

Gifted and Thriving

Processing Speed and the Gifted/2e Child



Dr. Michael Postma

Processing Speed and the G/2e Child

A few months ago, I wrote a very short piece about processing speed that found its way onto a Facebook group for parenting gifted and twice-exceptional children. This post was in response to an innocent question posed by a parent wondering why her child scored lower in this area on the WISC-V (Weschler Scale of Intelligence). I rarely post on FB, so I didn't think much of it. A short time later, I decided to check on the responses and was surprised to find more than one hundred responses from various members. Apparently, I had touched a raw nerve; one that affects large numbers of gifted and especially those dealing with multiple exceptionalities.

Processing Speed is a complex variable, especially for highly gifted and twice-exceptional children. Due to atypical neuro-development, these individuals experience asynchronous growth characterized by intense epigenetic signatures (sensory prints) and a delayed (but intense, and easily overwhelmed) Limbic System. Some refer to this as Hyper Body, Hyper Mind. In short, these children intake and process information in a very different manner than their more typical peers that, in turn, influences perceptions of processing speed as measured both by formalized assessment and, in a more nuanced manner, by daily requirements placed on children by institutionalized systems such as schools, social norms, and even the work place. Furthermore, parental expectations can run contrary to how children g/2e children process and manipulate information, especially if the parent is unfamiliar with neuro-diverse patterns of development. As a result, many of these children and teens become frustrated, anxious, or even angry and may react negatively when labels and expectations of performance are placed upon them. So, what is the issue? We know that processing speed can be characteristically low for highly gifted and 2e children, but why?

Let's first take a brief look at what processing speed is and how it is measured.

Processing Speed and the Gifted/2e Child

Processing Speed is determined by a composite analysis measuring the following: the ability to **quickly and correctly scan** (not all of us are visual learners), sequence, and/or **discriminate visual information**. Included in this composite are implications for **short-term visual memory, attention, and a measure called graphomotor processing** which is both the mechanical and visual perceptual processes of correctly scanning and organizing visual information. Yes, a bit of a mouthful but if you think about the way processing speed is measured, you may better understand why, for highly gifted or 2e children displaying traits of hyper body/hyper mind, there are a number of triggers associated with the measurement:

1. Intense minds (especially those with ADD or ADHD or similar symptoms) may struggle with 'sluggish cognitive tempo' due to distractibility and poor executive functioning needed for focus and planning. This can also impair 'activation' or the ability to organize their time, schedule, or calendar. It is a type of inertia that is also influenced by a reluctance to do the work (especially if it is perceived as busy work or uninteresting), uncertainty of the directives, anxiety, frustration, or even boredom. Generally, tasks associated with processing speed do not require deep thought, contemplation, or higher order thinking skills that can engage the child. Rather, they require concentration and effort which may not always be present. So, as a result, processing speed scores can be artificially deflated and may not always be the best indicator of how these children intake and store information.
2. In most cases, processing speed assessments require a '**paper and pencil**' to complete these sections of the test. Many G/2e children dislike using a pencil or may struggle with pencil coordination that, once again, will slow them down. Within the WISC-V, processing speed is determined by two subtests: Coding and Symbol Search. For children with fine motor (or any of the above issues) will struggle with these assessments as they require pencil to paper tasks and rapid differentiation of abstract symbols
3. Gifted children, especially those that display traits of **perfectionism**, like to check their work for accuracy and thus may deliberately move slowly to make sure that they are doing things correctly. In timed assessment models, this will reflect poorly on the actual scoring.

Processing Speed and the Gifted/2e Child

4. Processing speed is measured through **timed assessments**. This does not allow the child to accommodate for any of the above issues or allow them to think through the tasks at hand. Any timed assessment, whether an IQ test or a school assessment puts the highly gifted or 2e child at risk. There are those in the field that will describe this as immoral as it artificially deflates scores, test results, and, in many cases, prevents the children who need services the most from receiving them.
5. Processing speed is related to **immediate recall** and I personally theorize that G/2e kids accumulate information rapidly but do not always store that information properly. I call it the **messy filing cabinet theory**. The material is there, it just takes extra time to organize, recall, and in some cases sift through the varying solutions that arise to come up with the best answer. Before I was admitted to begin my doctoral program, I had to take the Miller's Analogy Test. This test contains one hundred short analogies which had to be completed in sixty minutes. The first few were quite simple, but as they grew more complex, I began to analyze each answer and was able to make cases for most of the answer choices. I only completed fifty problems. In a similar manner, gifted children can over analyze and thus be unfairly labeled as slow processors when, in fact, they are actually dissecting all the options before making a proper judgement.
6. Processing speed is related to **executive functioning**. In turn, good executive functioning skills are related to a healthy Limbic System that is not always present in gifted and especially twice-exceptional individuals. Organizing, prioritizing, planning, emotional regulation, structure, and even, language development, stem from the Limbic System and can be related to how one processes information in a timely manner.

Processing Speed and the Gifted/2e Child

7. Processing speed can also be related to **visual and auditory processing** and in many cases visual and auditory issues are hidden behind the complexity of the twice-exceptional child. Visual Processing Speed can be defined as ‘the amount of time needed to make a correct judgement about a visual stimulus’. For those struggling with visual processing issues, the sensory information that is received through the eyes may be hindered in understanding or interpreting the information taken in and can affect how that information is processed and understood. This is not related to the sharpness of one’s vision (although that also can have an effect) but the ability to register, translate, and reproduce that information in a meaningful way. One can only imagine how this can affect the daily requirements of existence. Cleaning one’s room, reading, taking assessments and a myriad of other expectations can become burdensome for a child struggling with visual processing. In a similar fashion, auditory processing may also be an issue. WebMD defines auditory processing disorder as the following:

“People with auditory processing disorder (APD) have a hard time hearing small sound differences in words. Someone says, "Please raise your hand," and you hear something like "Please haze your plan." You tell your child, "Look at the cows over there," and they may hear, 'Look at the clown on the chair'. Auditory Processing Disorder, also known as central auditory processing disorder, isn't **hearing loss** or a **learning disorder**. It means your **brain** doesn't "hear" sounds in the usual way. It's not a problem with understanding meaning.”

Again, the difficulty in auditory processing artificially slows down the child’s ability to process and manipulate information leading to simple errors that can affect listening and learning. It takes time, flexibility and patience (as well as clear communication: visuals, spacing, color coding, enunciation) to make sure the student understands your intent. The intellectual potential is there, you just have to communicate it properly.

When you encapsulate all these potential issues, you can begin to see why processing speed can be a potential problem for our neuro-diverse children. As they manage the daily requirements of school (timed tests, due dates, multiple classroom assignments, quick question/answer sessions, and the like), or even the expectations set upon them in a variety of social settings, it is not hard to see how they may struggle. In addition, slow processing can cause anxiety, stress, low self-esteem, and the lack of confidence to move forward and tackle new and potentially exciting materials. What then, can be done?

Processing Speed and the Gifted/2e Child

From a societal standpoint we need to reframe our understanding of processing speed. From a standardized assessment perspective, we need to adjust how we assess our G/2e children or how we measure their intellectual potential. I do know that there are groups actively working on this project as we speak. We also need to develop patience/acceptance of how our children think and process information. In a society characterized by ‘immediate gratification’ or ‘immediate response’ we need to slow down and allow our children to think, evaluate, assess, and create. Given the proper time, space, and understanding, I have worked with a number of children who have exhibited an extraordinary talent in ‘rethinking normality’ and creating new visions, ideas, perspectives, and yes, even products. We need to reassess the way schools operate. Do away with timed assessments, busy work, continual repetition, outdated homework policies, etc. and focus on the individual growth of each of our students against individualized standards of potential. This following list chronicles a few strategies that might help both parents and teachers to alleviate and/or remediate the stress of slow processing:

1. Provide clear copies of notes/instructions ahead of time and read them aloud to the student.
2. Provide visuals (pictures, diagrams, index cards, reading strips, highlighters, sticky notes, etc.) whenever possible and give instructions as to what those visuals are asking. For example, for a child struggling to organize his backpack, pictures of what the backpack looks like when it is ready as well as visuals of what needs to go in in (i.e. color-coded folders with large TYPE) can assist them in getting ready for school.
3. Be patient. Listen reflectively. Display empathy, understanding, and maintain a good sense of humor in tough situations.
4. Get rid of timed assessments. Allow the student to process the information at their pace and give them the time and space to blow your mind!
5. Provide undistracted quiet space for learning and assessments.

Processing Speed and the Gifted/2e Child

6. Implement social/emotional curriculum and training on a daily basis both at home and at school. Yes, you can teach executive functioning skills alongside social skills and life skills. You can even work on occupational therapy skills. One suggestion is to review Art Costa and Bena Kallick's *Learning and Leading with Habits of Mind: 16 Characteristics for Success*. The book is available at ASCD Press. Another good resource is *Bright Kids Who Can't Keep Up* by Dr. Ellen Braaten and Brian Willoughby published by The Guilford Press.
7. Establish and maintain clear routines for increased efficiency. Twice-exceptional individuals need a sense of order to feel safe and productive. In some cases, this sense of order can become obsessive, but it is essential for 2e children (and even adults).
8. Model behaviors. Whether you are aware of it or not, your children are always watching and listening. They take their cues from you and if you are stressed or angry due to the difficulty in dealing with slow processing, they will become anxious and stressed. Coping is difficult enough without having to deal with stressed adults in the room whether you are a parent or teacher.
9. Challenge them to develop creative solutions/techniques to alleviate issues with processing speed.
10. Parents need to be on the same page in how you support your child. In addition, parent-teacher alliances are essential for success. It takes a village.

Finally, as parents, teachers, and caregivers, we need to continually advocate for our precious cargo by teaching them metacognition, self-advocacy, communication skills, character development, executive functioning skills, resilience, and yes, even a little personal interference, if needed (not drone parenting).

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Meet Dr. Mike Postma

Dr. Michael Postma is an educator, author, speaker, coach and consultant dedicated to the holistic development of the gifted/twice-exceptional (2e) community. Over the last two decades, Dr. Postma has served as a gifted teacher in the classroom, as an administrator and leader in gifted schools - both public and charter schools in multiple states, and was the architect of the Minnetonka Navigator Program, a magnet school in Minnesota specifically designed for highly gifted and twice-exceptional students. He currently is the President and co-founder of Gifted and Thriving, LLC and the Programming Director for the non-profit SENG (Supporting the Emotional Needs of the Gifted) organization. Dr. Postma has published a number of articles and two books, the latest titled "The Inconvenient Student: Critical issues in the Identification and Education of Twice-Exceptional Students". He travels and speaks nationally and internationally on a variety of topics such as: the social/emotional development of the gifted, understanding twice-exceptional learners, gifted/talented programming, neuroscience and the gifted/2e brain and more. Dr. Postma holds a B.A. from McMaster University in Hamilton, ON; a M.A. in Gifted, Talented and Creative Education from University of St. Thomas in Minneapolis, MN; and a Ed.D in Educational Leadership (Critical Pedagogy) also from the University of St. Thomas. He currently serves as a board member of Northwest Gifted Child Association (NWGCA) and Gifted Homeschoolers Forum (GHF Learners) organizations. Dr. Postma resides in Bellingham, WA with his wife Julie, and is the father of four gifted adult children, three of whom are twice-exceptional.