the child does not meet the autism criteria if a child's poor

educational performance can be explained by an emotional disturbance.

Prevalence and Demographics

According to the most recent update by the Center for Disease Control and Prevention (CDC), the estimated prevalence of autism in the United States is currently 1 in 88 children (Baio, 2012). That update also indicated that ASD occurs in all racial, ethnic and socioeconomic groups and are 4 to 5 times more likely to affect boys than girls. The number of reported cases of autism spectrum disorders has increased substantially over the last ten years (Flick, 2011). A comparison of the rates in 2008 to those from 2002 indicates a 78% increase over 6 years (Baio, 2012). This increase, along with early onset, lifelong persistence, and multiple areas of impairments associated with ASD have led to a serious public health concern (Simonoff et al., 2008). Possible reasons for this increase are actual increases in numbers and more awareness by parents and professionals. However, one specific cause has not yet been determined (Baio, 2012; Siminoff et al., 2008). The study of socioeconomic status (SES) association with prevalence rates of ASD in New Jersey indicated a strong association between wealthier census tracts and ASD prevalence (Thomas et al., 2012). The study also indicated an earlier age of diagnoses with higher SES. Thomas et al. (2012) suggest that this increase in prevalence associated with increased SES may be a result of better pediatric and developmental services as well as parents' increased educational level.

Many children with autism have been found to have one or more associated conditions including retardation, epilepsy, attention deficits, as well as aggressive and impulsive disorders (Flick, 2011). Studies by Siminoff et al. (2008), which included 112 children with autism spectrum disorders ranging from PDD to childhood autism, revealed the rate of at least one comorbid psychiatric disorder at 70.8%. Two or more comorbid

conditions occurred in 57% of the children studied. Twenty-four percent of the children were found to have three or more comorbid disorders. More than 62% of the children had Attention Deficit Hyperactivity Disorder (ADHD) or an emotional or behavioral disorder. Tourette syndrome, chronic tics, loss of hair from pulling, the inability to control bladder or bowel movement was found at a rate of 24.7 % (Siminoff et al., 2008).

Domains Affected by ASD

Associated with autism are many behavioral excesses and deficits. These behaviors serve many different functions in many different environments. They often interfere with the learning of those with ASD as well as their peers and with the learning of appropriate, functional behavior and limit engagement with others and the environment. Behavioral deficits characteristic to autism include an inability to relate to others, a lack of functional language, sensory processing deficits, and cognitive deficits. These deficits can lead to a lack of functional behavior which often leads to behavioral excesses. Behavioral excesses can include self-stimulation, resistance to change, and bizarre and challenging behaviors such as eating and sleeping disorders, hyperactivity, short attention span, impulsivity, tantrums, aggression and self- injurious behavior (Hall, 2013). An understanding of these behaviors and learning strategies to address them as they arise will help to decrease frequency and duration of behaviors, leading to a reduction in stress among staff and students and increased learning for all.

Social and Communication Issues

According to the U.S. Department of Education, (2010) and the American Psychiatric Association (2000), a diagnosis of an Autism Spectrum Disorder implies an individual has deficits in verbal and non-verbal communication and social interaction.

Individuals range from completely non-verbal, to verbal with deficits in social

communication such as the inability to interpret body language and social cues.

Difficulties with intonation, timing and rhythm, as well as with figurative language,

expressive and receptive communication are commonly observed in children with ASD

(Hall, 2013; Kluth, 2010). The limited or total lack of ability to communicate is directly

related to the use of inappropriate social behaviors for an individual with ASD in order

to get their needs met (Grandin & Scariano, 2005). Dr. Temple Grandin, an American

doctor of animal science, autistic author and activist, reported that "Screaming and

flapping my hands was my only way to communicate" (Grandin & Scariano, 2005, p.

25). Children with autism also have significant impairments in the ability to build

relationships with peers.   According to Kluth (2010), the development of social skills can

not only be the most challenging area of difficulty for individuals with autism, but is also

one of the most important skills needed for acceptance, love, interaction with others, and

independence. She also noted that social interactions are often limited due to multiple

deficits including difficulties with the ability to initiate, shift topics, repair conversations,

understand reciprocal interaction, and adjust responses to the situation and behavior of

others.

Sensory Differences

   Sensory differences are common in persons with autism spectrum disorders

though they present differently and to varying degrees among individuals (Ben-Sasson et.

al, 2009). Sensory Processing Disorder is a neurological disorder that interferes with the

processing of information from the five senses, including vision, auditory, touch,

olfaction, and taste, as well as the from the vestibular and proprioceptive systems (Kern

et al., 2007; Sicile-Kira, 2010). While information from these systems is sensed, it is not correctly perceived or interpreted. Studies by Ben-Sasson et al. (2009) found a substantially higher degree of sensory deficits related to under-responsivity when compared to over-responsivity and sensation seeking. Sensory abnormalities were highest in the age range of 6-9 years, and increased with the severity of autistic symptoms (Kern et al., 2007; Ben-Sasson et al., 2009). Sensory input that is received is often processed by these individuals in a way that can cause distress, discomfort, and confusion. This results in a negative effect on an individual's school performance and behavior (Ashburner, Ziviani & Rodger, 2008; Kern et al, 2006). Ashburner et. al. (2008) found that high levels of tactile sensitivity were associated with attention problems, such as inattentiveness and hyper-activeness. They also found that difficulty with filtering auditory information was associated with challenges in maintaining attention to cognitive tasks. Visual sensitivity, including sensitivity to colors, patterns or lighting, causing an individual to become anxious or distressed (Kluth, 2010). Temple Grandin explained that her hearing was extremely sensitive when she was young, stating "it was as though my ears were a microphone amplifying the sounds around me" (Grandin & Duffy, 2008, p. 13). As a result of the hypersensitivity to sound, individuals may shut down in an attempt to tune out or display aggressive behaviors (Grandin & Duffy, 2008). Signs of sensory difficulties in students with ASD include sensitivity to tags in clothing, resistant to touches and hugs, difficulties when bathing or hair brushing, food aversions, covering ears, complaints of smells or frequent sniffing of food, fingers or other objects, the use of sunglasses in inappropriate situations and obsession with certain colors (Boutot & Myles, 2011).

Academics/Cognitive Deficits

There are varying opinions regarding the cognitive abilities of those with autism (Scheuermann & Webber, 2002). Data reported to the Centers for Disease Control (CDC) indicate that approximately 38% of children with ASDs have intellectual disabilities while 24% are in the order line range and 38% have above average intellectual abilities (Baio, 2012). Studies by Dawson et al. (2007) and Bolte et al. (2009) indicate a possible underestimation of intelligence in those with autism. Both studies showed higher IQ scores in low functioning individuals with autism on The Colored and Standard Raven's Progressive Matrices (RPM) versus the Wechsler Intelligence Scales (WISC). Given that both have been considered accurate predictors of IQ and that the WISC is the most widely administered test, the reported IQ scores for many individuals with autism may be an underestimate of their cognitive abilities. Many individuals with ASD show areas of strength as well as areas of cognitive deficit. Scheurermann & Webber (2002) identify common areas of strength as calendar abilities, the ability to count visual items quickly, as well as artistic and music ability.

Transition

Individuals with autism often have difficulty with changes in routine due to one of the core characteristic features of autism, the insistence on sameness**.** Changes in any aspect of the environment can lead to significant behavior problems during times of transition (Schreibman, Whalen, & Stahmer, 2000). In their study addressing the impact of video priming to reduce disruptive behavior of children with ASD during times of transition, Schreibman et al. (2000) identified the following target behaviors; students becoming very upset (displaying tantrums), aggressive behavior, crying, and refusal to

shift to the next area, activity or event.   This difficulty can pose great challenges with disruptions to the classroom environment or school building as a whole.

In addition to these transition issues in the school setting, there are issues related to the transition of individuals with autism into the post-secondary environment. Due to the core deficits in individuals with ASD, many are at increased risk of placement in long-term residential settings after high school. Therefore, it is critical to create a supportive environment, during the school years, that lends itself toward community involvement and increased vocational and independent living skills. Transition planning for students with ASD should begin early and these plans should focus on interests and aptitudes. Instruction during the middle school years should include teaching the prerequisite skills necessary for employment (Sheuermann & Webber, 2002). Vocational training and employment should occur during a student's high school years and should include community-based instruction.

Impact of Knowledge and Training for School Personnel

Research conducted by the British Columbia Teacher Federation which identified teachers' views of special education, revealed that teachers felt a great concern over their lack of preparation for the inclusion of students with autism spectrum disorders in their classrooms (Naylor, 2002). Results from this study also indicated that teacher perception improved with increased teaching experience and higher access to support from knowledgeable professionals. Teachers with less experience and support were noted to have substantial increases in both stress and workload and identified a lack of ability to meet student needs (Naylor, 2002).

A pilot survey of fifty-four school employees in Southwestern United States currently enrolled in graduate programs was conducted to determine the perceptions and knowledge of autism by school personnel. The results of this study, which included general and special education teachers, school counselors and paraprofessionals, revealed that a majority of participants had little knowledge of autism, yet perceived their competence as average (Williams, Schroeder, Carvalho & Cervantes, 2011).   Most participants indicated that they had no prior training in autism and few demonstrated an interest in receiving training. This, along with the demonstrated lack of knowledge by school personnel, raises strong concerns over the quality of education the autistic population currently receives. Autism is a complex disorder and it is critical that school personnel assume the responsibility for understanding the disability to ensure positive outcomes (Williams et al., 2011). In a study of schools in Scotland which looked at teachers' experiences in educating students with autism in mainstream classrooms, several factors were identified as effecting successful inclusion. In this study, Glashan, Mackay, and Grieve (2004) identified that among school staff there was great concern over the lack of knowledge about autism as well as the lack of experience in working with students with autism.

Research indicates that training in ASD increases both knowledge and teacher perception providing substantial benefits when students are introduced into general education classrooms. Leblanc, Richardson, and Burns (2009) demonstrated that minimizing the stressors that are associated with teaching or working with students with disabilities is critical. Offering resources to support teachers along with training, can both significantly increase participants' perceptions and knowledge of autism spectrum

disorder (ASD) and evidence-based practices as well as reduce overall stress and anxiety levels.

According to the National Research Council (2001), to be effective, teachers of students with autism spectrum disorders need to be knowledgeable about theory and current research related to best practices for children with autistic spectrum disorders. Teachers must become knowledgeable of the principles of applied behavior analysis, incidental teaching, assistive technology, social skills, learning in the natural environment, verbal and non-verbal communication, inclusion, environmental adaptations, interventions for improving language skills, various types of assessment, as well as accurate and effective use of data collection systems (National Research Council, 2001). The critical need for teacher knowledge of best practices stems from both the variation among students, ranging from severe mental and language impairments, to those with very high IQ's, and the challenges students with autism spectrum disorders have with generalization and maintenance of skills.

Evidence-Based Practices for Working with Students with Autism

The IDEA (2004) requires that public schools use evidence-based practices (EBPs) when working with students with disabilities. Therefore, evidence-based practices must serve as the foundation upon which educators design education for learners with ASD. The National Professional Development Center (NPDC) on Autism and the National Standards Project (NSP) have established criteria for the identification of high quality studies that consistently show specific practices to be effective for individuals with ASD. While there is some variation in the criteria of the two groups, the effective practices identified by the NSP and the NPDC on Autism are very similar.

Researchers with the NPDC on ASD have identified 24 intervention practices that they consider evidence-based (Odom, Collet-Klingenberg, Rogers & Hatton, 2010). These practices include antecedent-based intervention, computer-assisted instruction, differential reinforcement, discrete trial training, extinction, functional behavioral assessment, functional communication training, naturalistic interventions, parent-implemented interventions, peer-mediated instruction/intervention, picture exchange communication system (PECS), pivotal response training(PRT), prompting, reinforcement, response interruption and redirection self-management, social narratives, social skills groups, voice output communication aids (VOCA's), structured work systems, task analysis, time delay, video modeling and visual supports. With the exception of social skills training groups, speech generating devices, computer aided instruction, (PECS), and extinction, the NSP also considers the listed practices evidence-based. These five practices are considered to be emerging practices by the NSP. That is, they are practices for which the NSP feels that there are not a sufficient number of high quality studies that consistently demonstrate their effectiveness with individuals with ASD (National Autism Center, 2009).

Studies have shown that many of the strategies noted above are effective in addressing more than one deficit area when working with individuals with ASD (Odom, Collet-Klingenberg, Rogers & Hatton, 2010). The deficit areas include behavior, academics, communication and social skills, play skills and transitions. In their work, Odom, Collet-Klingenberg et al. (2010) present a list which identifies the areas of deficit, referred to as target areas, and practices used by the NPDC in determining their effectiveness. Odom, Cox, & Brock (2013) further analyzed the studies used by the

NPDC. When the practices determined to be effective were broken down by age group, they found significant overlap between strategies and domains.

Evidence-based strategies with studies that show effectiveness in improving behavior for those with ASD include all of the previously noted strategies with the exception of computer-based instruction, naturalistic interventions, peer-mediated instruction/intervention, social skills groups, voice output communication aids (VOCA's), structured work systems, time delay and video modeling (Odom, Collet-Klingenberg et al., 2010). As demonstrated by Hall (2013), these strategies can be broken down and utilized to minimize problem behaviors in students with ASD. The use of these strategies can provide a motivating environment that leads to increased engagement and development of new skills. Specific strategies recommended by Hall (2013) include the use of token systems, providing choice-making opportunities, and providing self-management opportunities. He pointed out that when problem behaviors occur, a functional analysis provides the information from which to develop positive strategies to decrease or replace the behavior.

Studies reveal that the strategies showing effectiveness with communication are similar to those showing effectiveness with behavior. They include the same strategies with the exception of antecedent-based interventions, extinction, response interruption & redirection. Additional strategies shown to be effective in increasing communication include parent-implemented interventions, peer-mediated instruction/intervention, social skills groups, VOCA's, and video modeling (Odom, Cox & Brock, 2013). Hall (2013) suggests techniques for improving communications skills in children with ASDs which include providing frequent opportunities, using motivational reinforcement,

acknowledgment of all communication attempts, incorporating communication into regular routines, capitalizing on shared affect and enjoyment and using careful elaboration.

Odom, Collet-Klingenberg et al. (2010) note that many of the evidence-based practices listed by the NPDC found to be effective for the communication were also effective in the social domain. Ashcroft, Delloso & Quinn (2013) suggest more specific strategies for increasing students' social skills which include using activity schedules, cartooning, the Incredible 5-Point Scale, Powercards, priming, social scripts and Social Stories, Video Modeling, and relaxation training.

The number of practices that had studies showing their effectiveness was minimal in the areas of play and transition (Odom, Cox & Brock, 2013). Self-management, structured work systems and visual supports were found to be effective for transitions. For play, this list also includes discrete trial training, parent-implemented interventions, pivotal response training (PRT), social narratives, and video modeling (Odom, Cox & Brock, 2013). The practices that have shown effectiveness with academics and cognition are antecedent-based interventions, computer assisted instruction, discrete trial training (early childhood and elementary age only), PRT, prompting, reinforcement, response interruption & redirection, self-management, social narratives, structured work systems, task analysis, time delay (elementary age only) video modeling and visual supports (Odom, Cox & Brock, 2013).

Educational programs utilizing the principles of applied behavior analysis (ABA) use a variety of the effective strategies identified by Odom, Collet-Klingenberg et al. (2010) as effective across several domains. Applied behavior analysis involves the use of

reinforcement procedures to provide motivation when teaching new skills to students while decreasing inappropriate behavior (Hall, 2013). The effective use of the principles of ABA in the educational setting involves accurate recording of data by all staff members, arrangement of the environment to provide stimulus control for cues, utilizing prompts such as visual schedules, auditory instructions, written scripts and electronic schedules, and implementation of appropriate strategies across settings (Hall, 2013). Strategies which utilize the principles of ABA include antecedent control, self-regulation, reinforcement and punishment, negative reinforcement, and teaching new behaviors (Ashcroft et al., 2013).

Teachers need to document their observation of student reactions in order to identify environmental factors that may have a negative impact a student's sensory system and use that information to set up an optimal learning environment for the child (Kluth, 2010). Providing students with a regular sensory routine can help calm students and prevent overstimulation of their sensory systems. Teachers can incorporate regular, planned sensory breaks and quiet times into the student's daily schedule to increase arousal and to prevent over-stimulation following a functional analysis to determine when high and low arousal periods occur (Indiana Resource Center for Autism & Indiana's Autism Leadership Network., n.d.). Additional recommendations from the Indiana Resource Center for Autism & Indiana's Autism Leadership Network (n.d) include using a low, calm voice when working with a child with ASD and never surprise the student with unexpected touch.

The feature characteristics of autism are numerous and complex. This presents many challenges for students with ASD, along with school personnel who work with and

support these students. Without training and support, teachers will continue to feel ill-equipped and unsuccessful in promoting successful outcomes for this population. It is essential that all school staff become knowledgeable about the disorder and familiar with evidence-based strategies to promote maximal growth of these students in the areas of behavior, communication, socialization, academics, transitions and play.

CHAPTER 3

THE PROJECT

Rationale

With the increases in prevalence of children with autism spectrum disorders,

general education classrooms and teachers are being presented with new challenges.

Autism is a very complex disorder with characteristic features that can present challenges

in multiple areas of functioning and behavior. A lack of knowledge related to students

with ASD has left teachers, service providers and support staff often feeling unprepared

for the integration of students with autism into the general education setting, reporting

feelings of inadequacy and frustration. An understanding of the characteristics of autism

and strategies to reduce challenging behaviors and provide a supportive environment for

these students will increase self-efficacy and reduce frustration levels of both school staff

as well as those affected with ASD. The rise in estimated prevalence rates of ASD's

indicate that more students than ever before will be found in our schools and in the

general education classrooms, creating a critical need for general education teachers, as

well as all school personnel, to increase their understanding of ASD and how to best

serve those affected by the challenges of ASD.

This project has been designed to prepare teachers for the inclusion of students

with autism into their classrooms. The presentation will assist teachers in gaining

gaining knowledge they will need to be prepared for and better meet the needs of

students with autism in their classrooms. It will help them understanding student

differences in learning, movement, behavior, communication and socialization in those

with ASD, while decreasing behavior problems and promoting the learning of all

students. The prior knowledge of participants will be assessed using a 25 question pretest

prior to the presentation. The acquisition of knowledge related to the information

presented will be assessed with a similar post-test following the presentation. Each

participant's pre-test and post-test scores will be compared to determine the effectiveness

of the presentation. A resource guide, which includes the pre-and post tests as well as

strategies discussed in the presentation, will be provided to each participant. The

resource booklet is intended to serve as a quick reference tool for teachers following the

presentation.

Audience

The information in this presentation is targeted for secondary general education

teachers who do or will work in the school setting with students with autism spectrum

disorders.

Explanation of the Design of this Project

This project has been created as a professional development tool to be used in a

half-day (3 hour) in-service for secondary general education teachers to increase their

awareness and understanding of students with autism spectrum disorders. It is intended

to provide secondary teachers necessary information that will allow them to better

understand and utilize practices that will enhance the educational experiences of high

school students affected by autism. The first part of the project was the creation of a

presentation intended to assist in the delivery of critical information to secondary teachers to increase their knowledge and understanding of autism. The presentation will require approximately 3 hours and is divided into three parts to provide information on the background of autism, the nature of autism, and supporting students with autism. The second part of the project was the creation of a resource guide. The resource guide is intended to provide teachers a quick reference of strategies to support students in the classroom that were discussed in the presentation.   The resource guide also contains the 25 question pre-test and post-tests based on information provided within the presentation. The tests are intended to assess prior knowledge and provide the presenter with a tool to monitor the effectiveness of the presentation.

Procedures

The creation of the presentation and resource guide was based on current research and evidence-based strategies for working with students with autism spectrum disorders. The information included in the presentation is focused specifically on that which is relevant to secondary general education teachers and students with ASD within their classrooms. It takes into consideration the perspectives of students and teaching professionals identified in recent literature.

The first part of the project involved the creation of the presentation to be used as a tool in the delivery of information to teachers. It consisted of the identification of critical information for secondary education teachers and breaking relevant information down into three main areas to be presented in a three-hour in-service for secondary general education teachers. The three areas include background information, factors that influence the education of students with autism and strategies for addressing challenges

in the classroom. The second part of the project resulted in the creation of a 25 question

pre- and post-assessment tool to be administered prior to and upon completion of the

presentation. This assessment is intended to assess prior knowledge of the participating

teachers as well as to determine the effectiveness of the presentation. The third part of

this project led to the creation of a resource guide containing information and resources

provided in the presentation that teachers would be able to keep on hand to refer to as

needed following the presentation.
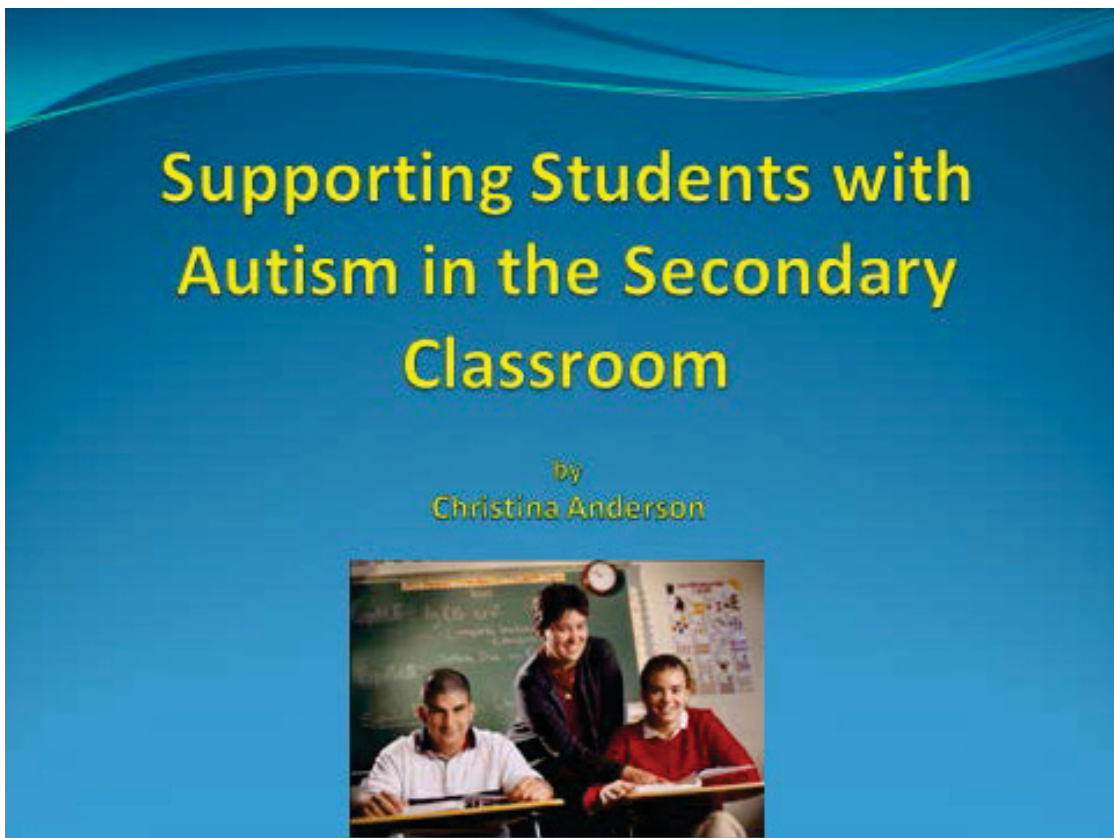
CHAPTER 4

THE PRESENTATION

Introduction

  With the continuing increases in prevalence of children with autism spectrum

disorders (ASD), classrooms and teachers are being presented with new challenges.

Teachers often feel unprepared for the integration of students with autism into the general

education setting, reporting feelings of inadequacy and frustration. An understanding of

the characteristics of autism and an understanding of proactive strategies to reduce

challenging behaviors and provide a supportive environment for these students will

increase self-efficacy and reduce frustration levels of teachers and students as well as

individuals affected with ASD.

  This presentation and the accompanying resource booklet are provided as part of a

professional development opportunity for general education teachers at the secondary

level. The information provided in the presentation is intended to increase the

participant's knowledge and understanding of autism. It will also provide strategies for

teachers to utilize when working with students with autism spectrum disorders in order to

improve educational experiences of teachers and students with ASD. Prior to the start of

the presentation, participants will take the pre-test which can be found on page 4 of the

resource guide. The answers to the pre-test will be provided upon completion of the

assessment. Participants will then check their answers and record their score. Following

the presentation, participants will take the post-test found on page 18 of the resource

guide. Correct answers will be provided to allow participants to determine their scores.

to compare with their pre-test scores. Participants will be asked to submit their scored

pre-test and post-test to the presenter upon completion. Participants will keep the

resource guides to serve as an overview of topics and strategies covered in the

presentation for future reference. Participants are encouraged to take notes as needed in

the resource guide.

PowerPoint

Introduction

With the continuing increases in prevalence of children with autism spectrum disorders(ASD), classrooms and teachers are being presented with many new and complex challenges. Teachers often feel unprepared for integration of students with autism into the general education setting, reporting feelings of inadequacy and frustration. An understanding of the characteristics of autism and an understanding of strategies to reduce challenging behaviors and provide a supportive environment for these students will increase self-efficacy and reduce frustration levels of teachers and students as well as individuals affected with ASD.

This presentation is provided as a professional development opportunity for general education teachers at the secondary level. It is intended to assist the secondary general education teachers increase their knowledge and understanding of autism. The information contained within the presentation will provide teachers with background information on autism as well as common characteristics of individuals with autism. It will also provide useful strategies for teachers when working with students with autism spectrum disorders to improve educational experiences for both teachers and students. The presentation is accompanied by a resource guide. The resource guide contains a pre-test and post-test to assist the participant in monitoring his or her understanding and provide the presenter a tool to measure the effectiveness of the presentation. The resource guide also contains the strategies discussed throughout the presentation to provide a quick reference for teachers as they encounter challenges when working with students with ASD.

To get started, please turn to the pre-test found on page 4 of the resource guide.

Content Overview

Pre-Test Answers

1. b
2. e
3. e
4. b
5. b
6. b
7. b
8. b
9. a
10. c
11. d
12. b
13. a
14. d
15. a
16. b
17. e
18. c
19. b
20. b
21. a
22. b
23. b
24. d
25. e

Part I: Background Information

Autism- General Definition

According to the Autism Society of America:

"Autism is a complex developmental disability that typically appears during the first three years of life and affects a person's ability to communicate and interact with others. It is defined by a certain set of behaviors and is a "spectrum disorder" that affects individuals differently and to varying degrees."

(Autism Society of America, n.d.)

Current Statistics

- Autism affects approximately 1 in 88 children nationwide (Baio, 2012).
- Autism can be found in all cultures of the world, not dependent on race, socioeconomic status, education of parents, or other demographic variables (Baio, 2012).
- Autism is four to five times more common in boys than in girls (Baio, 2012).
- There is currently no known cause or cure for autism.
- Autism is now considered a neurodevelopmental disorder, most likely a result of a combination of genetic and environmental factors (Hall, 2013).
- A comparison of the rates in 2008 to those from 2002 indicates a 78% increase in autism over 6 years (Baio, 2012).

Myths and Misconceptions

Common Myths and Misconceptions of Autism
Throughout time, misconceptions have had a negative impact on the way individuals with autism and their families have been viewed, educated, and treated by society.

Common themes on the myths/misconceptions of autism as reported by the autism community include:
- Autism is an emotional disability
- Autism is rare
- Autistic children have no feelings
- Autistic children do not desire friendships
- Children with autism cannot learn
- Inside a child with autism is a genius (Savant)
- Kids with autism all have cognitive deficits
- Autism is caused by bad parenting or "cold and unfeeling parents"
- Autistic children could talk if they wanted to.

(Autism Resource Foundation, n.d.)

For a comprehensive list, follow the link:
http://www.autismresourcefoundation.org/info/info.misconceptions.html)

Debunking the Myths

- Children with autism lack the skills involved in expressing and communicating feelings and the ability to recognize those feelings in others
- Children with autism lack the communication and social skills to interact appropriately with others
- Children with autism learn differently and express their knowledge in a different way.
- There is a broad range of IQ scores among individuals with ASD and cognitive impairment is not among the diagnostic criteria for ASD.
- Autism is now known to be a neuro-developmental disorder.

(Autism Resource Foundation, n.d.)

The "Least Dangerous Assumption"

The "Least Dangerous Assumption"

In 1984, Anne Donnellan introduced the concept of the "least dangerous assumption" with respect to individuals with disabilities. This foundation of this principle is that the actions, movements, appearance, learning styles, communication and demonstration of knowledge are differences rather than deficits. In order to make the "least dangerous assumption", without clear and absolute evidence otherwise, one must *presume competence* of the individual. In other words, one must make the assumption that, if proven to be false, would be the least harmful to the individual. *"Absence of evidence can never be absolute evidence of absence"* therefore, it is safest and most respectful to make the *"least dangerous assumption"*.

-

(Rossetti, n.d.; Donellan, 1984)

DSM-5 Diagnostic Criteria

For an individual to meet criteria for a diagnosis of ASD, one must have:

- Persistent deficits in social **communication and social interaction** across contexts that cannot be explained by general developmental delays.
- Deficits must be present in each of the following areas:
    - Social-emotional reciprocity;
    - Nonverbal communicative behaviors used for social interaction;
    - Developing and maintaining relationships appropriate to developmental level.
- The individual must display **restricted, repetitive patterns** of behavior, interests, or activities in at least two of the following areas:
    - Stereotyped or repetitive speech, motor movements, or use of objects;
    - Excessive adherence to routines, ritualized patterns of verbal or nonverbal behavior, or excessive resistance to change;
    - Highly restricted, fixated interests that are abnormal in intensity or focus; and hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment.
- Symptoms must be present in early childhood and must **limit and impair daily functioning** .

(Granpeesheh, 2013; Herold, 2012)

Follow the link http://www.youtube.com/watch?v=ILiX9gGdoIk, to view a video in which Dr. Doreen Granpeesheh breaks down the autism diagnosis criteria in the new DSM-5. Copies of the slides from her presentation can be found at: http://on.fb.me/14sBCYI

Educational Eligibility Criteria-Michigan

Michigan Rule 340.1715: Autism Spectrum Disorder Eligibility

(1) Autism spectrum disorder is considered a lifelong developmental disability that adversely affects a student's educational performance in 1 or more of the following performance areas:
  (a) Academic.
  (b) Behavioral.
  (c) Social.
Autism spectrum disorder is typically manifested before 36 months of age. A child who first manifests the characteristics after age 3 may also meet criteria. Autism spectrum disorder is characterized by qualitative impairments in reciprocal social interactions, qualitative impairments in communication, and restricted range of interests/repetitive behavior.

(2) Determination for eligibility shall include **ALL** of the following:
  (A) Qualitative **impairments in reciprocal social interactions** including at least 2 of the following areas:
    (i) Marked impairment in the use of multiple **nonverbal behaviors** such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction.
    (ii) Failure to develop **peer relationships** appropriate to developmental level.
    (iii) Marked impairment in **spontaneous seeking to share** enjoyment, interests, or achievements with other people, for example, by a lack of showing, bringing, or pointing out objects of interest.
    (iv) Marked impairment in the areas of social or emotional **reciprocity**.

(Macomb Intermediate School District, n.d)

(B) Qualitative **impairments in communication** including at least 1 of the following:
  (i) Delay in, or total lack of, the development of spoken language not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mime.
  (ii) Marked impairment in pragmatics or in the ability to initiate, sustain, or engage in reciprocal conversation with others.
  (iii) Stereotyped and repetitive use of language or idiosyncratic language.
  (iv) Lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level.

(C) **Restricted, repetitive, and stereotyped behaviors** including at least 1 of the following:
  (i) Encompassing preoccupation with 1 or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus.
  (ii) Apparently inflexible adherence to specific, nonfunctional routines or rituals.
  (iii) Stereotyped and repetitive motor mannerisms, for example, hand or finger flapping or twisting, or complex whole-body movements.
  (iv) Persistent preoccupation with parts of objects.

(Macomb Intermediate School District, n.d.)

(3) Determination may include unusual or inconsistent response to sensory stimuli, in combination with subdivisions (A), (B), and (C) of subrule 2 of this rule.

(4) While autism spectrum disorder may exist concurrently with other diagnoses or areas of disability, to be eligible under this rule, there shall not be a primary diagnosis of schizophrenia or emotional impairment.

(5) A determination of impairment shall be based upon a comprehensive evaluation by a multidisciplinary evaluation team including, at a minimum, a psychologist or psychiatrist, an authorized provider of speech and language under R 340.1745(d), and a school social worker.

(Macomb Intermediate School District -Rule Details for Autism Spectrum Disorder Eligibility Form: Michigan Revised Special Education Rules - Sept. 2004)

Retrieved from http://www.misd.net/SEForms/Repository/METS/MET-ASD.pdf

Reflection: Part I

1. What are some of the characteristics of individuals with ASD?

2. What causes ASD?

3. What are some of the diagnostic criteria of ASD?

4. What is the prevalence rate of Autism?

5. What are some common myths and truths about autism?

PART II:

Understanding the Nature of Autism

Common Characteristics of Individuals with Autism include:

- Movement Differences
- Sensory Differences
- Communication Differences
- Social Differences
- Learning Differences
- Behavior Differences

(Kluth, 2010)

Movement Differences

Movement differences in those with autism can include:
- atypical, excessive movements
- loss of typical movement.

These differences can interfere with actions, speech, thoughts, perceptions, emotions and memories.

Common examples are:
- walking with an uneven gait
- rocking
- hand-flapping
- pacing
- unintentional speech production
- stuttering
- difficulty making transitions between environments and situations.

Difficulties with motor planning can make even the smallest task extremely challenging.

Developing an understanding of these differences along with the ability to recognize them, will help educators decrease the risk of making inaccurate assumptions about their students with ASD.

(Kluth, 2010)

Sensory Differences

Unusual sensory experiences to stimuli from the environment are common in individuals with ASD.

These experiences may be a result of hypo- or hyper- sensitivity to stimuli in the following areas:

- Visual – (light, color, patterns)
- Auditory – (hearing)
- Olfactory- (smell)
- Gustatory- (taste)
- Tactile (touch)
- Vestibular (balance)
- Proprioceptive (body positioning)

For perspectives from individuals with ASD, follow the following links:

Dr. Temple Grandin: Sensory Issues and Sensitivity -
http://www.youtube.com/watch?v=zzf8ok5b_EM
High Functioning Autism and Sensory Issues - Diana's World
http://www.youtube.com/watch?v=AnEJeH6lP8M
Autism: Sensory Overload Simulation -**http://www.youtube.com/watch?v=IcS2VUoe12M**

Communication Differences

Communication is essential for independence, positive behavior, academic and vocational success as well as social interaction. Communication differences in individuals with ASD may include:
- Speech with few or no spoken works
- Speech with unusual qualities including:
  - Echolalia, or stereotyped and repetitive use of language such as using language scripts from TV, videos, or people in the environment
  - Volume & tone
  - Conversational timing and rhythm
  - Speaking in an overly mature manner
- Difficulty with the use of language including:
  - Use of pronouns
  - Rules of conversation
  - Literal interpretation of figurative language

(Kluth, 2010, Thorsen, n.d.)

- Difficulty with expressive communication- sharing thoughts or ideas with others
- Inability to repair communication breakdowns
- Difficulty with receptive communication- understanding or interpreting what is seen and heard.
- Delays in responding to the verbal instructions, particularly multi-step directions
- Avoidance of or inconsistent eye contact
- Difficulty understanding gestures and non-verbal communication
- Difficulty staying on topic
- Inability to initiate, terminate, and/or sustain reciprocal conversations with others

(Kluth, 2010, Thorsen, n.d.)

Social Differences

Social skills are essential for interaction, reciprocal relationships, employment and for developing and maintaining friendships.

Behaviors of individuals with ASD can lead to inaccurate perceptions by others that include:
- Viewing them as aloof and disconnected
- The belief that they don't care about social interaction and friendships.

Most individuals with ASD have a desire for friendships but have challenges in the following areas that interfere with social interactions:
- Eye contact
- Environmental stimuli in social settings - Sensitivity to input from and changes in the environment can interfere with opportunities to interact with others
- Understanding rituals in social situations
- Reading and interpreting the cues and emotions of others
- Pragmatics – (Understanding the use of language in a social context)
  - Shifting topics
  - Initiating and repairing conversations
  - Providing appropriate detail in a conversation
- Misunderstanding by others when attempts are made at social interaction
- Paying attention to, or hyper-focusing on, unrelated details of a conversation.
- Understanding the perspective of others

(Ashcroft et al., 2013; Kluth, 2010; Thorsen, n.d.)

Most individuals with ASD have difficulty both in conveying information to others and in understanding what others are saying.

- Some have delayed or absent verbal language

- Limited vocabulary

- Some have limited ability to follow simple directions

- Difficulty processing information presented verbally

- Literal interpretations due to concrete thinking.

(Ashcroft et al., 2013; Kluth, 2010; Thorsen, n.d.)

Learning Differences

Individuals with autism are often incorrectly assumed to be unable to understand a task when they do not respond to a direction or answer a question correctly. However, the lack of a correct response is often due to the manner in which the information was presented, heard or processed rather than the inability to complete the task (Kluth, 2010).

Individuals with autism often have difficulty in the following areas (Mesibov, n.d.):
- organization
- distractibility
- sequencing
- generalization of skills (use of a skill in different settings)
- uneven patterns of strengths and weaknesses

Strategies to address each difficulty include (Mesibov, n.d.) :

Organization
- Developing systematic habits and work routines – work right to left, top to bottom
- Checklists, visual schedules, and visual instructions

Distractibility
- Conduct careful assessments of what is distracting to the student.
- Modify the environment to minimize distractions

Sequencing
- Developing systematic habits and work routines – work right to left, top to bottom
- Checklists, visual schedules, and visual instructions

Generalization
- Provide opportunities to practice skills in different settings, with different materials and with different people.

Impact of Neurobiology (Diehl, n.d.)

Increase in Brain Volume
- Overgrowth/proliferation of white matter –the connections between areas of the brain
- Beginning at 2-4 yrs through adolescence

Concentration in areas of brain responsible for :
- Control of executive functioning
  - The integration and association of information
  - Allows one to keep an idea in mind and maintain flexibility in how it is accomplished
- Language
- Functional Connectivity Integration and connection of thoughts and ideas
  - Contributes to impaired language and communication abilities
  - Challenges with connections and integration of information
  - Difficulties with summarizing and making inferences
  - Simple abilities can be intact or enhanced - Hyperlexia
- Higher order thinking – leads to difficulty with sentence structure & comprehension, summarization and making inferences

Behavior

Individuals with autism often exhibit the following behavioral characteristics (Thorsen, n.d.):

- Ritualistic adherence to activities and behaviors
- What appears to be non-functional behavior
- Repetitive and/or compulsive behavior
- Stereotypical and/or intense behavior
- Idiosyncratic behavior

Possible reasons for increases in certain behaviors(Milton, 2012):
- anxiety
- unfamiliarity
- transition
- failed communication attempts
- confusion
- executive function deficits-
  Executive function is a set of cognitive processes that is used to connect past experience with present action. It is used to perform activities such as planning, organizing, strategizing, attending to and remembering details, and managing time and space(National Center for Learning Disabilities, n.d.).
- attempts to attain desired items or activities

These behaviors often serve one of the following functions:
- attempt to communicate
- attempt to control the environment (avoidance, escape, increase or maintain)

Autism Lens: Understanding the actions of pupils on the autism spectrum (Adapted from Milton, 2012)

What the student with autism did	Some possible reasons for their actions
During lunchtime, student wanders around the perimeter of the cafeteria rubbing his/her hands over the walls.	• Stressed due to lack of structure. • Difficulty engaging with peers • Sensory seeking behaviors. • Safe routine of wandering around the perimeter. • Regrouping time after a stressful class.
Student struggles to sit still on his/her chair, wiggling, rocking and fidgeting with objects and materials.	• Uncomfortable on the chair. • Sensory seeking by wiggling and rocking to increase awareness of where he/she is in space. • Comforting or habitual behaviors. • High activity levels and/or lack of interest in the activity. • Stress about what is happening in the environment/lesson.

What the student with autism did	Some possible reasons for their actions
Whenever possible, and within lessons, student will go into a monologue about tractors.	• Student's special area of interest. • A safe monologue that the student uses when having difficulty understanding a lesson or does not feel understood. • Lack of understanding of what appropriate behavior to use in the situation.
Student rarely does homework and often gets in trouble for this. When student does attempt it, work makes little sense to the teacher.	• Instructions are not clear to the student. • Task not differentiated to suit student's learning style or skills. • Compartmentalization of school and home - Things done at school are for school only and those things done at home are only for home. • Desire to relax after the stressful school day and to do the things student likes doing at home. • Lack of clear homework routine to follow.

(Milton, 2012)

What the pupil with autism did	Some possible reasons for their actions
On some days, student will climb up to the top of the bleachers and not want to come down.	• May not be clear on what is coming next. • Avoidance of an activity he/she worries about. • Student likes the physical sensation, wants it to continue
After an incident, the student runs out of school and across the road.	• High level of distress and anxiety when things go wrong. • Escape from the situation. • Looking for a place to be alone. • Wants to get away from people who are causing distress.
Whenever the student has a substitute teacher, he/she becomes verbally rude and is sent out of class.	• Anxiety due to change in the usual routine. • Unpredictability within the lesson or the structure created by a different teacher, or uncertainty of the way this teacher might respond. • Student has learned that unacceptable behavior will result in being sent out of the classroom to an environment that he/she is familiar with and feels safe in.

(Milton, 2012)

*For more examples, go to http://www.aettraininghubs.org.uk/wp-content/uploads/2012/05/7.1-14.2Autism-lens-resource.pdf

Views from students with autism on factors that are important and difficult in the school setting.

(Adapted from Milton & Giannadou, n.d.)

Individual Students

Important Aspects:
• Being given space by adults when needed
• Having trained staff who can guide learning in a differentiated way
• Helping the child to understand their autism, anger or other issues

Difficult Aspects:
• Waiting
• Anger
• Lack of understanding from staff
• Transitions
• Memory issues

Building Relationships

(Milton & Giannadou, n.d.)

Important Aspects:
- Supportive friends
- Staff that listen
- Rules that adults and peers follow too

Difficult Aspects:
- Bullying
- Friends can be overwhelming and be bullies
- Not being given space to be on one's own
- Being mocked

Curriculum & Learning

(Milton & Giannadou, n.d.)

Important Aspects:
- Trips
- Being given help
- The use of visuals
- Video clips & DVDs
- Extra time on work
- Rewards
- Using special interests in learning process
- Use of technology
- Using groups with clear rules of engagement
- Using games in lessons

Difficult Aspects:
- English & Literacy
- Letters & sounds
- Math
- French
- P.E.
- Geography
- History
- Science

Environment

(Milton & Giannadou, n.d.)

Important Aspects:

- Accessible quiet and sensory areas
- Enough personal space
- Monitoring of behavior and bullying
- Small and tidy building
- Spacious classrooms
- Library /Media Center
- Permanent (consistent) staff
- Individual support
- Equipment that works and is taken care of
- Peers that help with learning
- Interesting things on walls (but tidy)
- No crowds
- Quiet environment

Difficult Aspects:

- Climbing stairs
- Uncomfortable seating
- Completing things within time limits
- Transitions
- Crowds
- Large, complex buildings
- School food
- Things to do and structured activities at break times
- Cancellations

TEACHER QUALITIES

Skills and qualities identified as those most important for teachers/individuals working with students with autism include (Milton & Giannadou, n.d):

- Clear communication and instructions and the ability to explain tasks in different ways
- Curiosity about how autistic people think and learn and a desire to work with the student
- Emotional literacy
- Flexibility, adaptability and resilience
- Knowledge of autism and knowledge of the individual student
- Non-judgmental approach, understanding and empathy
- Patience, ability to remain calm and a positive outlook
- Sense of humor, being creative and fun

and demonstrating enthusiasm
- Consistent, observational and problem-solving approach
- Understanding sensory needs
- Developing the student's strengths and the ability to work with students on areas of special interest
- Holistic approach
- Ability to reflect on language use and an understanding literal thinking
- Differentiation
- Good listening skills and effective collaboration with parents and peers
- Good health
- View every day as a new start

Areas of Challenge with the Inclusion of Individuals with ASD

Effective inclusion for students with autism can be challenging for the student, parents, school staff, as well as peers.

Challenges with inclusion of individuals with autism stem from difficulties with (Morewood, Humphrey & Symes, 2011):

- learning in social settings, understanding social situations, and understanding ambiguous rules of social interaction
- learning environments utilizing complex language with limited visual support
- understanding and communicating with other peers and adults
- coping with changes, transitions, and unexpected breaks in established routines
- organization
- generalization of skills to settings outside of those in which the skills were taught

Challenges for Teachers:

- gaining, maintaining and refocusing the student's attention
- motivation of the student
- differentiation of language and/or the curriculum to an appropriate level
- management of the student's behavior
- accommodation of the student's special interests

Challenges of peers

Peers may:

- not understand why the student with autism behaves the way he/she does
- resent the extra attention given to the student with autism
- be hurt if their social initiations are ignored or rejected
- be distracted or disrupted by the student with autism
- feel that the student with autism is treated differently
- be nervous of or frightened by different behaviors
- ignore, tease, instigate or bully the student with autism

(Morewood, Humphrey & Symes, 2011)

Part II Reflection

1. Differences in which six areas are commonly observed in individuals with autism?

2. Individuals with ASD often experience hyper- or hypo-sensitivity to what types of stimuli?

3. Challenging behaviors demonstrated by individuals with ASD are often an attempt to serve one of which two functions?

4. What types of things might a student with ASD find challenging in the environment?

5. What types of things related to interacting with others might a student with ASD find challenging?

6. What are some factors related to instruction that a student with ASD may find difficult?

7. What is an example of a behavior that a student with ASD might display in a classroom setting and what are some possible reasons for that action?

PART III:

Supporting the Inclusion of Students with Autism

Positive School Environment

A critical component for the successful inclusion of students with ASD is a positive school environment. A positive school environment means ensuring:

- the *presence* of all students without the use of separate classes or other means of separation
- *participation* - the quality of student's educational experiences
- *acceptance* - by teachers and peers, and
- *achievement* - increasing academic progress and building social and emotional skills

(Humphrey, 2008)

To achieve this, school staff must:

- Recognize differences
- Create a culture of acceptance and understanding, a culture where individual differences are valued
- Avoid the use labels in a way that is harmful or limiting to the student
- Allow students to be the experts at times by allowing them to teach and lead in the classroom. This will create opportunities for all to learn about the expertise and experiences of the students
- Preserve student dignity(use student-first language)
- Look for student strengths
- Serve as an advocate and teach advocacy
- Act as a teacher and a learner
- Listen carefully
- Take necessary risks
- When necessary, question common practices such as policies and procedures that interfere with opportunities and development of individuals with ASD.

(Humphrey, 2008; Kluth, 2010)

Sensory Processing Strategies

(Attfield, Fowler & Jones, n.d.)

Sensory processing difficulties can produce anxiety in students with autism, interfering with their involvement and participation in the classroom. The following information related to the sensory needs of students can assist teachers in creating an environment that decreases anxiety and leads to increased participation.

Visual

Provide suitable lighting.
- Flickering lights can cause discomfort. Check and change fluorescent lights regularly.
- Minimize distracting patterns created by the effects of light coming into the room through blinds.
- Minimize reflections of light off shiny surfaces or metal.

Create a clutter-free and orderly classroom so students can make sense of the environment.

Busy, colorful, and cluttered walls can be distracting. Use designated areas for wall displays of specific themes/activities for clarity and organization.

Allow students the opportunity to work at a specific station or quiet area to focus their attention when necessary.

(Attfield, Fowler & Jones, n.d.)

Auditory (Attfield, Fowler & Jones, n.d.) -

Minimize sounds from classroom equipment.
- Turn televisions, videos, audio systems, lights and computers off when not in use to avoid continual humming.

Utilize strategies to reduce noise in classrooms.
- Carpeted rooms will decrease noise created by the movement of students, chairs and desks.
- Modify the acoustics of the gym, cafeteria and hallways to reduce echo.

Sounds from outside the classroom can cause problems within classrooms.
- Soundproofed windows – can keep the noise from traffic from being a distraction.
- Carpeted hallways will produce less noise.

Discuss strategies with student and develop a plan for times when noise becomes overwhelming.
- Identify a quiet room to be available to the student to provides a place for the student to relax when needed.
- Provide a warning to the student prior to a loud noise or bell sounding.
- Implement strategies to support students who have difficulty tolerating loud noises , drills, or fire bells.

Olfactory (Attfield, Fowler & Jones, n.d.) -

Minimize smells in the classroom.
- Paints, glue, clay and cleaning fluids
- Science experiments, dissections, and chemistry labs
- Perfumes and deodorants

Monitor and reduce smells from outside the classroom when possible.
- Have a plan for use of an alternative restroom such as staff restroom when needed
- Reduce the smell of cooking from the cafeteria, cooking classes and science rooms

Tactile (Attfield, Fowler & Jones, n.d.) -

Avoid uncomfortable clothing-those with seams, inflexible or itchy fabrics.
- Offer variations of school uniforms that allow students to wear clothing they find comfortable

Find writing alternatives for students for which writing is physically painful or difficult.
- Allow some classwork, notes and homework to be typed
- Allow students to use an alternative method for written work such as an Ipad or computer.

Provide comfortable seating.
- Padding on hard chairs
- Allow students to sit on bean bag, cushion or carpet squares when sitting on the floor is necessary

Other (Attfield, Fowler & Jones, n.d.) -

- Encourage students to let others know if an aspect of the environment is distressing.
- Provide students with a designated person or mentor to talk to.
- Students are allowed to leave the classroom before or after peers to avoid noisy halls/crowds.
- Classroom organization and individual seating plan takes into consideration individual sensory concerns
- Provide ample space around the seats of students who become anxious by the close proximity of others
- Allow students to enter the cafeteria before or after peers to avoid noise and crowds.
- Allow an adult or peer to accompany the student to and within the cafeteria.
- Allow breaks when necessary.
- Designate a place and routine for the student for when they feel they need to withdraw due to sensory overload.

For a printable environmental sensory audit checklist, go to
http://www.aettraininghubs.org.uk/wp-content/uploads/2012/05/37.1-Sensory-audit-tool-for-environments.pdf

Transitions

Students with ASD have a need for predictability (Kluth, 2010). When there is a change, students may feel out of control and be uncertain of what to do or what is going to happen next.

Build predictability by using a consistent schedule and classroom routine

- Post a schedule in the classroom
- Give the student a personal schedule appropriate for comprehension level
- Post changes in the schedule as soon as possible and review them with the student
- Inform the student when you will be absent and who will be taking your place
- Give warnings about how much time will be given or is left for an activity. A timer may be helpful.
- If a student feels compelled to complete one task before moving on to the next, create a routine for the student for what is to done when work is not finished before the class needs to move on.
- Reward adaptability.

BEHAVIOR		Northwest Regional Education District - Retrieved from https://sites.google.com/a/nwresd.k12.or.us/autism/general-education-teacher/how-to-address-challenging-behaviors-in-the-classroom
Students Who:	**Possible Explanations**	**Suggested Strategies**
Call Out in Class	Impulsivity and deficits in social understanding. • Unaware of how their talking affects the class • Lack of understanding when a question is posed to the entire class. • Lack of understanding of expectations and unspoken rules of class discussions and lessons • Student may have so much to say that they have difficulty containing themselves.	Create a visual cue of when it is acceptable and not acceptable to talk about the favorite topic. Schedule a specific time for the student to share with you or the class Teach and reinforce the use of visuals for when the student can engage in off topic behaviors. • Teach the student about on topic and off topic behaviors, ways to monitor it, and strategies for staying on topic during social skill instruction. • Teach the student the classroom routine of how to raise their hand and wait to be called on. Use a visual cue. • Teach the class the rules and expectations for group lessons. • Teach how others may be feeling when they talk out of turn. Post behavioral expectations in your classroom that outline what is considered to be appropriate types of talking during specified times. • Be specific and give notice when the student is going to be called. • Remind the class that you call on those who are quiet and raise their hands • Ignore students who calls out and select another student to answer the question. • Develop a visual to signal the student when you will be calling on them. • Use visuals for the whole class to be able to identify when talking quietly is permitted and when it is not. Give the student poker chips and tell them they will have to give one up each time they want to talk. Ask for a chip each time the student talks. When the chips are gone, ask for a chip. Because they have none left, remind them that the rule is they must give a chip before they can talk. (Northwest Regional Service District, n.d.)

Students Who:	Possible Explanations	Suggested Strategies
Do Not Respond to Typical Discipline	• Deficits in receptive language may limit understanding of the meaning and content of a particular discipline technique. • Inconsistent memory retrieval skills may result in student not remembering the rules. • Not understanding the relationship between behavior and consequences. • Loss of time for activities such as assemblies, free time and lunch may be rewarding due to sensory issues.	• Use simplified language and visual models and cues • Choose consequences that are meaningful to the student. • Have the student or his parent(s) complete a reinforcement inventory to find out what motivates the child. • Use a visual rather than verbal warning system.

(Northwest Regional Service District, n.d.)

Students Who:	Possible Explanations	Suggested Strategies
Talk Excessively About Preferred Topics	Often, students with autism have special interests on which they may perseverate.	• Expand the student's interests by giving opportunities to research or learn about related topics • Have the student keep a notebook to write down his thoughts • Schedule a specific time for them to share with you or the class • Instruct others in the classroom when it is and is not ok to interact. • Give the student time in his day to talk about his topic of interest with a person of his choice. Use a timer to help student to move on to another activity when time is up.

(Northwest Regional Service District, n.d.)

Students Who:	Possible Explanations	Suggested Strategies
Argue with others	• Enjoyment of arguing due to stimulation of logical thinking skills • Previous success in negotiating • Increases predictability and control in a social situation • Inflexibility due to a contradiction or change in a procedure, concept or rule.	• Consult speech pathologist to find more positive means of expressing opinions. • Use social stories to address that sometimes you can engage in "negotiation" and sometimes it is not allowed. • Teach others how to respond • Teach him other ways to interact that still offers positive reinforcement • Allow the student to write for 5 minutes in a journal about his perspective, so that he may get his thoughts out and move on. • Teach, use, and post phrases that relay the message that it is alright to disagree. • Use activities that help calm the student down, such as breaks, breathing, counting, a stress ball, or drawing. • Make a list of choices that the student can select from when he is starting to feel anxious and argumentative.

(Northwest Regional Service District, n.d.)

Students Who:	Possible Explanations	Suggested Strategies
Are Aggressive to Others	• Poor social judgment • Unaware of the feelings of others. • Sensory misperceptions- overload by the social demands of the situation • Limited ability to communicate verbally when frustrated or upset.	• Use visual tools to help the student de-escalate and have visual choices available when he is beginning to get upset • Consult your ASD specialist and Special Education Case Manager about developing a Positive Behavior Support Plan. • Evaluate the sensory needs of the student. • Consult the Occupational Therapist about creating a sensory diet for the student to help the student maintain an optimal level of sensory input • Reduce the amount of verbal language that you use- offer visual cues, such as writing down a message to the student on a piece of paper, or picture cards, directing him to begin a specified calming routine. • Consult your school behavior specialist, special education teacher or autism specialist about designing a calming sequence or process.

(Northwest Regional Service District, n.d.)

Students Who:	Possible Explanations	Suggested Strategies
Who React Negatively When Asked to Correct Work or Suggestions Are Given	• Students with ASD often struggle with perfectionism, • The student may not know how to redo his/her work • Inflexibility - Student may feel that once he/she has finished the work, it is finished and he/she so can't go back to redo any part of it.	• Reinforce that we learn from our mistakes and we all make mistakes. Use Albert Einstein as an example. He failed his high school classes because he was a visual rather than an auditory thinker • Encourage use of relaxation techniques • Use errorless learning as much as possible- observing as the student gets started to assure they is doing the work correctly • Evaluate the level of difficulty of the work assigned to determine if it is appropriate for a student and/or if changing the visual appearance of the work, reading level, or time constraints to complete the work • Reduce the emphasis on competition in the classroom. • Provide rubrics and/or work samples.

(Northwest Regional Service District, n.d.)

Increasing Motivation of Students During Lessons

Students with ASD are often not motivated by the same things that their peers find motivating, such as good grades or praise. They are often more motivated by quiet time alone, sensory activities, or time to explore information about their favorite topics. In addition, individuals with ASD often fail to see the purpose in an assignment or an activity or in practicing previously learned skills. Therefore, motivating students with ASD can, at times, be quite challenging. Strategies to assist teachers in increasing motivation for students with ASD include:

- Clearly defining the purpose of the lesson. If knowing the purpose is not enough motivation for the student, establish a routine of completing a task, then providing access to a preferred activity or task.

- Following difficult tasks with tasks that the student enjoys or can complete successfully.

- Alternating types of tasks. Follow paper and pencil assignments with an active task.

- Using visual lists or token boards to help student stay motivated.

- Determining what information the student already knows and what he/she still needs to learn.

(Northwest Regional Education Service District, n.d.)

Verbal Directions

Auditory processing difficulties are common among students with ASD (Kluth, 2010). It is very easy for the student to miss all or part of what is stated verbally. The following strategies may be helpful when giving verbal directions to students with ASD (Northwest Regional Education Service District, n.d.) :

- **Speak slowly** so the student can process what you say.
- Use **visual cues** to help with explanations.
- Have student **paraphrase** the directions given to check for understanding.
- Utilize **cue words** just prior to giving directions to prompt the student to focus
- **Define a specific location** within the classroom where you will always stand to give directions to provide a visual cue for the student.
- Use a **designated place** to consistently write assignments and due dates.
- **Pair** visual cues with verbal directions.
- Show **examples** of a finished product.

Responding to Questions

Students with ASD often have processing delays. Delays in processing interfere with the ability to listen, process what is heard, formulate an answer, and then give a verbal response. The following are some strategies that can assist the student when responding to verbal questions presented (Northwest Regional Education Service District, n.d.).

- Provide *extra time* for responding to questions. (Caution: do not repeating or restate the question while the student is processing. It can lead to restart his/her processing as if it is were a new question).
- Use a *signal* before calling on the student in class (standing in front of the student's desk before calling on him/her).
- Teach students to be patient while another student is formulating a response.
- Let the student know that you will ask a question, move on to a few other people for answers to other questions, and then will return to him/her for the answer.
- Accept other forms of communication, such as pointing to a yes or no card or allowing the student to write or type her answer.
- Ensure you have the student's attention before talking.

Following Lessons and Lectures

Lessons frequently include a lot of information presented verbally. Because students with ASD have difficulties processing auditory information and understanding figurative language, they often have difficulty with verbally instruction. Strategies to assist the student in following along with lessons include (Northwest Regional Education Service District, n.d.):

- Creating context, point of reference, at the start of the lesson
- Using visual forms of presentation (whiteboard, charts, PowerPoint, and/or objects)
- Avoiding ambiguous language
- Minimizing visual stimuli from the area in which teacher typically stands during lessons
- Using fill in the blank handouts to accompany a lesson to help student follow along
- Repeating important facts
- Pre-teaching new concepts
- Audio recording lessons
- Designating a note-taker to share notes with the student
- Teaching and modeling note taking strategies
- Using cueing statements prior to key points
- Minimizing auditory distractions
- Reviewing key points at the end of class
- Making an outline for the lesson for the student to follow

Use of Visuals

The use of visual supports and strategies have been found to benefit many individuals with autism.

(Boutot & Myles, 2011)

Introduce lessons visually

Teach ways to record and organize information visually

- Reduces the need for students to be dependent solely on auditory information, increasing understanding of content and directions
- Promotes increased confidence and independence
- Provides an unchanging point of reference, reducing anxiety
- Fewer questions
- Lessens need for additional instruction and explanation

Visual/Graphic organizers –
- Provide a way of clarifying thinking and understanding
- The type of organizer must be specific to the task
- Provide a template for the student

Examples:
- Venn Diagrams
- Story Planner
- Experiment organizer
- Math Problem Solver
- English/History Organizer
- Independent learning organizer
- Making a Balanced Decision
- Considering both sides of an argument
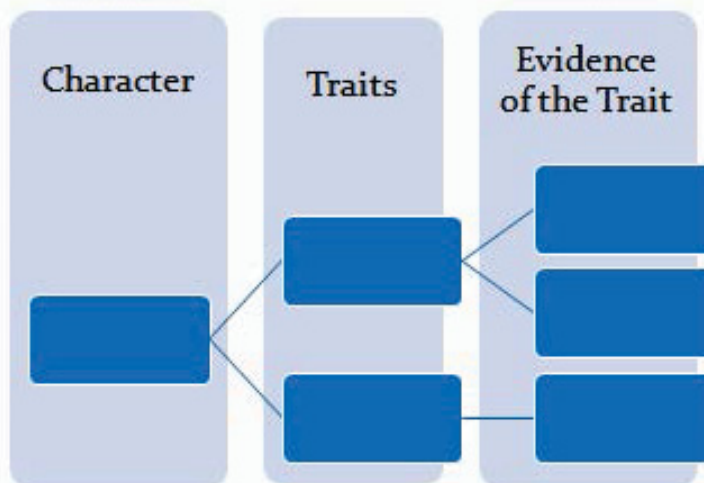
Venn Diagrams

Venn Diagram

Differences   Similarities   Differences
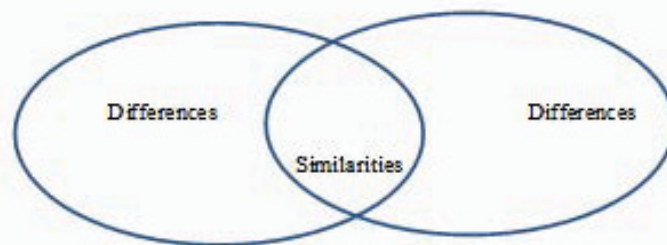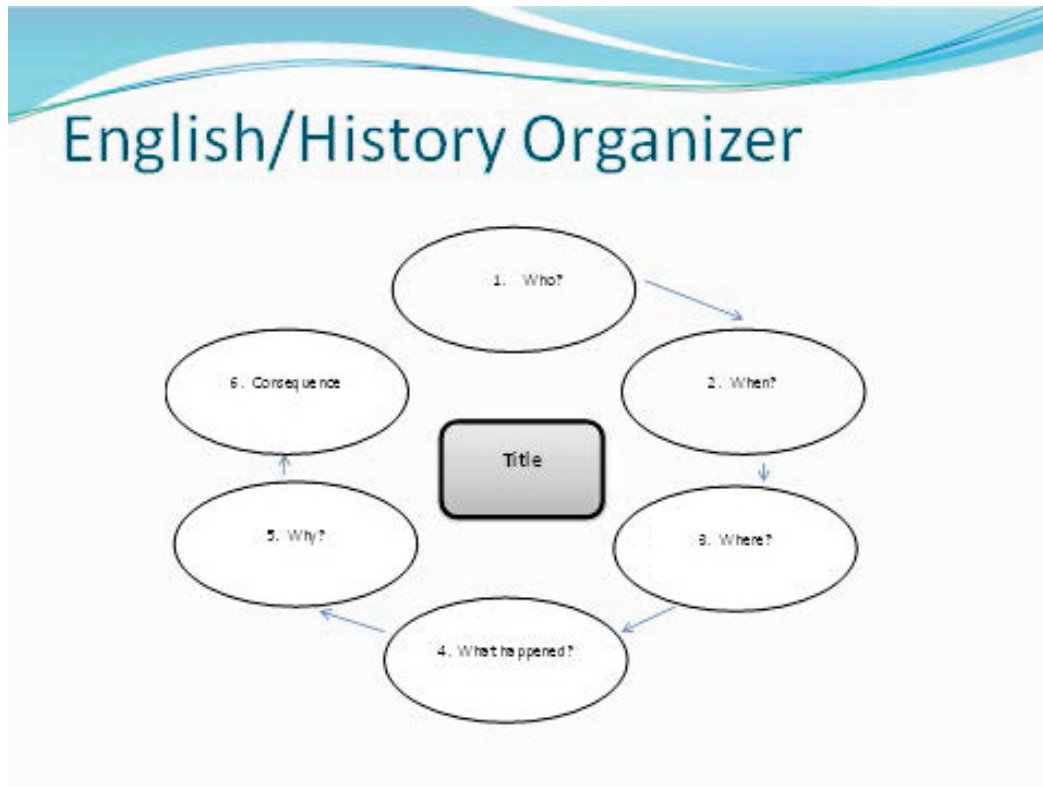
Story Planner

Title	
Characters	
Where does the story take place?	
What happened at the beginning of the story?	
What happened in the main part of the story?	
What happened at the end of the story?	

Character Map (West Virginia Department of Education, n.d.)

Book Title _____

Character   Traits   Evidence of the Trait

English/History Organizer

Graphic Organizers - Resources

For more information on creating graphic organizers, go to:
http://www.psea.org/uploadedFiles/TeachingandLearning/Special%20Ed%20Graphic%20Organizers.pdf

For printable graphic organizers, go to:
- Education Place - http://www.eduplace.com/graphicorganizer/
- The Graphic Organizer -http://www.graphic.org/organizers/free-graphic-organizers.html
- Teach-nology - http://www.teach-nology.com/worksheets/graphic/
- Education World - http://www.educationworld.com/tools_templates/index.shtml#graphicOrganizers
- Teacher Vision - https://www.teachervision.com/graphic-organizers/printable/6293.html
- West Virginia Department of Education – http://wvde.state.wv.us/strategybank/GraphicOrganizers.html

Computer-Aided Instruction (CAI)

Computer-aided instruction(CAI) can be used to address academic and/or language and communication skills in individuals with ASD. CAI has been shown to be effective with students due to the tendency for those with ASD to be visual thinkers, processors and learners. (Grandin, 2005). Skills that can be addressed through CAI include recognition and prediction of emotion, problem solving, vocabulary and grammar, reading and communication skills(Collet-Klingenberg, 2010).

VizZle - a web-based visual learning system through which educators can launch interactive instructional lessons, schedules, games and data reports on a computer, smartboard, iphone or ipad. VizZle provides lesson templates, authoring tools, and media, tutorials, and a data tracking system for each student. For more information go to http://www.monarchteachtech.com/.

For more resources and information on CAI, go to:
www.gvsu.edu/.../autism_in_the_classroom_computer-aided_instruction....

Modifications

(Adapted from Northwest Regional Education Service District, n.d.)

Worksheets

Worksheets are commonly used as a way to support content and provide students a way to practice newly learned skills. Due to fine motor challenges, attention issues, reading level, cognitive differences, perfectionism, and challenges with forming answers, students with ASD may benefit from worksheets with (Northwest Regional Education Service District):

- Fewer questions per page.
- Increased font size.
- A reduced number of items to match on matching sections.
- De-cluttered worksheets (taping over extraneous pictures, blocking the page into sections, fold into sections or cut in half).
- Pictures to support concepts and understanding.
- Elimination and rewording of essay questions .
- Examples to follow.
- Highlighting of important information or for items the student needs to complete.
- The option to answer questions on a separate sheet of paper or on a word processor.

Homework

Due to the challenges with communication, fine motor skills, language processing, and executive function, students with ASD may take much more time to complete homework assignments than their typical peers. Modifying homework expectations in the following ways can support the content presented and increase learning, while decreasing the level of stress and frustration.

- Reduce the number of questions to be completed.
- Identify fewer questions that cover the most important concepts.
- Provide the option of not completing essay questions.
- Accept alternative forms of demonstration of understanding.
- Provide word banks for worksheets.
- Allow student to type or record answers.
- Exempting the student from homework if he/she has demonstrated mastery. of a concept.

(Northwest Regional Education Service District, n.d.)

Writing Assignments

Because writing can be difficult for students with ASD, behaviors can occur due to frustration or attempts to avoid writing assignments. Students with ASD often have difficulties with understanding how and where to begin, how much and what to write about, as well as how to form sentences or paragraphs can result in high levels of frustration. Modifications for writing may include:

- Providing opportunities for the student to write about his or her favorite topics. Shifts the focus to the process of getting ideas written down.
- Using visuals to help the student create a clear direction for his/her writing and identify what is important.
- Using a template to get started.
- Providing an example of a desirable finished product to clarify the expectations.

(Northwest Regional Education Service District, n.d.)

- Providing specific expectations for each assignment.
- Reinforcing attempts to complete written assignments.
- Allowing the student to use a word processor to complete lengthy assignments.
- Doing a relaxation activity before writing.
- Providing sentence starters.
- Giving topic words that could be used to assist in generating writing ideas.
- Suggesting words that help make sentences flow and appear more complex.
- Highlighting or underlining the main idea in essay questions
- Allowing various forms of demonstrating knowledge.

(Northwest Regional Education Service District, n.d.)

Reports and Long-Term Projects

Difficulties with the executive functioning skills create challenges for many students with ASD in completing long-term projects. Difficulty knowing where to begin, what the final product should look like, and planning for each steps necessary to complete the project can make these tasks very difficult. Modifications to consider include:

- Break down project into smaller parts with short term due dates
- Allow various methods of presentation in place of oral reports.
- Provide worksheets or checklists for students to organize and set timelines for themselves.
- Listing resources that students may use to get started on doing research.
- Provide examples of acceptable projects.
- Inform parents about the project or report.
- Allow the student to work on a topic that is of special interest.
- Provide descriptive rubrics to demonstrate expectations.

(Northwest Regional Education Service District, n.d.)

Additional Resources

Understanding Autism: A guide for secondary School Teachers from the Organization for Autism Research

- Part 1. Characteristics - http://www.youtube.com/watch?v=4yAAOI6JUsM
- Part 2 – Integrating Supports in the classroom - http://www.youtube.com/watch?v=veQKDDE9C_w
- Part 3 – Practices for Challenging Behavior- http://www.youtube.com/watch?v=LK5Pr9h1oBY
- Part 4 – Effective Use of Teacher Supports - http://www.youtube.com/watch?v=X4GdaD2Izxc

Post-Test Answer Key

1. a
2. b
3. c
4. a
5. b
6. b
7. b
8. b
9. d
10. b
11. d
12. b
13. a

14. b
15. d
16. b
17. b
18. a
19. e
20. e
21. c
22. a
23. b
24. a
25. b

Conclusion

As the prevalence of autism spectrum disorders continues to increase, teachers are more and more likely to find students with ASD in their classrooms. The information and strategies in this presentation were intended to assist you as you encounter students with autism spectrum disorders in your classroom. Because there can be great variations between students with autism, their will be a need to determine which strategies are most appropriate for each student to maximize learning and independence.

Thank you for participating in this professional development opportunity. Through this presentation, hopefully you have gained knowledge necessary to assist you as you encounter students with autism in your classroom and you feel more confident in your ability to meet the needs of students with this complex disorder.

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Supporting Students with Autism in the Secondary Classroom:

Resource Guide

TABLE OF CONTENTS

Introduction

With the continuing increases in prevalence of children with autism spectrum disorders(ASD), teachers are being presented with new challenges. Teachers often feel unprepared for the integration of students with autism into the general education setting, reporting feelings of inadequacy and frustration. An understanding of the characteristics of autism and an understanding of strategies to reduce challenging behaviors and provide a supportive environment for these students will increase self-efficacy and reduce frustration levels of teachers and students as well as individuals affected with ASD.

The presentation that accompanies this booklet is provided as a professional development opportunity for general education teachers at the secondary level. The information provided in the presentation is intended to increase the participant's knowledge and understanding of autism.   It provides strategies for teachers to utilize when working with students with autism spectrum disorders to improve educational experiences for teachers and their students. This resource guide contains an overview of topics and strategies discussed in the presentation as well as a pre-test and post-test to assess individual participant's prior knowledge as well as knowledge gained during the presentation.

Id _____

Score _____ **%**

Supporting Students with Autism in the Secondary Classroom

Pre-Test

1. Over 90% of individuals with autism are cognitively impaired.

   a) True
   b) False

2. Which of the following is a cognitive characteristic often exhibited by individuals with ASD?

   a) Uneven development of cognitive skills
   b) A strength in cognitive flexibility
   c) Strong reading comprehension skills and difficulty with word recognition
   d) A strength in the ability to generalize skills across settings

3. Which is not an example of a teaching strategy that utilizes strengths in the area of visual spatial processing?

   a) Verbal instructions with a backup audio recording
   b) Video modeling
   c) Hands-on learning
   d) Picture schedules

4. Individuals with autism never make eye contact.

   a) True
   b) False

5. Individuals with autism do not desire friendships.

   a) True
   b) False

6. When a student with autism does not respond to a question/direction to which he or she has previously responded to, it is likely that he/she is_____.

   a) just being stubborn and non-compliant.
   b) having difficulty with receptive communication
   c) over responsive to auditory stimuli
   d) all of the above

7. Individuals with autism always have significant impairments in speech.

    a) True
    b) False

8. Individuals with autism always have significant impairments in language.

    a) True
    b) False

9. Individuals with autism always have significant impairments in communication.

    a) True
    b) False

10. When selecting a student with autism to respond to a question posed verbally, one should _____.

    a) restate or rephrase the question immediately if the student does not respond
    b) call on another student if the student does not respond within 5 seconds
    c) give the student a signal before calling on him or her
    d) all of the above
    e) none of the above

11. Which of the following characteristic(s) of speech are likely to be found in children with autism?

    a) unusual intonation
    b) echolalia
    c) repetition of words or phrases
    d) all of the above

12. All individuals with autism are over-responsive to sound.

    a) True
    b) False

13. Having a sensory processing disorder means that an individual _____.

    a) lacks the ability to effectively and efficiently organize sensory information
    b) is over-responsive to touch
    c) is under-responsive to smells
    d) fears loud noises

14. An individual with a sensory processing disorder may demonstrate _____.

    a) adverse behavior as a result of discomfort
    b) avoidance of a particular setting or activity
    c) a lack of awareness of a serious injury
    d) all of the above

15. A child who exhibits sensory processing difficulties can have more than one area affected.

    a) True
    b) False

16. Autism affects approximately 1 in _____ children nationwide.

    a) 52
    b) 88
    c) 110
    d) 150

17. Repetitive patterns of behavior in individuals with autism may increase due to _____.

    a) stress
    b) excitement
    c) boredom
    d) anxiety
    e) all of the above

18. Which of the following is the least effective technique for students with autism for presenting lessons and lectures?

    a) Creating context at the beginning of the lesson
    b) Using overheads, whiteboard, charts, PowerPoint, and/or objects to supplement verbal content
    c) Calling on the student to answer questions randomly and frequently throughout the lesson
    d) Using fill in the blank handouts to accompany a lesson to help student follow along
    e) Repeating important facts or concepts

19. Which one of the following is not required to receive an educational diagnosis of autism?

   a) exhibit impaired social interaction.
   b) exhibit self-injurious behaviors.
   c) exhibit behaviors and interests that are repetitive and stereotyped
   d) exhibit impaired communication skills

20. Autism is limited to certain cultures and populations of the world.

   a) True
   b) False

21. Most individuals with autism have difficulty processing information presented verbally.

   a) True
   b) False

22. Autism is caused by psychological trauma in early childhood.

   a) True
   b) False

23. Which of the statements about autism is not true?

   a) There is currently no known cure for autism
   b) Autism is now considered an emotional disorder
   c) Autism is most likely a result of a combination of genetic and environmental factors.
   d) There has been a significant increase in the prevalence of autism over the last decade.

24. When a student with autism is not motivated to complete tasks, the teacher should consider _____.

   a) following difficult tasks with tasks that the student enjoys or can complete successfully.
   b) alternate the types of tasks.
   c) the use visual lists or token boards.
   d) all of the above
   e) none of the above

25. Whenever the student has a substitute teacher, he/she becomes verbally rude and is sent out of class. Which of the following is least likely the reason this behavior continues to occur?

   a) Anxiety due to change in the usual routine.
   b) Unpredictability within the lesson of the structure created by a different teacher,
   c) Unpredictability of the way this teacher might respond.
   d) Student has learned that unacceptable behavior will result in being sent out of the classroom.
   e) The student does not want to work.

Strategies for Sensory Processing

Sensory processing difficulties can produce anxiety in students with autism. The following strategies can assist teachers in creating an environment that decreases anxiety and leads to increased participation (Attfield, Fowler & Jones, n.d.).

Visual Strategies (Attfield, Fowler & Jones, n.d.) –

Provide suitable lighting.
- Flickering lights can cause discomfort. Check and change fluorescent lights regularly.
- Minimize distracting patterns created by the effects of light coming into the room through blinds.
- Minimize reflections of light off shiny surfaces or metal.

Create a clutter-free and orderly classroom
- Use designated areas for wall displays of specific themes/activities for clarity and organization.
- Allow students the opportunity to work at a specific station or quiet area to focus their attention when needed.

Auditory Strategies (Attfield, Fowler & Jones, n.d.) –

Minimize sounds from classroom equipment.
- Turn televisions, videos, audio systems, lights and computers off when not in use to avoid continual humming.

Utilize strategies to reduce noise in and outside the classroom.
- Carpeted rooms
- Soundproofed windows
- Carpeted hallways

Discuss strategies and develop a plan for occasions when noise becomes overwhelming.
- Identify a quiet place for the student to get away or relax when needed.
- Provide a warning to the student prior to a loud noise or bell ringing.
- Implement strategies to support students who have difficulty tolerating loud noises, drills, or fire alarms

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Olfactory Strategies (Attfield, Fowler & Jones, n.d.) –

Minimize smells in the classroom.
- Paints, glue, clay and cleaning fluids
- Science experiments, dissections, and chemistry labs
- Perfumes and deodorants

Monitor and reduce smells from outside the classroom.

- Have a plan for use of an alternative restroom
- Reduce the smell of cooking from the cafeteria, cooking classes and science rooms

Tactile Strategies (Attfield, Fowler & Jones, n.d.) –

Avoid uncomfortable clothing-those with seams, inflexible or itchy fabrics.
- Offer variations of school uniforms that allow students to wear clothing they find comfortable

Find writing alternatives for students for which writing is physically painful or difficult.
- Allow some classwork, notes and homework to be typed
- Allow students to use an alternative method for written work.

Provide comfortable seating.
- Padding on hard chairs.
- Allow students to sit on bean bag, cushion or carpet squares when sitting on the floor is necessary.

Other Strategies (Attfield, Fowler & Jones, n.d.) –

- Encourage students to let others know if an aspect of the environment is distressing.
- Provide students with a designated person or mentor to talk to.
- Allow students to leave the classroom before or after peers to avoid noisy halls/crowds.
- Organize classroom and seating arrangement taking into consideration individual sensory needs.
- Provide ample space around the seats of students who become anxious by the close proximity of others
- Allow students to enter the cafeteria before or after peers to avoid noise and crowds.
- Allow an adult or peer to accompany the student to and within the cafeteria.
- Allow breaks when necessary.
- Designate a place and routine for the student for when they feel they need to withdraw due to sensory overload.

For a printable environmental sensory audit checklist, go to: http://www.aettraininghubs.org.uk/wp-content/uploads/2012/05/37.1-Sensory-audit-tool-for-environments.pdf

Strategies for Transitions

Students with ASD have a need for predictability (Kluth, 2010). When there is a change, students may feel out of control and be unsure of what to do or what is going to happen.

Build predictability by using a consistent schedule and classroom routine
- Post a schedule in the classroom
- Give the student a personal schedule.
- Post changes in the schedule as soon as possible and review them with the student.
- Inform the student when you will be gone and who will be taking your place
- Give warnings about how much time will be given or is left for an activity. (Timers)
- If a student feels compelled to complete one task before moving on to the next, create a routine for the student for what to do when work is not finished before the class needs to move on.
- Reward flexibility.

Strategies for Behavior

(Retrieved from https://sites.google.com/a/nwresd.k12.or.us/autism/general-education-teacher/how-to-address-challenging-behaviors-in-the-classroom)

Calling/Talking Out in Class - (Northwest Regional Education Service District, n.d.)

Create a visual cue of when it is acceptable and not acceptable to talk about the favorite topic.
Schedule a specific time for him to share with you or the class
Teach and reinforce the use of visuals for when the student can engage in off topic behaviors.
- Teach the student about on topic and off topic behaviors, ways to monitor it, and strategies for staying on topic during social skill instruction.
- Teach the student the classroom routine of how to raise his hand and wait to be called on. Use a visual cue.
- Teach the class the rules and expectations for group lessons.
- Teach how others may be feeling when he talks out of turn.

Post behavioral expectations in your classroom that outline what is considered to be appropriate types of talking during specified times in the school day.
- Be specific and give notice when the student is going to be called.
- Remind the class that you call on students who are quiet and raise their hands before answering.
- Ignore students who call out and select another student to answer the question.
- Develop a visual to signal the student when you will be calling on him.
- Use visuals for the whole class to be able to identify when talking quietly is permitted and when it is not.

Give the student poker chips and tell them they will have to give one up each time he wants to talk. Ask for a chip each time the student talks. When the chips are gone, ask for a chip. Because they have none left, remind them that the rule is they must give a chip before they can talk.

Talking Excessively About Preferred Topics - (Northwest Regional Education Service District, n.d.)

- Expand the student's interests by giving opportunities to research or learn about related topics.
- Have the student keep a notebook to write down his/her thoughts.
- Schedule a specific time for them to share with you or the class.
- Instruct others in the classroom when it is and is not ok to interact.
- Give the student time in his/her day to talk about the topic of interest with someone. Use a timer to help student to move on to another activity when time is up.

Aggressiveness Toward Others - (Northwest Regional Education Service District, n.d.)

- Use visual tools to help the student de-escalate and have visual choices available when the student is beginning to get upset
- Consult your ASD specialist and Special Education Case Manager about developing a Positive Behavior Support Plan.
- Evaluate the sensory needs of the student.
- Consult the Occupational Therapist about creating a sensory diet for the student to help the student maintain an optimal level of sensory input
- Reduce the amount of verbal language that you use- offer visual cues, such as writing down a message to the student on a piece of paper, or picture cards directing the student to begin a specific calming routine.
- Consult your school behavior specialist, special education teacher or autism specialist about designing a calming sequence or process.

Students Who Do Not Respond to Typical Discipline –((Northwest Regional Education Service District, n.d.)

- Use simplified language and visual models and cues
- Choose consequences that are meaningful to the student.
- Have the student or his/her parent(s) complete a reinforcement inventory to find out what motivates the child.
- Use a visual rather than verbal warning system.

Students Who React Negatively When Asked to Correct Work or Suggestions Are Given (Northwest Regional Education Service District, n.d.)

- Reinforce that we learn from our mistakes and we all make mistakes. Example-Albert Einstein failed his high school because he was a visual rather than an auditory thinker.
- Encourage use of relaxation techniques
- Use errorless learning as much as possible-observing as the student gets started to assure he/she is doing the work correctly
- Evaluate the level of difficulty of the work assigned to determine if it is appropriate for a student and/or if changing the visual appearance of the work, reading level, or time constraints to complete the work
- Reduce the emphasis on competition in the classroom.
- Provide rubrics and/or work samples.

Strategies to Promote Engagement and Learning

Increasing Motivation of Students During Lessons

Strategies to assist teachers in increasing motivation for students with ASD include (Northwest Regional Education Service District, n.d.):
- Clearly defining the purpose of the lesson. If knowing the purpose is not enough motivation for the student, establish a routine of completing a task, then providing access to a preferred activity or task.
- Following difficult tasks with tasks that the student enjoys or can complete successfully.
- Alternating types of tasks. Follow paper and pencil assignments with an active task.
- Using visual lists or token boards to help student stay motivated.
- Determining what information the student already knows and what he/she still needs to learn.

Giving Verbal Directions

Auditory processing difficulties are common among students with ASD (Kluth, 2010). It is very easy for the student to miss all or part of what is stated verbally.   The following strategies may be helpful when giving verbal directions to students with ASD (Northwest Regional Education Service District, n.d.):

- **Speak slowly** so the student can process what you say.
- Use **visual cues** to help with explanations.

- Have student **paraphrase** the directions given to check for understanding.
- Utilize **cue words** just prior to giving directions to prompt the student to focus
- **Define a specific location** within the classroom where you will always stand to give directions to provide a visual cue for the student.
- Use a **designated place** to consistently write assignments and due dates.
- **Pair** visual cues with verbal directions.
- Show **examples** of a finished product.

Responding to Questions

The following are some strategies that can assist the student when responding to verbal questions presented (Northwest Regional Education Service District, n.d.).

- Provide *extra time* for responding to questions. (Caution: do not repeat or restate the question while the student is processing. This may cause the student to restart his/her processing as if a new question were being asked).
- Use a *signal* before calling on the student in class (standing in front of the student's desk before calling on him/her).
- Teach students to be patient while another student is formulating a response.
- Let the student know that you will ask a question, move on to a few other people for answers to other questions, and then will return to him/her for the answer.
- Accept other forms of communication, such as pointing to a yes or no card or allowing the student to write or type her answer.
- Ensure you have the student's attention before talking.

Following Lessons and Lectures

 Strategies to assist the student in following along with lessons include (Northwest Regional Education Service District, n.d.):

- Creating context, point of reference, at the start of the lesson
- Using visual forms of presentation (whiteboard, charts, PowerPoint, and/or objects)
- Avoiding ambiguous language
- Minimizing visual stimuli from the area in which teacher typically stands during lessons
- Using fill in the blank handouts to accompany a lesson to help student follow along
- Repeating important facts
- Pre-teaching new concepts
- Audio recording lessons
- Designating a note-taker to share notes with the student
- Teaching and modeling note taking strategies
- Using cueing statements prior to key points
- Minimizing auditory distractions
- Reviewing key points at the end of class
- Making an outline for the lesson for the student to follow

Use of Visuals

The use of visual supports and strategies have been found to benefit many individuals with autism .(Boutot & Myles, 2011)

Examples:

- Venn Diagrams
- Story Planner
- Experiment organizer
- Math Problem Solver
- English/History Organizer
- Independent learning organizer
- Making a Balanced Decision
- Considering both sides of an argument

For more information on creating graphic organizers, go to: http://www.psea.org/ uploadedFiles/ TeachingandLearning/Special%20Ed%20Graphic%20Organizers.pdf

For printable graphic organizers, go to:
- Education Place - http://www.eduplace.com/graphicorganizer/
- The Graphic Organizer -http://www.graphic.org/organizers/free-graphic-organizers.html
- Teach-nology - http://www.teach-nology.com/worksheets/graphic/
- Education World - http://www.educationworld.com/tools_templates/ index.shtml#graphicOrganizers
- Teacher Vision - https://www.teachervision.com/graphic-organizers/printable/6293.html
- West Virginia Department of Education
  – http://wvde.state.wv.us/strategybank/GraphicOrganizers.html

Computer-Aided Instruction (CAI)

Computer-aided instruction(CAI) can be used to address academic and/or language and communication skills in individuals with ASD. CAI has been shown to be effective with students due to the tendency for those with ASD to be visual thinkers, processors and learners. (Grandin, 2005). Skills that can be addressed through CAI include recognition and prediction of emotion, problem solving, vocabulary and grammar, reading and communication skills(Collet-Klingenberg, 2010).

VizZle - a web-based visual learning system with interactive instructional lessons, schedules, games and data reports that can be accessed on a computer, smartboard,

iphone or ipad. VizZle provides lesson templates, authoring tools, and media, tutorials, and a data tracking system for each student. For more information go to: http://www.monarchteachtech.com/.

For more resources and information on CAI, go to:
www.gvsu.edu/.../autism_in_the_classroom_computer-aided_instruction....

Modifications
(Northwest Regional Education Service District, n.d.)

Worksheets

Students with ASD may benefit from worksheets with:

- Fewer questions per page.
- Increased font size.
- A reduced number of items to match on matching sections.
- De-cluttered worksheets
- Pictures to support concepts and understanding.
- Elimination and rewording of essay questions.
- Examples to follow.
- Highlighting of important information or for items the student needs to complete.
- Answering questions on a separate sheet of paper or a word processor.

Homework

Modifying homework expectations in the following ways can support instruction and increase learning, while decreasing the student's level of stress and frustration (Northwest Regional Education Service District, n.d.)**.**

- Reduce the number of questions to be completed.
- Identify fewer questions which cover the most important concepts
- Provide the option of not completing essay questions.
- Accept alternative forms of demonstration of understanding.
- Word banks for worksheets.
- Allow student to type answers or audio record them.
- Exempting the student from homework if the student has demonstrated mastery of a concept.

Writing Assignments

Modifications for writing may include (Northwest Regional Education Service District, n.d.) :

- Opportunities to write about the students favorite topics.
- Using visuals to help the student create a clear direction for his/her writing and identify what is important
- Using a template to get started.
- Provide an example of a desirable finished product to clarify expectations.
- Provide specific expectations for each assignment.
- Reinforce attempts to complete written assignments.
- Do a relaxation activity before writing.
- Allow the student to use a word processor to complete lengthy assignments.
- Provide sentence starters.
- Give suitable topic words to help generate writing ideas.
- Suggesting words that help make sentences flow and appear more complex
- Highlight or underline the main idea in essay questions
- Allow various forms of demonstrating knowledge.

Reports and Long-Term Projects

Difficulties with executive functioning skills create challenges for many students with ASD in completing long-term projects (Northwest Regional Education Service District, n.d.). Modifications to consider include:

- Break down project into smaller parts with short term due dates
- Allow various methods of presentation in place of oral reports.
- Provide worksheets or checklists for students to organize and set timelines.
- List resources students can use to get started on doing research.
- Provide examples.
- Inform parents about the project or report.
- Have the student work on a topic that is of special interest.
- Provide descriptive rubrics to demonstrate expectations.

Tests and Exams

The following modifications may be beneficial for the student at test time (Northwest Regional Education Service District, n.d.)

- Give the test in a quiet location which is free of visual distractions.
- Remove time limits.
- Shorten the test (select only the most important items).
- Replace essay questions with more direct questions requiring a one or two-word response.
- Use word banks and/or box sections of the test
- Highlight or underline directions.
- Allow the student to type or record answers.
- Have the student write directly on the test rather than fill in an answer sheet.
- Simplify the appearance of the test.
- Use take-home tests.
- Provide different options for the student to demonstrate knowledge.

Additional Resources

Understanding Autism: A guide for secondary School Teachers from the Organization for Autism Research

- Part 1. Characteristics - http://www.youtube.com/watch?v=4yAAOI6JUsM
- Part 2 – Integrating Supports in the classroom - http://www.youtube.com/watch?v=veQKDDE9C_w
- Part 3 – Practices for Challenging Behavior- http://www.youtube.com/watch?v=LK5Pr9h10BY
- Part 4 – Effective Use of Teacher Supports - http://www.youtube.com/watch?v=X4GdaD2Izxc

Supporting Students with Autism in the Secondary Classroom

Post-Test

1. Having a sensory processing disorder means that an individual _____.

    a) lacks the ability to effectively and efficiently organize sensory information
    b) is over-responsive to touch
    c) is under-responsive to smells
    d) fears loud noises

2. Individuals with autism always have significant impairments in speech.

    a) True
    b) False

3. When selecting a student with autism to respond to a question posed verbally, one should _____.

    a) restate or rephrase the question immediately if the student does not respond
    b) call on another student if the student does not respond within 5 seconds
    c) give the student a signal before calling on him or her
    d) all of the above
    e) none of the above

4. Which of the following is a cognitive characteristic often exhibited by individuals with ASD?

    a) Uneven development of cognitive skills
    b) A strength in cognitive flexibility
    c) Strong reading comprehension skills and difficulty with word recognition
    d) A strength in the ability to generalize skills across settings

5. Which one of the following is not required to receive an educational diagnosis of autism?

    a) exhibit impaired social interaction.
    b) exhibit self-injurious behaviors.
    c) exhibit behaviors and interests that are repetitive and stereotyped
    d) exhibit impaired communication skills

6. Individuals with autism never make eye contact.

   a) True
   b) False

7. Autism affects approximately 1 in _____ children nationwide.

   a) 52
   b) 88
   c) 110
   d) 150

8. Individuals with autism do not desire friendships.

   a) True
   b) False

9. When a student with autism is not motivated to complete tasks, the teacher should consider _____.

   a) following difficult tasks with tasks that the student enjoys or can complete successfully.
   b) alternate the types of tasks.
   c) the use visual lists or token boards.
   d) all of the above
   e) none of the above

10. When a student with autism does not respond to a question/direction to which he or she has previously responded to, it is likely that he/she is_____.

   a) just being stubborn and non-compliant.
   b) having difficulty with receptive communication
   c) over responsive to auditory stimuli
   d) all of the above

11. An individual with a sensory processing disorder may demonstrate _____.

   a) adverse behavior as a result of discomfort
   b) avoidance of a particular setting or activity
   c) a lack of awareness of a serious injury
   d) all of the above

12. Which of the statements about autism is not true?

    a) There is currently no known cure for autism
    b) Autism is now considered an emotional disorder
    c) Autism is most likely a result of a combination of genetic and environmental factors.
    d) There has been a significant increase in the prevalence of autism over the last decade.

13. Individuals with autism always have significant impairments in communication.

    a) True
    b) False

14. Over 90% of individuals with autism are cognitively impaired.

    a) True
    b) False

15. Which of the following characteristic(s) of speech are likely to be found in children with autism?

    a) unusual intonation
    b) echolalia
    c) repetition of words or phrases
    d) all of the above

16. All individuals with autism are over-responsive to sound.

    a) True
    b) False

17. Autism is limited to certain cultures and populations of the world.

    a) True
    b) False

18. A child who exhibits sensory processing difficulties can have more than one area affected.

   a) True
   b) False

19. Whenever the student has a substitute teacher, he/she becomes verbally rude and is sent out of class. Which of the following is least likely the reason this behavior continues to occur?

   a) Anxiety due to change in the usual routine.
   b) Unpredictability within the lesson of the structure created by a different teacher,
   c) Unpredictability of the way this teacher might respond.
   d) Student has learned that unacceptable behavior will result in being sent out of the classroom.
   e) The student does not want to work.

20. Repetitive patterns of behavior in individuals with autism may increase due to _____.

   a) stress
   b) excitement
   c) boredom
   d) anxiety
   e) all of the above

21. Which of the following is the least effective technique for presenting to students with autism during lessons and lectures?

   a) Creating context at the beginning of the lesson
   b) Using overheads, whiteboard, charts, PowerPoint, and/or objects to supplement verbal content
   c) Calling on the student to answer questions randomly and frequently throughout the lesson
   d) Using fill in the blank handouts to accompany a lesson to help student follow along
   e) Repeating important facts or concepts

22. Which is not an example of a teaching strategy that utilizes strengths in the area of visual spatial processing?

    a) Verbal instructions with a backup audio recording
    b) Video modeling
    c) Hands-on learning
    d) Picture schedules

23. Individuals with autism always have significant impairments in language.

    a) True
    b) False

24. Most individuals with autism have difficulty processing information presented verbally.

    a) True
    b) False

25. Autism is caused by psychological trauma in early childhood.

    a) True
    b) False

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CHAPTER 5

CONCLUSION

Conclusion

Through this project, I have created resources to prepare secondary general education teachers for the inclusion of students with autism in their classrooms. I believe that the information provided will assist teachers in becoming more effective in addressing the needs of students with autism as well as becoming more confident as educators when presented with students with autism in their classrooms.

Limitations

The biggest potential problem with this type of teacher education or training is that it does not provide direct experience and practice implementing strategies with students with ASD. Due to the unique characteristics and various presentations of behaviors and skill deficits among students with ASD, it is beyond the scope of this project to include all the possible situations a teacher may experience in the classroom. However, with a better knowledge and understanding of factors that influence behavior and learning of students with ASD and keeping in mind the specific deficits and strengths of the individual students, teachers will be better equipped to modify the strategies to fit their students' needs. Due to the time constraints and challenges of scheduling in-service or training days within schools, this project was designed as a half-day professional

development opportunity for teachers to begin to develop an understanding of the characteristics, challenges, and effective strategies for working with individuals with autism. Additional training and ongoing support will be necessary for teachers to become adequately prepared to address the numerous challenges faced when working with students with ASD. In addition, there may be challenges with the motivation of teachers to participate in this professional development opportunity. Another limitation to this project is that the pre- and post-tests have not been established as reliable and valid.

Recommendations

This project does not address the problem of limited access of general education teachers to other professionals throughout the school year who have adequate knowledge and experience with students with ASD. Access to knowledgeable professionals has been identified as an important factor in meeting the needs of both students with ASD, and the teachers who work with them.   It is recommended that teachers identify knowledgeable individuals in their area who can assist them in identifying and adapting strategies to best meet the needs of their students This project could be adapted and given over 2 days or as a full day presentation to allow for demonstrations, role plays, case scenarios/studies, discussion and question/answer sessions. It is recommended that ongoing training and support be provided to teachers following this presentation. The pre- and post-tests found in the presentation could be rewritten and established as reliable and valid. This presentation could then be formalized to include acknowledgement and rewards for those who participate. Teachers could be offered a certificate for completion and State Continuing Education Clock Hours (SCECH's) could be offered to increase teacher motivation and participation.

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