

## Understanding Neurodiversity as an Emerging Culture

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### Abstract

Neurodiversity is a concept where neurological differences are to be accepted and respected as any other human variation. This includes Autism, Attention Deficit Hyperactivity Disorder, learning difficulties, and many other neurological differences. Different people think differently - not just because of differences in culture or life experience, but because their brains are "wired" to work differently. For kids with learning and thinking differences, the idea of neurodiversity has real benefits. It can help kids and parents frame their challenges as differences, rather than as deficits. It can also shed light on instructional approaches that might help to highlight particular strengths or exceptional skills kids have. This concept can reduce stigma and the feeling that something is "wrong" with them and help build confidence, self-esteem, motivation, and resilience. Acceptance of neurodiversity as an emerging culture is the need of the hour to address that section of our population who are denied access to many educational, cultural, and physical resources based on their diagnosis and differences. This concept could lead us to a path of non-discrimination, lesser misunderstandings, proper support, and possible accommodations of differences, and most importantly self-reflection and emotional maturity. It is also important to understand that conventional methods of learning, need to be replaced with a "universal design for learning" approach to promote access to physical and learning resources regardless of age or disability status. This approach embraces and responds to creating inclusive environments to help individuals from diverse backgrounds learn together within their capacities and capabilities. Teachers have an important part to play in ensuring students feel included, understood, appreciated, and confident in their ability to do well in school and in life. This will eventually facilitate a better understanding of what it means to be a neurodivergent student.

**KEYWORDS:** Neurodiversity, Acceptance, Collaborative teaching, Multisensory engagement, differences, disability, peer teaching

### INTRODUCTION

"Can I include a child with autism in a normal classroom?" "What accommodations are autistic students entitled to?" "How can I help my student who doesn't socialize in groups?" "Should I fail my student whose work is often incomplete?" "What can be done for the slower readers in my class?" "How can I spend my time on one student when I have so many others to respond to?" Quite common to come across teaching faculty who ask practical, problem-solving questions like these when they encounter students who may not fit in as traditional learners. What is the point of an education system which refuses to lead to teaching practices that give all students a reasonable chance to achieve and co-exist? While we celebrate diversity in every other aspect of life, why not celebrate it in the human brain? (Mandy H. Breslow, 2020)

Neurodiversity is the diversity of human minds and the fact that brains and neurocognition vary among all individuals. All these variations are ‘normal’ and ‘valuable’ with neurodiversity being the concept that neurological differences are to be recognized and respected as any other human variation (Green, 2020). Different people think differently - not just because of differences in culture or life experience, but because their brains are "wired" to work differently. Credit for originating the term neurodiversity goes to Australian autism and disabilities activist Judy Singer, who argued that neurological differences constituted a new category of political engagement by marginalized groups which would, and should, take its place alongside other familiar categories for political action. The most vocal advocates for neurodiversity have been persons whom the medical, psychiatric, and educational domains would categorize as autistic or “on the autism spectrum.” But the movement also includes those with neurological differences as varied as ADHD, Alzheimer’s disease, bipolar disease, dyslexia, dyspraxia, depression, epilepsy, Tourette’s Syndrome, and any number of other psychiatric and neurological classifications. Like biodiversity, which is seen as critical to the health of ecosystems, advocates of neurodiversity assert that neurological variation is not only natural but is central to the success of the human species. (McGehee, 2012). Neurodiversity advocates support systems (such as inclusion-focused services, accommodations, communication and assistive technologies, occupational training, and independent living support) that allow those who are neuro-divergent to live their lives as they are, rather than being coerced or forced to adopt uncritically accepted ideas of normality or to conform to a clinical ideal. The Neurodiversity Movement is a social justice movement that seeks civil rights, equality, respect, and full societal inclusion for the neurodivergent.

The ‘neurodiversity’ approach provides an alternative inclusive teaching and learning model as against that based upon the traditional special educational needs model which goes beyond the practice of ‘teaching to the label’. Instead, it proposes teaching to the differing individual dimensions of strengths and therefore, is based upon the importance of recognizing and responding to individuals’ profiles of learning strengths and needs of each student to approach each learner holistically. It recognizes the principle that teachers need to make ‘*reasonable adjustments and modifications*’ to their teaching to meet the diverse learning needs of each student.

An approach that is now gaining considerable preference, is the UDL or Universal design for learning approach. UDL is a powerful approach because from the very start of a lesson, it helps anticipate and plan for *all* learners. It can help make sure that the greatest range of students can access and engage in learning — not just certain students. Students are allowed to use the learning resources and tools in the way they want to enrich their conceptual learning experience. Instead of thinking that something needs to change about the students, UDL looks at the *learning environment*. The learning environment can include barriers to learning, like the design of the curriculum goals, assessments, methods, and materials. In this way, the learning environment itself can be “abled” or “disabled.” UDL helps in building a conducive learning environment with clear-cut goals for every learner, access to multiple resources, flexible options for students to use to build and internalize their learning.

How do we respond as an educational system to the variability in students that we teach? UDL describes human variability based on parts of the brain that manage the “why” (affective network), the “what” (recognition network), and the “how” (strategic network) of learning. The approach includes three UDL principles; engagement, representation, and action and expression. (Posey)

*Provide multiple means of **engagement***

**How can I engage all students in my class?**

- In what ways do I give students different choices and autonomy?
- How do I build learning activities which are relevant to individual needs and capacities?
- In what ways can I incorporate a supportive curriculum?

**Examples:**

- Find out students’ interests, strengths and needs. Incorporate the findings into adapted lessons
- Use alternate timetables and assign choice menus

*Provide multiple means of **representation***

**How can I present information in ways that reach all learners?**

- Have I included visual charts and technological support for children with ASD? (Primarily visual learners)
- What options do I provide for students who need support engaging with texts and/or with auditory learning?

**Examples:**

- Provide options for engaging with texts, such as text-to-speech, audiobooks, or partner reading, whole-word approach, etc

*Provide multiple means of **action and expression***

**How can I offer flexible options to showcase what they know?**

- Can I provide flexibility with timing and spacing?
- Have I considered methods aside from paper-and-pencil tasks? Can I incorporate oral assessments or group assessments?
- Am I providing access to AT(Assistive technology) and AAC (Augmentative and alternative communication devices)?

**Examples:**

- Provide calendars and checklists to help students track the subtasks for meeting a learning goal.
- Allow students to show what they know through a variety of formats, such as a poster presentation, hands-on projects, or a graphic organizer.

UDL approach should include collaborative learning. A number of educators with inclusion classrooms are realizing the benefits of *collaborative learning* and special needs students being placed in small group environments with regular education

classmates. Collaborative learning is an instructional method where students team up together on an assignment. In this method, students can produce the individual parts of a larger assignment individually and then *assemble* the final work together as a team. Learning is an active process whereby learners assimilate the information and relate this new knowledge to a framework of prior knowledge. Learning requires a challenge that opens the door for the learner to actively engage his/her peers, and to process and synthesize information rather than simply memorize and regurgitate it. (Srinivas) This method better subject matter comprehension and retention. In this method, teamwork increases the community bond, positive interdependence and helps every student to understand and cooperate with diverse needs of the other. Socialization and acceptance of cultural diversity increases apart from boosting self-esteem, trust and conscientiousness.

Over the past 30-40 years, *peer teaching* has become increasingly popular in conjunction with mixed ability grouping in schools and an interest in more financially efficient methods of teaching. Peer tutoring is a set of strategies in which students serve as both teachers and learners. In general, students work with each other in a 1-on-1 setting, learning together (Tilly III, 2004). Peer tutoring has the advantage that it can individualize instruction for students based on individual needs. In many cases, all students participating in peer tutoring get to serve both as instructors and as learners. A range of positive effects have been documented in the peer-tutoring literature, including positive effects on academic achievement in reading, mathematics, and language, increases in students' attitudes toward school, and improved school behaviour. Research has demonstrated that peers can help teach social skills to students with autism. For this to be successful, activities have to be appropriately structured, training has to be made available to peers, and teachers have to actively prompt and reinforce the interactions between students with autism and peers (Wagner, 1999). Peers also benefit by having students with autism in the classroom. When peers of children with autism are educated about autism, and are given an opportunity to act as peer tutors/buddies, they learn acceptance and empathy, act as role models, and become more aware of individual strengths and weaknesses (Wagner, 1999).

The UDL approach can also embed *multisensory learning* to address the diverse abilities and creative capacities of students. Multisensory learning involves engaging more than one sense at a time, visual, auditory and kinaesthetic-tactile pathways to enhance memory retention and the ability to learn. Students are made to experience a lesson through multiple pathways that can best stimulate their brains and engage them more deeply in the subject matter. Multisensory learning can be particularly helpful for students with learning disabilities and cognitive limitations who may have difficulty in one or more areas of education. For example, a differently-abled student may have trouble processing visual information. This can make it challenging for them to learn and retain information through only reading and visual stimuli. Using other senses, such as tactile or auditory, these children can make a stronger connection with what they're learning. Similarly, children with autism may have difficulties in understanding verbal instructions/ verbal instructions and routines or timetables. Social stories, visual organizers, pictured timetables, PECS (Picture exchange communication systems) can help them organize and synchronize their curricular and co-curricular activities in a better manner. Instead of each student experiencing a lesson through a

singular medium like a textbook, a multisensory approach will involve more students in taking active roles in learning. This kind of hands-on learning enhances students' ability to collect and remember information, make connections between what they already know and new information, understand and work through complexities, and use nonverbal problem-solving skills. Ultimately, using a multisensory approach in a learning environment helps to meet the varying needs of all children giving them each a chance to succeed.

At this stage, it's also very important to understand that creative arts and music, movement and theatre are some of the inclusions a curriculum can have because of the abundance of multisensory experience in engaging in them. E.g., By drawing, a child can express his/her feelings and emotions. Where speech can't take place, art and music can act as a substitute for words to make a point or statement. A theory that I believe for neurodiverse children is "The Multiple Intelligences theory", developed by Howard Gardner in the early 1980s <sup>(Gardner, 2000)</sup>. His theory gave educators and parents a greater understanding of intelligence and how children learn. In his book *Frames of Mind*, he introduced his "theory of multiple intelligences." Gardner proposed that there are eight intelligences, and has suggested the possible addition of a ninth known as "existentialist intelligence." Gardner theorizes that people do not have just an intellectual capacity, but have many kinds of intelligence, including musical, interpersonal, spatial-visual, and linguistic intelligences. This theory puts a strong emphasis on addressing a student's individual needs and relating the curriculum content to their strengths. Generally, an individual will only have an aptitude for one or two 2 intelligences meaning that they learn content best when relating it to their aptitudes <sup>(Gardner, 2000)</sup>. However, there is one particular intelligence that connects to all seven other intelligences – musical intelligence. This intelligence area can reach all other areas of intelligence almost simultaneously, allowing for educational opportunities that address multiple areas of concern. Through collaboration and improvisation, children with autism can focus on music intelligence, which indirectly develops other areas of intelligence. Though children with autism often show socially avoidant behaviours, it has been shown that the inclusion of music and art is most beneficial when connected to a particular interest from the child's life. Gardner mentions criteria for identification of intelligence as in autistic savants and exceptional populations. In other words, certain individuals should demonstrate particularly high or low levels of a particular capacity in contrast to other capacities (Duvall, 2020). The criteria form a strong base to help children with special needs to explore dimensions in music to stimulate their multi-senses, to keep them stimulated and engaged towards education beyond academics and specific interest areas, and toward meaningful goals.

Neurodiversity offers a whole range of new perspectives and leads us to that path, to be inclusive of people who see, understand and, think about the world differently. Advocates of neurodiversity assert that neurological variation is central to the success of the human species. When autism, ADHD, dysgraphia, dyslexia and, other neurodiverse profiles come up in conversation, words like "challenge," "hardship," "disability," "disorder," "condition" and "special needs" typically cross the mind. To think about these diagnoses strictly in these terms overlooks the big picture in that there is growing evidence that certain exceptional abilities are directly relevant. Attention to detail, intense focus on tasks, pattern recognition, analytic thinking, and

moral decision making are some innate strengths in the neurodiverse population and much of these are pertinent skills for the success of any institution/ organization. As Dr. Armstrong states it's time regular and special educators "step out of the box and embrace an entirely new trend in thinking about human diversity. Rather than putting kids into separate disability categories and using outmoded tools and language to work with them, educators can use tools and language inspired by the ecology movement to differentiate learning and help kids succeed in th

## References

Armstrong, Dr. Neurodiversity in Classroom Strength-Based Strategies to Help Students with Special Needs Succeed in School and Life. 2012. <<https://the-art-of-autism.com/neurodiversity-in-the-classroom-by-thomas-armstrong-a-must-read-for-teachers/>>.

Duvall, Rhiannon M. "The Relationship between Autism and the Multiple Intelligences." EASTERN KENTUCKY UNIVERSITY, 2020. <[https://encompass.eku.edu/cgi/viewcontent.cgi?article=1785&context=honors\\_theses](https://encompass.eku.edu/cgi/viewcontent.cgi?article=1785&context=honors_theses)>.

Gardner, H. E. . "Intelligence reframed: Multiple intelligences for the 21st century, Hachette UK." (2000).

Green, Mel. "Neurodiversity: What is it and what does it look like across races?" (2020). <<https://www.open.edu/openlearn/health-sports-psychology/mental-health/neurodiversity-what-it-and-what-does-it-look-across-races>>.

Griffiths, Dominic. "TEACHING FOR NEURODIVERSITY: TRAINING TEACHERS TO SEE BEYOND LABELS." Impact, Journal of the Chartered college of Teaching (2020). <<https://impact.chartered.college/article/teaching-for-neurodiversity-training-teachers-see-beyond-labels/>>.

Mandy H. Breslow, LCSW. "Neurodiversity – The New Normal." 1 Jan 2020. <<https://autismspectrumnews.org/neurodiversity-the-new-normal/>>.

Marens, Michele. "Gardner's theory of multiple intelligences." 9 June 2020. <<https://www.simplypsychology.org/multiple-intelligences.html>>.

mcgee, micki. "neurodiversity." Contexts 11 (2012): 12, 13. <<https://journals.sagepub.com/doi/pdf/10.1177/1536504212456175>>.

Posey, Allison. Universal design for learning(UDL): A teacher's guide. CAST, Inc, n.d. <<https://www.understood.org/articles/en/understanding-universal-design-for-learning>>.

Srinivas, Hari. "What is collaborative learning?" National Institute for Science Education, n.d. <<https://www.gdrc.org/kmgmt/c-learn/what-is-cl.html>>.

TillyIII, William D. Encyclopedia of Applied Psychology. International Encyclopedia of Education (Third Edition), 2010. Vol. 10. Science Direct-International Encyclopedia of Education, 2004. <<https://www.sciencedirect.com/topics/social-sciences/peer-teaching>>.

Wagner, S. Inclusive Programming For Elementary Students with Autism. Arlington,TX: Future Horizons, Inc. 1999. <[https://www.fhautism.com/http://www.gov.pe.ca/photos/original/ed\\_autisminc.pdf](https://www.fhautism.com/http://www.gov.pe.ca/photos/original/ed_autisminc.pdf)>.