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# IDENTIFYING AND SUPPORTING TWICE-EXCEPTIONAL STUDENTS WITH AUTISM SPECTRUM DISORDER (ASD)

Student Article by Jennie McFadden

## Abstract

Twice-exceptional students are being over looked because the identification process is one sided and/or eliminates dual diagnoses. Twice-exceptional refers to students who are both gifted and have a disability (Segen's Medical Dictionary, 2011). The method in which this research was completed included reading scholarly journals, textbooks, and educational websites. Although some children with autism are also gifted, never the less, the gifted talents of these children are often overlooked and not supported, because the disability masks their abilities, testing criteria, and behavior. The results identified that, because the students' disability camouflaged their areas of giftedness is being over looked. By educating teachers on how to properly test and teach students who are twice-exceptional, educators can facilitate the proper instructional methods. Twice-exceptional students have many variations including autism. It is important to address both areas so that the students are being challenged and taught using both ends of the spectrum.

## Introduction

How can teachers and administrators help to better identify and support twice-exceptional students? Twice-exceptional refers to students who are both gifted and have disabilities (Segen's Medical Dictionary, 2011). This article highlights and discusses many areas the twice-exceptional students are often over looked because they fall into the category for Autism Spectrum Disorder (ASD) and Gifted and Talented. Some of the areas covered are identification, abilities, behavioral needs, and creating a toolkit.

## Identification

Properly identifying twice –exceptional students can be difficult for many educational purposes. Mills and Brody, as cited by Rizza & Morrison, pointed to the following three categories as indicators of the twice-exceptional student (a) evidence of an outstanding talent or ability, (b) evidence of a discrepancy between accepted and actual achievement, and (c) evidence of the processing defect (Rizza & Morrison, 2007, p. 58). “If the student with a disability has a gift or talent, it will eventually be recognized” (Morrison & Omdal, 2000, p. 103). In some cases that might be true, but for other students they need the added support from their families and schools to survive in the world. Based on the Individuals with Disability Education Improvement Act, as cited by Rizza & Morrison, schools may not identify twice-exceptional students on test scores alone and should use a response-to-intervention model (RTI) to monitor student progress (Rizza & Morrison, 2007, p. 56). RTI is an approach used by school systems to intensely respond to both academic and behavioral concerns of at risk students in the building (National Center for Learning Disabilities, 2017). IQ tests are very beneficial in providing information but they are not always the best to determine placement for twice-exceptional students. This is because the student’s disability may be hidden behind the student’s ability.

In the United States, there is an estimate of 300,000 children who are both gifted and diagnosed with a learning disability, but out of that number only 25 to 30% have autism. Only 10% of the population with autism fall in the category of savants and only 1% fall in the category of extraordinary (Cash, 1999, p. 1). Many at risk-gifted students have presented academic and behavior problems, depression, moodiness, anger, confusion and different types of coping mechanisms. According to the American Psychiatric Association's Fourth Edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV, 1994), there are several types of autism that develop differently (Cash, 1999, p. 1). There are people who have autism and managed to make a difference within society; one example is Temple Grandin. Temple succeeded because she had the support from her family and the determination to strive for what she needed. That is not completely true for twice-exceptional students. The failure of schools to identify and serve these children has been “an indictment against our society and a problem we should not tolerate” (Morrison & Omdal, 2000, p. 103). When identifying students, the most efficient way to determine if a student has potential is to use an IQ test or other form of measuring cognitive ability. Using other criteria will help identify which students need support in both gifted and special education programs. Some other useful materials include: teacher’s reports, nominations, family, friends, community members and other checklists to help with identifying twice-exceptional students.

## Creating a Toolkit

Rizza and Morrison (2007) claimed there are five categories to consider when creating a toolkit for identifying twice-exceptional students. First, pre-referral and screening, which consist of identifying students with gifted ability, along with indicators of a disability, or students who appear average or are underachieving because the disability hides their giftedness. Second, preliminary intervention, which consists of support

procedures put into place by the district or a team of school personnel to provide the proper procedure to put into action. Third, evaluation procedure, which consists of a Multifactor Evaluation (MFE) being conducted to see if the student shows potential for gifted education and special education that cannot be accommodated in the regular classroom. Finally, the implementation of an Individual Educational Plan (IEP) if the student is identified for special education or a 504 plan. Before a plan can be put into practice, there are five considerations.

Making sure that there is training for general, special and gifted education teachers on the characteristics and needs for twice- exceptional students; inclusion of gifted education teachers and Individual Assistance Teams (IAT) and Multifactor Evaluation (MFE) teams and special education teachers involved in the gifted identification process; formation of a multidisciplinary team responsible for referral and further evaluation of twice-exceptional population; flexibility in use of test data to include subtest scores to do no discrepancies between ability and achievement; use of traditional and nontraditional data that further demonstrates due to strength areas including tests from approved list of gifted identification, teachers, parent, and student nominations, student product assessment, behavior checklist, record review, portfolio assessment, and process monitoring. (Rizza & Morrison, 2007, p. 63)

## Determining Placement in Schools

Additionally, proper identification of students for the appropriate programs is crucial to a student receiving the appropriate education for maximum growth. We, as a society, managed to identify students with special education programs and for the gifted program, but have a hard time identifying students who fall in both categories. With the toolkit and guidelines to effectively implement the appropriate verification process for twice-exceptional students can help eliminate the frustration, depression, anger and behaviors that some of the students' exhibit.

When determining where a typical developing child is placed in school and the student's academic achievement is based on testing, how are twice-exceptional children properly tested? Educators know children who have a diagnosis of Autism Spectrum Disorder (ASD) may have impairments in fine motor skills, oral and written communication and language, and social skills. Because of the limitations in this skill set some students with high IQs and ASD receive average scores in reading, math, and spelling. However, their written language skills are still below average.

Among average or above IQ students with autism, researchers found that verbal and nonverbal abilities were better than working memory and processing speed . . . According to a study ninety percent of thirty children with high functioning autism had discrepancies in their intellectual and achievements abilities, resulting that social skills may positively impact academic achievement. (Assouline, Foley Nicpon, & Dockery, 2012, p. 1782)

## Assessment for Twice-Exceptional Students

According to Assouline et al. (2012), the predictability of achievement was examined among high ability children with ASD. To be considered for the study the child needed an IQ standard of 120 or higher using the Wechsler Intelligence Scales for Children-4th Edition (WISC-IV) or the Wechsler Adult Intelligence Scale-3rd Edition (WISC-III). The children also had to have a diagnosis of ASD determined from the Autism Diagnostic Interview-Revised (ADOS). There was no requirement for the students to be enrolled in schools for the gifted and talented or in gifted programs.

To measure the child's intellectual ability, academic achievement and visual motor skills depending on their age, each student participated in the WISC-IV or WISC-III, along with the Woodcock-Johnson III Tests of Achievement (WJ-III ACH) to measure achievement in reading, mathematics, written language, and oral language. The last test students were given was the Beery-Buktanica Test of Visual Motor Integration (VMI) that measured eye-hand and fine motor coordination. According to the study, reading and math achievement scores were positively affected on the working memory index (WMI), processing speed index (PSI), and gifted and talented programs. Although the strongest connection was between WJ-III Broad Reading and WISC-VI PSI there was no connection between verbal comprehension index (VCI) and any of the other four dependent variables. Overall interpretation of the study suggested, "lower order thinking, such as working memory and processing speed, are important factors to the academic success of high ability youth with ASD" (Assouline et al., 2012, p. 178). Gifted and talented programs are also very valuable for students, as well as educational interventions.

According to the research, students classified as academically gifted and receiving special education services have an increased chance of encountering assessment issues. Most assessments designed for academically gifted students do not accurately measure the true ability of the student (Rambo-Hernandez & Warne, 2015). The most effective way to assess students at the top is to use a test designed to meet educational needs and geared towards out-of-level testing; a test administered to assess those students who test above the normal-level range. The benefit is an accurate portrait of a student's skills in the tested area. The downfall is it is not able to assess any students who falls in the below level category. So essentially, it can only be used for the academically gifted and those higher-level non-diagnosed students.

Traditional academic achievement tests are difficult for exceptional students because of the true score in the measurement error. On an academic test, the measurement error is geared for the average ability so that excludes students who receive scores on the higher levels. If the tests were written for above average students then the average students would find those too difficult. Because of the time limits on tests, and other restrictions, this causes developers to create tests for average individuals (Rambo-Hernandez & Warne, 2015, p. 119). To create a test that would be able to assess all levels would make the test extremely long. "Students' test scores not only contain the measurement error that all scores have but also additional measure error because of the mismatch between students' ability and most of the test content" (Rambo-Hernandez & Warne, 2015, p. 199). When finding the true score of students in the high

and low levels of ability there are more measurement errors such as regression to the mean and floor and ceiling effects. A floor effect happens when a student's score is close to or at the minimum score because the items of the test were too difficult. Ceiling effect is the opposite; it is when the student receives a score that is at or close to the maximum score of the test. This is when the test is not diverse enough to assess the student accurately. This is why out-of-level testing is the most effective way to assess students with extreme scores. The only challenge with the below-level testing is that it fell out of favor with educators because of some fundamental problems that were never resolved (Rambo-Hernandez & Warne, 2015, p. 200). Before using the above-level test, teachers need to have an adequate picture of what each student knows so they can meet their academic needs.

When assessing students, teachers and administrators have guidelines to follow such as the current framework, Common Core State Standards (CCSS), which many states have now adopted (Vantassel-Baska, 2015). CCSS were created to replace individual state standards and cover all years of schooling. These assessment measures are evidence-based, which means there are studies and reports on each content standard. These assessments are also in line with college and work expectations so students are prepared. The CCSS help states to develop curriculum and implement structure. Gifted education programs fall under the category of one-size-fits-all, aligning the instruction focus to higher-level skills, interdisciplinary concepts and problem -solving. Because of the rigor on the CCSS it is harder for teachers to differentiate within these new set standards. The same is true for students with disabilities depending on the Individual Education Plan (IEP); working within the standards becomes difficult. Teachers working with students who have a disability and are gifted (twice-exceptional), have a goal to effectively instruct within the standards. It is possible for teachers to align the National Association of Gifted Children (NAGC) standards and CCSS. Looking at the two standards the CCSS as a point in which to begin the differentiation process and the NAGC requires the teachers to make sure the content area is aligned to the standards and develop a scope and sequence. "Research-based curriculum materials have been developed to provide models for school districts to employ in implementation of the CCSS that stresses the importance of higher-level thinking and problem solving" (Vantassel-Baska, 2015, p. 195). Differentiation of real world issues and themes demonstrates greater learning opportunities and true learning. Differentiation is important to incorporate in students' learning to meet the needs of students with disabilities and who are gifted.

When determining where a child is placed in school and their academic achievement, considering the CCSS is important in the way to assess these students. When testing students, educators should have an accurate baseline data point to measure student knowledge so teachers can meet their academic needs. If that means out-of-level testing or other forms of testing such as WJ-III, WISC-IV or WISC-III instructors need to provide the student with the most appropriate testing and materials reach their full potential.

## Abilities

The traditional gifted student excels in all areas, such as observation, verbal, and basic skills, as well as reading ability, problem solving and persistence to a task or subject. That is not the case for twice-exceptional students with autism as they typically have some difficulties in those areas. While highly intelligent reading problems occur because of cognitive possessing defects, twice-exceptional students struggle with basic skills and reading. However, just because these students struggle does not mean they do not have strengths, such as curiosity, high creativity, wide range of interests, and advanced ideas and opinions. They also have non-academic challenges. Twice-exceptional students can be easily frustrated, highly sensitive to criticism, and have difficulty with social interaction (Colorado Department of Education, 2012, p. 10). When it relates to special interests, twice-exceptional students can give lengthy and elaborate details on a topic, but have difficulty when it comes to a topic that does not interest them (Lovecky, 2005). When working with twice-exceptional students, teachers need to encourage the students to try their best and use their strengths for overcoming challenges/areas of concern. Twice-exceptional students' strengths come in many different forms. As teachers, it is our responsibility to tap into our student's potential.

## Behavior Needs

Twice-exceptional children with an autism diagnosis often exhibit behavioral patterns. A behavior is an action or reactions of a person or animal in response to external or internal stimuli (American Heritage® Dictionary of the English Language, Fifth Edition, 2011). When children demonstrate behaviors, it is generally in the form of internalizing or externalizing and a student with autism typically exhibit internalization patterns. External behavior can also occur which can consist of hand flapping, rocking, yelling/loud noises, and loping. These behaviors can be directed towards other people or to themselves. Accommodations developed for some of these behaviors can vary, depending on the behavior and how the behavior impacts the student. When supporting these students, teachers need to learn which behaviors indicate the student is being over stimulated or having difficulties. By identifying early triggers, a teacher can prevent the behavior from occurring. The teacher should also put steps into practice, where the students are about to recognize when they are reaching specific levels and can initiate a solution.

## Teaching Strategies

All students need strategies to excel in school, which is especially true for twice-exceptional students. According to Winebrenner (2003), "twice-exceptional students cannot improve by simply "trying harder" (p. 132). When teaching these strategies to twice-exceptional students, teachers need to remember they are addressing strengths and struggles. Some ways to enhance education for student with ASD are to remove or minimize distractions that could cause overstimulation, establish clear procedures and routines, reduce choice selection, and implement a reward system. When teaching, educators should differentiate instructions to better support the student learning styles. To help students be more interested in learning, teachers need students to be tolerant

of individual differences and use technology during lessons to promote student productivity.

## Conclusion

Twice-exceptional students are capable and intelligent, who with support, can achieve dreams and goals. For the dreams and goals to be achievable, teachers and administrators need to find the best way to identify and support twice-exceptional students. There are many forms of assessment to help students, but an appropriate assessment for twice-exceptional students is non-existent. The most important way to support students is to realize and appreciate their individual differences; while districts and administrators are helping to find or develop appropriate ways to support the twice-exceptional student in and out of the classroom. When teachers work with a child who struggles, they may misperceive areas in which the child excels. The coexistence of both aspects can be perplexing. Research indicates twice-exceptional students require a dual-emphasis approach, one that focuses on the struggles and talents while supporting and addressing the disability (Baldwin, L., Omdal, S. N., & Pereles, D., 2015, p. 219). This is how educators and administrator can help to better the lives of twice-exceptional students. Education is about learning not just for the students but also for the teachers. Our students are changing; as teacher and administrators it is important we make changes and learn from our students.

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