

# Valuing differences: Neurodiversity in the classroom



Drawing on their own experiences as students, researchers, and educators, the authors discuss how teachers can build on the skills and talents of neurodiverse learners.

**By Barb Rentenbach, Lois Prislovsky, and Rachael Gabriel**

**N**eurodiversity describes the idea that neurological differences like autism, ADHD, and dyslexia are natural human variations that have benefits (Rentenbach & Prislovsky, 2016). The neurodiversity movement values human differences that have often been pathologized, underscores the strengths associated with each unique neurological design, and demonstrates how partnerships and teams that include neurodiverse individuals can enhance problem solving in a complex world.

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## Until I was 19 years old, I was thought to be profoundly retarded.

Educators have a particularly important role to play in making the benefits of neurodiversity more widely appreciated and empowering different thinkers to contribute to mainstream life, thought, and culture. In this article, we offer three sets of practical suggestions for teachers working to strengthen connections among neurodiverse students and their peers.

The “unusual” 1st, 5th, or 10th grader in your classroom may not yet seem like the brilliant scientist or business owner who they might very well become, growing into a role that allows them to work closely with partners who complement their unique abilities. In typical school settings, recognizing such potential can be difficult. Faced with dozens of students, each with their own needs and interests, teachers may not see every child’s intellectual gifts, especially when those gifts are obscured by a physical or social appearance that the teacher views as abnormal or undesirable. That is how it was with me (Barb). As an autistic mute, I am disguised as a poor thinker. I don’t look normal. I appear quite messed up, inviting nothing but pity, a sprinkling of repulsion, and fear. Until age 19, I was thought to be profoundly retarded.

The formal and useless part of my education took place in a series of special-needs classrooms plastered with fading laminated posters of the alphabet and hand-washing instructions. I heard bad jazz renditions of Velcro schedules being adjusted, recrudescient nagging, and the loud clicking of 504,910,816 seconds until graduation at age 21.

What changed?

I learned to type. And with the help of Lois (co-author #2) — an educational psychologist and entrepreneur who also carries such labels as ADHD and dyslexic — I connected with a well-synchronized team of people whose own strengths and interests make our collaborative work bigger and better than the sum of its atypical parts.

Lois learns most efficiently by listening to podcasts played at 1.5x-2x speed while she is running. When leading meetings with employees, she sometimes balances herself on a unicycle. She often works more effectively when moving than when she is sitting still.

While studying to become an educational researcher, Rachael (coauthor #3) was one of Lois’s employees. She wants to make sure that no other students are forced to repeat the first 19 years of my educational history.

So we wrote this article together, collaborating as a team of writers, researchers, and pioneers who want to bring specific, skill-based strategies — synthesized from formal research and life experience — into classrooms. In the sections that follow, Lois and I describe insights related to our areas of expertise, and Rachael offers thoughts about their implications for classroom practice.

### Living and working with neurodiversity

When you treat someone as their highest self, you help them become that person. Yet, the challenges associated with autism, ADHD, or dyslexia do not magically melt away just because you affirm that these things also have some benefits. So, instead of presenting our suggestions as “tips” that teachers can apply to “fix” or “help” neurodiverse students, we list them as practical implications: meanings uncovered by living out the realities of our unique designs within and outside the structures of K-12 schools.

### Autism – Practical implications

#### #1. *Presume competence even when you don’t see or hear it yet.*

Don’t assume mental retardation based on odd behavior and poor communication. One has nothing to lose by treating another person with respect. Give students the freedom to rise to expectations — surpassing them may come next. Similarly, do not assume that students cannot hear or understand you when you talk about them. Eavesdropping tends to be a well-developed, if covert, skill among atypical communicators, letting us know whom to trust and who believes in us. Keep in mind: We hear you.

#### #2. *Smile.*

Smiling is not wasted on autistics. We sense and often take on the affect of those around us. People who are happy, confident, honest, and energetic — and who don’t take themselves too seriously — help make mentally external tasks appealing. That’s why Lois always insisted that my (Barb’s) team members work with me in short blocks of time (no more than two or three hours) to ensure “freshness.” Burned-out, tired, listless, disingenuous, or pessimistic workers were not hired. Variety and connection are good for all of us.

### #3. Listen.

When working with autistics who are nonverbal or echolalic (prone to repeating other people's words out loud), listening may seem to be beside the point. But break it down: To listen means to make an effort to hear, take notice of, or heed. If students are not talking or typing, find other ways to observe them. Find out about their past, their proclivities, how they spend their time, and what gives them joy. Having discovered one interest, at least, teachers can tap into it as a source of learning opportunities and socialization. Favorite and familiar themes create fertile ground for us to initiate and sustain efforts to practice academic and social skills that do not come easily.

### #4. Wait.

What neurotypical people often perceive as “waiting” and “wasting time,” we may view as stasis. Like well-seasoned Tibetan monks, we are in no rush. We understand the reality of impermanence. We understand the reality that nothing is as it appears to be, and having time to process, think, and just be is important in our daily routine. For example, I prefer to take a mental picture of the page and file it so I may consider it and recall it at my leisure. This doesn't fit the structure of many classrooms where students are expected to create written responses immediately after reading. Yet, allowing some downtime to contemplate words and plan a response in class, during the day, or even overnight may give time for a fresh perspective to materialize. After all, autism is our prism, not our prison. We may think differently, but we are still thinking.

### #5. Make room for nonverbal communication.

Nonverbal, autistic blogger Emma Zucher-Long has written, “Language is an awkward way to communicate” — and I (Barb) argue that while this can be true for everyone, it is highly challenging for those of us who are autistically wired. It took me years to think in language. But prior to that, my thinking was not faulty; it was just not language based. Typing makes it way easier because I can control the speed of each thought and break it down into smaller parts or, to be more precise, one letter at a time.

Sometimes it takes another person with your specific disability label, not another neurotypical teacher or peer, to help the world understand your experience. One of the first books I read about autism was Donna Williams's memoir *Nobody Nowhere: The Extraordinary Autobiography of an Autistic* (Jessica Kingsley Publishers, 1998). One of her observations has always struck me as particularly apt: “Communication via objects was safe,” Williams says. For me,

computers are objects that can be a bridge to interpersonal connection and growth. Those are things we all want, regardless of our differences.

## ADHD – Practical implications

Barb's insight about using objects as communication bridges worked so well for her and others that I (Lois) decided to try it with an impulsive ADHD client who is intellectually gifted but struggles with anxiety and anger. The plan was to require him to type his responses instead of blurting them out. Multimodal communication requires more diverse brain real estate and thus makes strong, novel connections for fresh learning. It worked. This client's impulsiveness and disrespectful responses dropped dramatically. For the first time in our many sessions together, he was fully present, attentive, honest, and respectful for the full hour, which let his strengths shine.

The psychologist Lynn Weiss (2005) has published a list of “29 positive attributes of ADD” (a term she uses to include both ADD and ADHD), beginning with sensitive and empathetic, and ending with observant, loyal, and wholehearted. *Knowing positive attributes exist and designing classrooms where they flourish* are two different things. When ADHD-related challenges frustrate you and/or your students, consider these practical implications of the unique ADHD design:

### #1. Let students know that human excellence comes in all packages – so they are invited to be themselves.

If you cannot tell what their individual strengths are, then watch and ask. They might not yet know either, but watching them pursue their areas of interest is a good place to start, as is checking in with the other adults in their lives. Finding out where individuals with ADHD feel most competent and at ease also provides a good footing for trust and connection. Ask them which part of the school day makes them happiest or calmest, and ask them why that is. Every week, make a point of giving them at least one opportunity to communicate, collaborate, or learn in a way that plays to their strengths, even if that means a change from your regular classroom routine.

### #2. Don't make unrealistic restrictions on movement.

Students with ADHD may think best when their bodies are active. Rather than assuming that they ought to sit still in class, look for opportunities to get them moving. When assigning partners to work together, for example, you might encourage them to take a walk while they talk over their ideas. During

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classroom discussions, you can invite students to sit on a rocking chair or an exercise ball. Or, while reviewing for tests, you might engage them in tossing a ball back and forth.

### **#3. Create some routines.**

For those of us with ADHD, predictable structures are critically important. For example, to foster more reliable attention, I go to sleep and wake up at basically the same time every day, even on vacation. Likewise, classroom routines can help students get into a pattern of efficient thinking and performance. By designating regular times for specific activities, you can give them an opportunity to plan their attention and train their focus on one connection at a time.

### **#4. Understand that people with ADHD are drawn to intense stimuli – and go for it.**

Dopamine is a chemical in the brain associated with movement, motivation, and reward seeking. Because of this, people with ADHD often seek lots of stimulation, even extreme thrills. (This is why people with ADHD are overrepresented among the world's outstanding entrepreneurs, athletes, and explorers, for example.) Ask such students to help with any part of a lesson that involves movement — for example, passing out materials, reorganizing spaces for group work, and carrying messages between groups. If you want to reward them for good work, offer them an opportunity for intense stimulation — for example, extended recess or a chance to practice their juggling skills. For some students, you might also consider adding a layer of physical challenge to routine tasks — for example, by asking them to balance on one foot while proofreading an essay, or to type their responses to a class prompt instead of blurting them out.

### **#5. Be patient with yourself as you learn more and do better.**

This encourages students to do the same, giving all of us permission to take risks and make mistakes.

## **Dyslexia – Practical implications**

On a recent TV interview, I (Lois) said NMIH instead of NIMH for National Institute of Mental Health — twice. No one in my office trusts any phone number that I jot down. Given the option,

I'd rather listen to text than read it. So I understand firsthand that, due to a different pattern of brain organization, the dyslexic brain is wired inefficiently for word recognition and spelling. But on the flip side of this neurological coin are quantifiable advantages.

Brock and Fernet Eide (2012), leading scholars in the learning sciences, have identified four distinct talents that offer significant benefits for individuals with dyslexia — they use the acronym MIND, referring to advanced abilities in *Material reasoning*, *Inter-connected reasoning*, *Narrative or story-based reasoning*, and *Dynamic reasoning*. Theirs is an uplifting and motivating perspective, especially when you note that these abilities are closely aligned with advanced literacy skills related to comprehension, meaning making, the drawing of inferences, and making connections among ideas. In short, while the dyslexic brain may struggle with the foundational skills of word recognition and spelling, it appears to be uniquely suited to sophisticated forms of literacy.

Keep in mind that the Eides do not deny the impairment, frustration, or difficulty that individuals with dyslexia labels encounter in school settings. They simply ask us to look beyond those challenges and see that dyslexia is more than just difficulty learning to read — it's also a systemic style of language processing that has advantages. Individuals with dyslexia vary in many ways; as a group, though, they are statistically more likely to have certain skills that are quite valuable in many careers. Being able to see the big picture and avoid getting lost in details helps many dyslexics flourish in the world of business, for example. (In fact, entrepreneurs are five times as likely to be dyslexic as not.) If you embrace such skills in the classroom, they also can be a source of strength for students:

### **#1. Make print worth it.**

Given that it will take extra effort, skill, and courage for some students to consume printed texts independently, create reasons for reading that are truly compelling and linked to students' goals and interests. For example, a budding adolescent chef might be tempted by the first-year kitchen skills textbook used at the local culinary school, and younger readers who have yet to find much joy in print might connect with stories that include favorite characters from cartoons or movies.

**Give students the freedom to rise to expectations.**

## #2. Accommodate now.

As students develop skills and strategies to navigate a print-centric education system that requires reading and writing, they still need access to content, opportunities to participate, and ways to demonstrate their strengths. Do not hesitate to allow content to be conveyed by audiobook or video or to allow students to represent their understanding by visual and oral presentation. Dyslexics may need time and steady effort to build foundational literacy skills and strategies (and that time is likely accounted for in their schedules both in and outside of school). But in the meantime, the real purposes of literacy — comprehension and communication — should not be put on hold. Ensure access to interesting, meaningful texts in multiple forms, and allow critical content to be conveyed in multiple ways.

## #3. Invest in strategies that work.

Students are often the first to know whether an intervention or remedial program is working for them. Developing reading, writing, and spelling skills may take significant time and effort so make sure that time and effort is well-placed in instruction that allows students to build on their strengths, make visible progress, and develop powerful literacies.

## #4. Communicate the strengths as well as the patterns of difficulty that dyslexia signifies.

Shame and isolation are common side effects of students' difficulty in learning to read, but they don't have to be. In your classroom, make it a priority to ensure that individuals with disability labels and their peers understand the benefits of neurodiverse teams. (For a good conversation starter for middle schoolers and older students, see Foss, 2014, and to introduce the topic to students in the elementary grades, consider the children's book by Ludwig, 2013.)

## #5. Cultivate the advantages of dyslexia.

If students always have to complete independent reading assignments before classroom activities, they may not be able to participate fully. As an alternative, consider assigning small group roles and activities that emphasize reasoning and creativity, rather than textual processing as a prerequisite for participation. For example, this might mean putting students with dyslexia in positions where they can take the lead on tasks related to interpretation and problem solving rather than asking them to read aloud or act as scribes.

Small moments within everyday classroom interactions shape students' understandings of school, of themselves, and of others. The implications we share above are meant to be a starting point for reflection

**If you cannot tell what your students' individual strengths are, then watch and ask.**

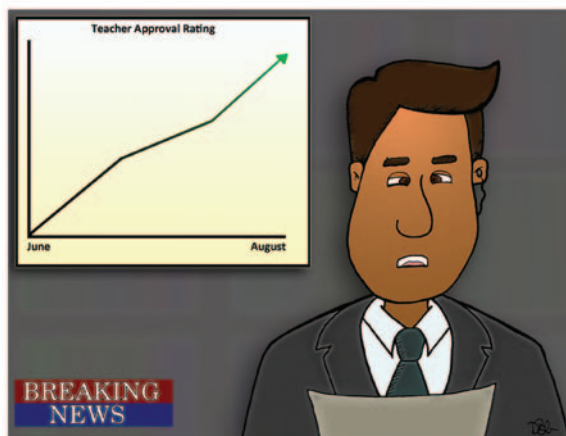
and conversations that expand as more and more people become aware of the benefits of neurodiversity in classrooms and beyond. Our thoughts on the learning differences created by neurodiversity are clear: A community is the sum of its parts. Be your part. The world needs exactly you. **■**

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