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parenting for high potential

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a note from the editor

As *Parenting for High Potential* celebrates its 25th anniversary in 2021, I reflect on how research and resources on giftedness have evolved.

In my personal and professional experiences, I've found most helpful the revelations that come when digging deeper beyond the "gifted label." The intersection of culture, gender, talents, interests, passions, disabilities (for some), *and giftedness* is the key to unlocking the whole gifted child. This level of sophistication ensures the right supports can be put into place well beyond what is visible on the surface of a gifted and talented child.

This issue features topics that have come into greater focus since *PHP's* debut. Through the lens of giftedness, we explore neuroscience, transgender individuals, Asian American families, and online learning.

In my own family, I hung my hat only on my child's gifted identity for years. But, it was only when I truly delved deeper into all aspects of my son's cultural, personal, social, physical, spiritual, and academic needs was I able to develop a clearer picture of who he was and what he needed at home, school, and in the community to thrive.

Nurturing gifted children is a complex endeavor. But, delving deeper into the nuances of each child's identity helps us help them rise to their potential.

Kathleen M. Nilles
Editor-in-Chief



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...Asian American
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...The Brain

Supporting our Brightest Minds:

Ideas for Parents and Teachers to Challenge and Empower Gifted Students During a Time of Social and Educational Change

By H. Michelle Kreamer, Ed.D., and Latasha Holt, Ph.D.

It has now been more than a year since COVID-19 rapidly spread across the globe, impacting education systems around the world.¹ In spring 2020, mass closures of in-person school meetings took effect as physical distancing measures were put into place to help reduce spread of the virus. Despite the challenges faced with the sudden shift from in-person to virtual instruction, an extraordinary partnership formed between America's dedicated classroom teachers and parents in an attempt to navigate online learning. Teachers, parents, and students answered the call to engage in virtual learning even with numerous obstacles presented, such as lack of technology access² and limited time to prepare for this new approach to instruction.

Ultimately, the pandemic has impacted teacher and parent approaches to education and the way we "do school" in many areas. Furthermore, it has demonstrated the need for and value of online learning across content areas and grade levels, suggesting that online learning is an important ingredient in the new educational norm.

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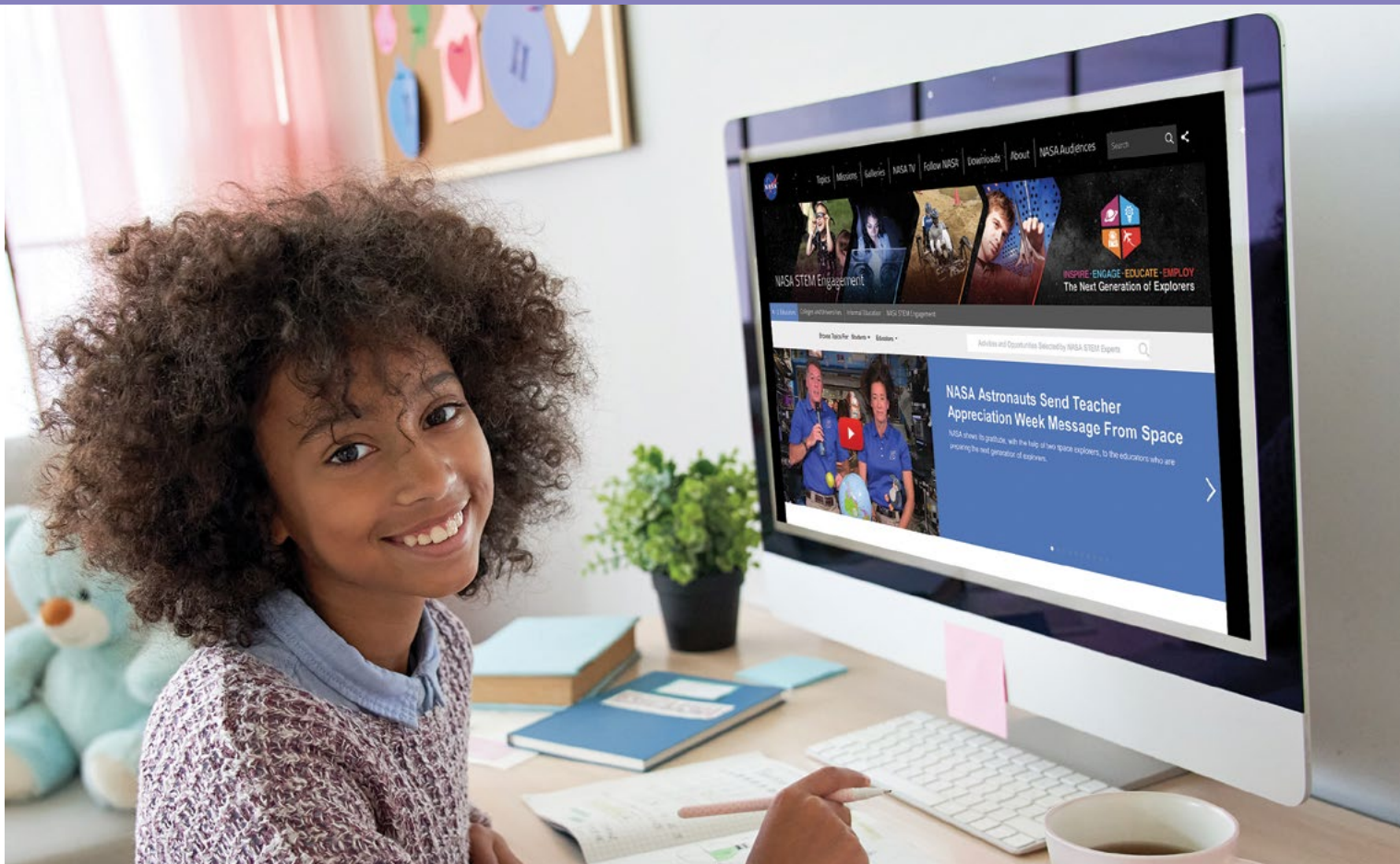
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Now that we are at the end of another school year, it is necessary to look ahead to summer enrichment and a new academic year to provide best instructional practices for students. Regardless of pandemic-related challenges still being addressed, educators must continue forward progress by designing and implementing rigorous instruction (whether in-person or virtual) to provide appropriate, high-quality learning experiences for their students. Unfortunately, services and learning opportunities to challenge gifted and talented students sometimes fall short.³ It is essential for educators and parents to work together to provide programming at home, in school, and within the larger community to challenge and empower these students. Additionally, it is important to recognize that gifted children have interests beyond their talent areas. Offering students home, school, and community experiences that relate to their special or general interest areas can provide low-pressure, interesting experiences that can enrich their lives and provide opportunities for new exploration, friendships, and possible new academic and career paths.

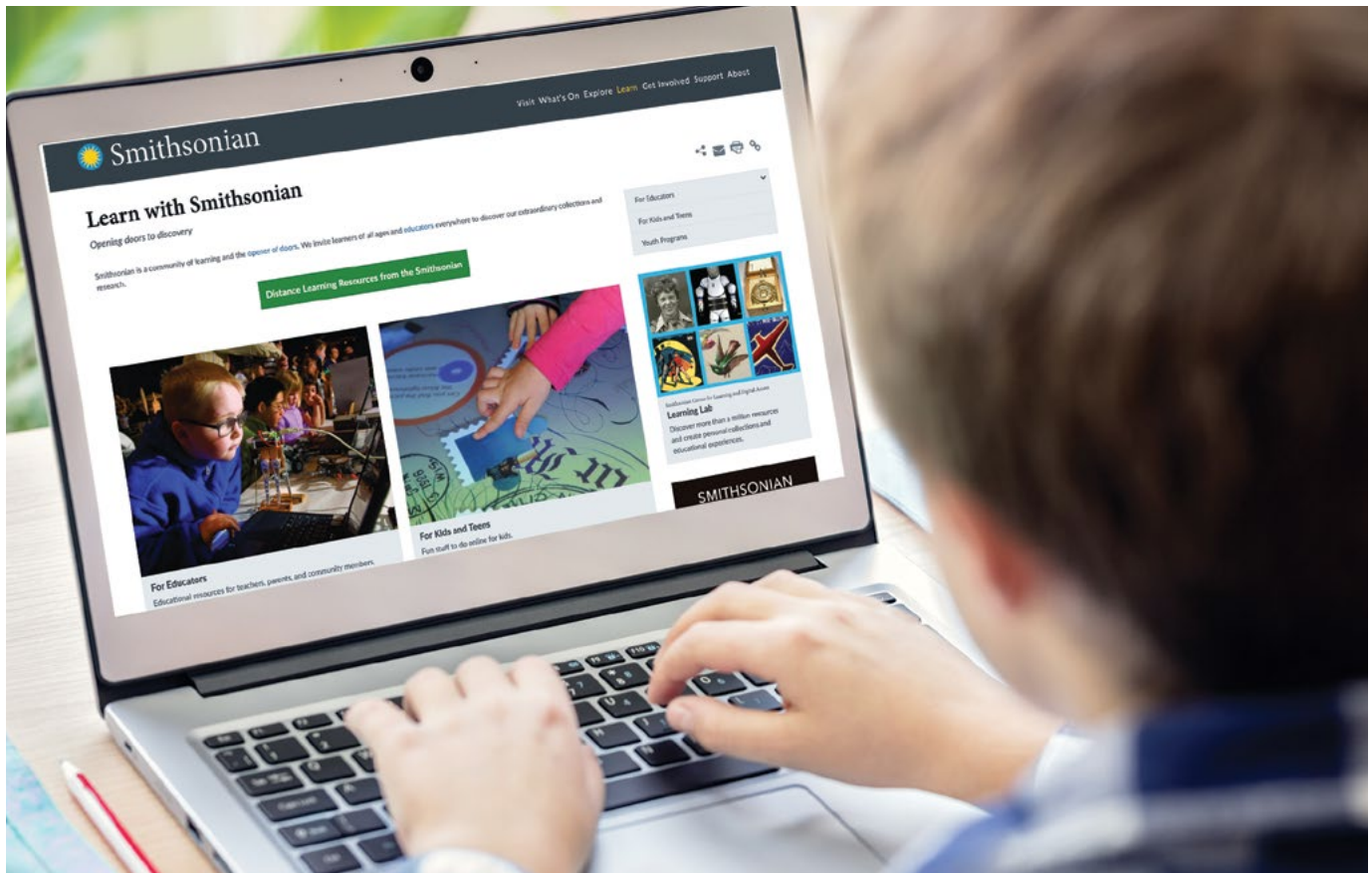
The reliance upon online learning for more than a year now highlights the needs and benefits for this approach to education; online resources can help to ensure gifted students are appropriately challenged. *(Be sure to read the May 8, 2020, NAGC blog on teaching online best practices.)*⁴ To provide further support, parents and teachers should become familiar with the Whole Gifted Child

approach. Rather than focusing solely on academic achievement, the whole gifted child process addresses student health, safety, engagement, support, and challenge. The Whole School, Whole Community, Whole Child Model provides a guiding framework focused on the “alignment, integration, and collaboration between education and health to improve each child’s cognitive, physical, social, and emotional development.”⁵ During these difficult times for young people, it is especially important to consider all the needs of gifted and talented students to better serve them most appropriately.

Following are examples of resources and online supports to help parents and teachers nurture gifted minds at home, school, and within the community.

Learning Opportunities at Home

Regardless of the educational setting, there are numerous resources for gifted and high-achieving students to engage in at home. To begin, you might start in your local community (e.g., public parks and recreations centers, local museums, and libraries) as these are great resources that may host various virtual or socially distanced events. Exploring these opportunities tailored to your child’s interests and talents is a great starting point. Whether your gifted child loves writing, science, art, math, or reading, there are engaging online opportunities that can be completed at home.



Below are ideas to get you started with high-quality materials for your child. Web addresses for these suggestions may be found in the resource list.

- **Art of Problem Solving.** This free online resource engages students with challenging mathematics problems after assessing their skill level. Students can choose their focus area (e.g., pre-algebra, geometry, calculus) and then track their performance as they continue to solve challenging math problems. The site also includes video resources explaining various mathematics content.
- **Code Wizards Coding for Kids.** This resource is great for parents of gifted children who want to learn how to code. It includes free resources, apps, websites, and activities, each accompanied by a description and recommended age range. The site also provides a guide for choosing the right coding class and helping parents navigate all of the options to determine what will be most engaging and fun for their child.
- **Free Online Courses.** Sure, you have heard about different free online courses your child could enroll in, but there are so many, how do you know what to choose? The Smithsonian Institution has created and shared free online courses on different topics relating to art, history, science, and more. A bonus is that course descriptions are included and indicate estimated time

and challenge level for each course. Additionally, the Museum of Modern Art (MOMA) has a variety of self-paced online courses bringing together students and the art world like never before.

- **National Writing Project: Writing Together at Home.** The National Writing Project has a webpage dedicated to individual student writing and opportunities for students to interact with an online community of writers. In particular, the webpage highlights information from *826 Digital* that includes resources for writing at home, as well as *Storium*, an online game centered around creative writing.
- **Virtual Book Clubs.** Organizing a virtual book club for your gifted child who loves to read is a fantastic way for students to interact with others to discuss a shared text. We suggest this be a collaborative effort among student, parent, and (ideally) teacher to gather participants, select a text, and set up parameters for virtual book club meetings. *Edutopia* has a helpful article on setting up a virtual book club.

Learning Opportunities in School

Collaboration between teachers and parents of the gifted can bridge school and home learning to allow for richer educational experiences for gifted and talented students. Much like the

home-based examples, there are many learning opportunities that can begin at school with the teacher and continue to challenge students within the home learning environment.

- **Flipgrid.** Different from the previous examples, *Flipgrid* is a platform for peer collaboration and interaction. This free resource allows a teacher to post a prompt or question, and have students respond through video replies. Students are then able to view and respond to peer posts by creating videos, allowing for online discussion between peers asynchronously. There is also a discovery library with thousands of pre-made topics from which teachers may choose, which can be a great way to encourage student exploration and expand their areas of interest.
- **Flocabulary.** *Flocabulary* by Nearpod also has a musical element with comprehension and vocabulary lessons in all content areas for K–12 students. Through interactive video lessons, students can view or read content, respond to questions, play vocabulary games, and ace quizzes. Students also can visit the “Lyric Lab” to make new lyrics.
- **Illuminations.** From the National Council for Teachers of Mathematics (NCTM), comes *Illuminations*—a website that includes brainteasers, games, and interactive tasks for students, as well as lesson plans available for NCTM members. Interactives and brain teasers are freely available on the site and include content for pre-K through high school. Gifted students will enjoy the game-like atmosphere while interacting with challenging math content.
- **NASA.** Space exploration may seem so far away, but this site makes it possible. Access STEM opportunities such as completing aeronautic nonograms, building your own moon, attending virtual field trips, and much more. There is a section for K–12 educators with engaging activities and lesson plans aligned to educational standards, as well as a section for informal education, so students can continue to explore the final frontier from home. The recent Mars landing can be a great inspiration for budding astronomers.
- **Teachrock.** Connecting music and academic content is made simple through *Teachrock*. Packed with free lesson ideas from elementary through high school that provide complete access to a wide range of music genres and real-world topics, this is a place where music and learning come alive. For instance, students might choose to explore “Beatlemania” while learning about history, social elements of the time, and the influence of this legendary group.

Learning Opportunities in the Community

Our brightest thinkers often have a heart for community connections. Although COVID-19 has made participation in “normal” community activities more challenging, creative minds have helped to combat this by reshaping ways students can continue to explore and learn about the world outside of

the classroom while adhering to social distancing and other safety measures during the global pandemic. Again, your local community is a great place to start exploring as more virtual and distanced events are available. Parents and teachers should also consider the following out-of-the-box, virtual ways gifted learners can continue to grow.

- **Common Sense Education.** This site is a collection of top picks for building online communities. It has a wide range of options that includes project-based learning at a global level (*Dreamdo Schools*), a creative sandbox for coding (*Scratch*), CAD social creations (*Tinkercard*), and more. Each virtual community recommendation has a grade level suggestion and a full review for parents and educators.
- **Learning to Give.** This is a great resource to nurture gifted students’ social and emotional intelligence, by focusing on service-learning ideas related to social justice, empathy, respect, democracy, diversity, and more. This site contains lesson plans, service-learning toolkits, and blogs that spark ideas on ways to

(Continues on p. 24)

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A Tapestry of Gifts and Talents through Asian American Values

By Benna Haas and Lisa Pagano

Woven through concepts familiar to families of Asian descent, the article features parent perspectives and teacher strategies on how to best support Asian American students with gifts and talents, including those who come from homes where English is not the first language. Although academic and social and emotional experiences may vary from one child to another, the values described in the article provide a lens on how to cultivate their potential and serve their unique gifts and talents.

Respect and Relationship

Parent Perspectives

The Korean saying “*One cannot dare to step in the shadow of a teacher*” speaks to how teachers are viewed in many Asian countries. We instill in children that teachers must be regarded with utmost reverence and respect. We assume teachers have the highest positions of authority because the Confucian influence is a part of the societal fabric in many Asian countries.¹ Because of our view on teachers’ titles and roles, we lean on the children’s teachers as sole informant and societal agents for academic access.

Approaches to our children’s learning environment may look and feel different from those of American-born parents. Instead of proactively engaging in children’s school activities, PTA, or school-related functions, we advocate for them by placing support systems at home through routine and structure. If you wonder why we don’t call, email, or contact teachers during the entire school year, it’s because we know and trust that teachers are doing their best for our children. The silent space between school and family is our absolute reliance on teachers’ authority and guidance.

Tips for Parents

- Invite teachers to the child’s milestone celebrations, performances, and tournaments that highlight the child’s gifts and talents.
- Use the child’s agenda as a three-way communication tool among teacher, child, and parents. Monitor teacher’s weekly academic expectations and use the agenda to send comments or questions back to the teacher.
- Ask the teacher for a translator if discussions are highly nuanced and English is not your first language.

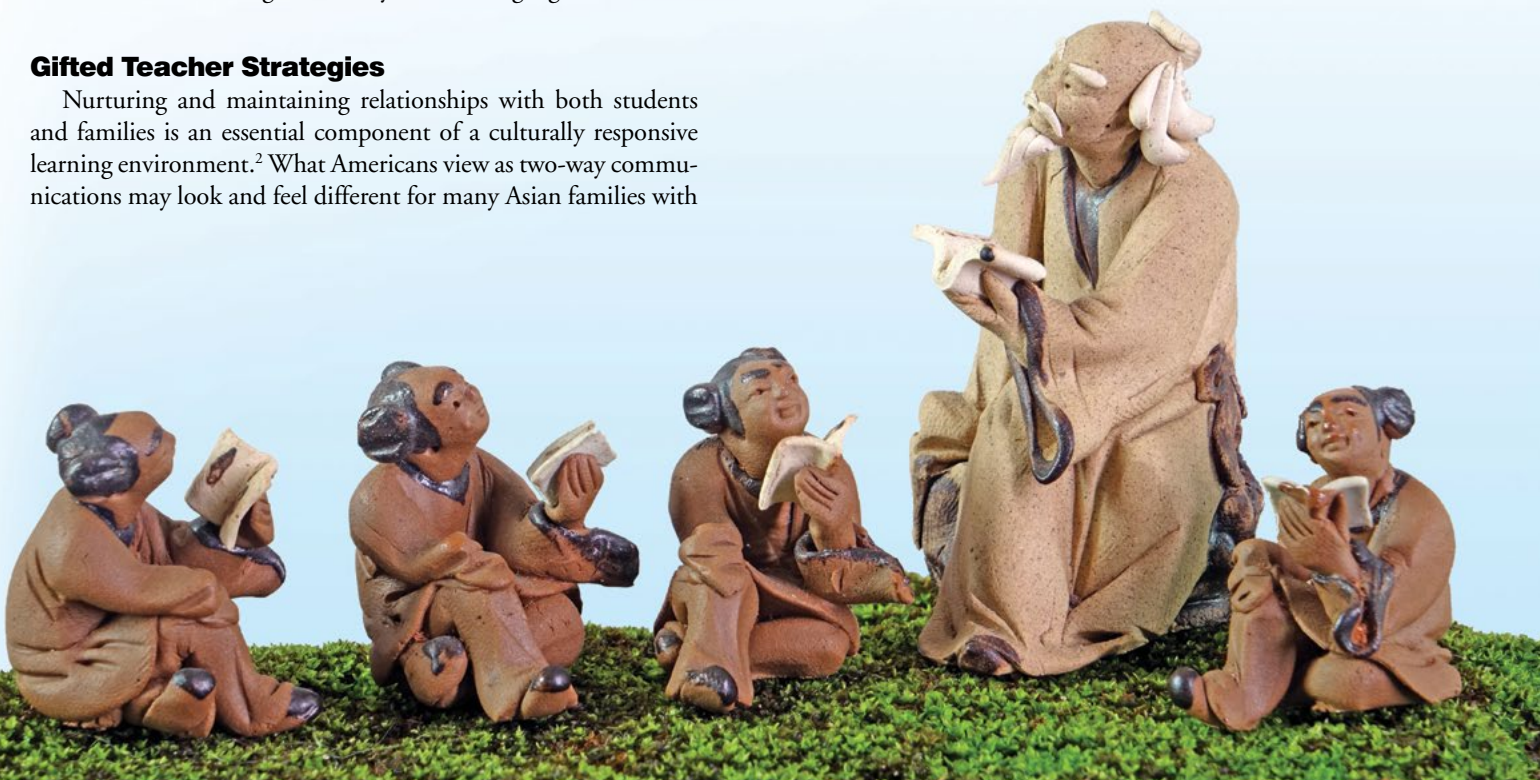
Gifted Teacher Strategies

Nurturing and maintaining relationships with both students and families is an essential component of a culturally responsive learning environment.² What Americans view as two-way communications may look and feel different for many Asian families with

gifted students. For example, to help parents understand what “a day in the life of” school looks like, provide frequent and consistent updates and communication through a written format rather than phone calls or in person. Include a signature or space for parents to sign or provide feedback to be returned as a way to invite two-way communications. Including academic content about classroom objectives, course offerings, or assessment schedules written in an easy-to-understand format empowers parents to be proactive in supporting their children at home and reflects a teacher’s invested interest in their families’ values. Another way to cultivate relationships is by making students’ culture and religious celebrations visible in multiple ways. Today’s digital tools and apps enable teachers to push out regular announcements, notifications, and celebrations for parents and students.

Tips for Gifted Teachers

- Provide regular written communications on school updates and academic content in an easy-to-understand format.
- Acknowledge and add holidays and religious celebration dates such as Ramadan, Chinese New Year’s Day, and Festivals of Light to the class calendar, or share a card or note to families to strengthen the home and school partnership.
- Easy-to-use tools like *Parent Square* and *Talking Points* seamlessly translate content. This increases access to information for families and helps them to connect with the school.



Excellence and Effort

Parent Perspectives

We believe that excellence is attained through individual and collective effort rather than natural abilities.³ Equating effort—rather than abilities—to achievement helps parents see that gifts and talents can be cultivated and nurtured through long-term exposure, practice, and discipline. We continuously cherish and give critical feedback to our children, rather than praise, to drive them to persevere and perform better, which we think will produce internal reward and purpose in life. However, because we might not have had similar schooling experiences or lack the social capital to expose children to appropriate educational opportunities as those of other American parents, we may not know how to direct our children to build specific skills required to be successful in both academic and social settings.

We sometimes wonder if our emphasis on effort might have produced unintended consequences. The focus on effort may contribute to a stereotypical view that Asian immigrants attain a high level of education and of economic success compared to those of other immigrants.⁴ Because of this prevalent view of Asians as model minorities, some of our children may shield their academic struggles from teachers and peers or are reluctant to seek help when they face academic challenges.

Tips for Parents

- Find a tutor or a mentor from similar cultural or ethnic backgrounds for academic and social and emotional support for your child.
- Engage in family fun to build soft skills. Board games, hiking, and similar activities on weekends and during summer help your child build confidence and relational skills.
- Help your child develop speaking skills to cultivate leadership and self-advocacy skills such as public speaking, debate, or Model UN.



Gifted Teacher Strategies

Because many parents and students of Asian descent are open to guidance, constructive feedback can motivate Asian American students to build self-efficacy and confidence. When teachers function as coaches and mentors for students, meaningful feedback can encourage continuous growth and confidence. For example, self-assessment tools for content and small-group instruction can help them monitor progress and track growth. Students can track grades, comments, and feedback on assessments and assignments. They can also graph progress and set new goals for themselves for continued growth and success. Additionally, teaching explicit skills on how they can articulate progress will encourage continuous improvement and growth. Other examples such as the use of self or group evaluation and process evaluation rubrics will help students become familiar with expectations for high-quality work and set timelines for themselves to progress to the next level. Instead of driving students to focus on the end result, self-assessment tools emphasize the importance of the process.

When gifted students consistently reflect through the self-monitoring process, they become aware of their own needs and how they learn best. All students benefit from learning self-advocacy skills; however, gifted students especially benefit since they may need assistance in balancing and managing their cognitive and intellectual demands.

Another strategy that would both empower learners and strengthen the partnership between home and school is student-led parent-teacher conferences. Students and teachers can collect and save work samples and assessments throughout an academic period. Students then can select pieces to discuss and share with their parents at the conference. For example, they could share work that they are most proud of, celebrate their efforts and growth over time, share goals they have set for themselves, and reflect on what has been challenging. These student-led conferences can also be conducted in their home language to continue to deepen the relationships between teachers, parents, and students.

Tips for Gifted Teachers

- Provide timely and specific feedback on academic tasks to help gifted students thrive.
- Integrate self-assessment tools and teach specific skills on how to articulate their progress with their peers, teachers, and parents.
- Try student-led conferences as a collaborative process for both teachers and students. If there are students who have not tried it, allow them to rehearse and practice to ease them into the leadership role.

Propensity and Potential

Parent Perspectives

Giftedness knows no boundaries! Some of our gifted Asian children whose first language is other than English may manifest their giftedness in mathematics or a STEM-related academic discipline. For some, mathematics is a universal language that helps them find pride and fulfillment where languages cannot reach. Math becomes an academic bridge and access to understanding other conceptual frameworks. For some of our children whose gifted programming or gifted classes are not an option because their language proficiency did not meet the gifted identification criteria, know that they still have unmet gifted needs that require teacher support.⁵ You will notice that they demonstrate faster and quicker mastery of the English language in a relatively short period of time. When English vocabulary, text complexity, and cultural nuance are roadblocks to understanding, it's important to help our gifted children make quick social and emotional connections to literary conflicts or informational texts related to their interests and cultural exposure.

Unlike American education where verbal expressions increase thinking skills and vice versa, we have a different approach rooted in hierarchy and respect.⁶ For instance, our children are trained to be respectful to adults and only speak when they are invited to speak. So when our children don't speak much, avoid eye contact, or don't speak up in small group discussions, know that they are accustomed to wait for an invitation to speak in shared settings.



Tips for Parents

Extracurricular Opportunities

- First Lego League: <https://www.firstlegoleague.org/>
- Girls Who Code (Grade 3–12): <https://girlswhocode.com/programs/clubs-program>
- Math Olympiads (Grade 6–12): <https://www.moems.org/>
- MATHCOUNTS: <https://www.mathcounts.org/>
- National Robotics League: <https://gonrl.org/>
- Science Olympiad: <https://www.soinc.org/>

Distance Education Programs

- The Center for Talented Youth (CTY) at Johns Hopkins: <https://cty.jhu.edu/>
- The Education Program for Gifted Youth (EPGY) at Stanford University: <https://sps.stanford.edu/>
- Gifted LearningLinks at The Center for Talent Development (CTD) at Northwestern University: <https://www.ctd.northwestern.edu/programs>
- The Wisconsin Center for Academically Talented Youth (WCATY): <https://wcaty.wisc.edu/>

Gifted Teacher Strategies

Some Asian American students may exhibit strengths in quantitative reasoning and a propensity toward mathematics, including those who may be acquiring English as a second language. For districts that use the *Cognitive Abilities Test (CogAT)* as one of the measures for gifted identification, take advantage of an Ability Profile, which provides unique insight into a child's reasoning abilities in three different batteries: verbal, quantitative, and nonverbal. It provides a narrative that focuses on characteristics and instructional suggestions. The Ability Profile, combined with percentile scores, also provides educators and parents with practical strategies to build on students' strengths at school and home while developing other areas to maximize potential.

For example, students who demonstrate a relative strength in quantitative reasoning may be capable of thinking abstractly, be able to identify patterns and may be skilled at acquiring computer skills more easily than their peers. Therefore, students may benefit from acceleration or enrichment opportunities, such as Honors level courses or Math Olympiads. Their strong mathematical skills can be further developed through high-quality, challenging math tasks, games, and puzzles. To cultivate their potential, emphasis should be placed on cooperative learning experiences, rather than competition.

A strength-based approach benefits students by allowing them to further develop their skills, interests, and talents and experience appropriately challenging instruction. This helps with student self-concept and aids in motivation and engagement. Teachers can then work to ensure appropriate scaffolds or supports are provided in other areas to ensure success and continual progress.

For students who may be reluctant to share their thoughts and ideas verbally, find ways to encourage multiple forms of expression, including nonverbal and written communication. Strategies include utilizing backchannels through digital platforms, such as Google Jamboard. When possible, encourage students to jot their thoughts down on a sticky note and share it with the teacher at the end of class. Providing Asian American students with multiple ways to participate will empower them to share their ideas and is a sure way for teachers to “invite” them to be part of ongoing dialogues.



Tips for Gifted Teachers

- Use the Ability Profile from CogAT to gauge student strengths to inform instruction.
- Inform parents of district and school's acceleration and enrichment options. Honors level courses, MATHCOUNTS, or Math Olympiads can further develop mathematical thinking skills and provide opportunities for cooperative learning.
- Encourage equity of voice by using backchannels, such as Chatzy, Padlet, Google Jamboard, or the chat feature in platforms such as Zoom and Google Meet.

Shame and Shine

Parent Perspectives

Connection to families is key. Layered with hierarchical structure and values, Asian children tend to make career choices that mirror other adults in the family. We rarely share personal problems with school counselors and psychologists. We do not encourage our children to share deep-seated emotions or personal issues with adults outside of families; however, we understand the need for our children to have trusted adults to guide their unique social and emotional needs.⁷

We welcome support through religious organizations, relatives, and ethnic and cultural affinity groups to help our children cope with stress, anxiety, and pressure. We recognize the need for a broader community to support our children, so we circle back to relying on gifted teachers, who we know can cultivate and support our children's gifts and talents.

Tips for Parents

- Connect with coaches, club leaders, teachers, or other adults who your children can identify with and see themselves.
- Maintain multi-lingual heritage for the children's collective identity and career readiness.
- Ask your gifted children how they want to be understood. Listen and wait for their response. They will tell you!

Gifted Teacher Strategies

Building relational capacity with Asian American families cannot be overemphasized. Educators should view every moment of the instructional day as an opportunity to build and deepen relationships with students—lunch, morning arrival, afternoon dismissal, recess, and transitions. Teachers often become trusted adults in their lives, making significant impact on a child's trajectory. Instead of merely collaborating horizontally with school personnel to share students' academic or social and emotional issues, make every effort to connect with students and their families first. Invest in relationship building by connecting with students at school functions, community cultural events, and extracurricular activities to deepen school-home relationships. Recognize students' shines and sparkles in non-academic spaces.

Tips for Gifted Teachers

- Take advantage of early morning or after-school tutoring sessions or lunchtime to cultivate relationships.
- Prioritize getting to know students' life stories and interests over professional or academic priorities.
- Be proactive in non-academic spaces to support Asian students' social and emotional needs.

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Just Listen: Affirming Strategies for Supporting Gifted Transgender Youth

By Paul J. “PJ” Sedillo, Ph.D., Rebecca Niederlander, and Orion

As a parent, teacher, or counselor we must have a readiness to listen to persons who are both gifted and transgender. However, gifted transgender students may not always be outwardly recognizable for multiple reasons. First, for personal safety, they are used to performing their assigned gender. Second, when they encounter a predicament, they often use their comprehensive knowledge to quietly locate someone to provide answers or find the information themselves.¹ Lastly, gifted transgender youth may hide their true selves using the “chameleon affect”² as they may be uncomfortable or even unable to reveal their truth.

That’s why it’s essential that adults who support gifted teens and young adults understand what it means to be gifted *and* transgender and are equipped with appropriate strategies to support these students. This article provides practical suggestions and ways to create an open line of communication for talking and listening, which is key with these young people, especially when an individual chooses to “come out.”

Creating trans-affirming, thriving schools and classrooms requires strategies to cultivate practices of resiliency.³ In addition, it’s essential to be aware of strategies suggested by the trans community for navigating climates that can be fortified against transgender oppression.⁴ It is important that teachers and teacher preparers within the gifted community take an active role in creating a transgender-affirming educational experience and that they share these strategies school and districtwide as transgender students are in

every setting.

Non-conformity to traditional gender roles may be interpreted as questioning authority, misbehaving, or being disobedient when gifted transgender students are just trying to be true to themselves. Also, others may hide or feel distressed because they can’t see any way of getting the support they need from the school system. To address this problem, parents, along with gifted transgender students, should review school policies and, if needed, meet with school administrators and the school board. Some may also want to work with national or local gifted organizations and with transgender organizations that support inclusivity.

For Teachers: Culture & School Policies

In order to create a trans-affirming culture, it’s essential that districts and schools review their policies to ensure they

are inclusive and not problematic. Some policies that can be difficult for gifted and transgender students include sports, teams, school uniforms, restrooms, and the simple act of separating activities or classrooms based on gender. Here are thoughts about some policies and practices:

- **Inclusive Curriculum for Gifted and Transgender Students.** Providing a transgender-inclusive curriculum lets the student know that trans people are and have been part of our history and world. This can be accomplished by using gifted acceleration and differentiation strategies to research transgender historical figures in history courses, and including positive transgender issues in sex education classes. People who are transgender and gifted exist in every industry and field. Highlighting trans and gifted individuals through lessons, readings, and classroom discussions (even if the class is not focused on gender) can reveal the importance

of showcasing the diverse expertise of gifted transgender individuals and communities. This curriculum benefits all students by raising awareness of the issues that affect trans and gender-diverse people.

- **School Uniforms.** School codes for uniforms can be extremely restrictive for trans students, which might include skirts for girls, pants for boys, and haircut/hair color/makeup/jewelry restrictions. Advocating for trans students to wear affirming uniforms can assist the student in feeling comfortable, supported, and eager to learn.
- **Restrooms.** Individuals who are not transgender may not understand that even the simple act of using the toilet can become problematic. If schools do not have inclusive policies, including for non-binary individuals, the transgender gifted student may avoid using the bathroom altogether. This can result in serious medical problems that can affect their health and well-being. Supportive strategies can be as simple as gender-neutral bathrooms. This provides privacy and eliminates a potential safety issue for transgender gifted persons. If the school/district does not compromise, parents can work with their child to find appropriate solutions.
- **Respect Names and Pronouns.** Using preferred pronouns is an important way to honor a person's gender (example: she/her, he/him, they/them). There are also many neo-pronouns such as ze/zem/zir and fae/faer being used by individuals who do not identify with the standard pronouns. New pronouns, as well as new names, must be respected. Many trans people refer to their birth name as their "deadname" (as it is dead to them), and try different names and pronouns until they find a combination that feels right for them. Getting used to a person's new name and pronoun can be a difficult process; the best way to deal with any mistake is with a quick apology and correction. Make sure not to make this a big deal. It is more important for best

practice to ensure that the correct name and pronouns are being employed.

- **Roll Call.** Administrative, legal, and economic barriers often keep transgender gifted people, especially transgender gifted youth, from being able to change their birth names. That's why it's important to stop the traditional practice of roll call using official class lists provided by administrators. Teachers should allow students to name themselves. If they find discrepancies between the name a student shares and the official roll, they should defer to the student. After all, we let students use different versions of their birth names all the time (e.g., Bill instead of William), so this should not be any different for transgender gifted students. Best practices are to hand out a confidential form at the beginning of the semester that asks students for preferred names and pronouns and with whom these can be used, so as not to out your students.
- **Outing.** Outing is sharing a person's gender or sexual orientation without their permission. Being out is still dangerous in many places so trans youth often choose not to come out to their parents or even their friends. If a child tells you that they are transgender, you should ask them who else knows so that you do not accidentally out them to others. Be careful about gifted transgender students' safety and privacy in the educational setting, especially when talking with other teachers and/or family members. Being outed against their will is a very traumatic experience. Use caution.
- **Safe Spaces.** Transgender students need spaces in academic institutions where they can feel safe. Make sure your school provides such spaces (also known as Safe Zones). Implementing gender-aware



practices takes time, so make ongoing commitments to create more transgender affirming classrooms. It is critical that we understand this change needs to occur for our transgender gifted students. Educators, staff, parents, and counselors have a crucial role to play in the movement toward transgender rightfulness, and the school setting is a great place to start.

For Parents & Caregivers: At-Home Strategies

Parents and guardians might have suspected and felt that their child's new gender identity makes sense, while others might be surprised to learn that their gifted child is transgender. Parents, guardians, and caregivers can initially feel ill-prepared to assist their gifted transgender child or may be worried about their child's safety, happiness, and future. Some parents and guardians might experience confusion or sadness around perceived loss of their child's assigned gender identity and a disconnect by feeling that they need to get to know their child again. Finding support to positively navigate their child's different gender, peer relationships, siblings, religious institutions, and their teachers is not always easy. Remember that your child deserves love, respect, and validation along with the assistance to locate affirming healthcare

(Continues on p. 18)

Food for Thought



Like giftedness, transgender individuals do not fit one mold. Trans, a common abbreviation from trans-gender, is an umbrella term for people whose gender identity does not match the sex they were assigned at birth. Trans people can be straight, gay, bisexual, pansexual, asexual, demi-

sexual, or any other sexual orientation. Some may even decline to put a label on their sexual orientation. A transgender person can also be intersex, defined as people born with reproductive or other physical anatomy that typically do not fit binary notions of male or female bodies; however, the two terms are not interchangeable.¹

Transitioning is an individualized process in which transgender people move from living aligned with the sex they were assigned at birth to living aligned with their gender identity.² There are three generally acknowledged aspects to transitioning: *social* (e.g., presentation, relationships, employment, names/pronouns); *medical* (e.g., hormone blockers, hormone therapy, gender affirming surgery), and *legal* (e.g., changing gender marker and name on legal documents and identification). Each trans person's journey is unique to the individual so any, all, or none of these aspects may be addressed.

Currently, there are no data on the number of people in the U.S. who are both *gifted and transgender*. However, we can calculate an approximate number of transgender and gifted youth using this formula:

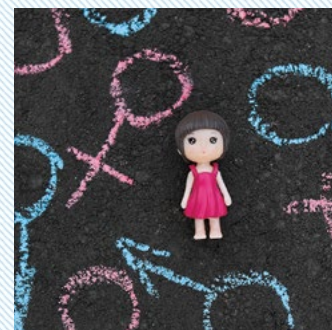
- According to the National Association for Gifted Children (NAGC), children who are in the top 10 percent in relation to a national and/or local norm is a good guide for identification and services,³ which would mean approximately 5 million

students are gifted.

- The U.S. Census does not ask for gender identity, so no official U.S. Census data have been collected on the number of transgender Americans. The Williams Institute documents that approximately 0.6% of American adults identify as transgender.⁴ A 2021 Gallup News poll found that adults maintain that 0.6% number; however, 1.8% of Generation Z (those born between 1997–2002) self-identified as transgender.⁵
- Using the Gallup polling data and NAGC estimates, there may be more than 90,000 gifted transgender children in America.

During the COVID-19 pandemic, educators, parents, students, and all others have seen an onslaught of individuals who are stressed and prone to depression. These issues can bring forth concerns for mental health and physical safety. Transgender gifted students also have dealt with stress and depression. As schools begin to reopen, many trans children, especially those who are gifted and already feel isolated, will be dreading renewed experiences of misgendering (when a person is referred to by their assigned at birth gender instead of the one they are), uniforms that do not fit their identities, cruel remarks, bullying, and even violence.

However, positive steps can alleviate some of the concern. A 2018 study found that transgender children who have support for their gender identity are no more likely to suffer from depression and have only minimal increases in anxiety compared to peers whose gender corresponds to their birth sex.⁶ With support and appropriate strategies, the gifted transgender youth in your life will thrive.



Endnotes

¹ National Center on Gender Equality. (n.d.) Frequently asked questions about transgender people. Retrieved from www.transequality.org

² National Center on Gender Equality. (n.d.)

³ National Association for Gifted Children. (n.d.). What is giftedness? Retrieved from <https://www.nagc.org/resources-publications/resources/what-giftedness>

⁴ Flores, A. R., Herman, J. L., Gates, G. J., & Brown, T. N. T. (2016). *How many adults identify as transgender in the United States?*

Retrieved from <https://williamsinstitute.law.ucla.edu/publications/trans-adults-united-states>

⁵ Jones, J. M. (2021). LGBT identification rises to 5.6% in latest U.S. estimate. Retrieved from <https://news.gallup.com/poll/329708/lgbt-identification-rises-latest-estimate.aspx>

⁶ Olson, K. R., Druwood, L., & McLaughlin, K. A. (2016). Mental health of transgender children who are supported in their identities. Retrieved from <https://pediatrics.aappublications.org/content/137/3/e20153223>

A Parent View: Love Your Trans Gifted Child Unconditionally

By Rebecca Niederlander

As the mother of a transgender highly gifted individual, I want to share some strategies and resources that I and other parents have found helpful—some essential—to help you in your journey.

The most important thing is to trust that what your child says is true. In the same ways that you learned to trust that their seemingly wild gifted interests were way beyond their age, that their ability to converse with adults was beyond the norm, and that their learning style was to consume information and process it, your trust of your child in their gender

identity needs to follow. Become the ally and advocate your child needs at home, in social situations, and at school.

First, read up! Learn everything you can about living a transgender life. Become fluent in the social, medical, and legal options for your child. As you have researched about giftedness to support your child's specific needs, research about being transgender and necessary accommodations. For example, at school your child may need your advocacy to get the district to accommodate name and gender changes. My district, Los Angeles Unified School District, has a gender policy called

Gender Identity & Students: Ensuring Equity and Nondiscrimination, which states that children are always to be called by their preferred name/pronouns and that name should be used on all documents except legal ones such as report cards. This means their preferred name and not their "deadname" is to be used on the daily educational electronic systems that your child uses. ("Deadname" is the term used to refer to a person's given birth name.)

Tell your child you love them and never express to them if you are "grieving the loss" of who you thought your child was. They were always the person they are telling you now that they are, they were just performing the gender they had been told they were until they realized the differences.

You will go through a lot of emotions around this profound shift in your life and the life of your child. This is to be expected. However, *do not* tell your child if you are having a hard time. Focus on the positives with your child around becoming their full selves. You will need support, too, just like you do with figuring out how to best support your gifted child. So, please work on these issues with your community of friends, family, and/or therapist.

Speaking of therapists, make sure your child has a good gender-affirming therapist if they need mental health assistance. You also may need to change pediatricians, since you will need someone supportive and willing to learn more about the specific needs of a transgender child. And you will need a specialized team of providers to address your child's gender needs. In Los





Angeles, institutions such as the Center for TransYouth at Children's Hospital provide comprehensive, gender-affirming care.

Unfortunately, some people might not be supportive. Your child needs you to be their number one advocate 100% of the time. If you have family that cannot get on board, let them know that when they can be supportive, they are welcome back. Never ask your child to be the one to tell family about their trans status since they might get an earful of negativity that could be devastating. Be the one to share information with others. Use positive language and tone such as, *"Recently we learned from our child that they are transgender! They would like you to use the name Robert, and their pronouns are now he and him. I hope you can be as supportive as I am. He will need your love even more as he finds his footing."*

As well, you may find that you get rude, intimate questions asked about your child. Never reveal your child's personal information around questions about genitals or sex life. If people ask you if your child is on hormones or is getting "the surgery," use

phrases like, *"We don't share private information like that, but it is a pleasure to share with you our family's big news!"* If they ask who the child likes, girls or boys, say, *"When our child has a relationship, they might share that information with you, but otherwise that is really personal information and not relevant to their transitioning. Gender and romantic attraction are two totally different things."*

Remember that their giftedness may make your child even more inquisitive about their gender identity. Given their gifted skill set, they have probably already done a lot of internet research. Aydin Olson-Kennedy, executive director of the Los Angeles Gender Center, refers to this as their "coming in, before they come out."¹ Support them in this. Be willing to talk with them at any time about their experiences since their sensitivities will make them even more aware and attuned to the nuances.

Expect the classic intense personalities of gifted kids to come out in this arena in triplicate! As you and your family strive to

support your gifted and transgender child, know that your child needs you more than ever. Be sure you regularly express your love and support, which will provide reassurance and strength for your child. ☺

Author's Note

Rebecca Niederlander is a Los Angeles-based visual artist, curator, and writer. Her sculptures and site-specific installations are data visualizations that use repetition and the inherent nature of the materials to address the individual's position within the larger intergenerational community. She is committed to illuminating the broad scope of the asynchronous nature of gifted individuals through her diverse, creative practice. She is a member of the advisory board for GRO Gifted and is a SENG Model Group Facilitator.

Endnote

¹ Webberly, H., Oakes, J., & Olson-Kennedy, A. (2020). Gendergp podcast. Retrieved from <https://www.gendergp.com/aydin-olson-kennedy-the-gendergp-podcast-s4-e5/>

Student Voices: Orion's View—"Just Listen"

By Orion and Paul J. "PJ" Sedillo, Ph.D.

As educators and parents, we spend a lot of time asking our students/children questions. In the best-case scenario, our questions are designed to stimulate their thinking. But all too often, our questions seem to have a different effect: they teach children that their job is to guess what's in their teacher's/parent's head and respond accordingly. The following questions were posed to elicit what gifted and transgender individuals are experiencing—stretching them into new horizons—and leading them to wonder, explore, follow their own curiosity, and think for themselves. Following are a few questions and answers with Orion.

PJ: *Do you feel there are unique challenges you face in being transgender and gifted?*

Orion: As a trans individual, one needs to have a working knowledge of neuroscience and biology just to justify my existence. Fortunately, being highly gifted, I find this research compelling.

PJ: *What do you think the world needs to know about what it's like to be gifted and transgender?*

Orion: The world needs to know that being transgender and gifted is alienating because so few people actually understand my experience. All day long I see stories on people's [social media] feeds about the latest bills being passed that take away my medical and human rights. I talk to trans people where this legislation is being passed who are scared to come out to their families for fear of being kicked out of their homes. Even my highly gifted friends have

this fear. What I want everyone reading this to understand is that what seems like minor [legislation] to you affects my life profoundly. We talk about gifted people being uniquely empathetic, and I am for sure feeling the hurt in my community.

Living with dysphoria is like living in a dark cave all your life and, someday, maybe there is a cave-in, and you first see a glimmer of light. At first, you are afraid of it; in time you realize that the light is really nice. You keep coming back to the light and you realize you need to live outside in the sun. That sunlight is gender euphoria. There is a similar phenomenon in gifted children. You spend all your time around other kids who don't understand what you are going through. Eventually, if you are lucky, you find other people who are like you.

I am a gifted person with sensitivities to external stimuli, so even seemingly little things like going to the hospital to get gender affirming medical care are harder because of the extreme stimulation everywhere. There are children crying, glaring lights, bright colors, and endless hallways to navigate.

PJ: *Can you share an example where you didn't feel heard or seen?*

Orion: When people spread transphobic rhetoric without investigation it feels like they don't care enough to look into the issues and are just blindly spreading hate. This is frustrating from both the trans and gifted parts of myself. The researcher inside of me is disappointed and the trans side of me is terrified.

PJ: *What advice do you have for parents and teachers who are raising a gifted transgender teen?*

Orion: **Listen to us—gifted or trans.** A lot of information around transitioning is deeply personal. You have no right to anyone else's journey. For example, for me, my name is a personal choice and no one else's business, so don't even ask me why I chose it. Additionally, although they/them pronouns are gender neutral and used for some non-binary people, it is still misgendering and hurtful to use they/them for a person who does not use that specific set of pronouns. Many people use they/them for me because I'm trans, but I don't want to be viewed as in-the-middle, I want to be viewed as the binary gender that I am.

PJ: *Do you feel adults focus more on your gender identity and less on your giftedness... or the other way around?*

Orion: Adults focus more on my gender than my giftedness because many people think being gifted is just smart—and not filled with all the downsides—while being transgender is a hot button topic that they feel entitled to talk about.

PJ: *What can schools do differently to support students who identify as LGBTQIA+ and gifted?*

Orion: Schools **must** have a school-approved GSA [Gender Sexuality Alliance] club where students can go to meet other people like them. This is especially important for gifted students who already feel alienated at mixed population schools.

(Continues on p. 18)

Resources for Transgender Gifted Youth and Their Families

READ:

- Brill, S. A., & Kenney, L. (2016). *Transgender teen: A handbook for parents and professionals supporting transgender and non-binary teens*. Cleis Press.
- Brill, S. A., & Pepper, R. (2008). *The transgender child: A handbook for families and professionals*. Cleis Press.
- Hassouri, P. (2020). *Found in transition: A mother's evolution during her child's gender change*. New World Library.
- Lev, A. I., & Gottlieb, A. R. (Eds.). (2019). *Families in Transition: Parenting gender diverse children, adolescents, and young adults*. Harrington Park Press.
- Shrouse, B. (2015). *Schools in transition: A guide for supporting transgender students in K-12 schools*. Retrieved from: www.nclrights.org/wp-content/uploads/2015/08/Schools-in-Transition-2015.pdf
- Read the work of Professor of Biblical Interpretation at New York Theological Seminary Obery M. Hendrick's scholarly research on LGBT+ issues in the Bible such as this article: www.huffpost.com/entry/dont-blame-it-on-the-bible_b_2884094.
- For families with younger kids, a read-together book is *It is Good to Be Yourself* by Theresa Thorn.
- A lengthy list of great books to read with trans youth can be found at <https://gendernation.org/wp-content/uploads/2019/05/Gender-Nation-Book-List-Updated-5-7-19.pdf>

WATCH: (INTERNET AND SOCIAL MEDIA)

- Dr. Karen Tang discuss the differences around biological sex and gender: <https://www.youtube.com/watch?v=FUw73Jy7tJg>
- For a deeper understanding of the true Judeo-Christian openness around gender, watch Unitarian Universalist Church of Santa Monica service on Transgender Day of Visibility: <https://www.youtube.com/watch?v=flaQ20-tfFQ&t=7s>
- A tip for the parents of trans masculine teens. For binding go to: <https://www.gc2b.co> and <https://transtape.life>
- Safe Zones in schools: <https://thesafezoneproject.com/about/what-is-safe-zone/>
- *Disclosure* on Netflix. A pivotal documentary that explains the complicated way the media portrays transgender people and how those portrayals affect the community. <http://www.disclosurethemovie.com/about>

FOLLOW: (INSTAGRAM/FACEBOOK)

- Transgender School: www.instagram.com/Transgenderschool/
- Pink Mantaray: www.instagram.com/pinkmantaray/
- Chase Strangio (ACLU Lawyer for LGBT+ rights): www.instagram.com/chasestrangio/
- International Transgender Health group on Facebook is a compendium of transgender scholar-led research. Well worth joining this group for gifted families who enjoy going deep on the subject. <https://www.facebook.com/groups/transgenderhealth>



CONTACT/JOIN:

- The LA Gender Center has therapists who will work via Zoom, or they can try to connect you to someone outside their practice who interned/trained with them and has specific knowledge around gender issues. www.lagendercenter.org
- SENG (Social Emotional Needs of the Gifted): www.sengifted.org
- PFLAG: <https://www.pflag.org>; Think about becoming a group leader: <https://pflag.org/owningyourroletoolkit>
- NAGC GLBTQ Network: <https://www.nagc.org/get-involved/nagc-networks-and-special-interest-groups/networks-glbtq>
- Transforming Family (support group): www.transformingfamily.org
- Facebook: Private and hidden group for parents of HG/PG LGBT+ kids. Message Rebecca Niederlander on the platform.
- Explore and find support at Gender Spectrum, a comprehensive site for parents of trans youth. www.genderspectrum.org
- Gender Nation provides gender-affirming books to school libraries for free. <https://gendernation.org>
- Transgender Law Center has terrific information around the legal issues you may encounter. <https://transgenderlawcenter.org/>

Many thanks to Rebecca Niederlander who curated these resources for transgender gifted youth and their families.

(Continued from p. 12)

providers, supportive counselors, friends, mentors, and local support groups.

Positive Statements

Providing constructive, helpful, and supportive comments lets a child know that they have a supportive family unit and can more easily see that they have a part in our history and world. For some gifted transgender youth, family support can be the difference between life and death. Parents and caregivers can find resources, peer support, and professional guidance to help them along the journey and to ensure that their child does not just survive but thrive. In many cases their giftedness provides more tools to help them to understand their exceptional, distinctive uniqueness. Below are positive statements for communicating with a trans gifted child:

- *Respect and love are my main goals as your parent/guardian. If others hurt or disrespect you, please come to me so that we can work together on this situation.*
- *Please know that I am trying to educate myself, and I love you no matter what.*
- *Have you decided on a new name and pronouns that you want me to call you? I apologize ahead of time for mistakes I may make, but know that I still love you unconditionally.*
- *Is it okay for me to tell other people about you being transgender? If you want to tell them, when and how would you like to do that...and what can I do to support you? We are on this journey together.*

- *Whenever you feel sad or worried, know that you can come to me and we will solve the problem together. I want you to feel good about who you are.*

Conclusion

We hope we have increased your understanding of gifted individuals who are transgender and have offered useful advice and strategies for parents, teachers, and counselors of gifted individuals who identify as transgender. Please read the accompanying parent and student voices columns elsewhere in this issue for further depth of understanding.

There is much work to be done to increase acceptance and understanding that there is no right or wrong gender and, that as a society, we recognize transgender gifted individuals as equals—eliminating all forms of discrimination against them. ☺

Authors' Note

Dr. Paul J. "PJ" Sedillo is associate professor for the Special/Gifted Education Department at New Mexico Highlands University. He has published numerous articles and chapters on the needs of diverse learners in gifted education. He is a past president of the New Mexico Association for the Gifted, has held numerous leadership positions at NAGC, and is currently an NAGC At-Large Board Member.

Rebecca Niederlander is a Los Angeles-based visual artist, curator, and writer. Her

sculptures and site-specific installations are data visualizations that use repetition and the inherent nature of the materials to address the individual's position within the larger intergenerational community. She is committed to illuminating the broad scope of the asynchronous nature of gifted individuals through her diverse, creative practice. She is a member of the advisory board for GRO Gifted and is a SENG Model Group Facilitator.

Orion is a gifted and transgender teen living his best life.

Endnotes

¹ Sedillo, P. J. (2013). A retrospective study of gay gifted, young adult males' perceptions of giftedness and suicide [Unpublished doctoral dissertation]. University of New Mexico, Albuquerque.

² Sedillo, (2013).

³ Sedillo, P. J. (2018). The "T" is missing from gifted: Gifted transgender individuals: A case study of a female to male (FTM) gifted transgender person. *Journal of Education & Social Policy*, 5(1),42–52.

⁴ Hassouri, P. (2020). *Found in transition: A mother's evolution during her child's gender change*. New World Library.

Lev, A. I., & Gottlieb, A. R. (2019). *Families in transition: Parenting gender diverse children, adolescents, and young adults*. Harrington Park Press.

(Student's view continued from p. 16)

Also, at the beginning of the school year, all teachers should pass out a confidential questionnaire asking for each student's legal name, preferred name, and pronouns. It should also include where the teacher can use the preferred name since some kids aren't out at home.

Schools should allow students to access whichever restrooms they feel most

comfortable in. Trust me, these students are already worried enough about their safety; the school should not be a contributing factor to safety concerns! ☺

Authors' Note

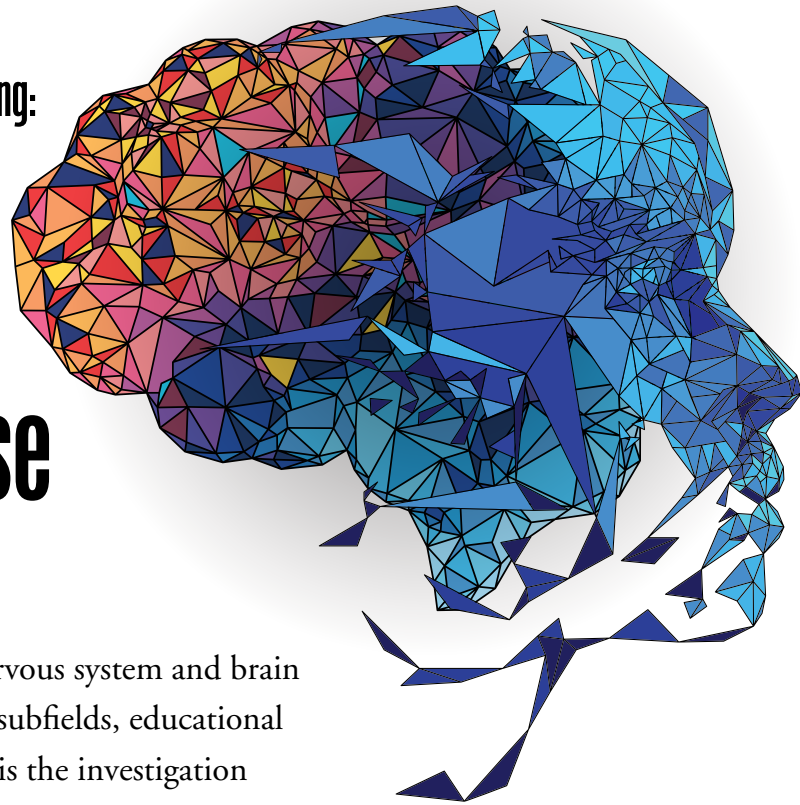
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Using Neuroscience Research to Guide Your Parenting:

Finding the Signal and Ignoring the Noise

By Erin M. Miller, Ph.D., and Pamela R. Clinkenbeard, Ph.D.



The field of neuroscience, which is the study of nervous system and brain structure and function, is booming. Of its many subfields, educational neuroscience (aka “mind, brain, and education”) is the investigation of the educational applications of brain studies, including research on intelligence, creativity, and giftedness. But what does brain research really tell us about parenting and teaching gifted and talented students? Is there insight about how to be the right kind of parent for a gifted child?

This article will touch on what we know (and, just as important, what we don’t know) from research in educational neuroscience, and what that research means in practice for parenting gifted students. Along the way we will consider how gifted children’s brains may be different, what “brain-based” curriculum and programming means, how the concepts of neuroplasticity and appropriate challenge are critical for talent development, and what experts generally agree is needed for optimal brain development.

Are gifted children’s brains different than average?

Yes, by definition. The brain is the primary source of differences in cognitive ability, creativity, leadership, and all other areas of human endeavor. Those differences

result from a combination of genetics and experiences. Researchers have looked at differences in structure (for example, areas of the brain that seem to be associated with specific talent domains) and function (speed and efficiency of processing information) and often find small but significant differences between gifted students and average achievers. However, note that while the brain affects learning, learning also affects the brain. The experiences that children encounter can cause changes in both structure and function of the brain. But what kinds of experiences? What is wonderful and quite reassuring is that for the most part, parents simply need to respond to their children’s interests and support them in finding their passions.

What do we know (and not know) about the brain and gifted education?

New technologies and methodologies for peering into the “black box” of human cognition and emotion are proliferating rapidly. When an assertion or piece of advice is supported with claims of being “brain-based,” people often have greater trust in the advice. Publishers know that if they place a picture of a brain on a book cover, it will sell better. However, the over-application of brain research to education practice is a well-documented problem.¹ Much “brain-based” parenting and teaching advice is not actually based on neuroscience research. That doesn’t mean that it’s bad advice; in many cases, direct brain research confirms what experienced parents and teachers already know. But in

other cases, neuroscience has shown that commonly used strategies and practices actually don't work in the way that most people assume that they do.

This brings us to “neuromyths” (*See pages 22-23*). There are a number of popularly accepted facts about the brain that are simply not true, and some of these beliefs can interfere with practices that support appropriate learning challenge and motivation for gifted children. In some respects, everything is brain-based; there are very few behaviors that do not have their root cause in the brain. However,

if someone tells you that their approach is better than a tried-and-true approach because it is brain-based, it is best to treat that assertion with educated skepticism. We know less about the practical applications from neuroimaging studies than you might think, although researchers are learning more every day.

What do we know to help parents right now?

This is not to say that neuroscience research has nothing to offer parents of gifted children. One of the most relevant

findings is the ability of the cerebral cortex to change due to experience. Neuroscientists call this “brain plasticity.” What this means is that with every experience, the cerebral cortex changes both chemically and structurally. One influential study examined what happened in the brain when people learn to juggle. Scientists know the basic layout of the cerebral cortex and which areas are generally involved with what major functions. When people learned to juggle, the area of the brain that is involved with manual dexterity and visual perception became denser. As stated earlier, the brain affects learning, but learning also affects the brain.

There are implications of this work for talent development perspectives of giftedness and equity. The work of neuropsychologists shows clear evidence of the malleability of young children's thinking skills—the ability of the brain to adapt and improve. We know from both laboratory and school research that executive function skills can be improved with training. *(Executive functions, such as the ability to focus on relevant information and ignore the irrelevant, can transfer to a wide variety of outcomes that are important for school success.)* Students who are bright but disorganized can improve their organizational skills and perform better.² There are also important implications of neuroplasticity research for equitable gifted programming. One strategy might be to offer high-level, open-ended thinking skill programming and activities to all children at an early age, watching for and developing talents in children who are underrepresented in advanced programming, rather than just trying to identify children who already have skills that are advanced for their age.

COMPLICATED WORLD OF GENETICS VS. ENVIRONMENT

The Necessity of Appropriate Challenge

There is a huge caveat to the concept of neuroplasticity: it requires appropriate challenge. In study after study it has been found that new neural connections are not formed unless the material encountered is



difficult enough to require some work and struggle on the part of the learner. Areas of the brain grow denser only when the task at hand is challenging.³ A weight training analogy is applicable here. Your muscles do not get stronger if you just keep lifting weights that you can already lift easily; you must continuously lift heavier weights to challenge yourself.

It is hard to overstate the importance of appropriate challenge for growth, yet it is the main stumbling block for parents who are begging schools and teachers to make sure that their gifted children actually learn something new. Parent groups and others who advocate for gifted education might want to add this to their talking points for school administrators and legislators.

Optimizing Your Child's Brain Development

There is considerable research agreement on a number of factors related to optimal brain development in children, especially with regard to the foundation that should be built to support that development. The Aspen Institute lists five physiological “preconditions” for optimal brain development and learning: quality sleep, adequate nutrition (and low exposure to toxins), physical activity and exercise, emotional and social well-being and safety, and cultural well-being and “belongingness.”⁴ For learning tasks, there’s nothing wrong with brain games and “brain training” programs, but neuroscience research indicates that they don’t really transfer to other skills. Playing a lot of Sudoku makes you better at Sudoku, but it doesn’t make you generally smarter.

Some of the strongest evidence for broad functional improvements in cognitive tasks is actually found in research on physical training. Among research studies presented at recent educational neuroscience conferences, aerobic exercise had some of the largest effects on general cognitive functioning in both children and adults. Anything that increases oxygen to

(Continues on p. 27)

BRAIN TERMINOLOGY: DEFINITIONS AND CONCEPTS

BRAIN—Central nervous system component consisting of the cerebrum, cerebellum, and brain stem.

CEREBRAL CORTEX—Outermost layer of tissue of the cerebrum.

CEREBRUM—Major component of the brain and central nervous system including the cerebral cortex, and structures such as the hippocampus, basal ganglia, and olfactory bulb.

COGNITION—The actions and processes related to acquiring knowledge, evaluating this knowledge, and adapting to the environment and overcoming obstacles by engaging in reasoning.

EDUCATIONAL NEUROSCIENCE—The field that brings together the multiple components of neuroscience to address issues related to education. Also called neuroeducation or “Mind, Brain, and Education.”

NEURONS—The cells of the nervous system, including the brain, that are specialized to carry electrochemical messages. Neurons consist of cell bodies (gray matter), axons (white matter), and dendrites. Messages travel along axons and jump to the dendrite of the next neuron.

NEUROPLASTICITY—The understanding that the brain changes throughout life, and that environmental factors can affect both the structure and the function of the brain.

NEUROSCIENCE—Study of the central and peripheral nervous system (including the brain). Domains of study include biological areas like anatomy and physiology, chemical processes, and psychological areas such as development, sensory/perception, and cognition.

NEUROMYTHS

One area of research in educational neuroscience is people's beliefs about the brain; widespread incorrect beliefs are known as "neuromyths." Neuromyths tend to be quite persistent in society, including among teachers, and some can interfere with educational practices that support appropriate learning challenge and motivation for gifted students.

MYTH 1: You only use 10% of your brain.

Everyone uses all areas of their brain.¹ One common metaphor is to think about it like your home. You might not use every room every day, but over the course of a month, you probably have used all areas of your house.



MYTH 2: Right and left brained.

A healthy human being is not left or right brained. Different areas of the brain are specialized for different cognitive tasks. However, regardless if one has an affinity for creative or analytical thinking, both sides of the brain are used equally. Individuals do not favor one side or the other, and most tasks use at least some areas on both sides of the brain.²

MYTH 3: The brain does not change after puberty.

The brain continues to change through neural plasticity until death.³ There are periods of development in which learning is easier, but the brain is malleable throughout one's lifetime.





MYTH 4: Brain training in adulthood increases IQ.

Although one can improve at certain cognitive tasks through practice, the improvement does not appear to transfer to other cognitive abilities.⁴ It is difficult to train the brain past its potential. However, one can certainly underachieve by not seeking to be a lifelong learner.

MYTH 5: The Mozart Effect.

Listening to a specific type of music does not have an effect on intelligence.⁵ However, training in music does change the brain as one develops new skills.

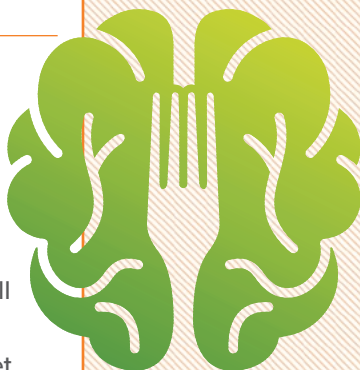


MYTH 6: Learning styles.

According to neuroscience research, students do not do better if instruction is matched only to a single mode of learning (i.e., verbal, auditory, kinesthetic). Instead, while many students have a preferred mode of learning, they learn best when information is presented in many different modalities and using multiple areas of the brain.⁶

MYTH 7: Nutritional supplements can increase intelligence.

There are certainly situations in which malnutrition can inhibit intellectual development. But there is no evidence to suggest that a particular diet will result in greater intelligence.⁷ No amount of nutritional supplementation will enhance development; all that is required is a basically healthy diet.



Endnotes

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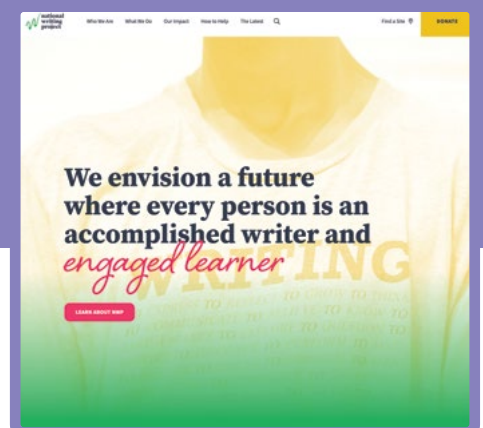
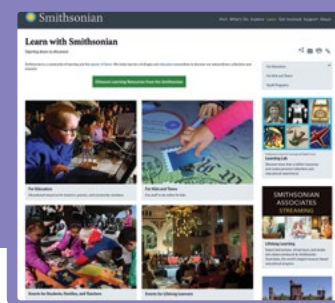
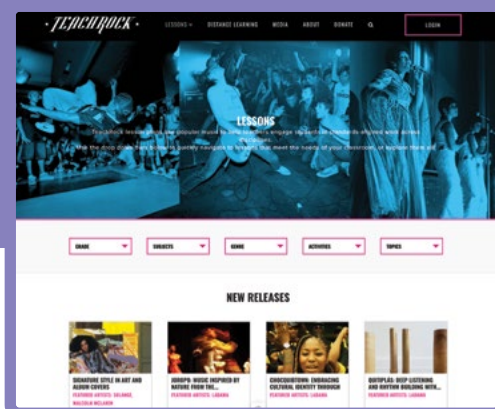
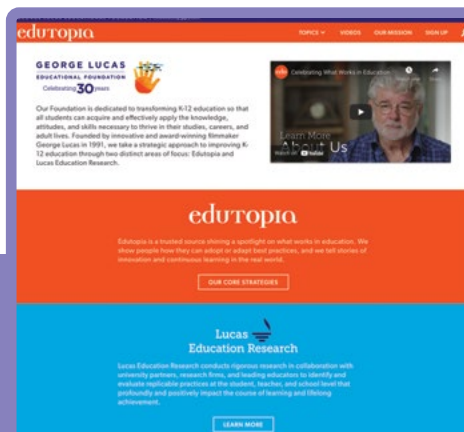
connect academic subjects and philanthropy. From civic duties, advocacy, writing, and building careers, this K–12 site is worth exploring.

- **PGK—Project Giving Kids.** This site has interactive Zoom workshops for youngsters, teens, and families providing guided service projects that support local communities. The site promotes different, timely project ideas, as well as ideas designed to help locally during COVID-19. While more time is being spent at home, students and families can still find ways to aid the elderly, comfort the sick, help other kids, save the planet, support troops, or find other ways to get involved.
- **Student-selected, Online Service-learning Projects.** Let your gifted child explore their passions while challenging their thinking and making a positive impact in the community. Service-learning projects are a fantastic way for students to address an issue, solve a problem, or support a cause based on their individual interests within their communities. The Krasny article (*in Resources section*) has examples of real-life, online service learning projects.
- **Writing as a Virtual Community.** While writing might seem like a solitary action to some, there are all kinds of ways for students to connect with a larger writing community through virtual platforms. One example of this is *Write the World*, an

engaging global community space where young writers can write, revise, think, and grow. Students can choose to write alone or together—sharing ideas and exchanging feedback. Additionally, there are a number of organizations that have transitioned to hosting virtual open mic events, so we recommend searching for a student-friendly event so your gifted child can read their writing for an authentic audience.

Conclusion

As the impacts of COVID-19 are still being felt around the world, the phrase “the new normal” has become a common term to describe the changes that have occurred. While we are unsure of how long these changes will be in place, it is essential for education systems and parents to continue to provide high-quality learning opportunities at home, in school, and in the community for all students, including those who are gifted and talented. While these recommendations have been broken up into different categories, it is important to keep in mind that they are strengthened through parent and educator collaboration. By providing engaging instruction, parents and teachers can meet the needs of gifted and high-achieving learners, while also challenging and empowering them. 🌟



Resources

Home

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- MoMA. (2021). *Online courses*. <https://www.moma.org/research-and-learning/classes>
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- The Smithsonian. (n.d.). *Learn with Smithsonian*. <https://www.si.edu/learn>

School

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Community

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Whole Child

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Authors' Note

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(Continued from p. 10)

Conclusion

For gifted Asian American students to succeed, it is critical for teachers to understand and respond to the values that underpin Asian culture and influence the relationships between student, family, and teacher. These core values allow all shareholders to identify entry points for nuanced communications and provide opportunities for supporting gifted children of diverse Asian descent. ☺

Resources

Interactive Profile Interpretation System to inform instruction <https://www.riversideinsights.com/apps/cogat?stanine=9&profile=4&strength=0>

Ritchotte, J., Lee, C. W., & Graefe, M. (2020). *Seeing & serving underserved gifted students: 50 strategies for equity and excellence*. Free Spirit.

Authors' Note

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the brain seems to help, but dose matters: a two-minute stretching break is of course not as effective as a brisk 30-minute walk.⁵

Conclusion

Most parents worry about whether they are doing the right thing when raising their children. Social media amplifies what is often illogical shaming of parents, unsupported by data or any real evidence. Research on the critical importance of the home environment for child development is often based on warnings about what can go wrong in cases of neglect or abuse.⁶ But for most families, for children to be happy and successful (however one might measure success), parents just need to supply the physical and emotional basics. For healthy brain development, that includes a healthy diet, exercise, safety, supportive attention, and encouragement. What this looks like will vary from family to family. Coupled with appropriate challenge from schooling, this is the “signal.” A lot of the rest is just noise. ☺

Resources

Brain & Neuroscience

Dowling, J. E. (2018). *Understanding the brain: From cells to behavior to cognition*. W. W. Norton.

National Geographic. (2017). Brain 101. Retrieved from <https://www.youtube.com/watch?v=pRFXSjKpKWA>

National Institutes of Health. <https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Know-Your-Brain>

Neuroscience & Giftedness

Kalbfleisch, M. L. (2008). The cognitive neuroscience of giftedness [Special issue]. *Roeper Review*, 30(3). <https://www.tandfonline.com/toc/uror20/30/3>

Neuroscience of Creativity & the Neuroscience of Twice-Exceptionality

Iowa Neuroscience Institute— in collaboration with the Belin-Blank Center. <https://medicine.uiowa.edu/iowanewscience/>

Society for the Neuroscience of Creativity. <https://www.tsfn.org/>

Neuromyths

Centre for Educational Neuroscience. (n.d.). *Neuro-hit or neuro-miss?* Retrieved from <http://www.educationalneuroscience.org.uk/resources/neuromyth-or-neurofact/>

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