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Neurodiversity in The Classroom: Reframing General Educators' Thoughts on Neurodiversity and Inclusion

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NEURODIVERSITY IN THE CLASSROOM: REFRAMING GENERAL EDUCATORS'
THOUGHTS ON NEURODIVERSITY AND INCLUSION

by

IVY MADDEN

©

SYNTHESIS*

MASTER OF ARTS

CRITICAL AND CREATIVE THINKING

UNIVERSITY OF MASSACHUSETTS BOSTON

MAY 2023

Advisor: Robert Ricketts

*The Synthesis can take a variety of forms, from a position paper to curriculum or professional development workshop to an original contribution in the creative arts or writing. The expectation is that students use their Synthesis to show how they have integrated knowledge, tools, experience, and support gained in the program so as to prepare themselves to be constructive, reflective agents of change in work, education, social movements, science, creative arts, or other endeavors.

ABSTRACT

This synthesis is designed to teach general education teachers about neurodiversity and the importance of recognizing neurodivergent students to better assist them in class. This includes exploring different ways to teach, perform lessons, and provide choices for students to choose how to do their assignments in order to express their knowledge. Specifically for general educators, the ideas presented are encouraged for teachers to research and implement for both neurodivergent and neurotypical students in their classrooms.

The Action Research method of problem solving inspired this synthesis and guided it to its completion. It is dedicated to my constituents (my colleagues), and any other educators looking to better their understanding of neurodiversity and inclusion education. There are four diagnoses I have chosen to research that I have found, in my experience, to be the most common diagnoses to be present in the general education classroom: ADHD/VAST, Autism, Down Syndrome, and Anxiety/Depression. The paper is organized to give brief descriptions of these diagnoses, how to reframe our thinking about educating these students, and share ideas to improve and implement lessons for all students to be successful, regardless of neurotype.

My research behind this synthesis focused on neurodivergent authors and their experiences, from their adolescent years, specifically their middle and high school years. Some of these ideas presented may already be known and are utilized, but I look forward to passing this synthesis on to my constituents to help boost your understanding of neurodivergent lives and answer your questions. I encourage you to do your own research, listen to neurodivergent voices, and practice inclusivity to the best of your abilities.

Introduction

The makeup of a general education classroom is quite direct; students sit at their desks while the teacher gives instructions. Afterwards, the students either work on something independently, in a group, or the teacher may take the time to perform a lecture with a classroom activity. While some students are able to keep their attention where it is needed, many cannot. Ideally, an additional educator is in the classroom assisting those who appear to be struggling but focus primarily on their assigned students. Students on IEPs, or an individual education plan, have the support they require in writing. Based on their diagnosis, their IEP is designed to support and keep track of their learning in the classroom for both the general and special educator to review.

In the United States public schools, educators are seeing a rise in neurodivergent students enrolled in general education classrooms. While educators know of certain neurodivergent diagnoses, there are others that are typically looked over. Conditions like ADHD (attention deficit hyperactivity disorder) and anxiety require specific training and understanding, and our general knowledge of these and other diagnoses needs to be updated.

Neurodivergent students are being recognized and included into general education classrooms, while the model of education still separates “general” education from “special” education. It is time to see that education is one in the same, and the line splitting the two is slowly fading to allow inclusion. Teachers from all domains can learn a lot from one another, and my goal in this synthesis is to pass on what I have learned in a year of researching neurodiversity to not only my colleagues, but anyone who is interested in practicing inclusivity.

As an assistant for students with disabilities, I have found myself needing to explain the accommodations I propose, or impose, and why they are beneficial to the student I am assigned to. Being in a general education setting with neurodivergent students has opened my eyes to how much general educators are able and willing to assist, but often lack the tools to help certain neurodivergent students, as well as understanding how some students learn based on their neurotype. General educators should always be looking and comprehending IEPs, have a clear and healthy correlation between them and their learning support teacher (a.k.a. the special educator¹), and observing behaviors as a form of communication other than noncompliance.

My Current Situation

Since starting the Critical and Creative Thinking program in 2018, my work has reflected on ways to help neurodivergent students reach their full potential, and how to help general educators take on research to help support their needs. I have worked as a classroom assistant for students with disabilities for over eight years, but I have been a licensed educator since graduating college in 2015. My licensure is in English grades 8-12, and through student teaching and working in general education classrooms, I am often the one to help lead teachers become more involved in understanding neurodiversity and what it looks like.

Through my place of work, a public middle school outside Boston, MA, I am striving to teach my colleagues how to be more aware of struggling students and try different approaches when interacting and teaching. The goal is for every classroom to be as inclusive as possible,

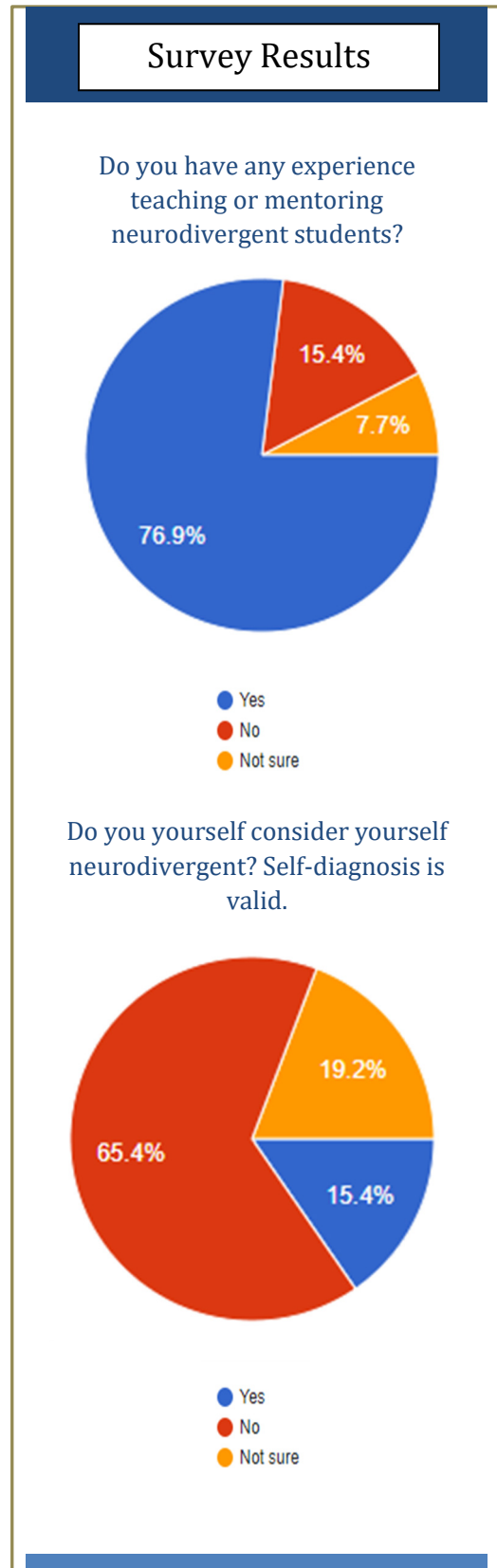
¹ For the rest of this synthesis, I will be replacing “special educator” with learning support.

whether a student has a diagnosis, an IEP, or is simply not learning to the best of their abilities. The middle school enrolls approximately 500 students a year, with about 120 staff members.

With student behaviors on the rise since the COVID-19 Pandemic, and teacher shortages across the country, I understand these struggles are not easy to fix. I do believe, however, that what I provide in this paper will be a start for my fellow educators to try new approaches and accommodations, overall working toward a truly inclusive classroom. It has been a time of high anxiety for everyone after a year of online and hybrid learning, and I hope these ideas can help reduce negative student behaviors.

Survey Questions and Analysis

In the fall of 2022, I comprised a survey to send to my colleagues throughout the school building to answer anonymously if they chose. This survey was completely voluntary and was available for three weeks. Questions included in the survey asked if they themselves were neurodivergent as well, or if they



have ever worked with any neurodivergent students. The charts provided show the answers my colleagues gave me regarding these questions. A large portion of them (about 77%) have heard of neurodiversity, but only 15.4% identified as being neurodivergent themselves.

This is promising to me because the neurodiversity movement has made its way into education, at least in my school, but what can educators do to nurture this? It is not enough to be aware, that is why I added a questions section for my colleagues to ask. Along with the diagnoses I plan on covering, I have researched specifically the questions my colleagues asked for me to answer in this paper.

Below are four questions that required short answer statements, and anonymous answers from educators at the middle school. Included are a few of the questions my colleagues asked on the survey:

What does neurodiversity mean to you? Who's included in this community?

- “When I think of neurodiversity, I think of ways of processing information that might not be typical. I think of ADHD, the autism spectrum, and bipolar.”
- “I feel like there's kinda two possible answers to this - one is more specifically people who have learning disabilities/autism/ADHD, and also sometimes it gets expanded to anyone who has mental illnesses or experiences the world in a different way from the ‘typical’ mindset.”
- “Neurodiverse means that someone’s brain works in a way that society would consider ‘atypical.’ Many people who are on the autism spectrum might be considered or consider themselves neurodiverse, someone who has fetal alcohol syndrome may feel similarly.”

- “Neurodiversity, or to be neuroatypical, means that the way one processes information is beyond the scope of what we would consider ‘normal.’ This could mean that the person has a cognitive disability, a physical disability, or an emotional disability. It also applies to difficulties with executive functioning. I’ll note that ‘disability’ in this context is not meant to have a negative connotation.”
- “Autism and Aspergers.”
- “Far more individuals are neurodivergent than we or even they realize. With our country finally focusing on and taking mental health seriously, hopefully people will realize this isn't a negative label or something they have to hide and can get the proper support to address the areas they struggle with, be it in a social, work or scholastic setting.”
- “Neurodiversity to me means individuals whose brain processes information in a different way than how a brain typically processes information. People in this community include individuals on the autism spectrum, individuals with certain health conditions, and learning disabilities.”

"Typical vs. atypical" is more appropriate than "normal vs. abnormal." Why do you think this is so?

- "'Normal' has a stigma attached to it, even though it can be used to replace 'the majority of people. To combat this stigma, we can say 'typical,' which I think has less baggage attached to it and brings with it less of an emotional charge."
- "'Abnormal' has bad connotations that references deficit thinking and doesn't allow for the very great benefits and strengths that can come from having an atypical mind."

- “There is no ‘normal’ and every type of thinking, feeling, and behaving happens on a spectrum.”
- “It is a kinder and more inclusive phrasing and also more accurate, as it's hard to quantify "normal" but it is easier to quantify ‘typical.’”
- “Designating something as ‘abnormal’ usually means bad or wrong, whereas ‘atypical’ is more just clarifying that there's a difference.”
- “There’s a stigma that comes with the word normal. Atypical feels more appropriate because it’s not about being normal, it’s about what is more common.”
- “There is no definition of ‘normal.’ People who need corrective lenses might think it's normal to have to squint when reading a book. When we talk in terms of ‘typical’ or ‘average,’ we're removing the negative black-and-white connotation of normal or abnormal. With that said, I think what we would discuss in abnormal psychology is neurodiversity.”
- “I think the word ‘normal’ is hard to define. I wonder what standards we use to deem someone or something normal or abnormal. I guess you could also say this for typical and atypical.”
- “Even if someone is atypical being labeled abnormal could be a detriment to confidence and self-esteem.”

Do you have any experience with the neurodiverse community? If so, please explain (family, friend, teaching, coaching, etc.)

- “I have done a lot of work in teaching students with severe disabilities.”

- “Yes, all of the above. My life as a teacher has evolved around working with the neurodiverse community.”
- Some colleagues shared personal stories of loved ones with acquired neurodiversity - usually categorized as someone with a traumatic brain injury or PTSD (Post Traumatic Stress Disorder).

What questions, if any, do you have for the neurodivergent community you'd like to ask?

- “Who is included? What is the most respectful way to address someone as 'neurodiverse?’”
- “Why is self-diagnosis considered valid? Are anxiety and depression considered neurodiversity, or does that fall under a category that would be more behavioral rather than (not sure if this is the right word) cognitive processing?”
- “General guidelines about what type of behaviors I can show to make members of the neurodivergent community comfortable and open the door for engagement?”
- “Here at school, I wonder how many students are familiar with this concept.”
- “I want to know how best to accommodate their needs. For instance, some students need to work in a quiet environment. Or students request to take a walk around the school.”
- “What terms do you prefer folks use? If there is one thing you'd want a non-neurodiverse person to know, what would it be? How can we support you?”
- “As a Neurodivergent individual myself I always struggled with effective communication growing up, what is something you struggle with that you feel is too quickly dismissed by those around you?”

- “Neurodivergent to me states a pattern in brain waves, so that is the case would we all be neurodivergent and no one person is the same?”

Why Does This Matter?

Through my personal observations, as I’m sure a lot of my colleagues can say as well, students are struggling every day, and we’re constantly looking for new accommodations and modifications. Students are easily distracted, have difficulty focusing, and feel pressured to do assignments they may not be able to complete on their own, but have the expectation to. Some students are not comfortable at all in certain classes due to the teacher’s approach not matching the student’s learning style. Of course, not all students are going to get along with their teachers, but getting along with their education is what’s most important, and we need to focus on modifying and breaking down assignments instead of strict compliance.

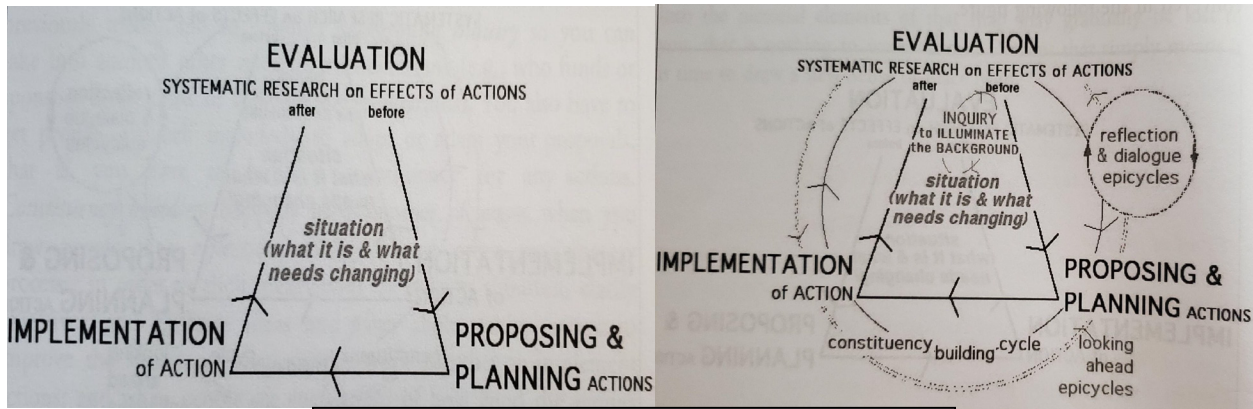
Classrooms are more neurodiverse than ever, and with this synthesis, my goal is for teachers to understand and practice inclusive language, spread motivation to unleash critical thinking skills, and begin looking into a deeper cause for these frustrations. Through Action Research, every educator can try out new methods of teaching for their classes and individual students to see what works best.

Action Research

Action Research is an organic, self-driven research method, designed to promote critical thinking awareness and problem solving skills.. When an issue arises, AR tells us to propose a solution, plan it, implement it, and evaluate/reflect. Then the cycle continues as more changes need to be made. Therefore, AR is a constant process. The beauty of it is when you take on AR,

the ideas spread, causing a ripple effect in which other people try to solve the problem as well.

Ideally, these people would be your constituents, or your audience that you've designed your AR



(Taylor & Szteiter, 2012, pgs. 37-38)

for. In my case, my

constituents are my

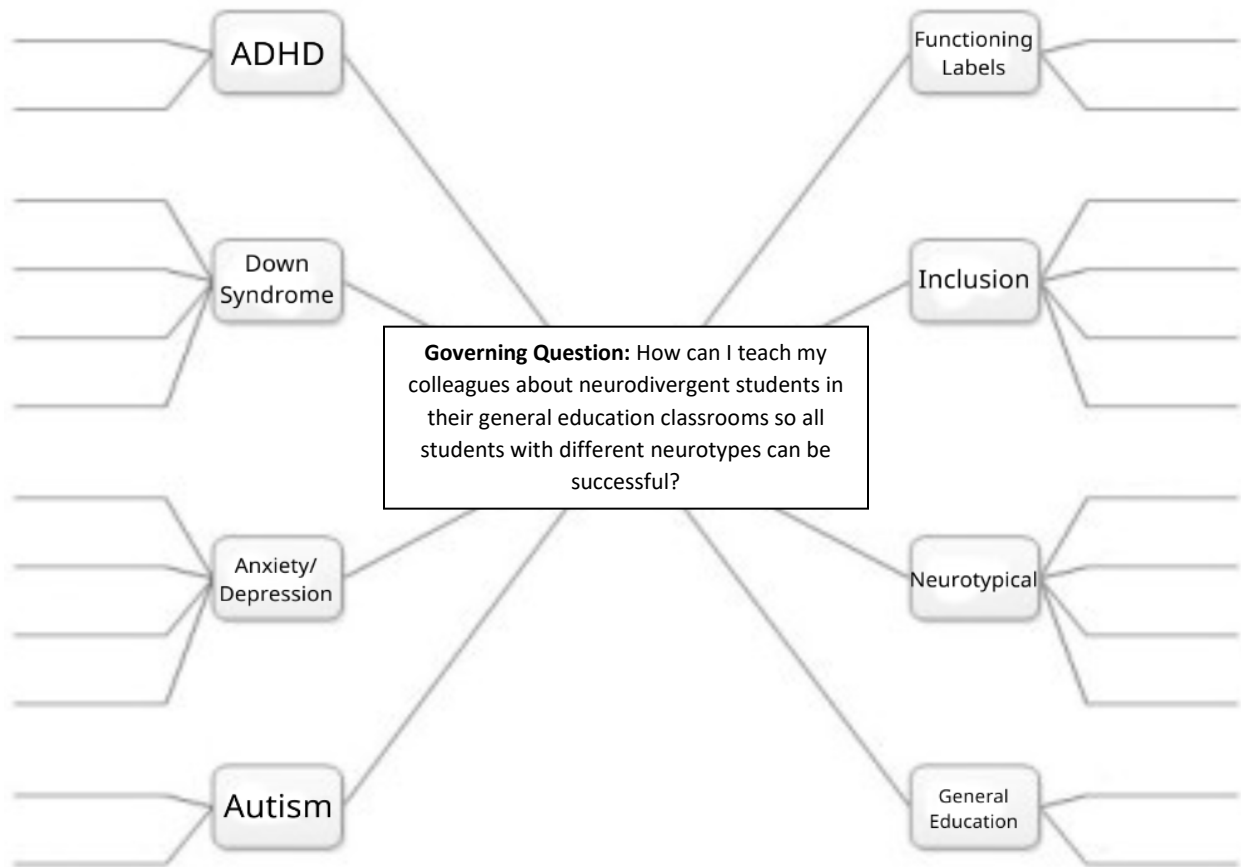
colleagues.

Governing Question

The governing question was developed to help guide our Action Research within the Critical and Creative Thinking program. It is designed to inspire us, comprising a simple question that branches out to bigger ideas and solutions. My governing question, as seen in the middle of the expanding graph, is, *“How can I teach my colleagues about neurodivergent students in their general education classrooms so all students with different neurotypes can be successful?”*

From that question I began thinking about how broad this research could be. There are four diagnoses I have chosen to research that I have found, in my experience, to be the most common diagnoses to be present in the general education classroom: ADHD/VAST, which I will describe momentarily, Autism, Down Syndrome, and Anxiety/Depression. This presentation is

organized to give brief descriptions of these diagnoses, how to reframe our thinking about educating these students, and share ideas to improve and implement lessons for all students to be successful.

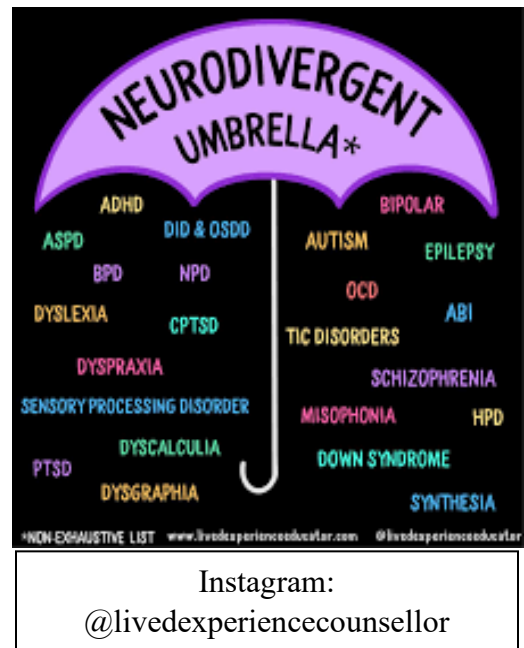


Neurodiversity and Inclusion

If you have not heard of neurodiversity, or the neurodiversity movement, it would not be too surprising to me as it is not discussed enough in classrooms outside of those for students with disabilities, in my experience. Simply put, neurodiversity is a compound word: neuro and

diversity. The word exists to put a name to a community of people who think, process, and express themselves differently than what society considers to be typical. Generally speaking, “Neurodiversity describes the idea that people experience and interact with the world around them in many ways; there is no one ‘right’ way of thinking, learning, and behaving, and differences are not viewed as deficits” (Baumer, 2021). If you *have* heard of this word before, you probably heard it when someone referred to Autistic people and those with various learning disabilities.

The term “Neurodiversity” was created by Autistic sociologist Judy Singer in 1998. As mentioned before, this gave a name to a community of people - Autistic people, and gradually branching out to those with other neurological and mental diagnoses in the last 20 years. ADHD/VAST, Down Syndrome, and anxiety/depression, are considered to be within the neurodiverse community as well. Being neurodivergent, however, means some of life’s aspects are challenging, such as social interactions, sensory input, and time management. This natural variation of how our brains are designed gives some people a unique perspective of the world. Those who do not have any neurological conditions are referred to as neurotypical, and they all interact and process their surroundings in similar ways. Because of this majority, our world has been built by neurotypical people, for neurotypical people, and has just begun to adapt and embrace neurodiversity.



Many neurodivergent people would say, “There is a sense that a particular neurodivergence does not make people inherently disabled, but they feel disabled because of the generally overstimulating environments of dominant neurotypical culture and settings” (Nerenberg, 2021). Us educators can help our neurodivergent students feel more in control and comfortable with this being known.

Self-Diagnosis

Self-diagnosing is common in the neurodivergent community. This is because waiting for a medical diagnosis can take months or even years before some form of professional intervention can take place. Do your research, and if you believe you are neurodivergent in some way, the community believes you know your brain best. However, seeking professional advice is always encouraged. Social media can be a useful tool to find others who express themselves similarly, and from there, one can evaluate themselves and learn what can help them through life’s challenges. Make sure whatever sources you use are credible, including what you find on social media.



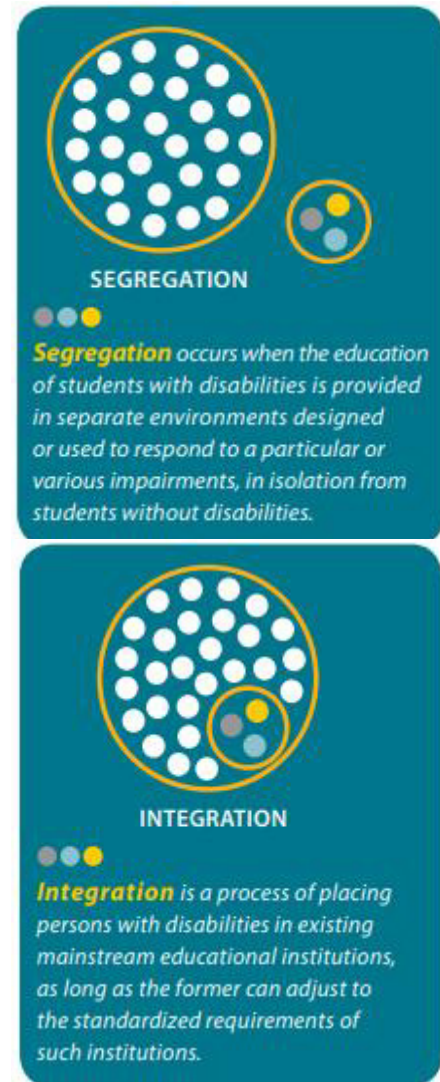
Graphic obtained from the Stimpunks Foundation at stimpunks.org

Why Inclusion is Important

The most recent statistics state that out of all students with disabilities who are served under IDEA (Individuals with Disabilities Education Act), 95% of them are integrated into general education classrooms in regular schools.

Therefore, it is absolutely necessary in today's realm of education for general education teachers to understand neurodiversity and become more flexible in how students achieve what is expected from them. This trend of integration is not going away, as the research behind inclusion education is overwhelmingly positive; "Children with disabilities that were included did as well, or indeed slightly better, than their counterparts who were educated separately" (Qvortrup & Qvortrup, 2017).

Being an inclusive classroom means always modifying and discovering ways to assist students so they can perform to the best of their abilities. For example, Dr. David Stein, author of *Supporting Positive Behavior in Children and Teens with Down Syndrome*, explains, "Inclusion is not all or nothing. It is not black or white. Inclusion, to me, means that an individual is meaningfully participating to the best of his ability in learning and in activities with peers" (Stein, 2016). Inclusion is more than having neurodivergent students attending classes with their neurotypical peers, it is about



Images 1&2 retrieved from
thinkinclusive.us

participation, helping, and allowing neurotypical peers to learn how to be flexible and supportive.

Neurotypical students also benefit from inclusion education because it allows them the opportunities to understand everyone's learning differences. It also gives them the opportunity to be in mentorship roles and encouraged to help their neurodivergent peers when paired. In terms of academics, "The vast majority (81 percent) of study findings indicated that nondisabled students either experienced no effects (58 percent of studies) or experienced positive effects (23 percent of studies) on their academic development as a result of being educated alongside students with disabilities" (Hehir & Friesen, 2016). There are no reported negative experiences among neurotypical students working alongside their neurodivergent peers.

Neurodivergent students provide educators with many variations of the mind and different thinking patterns to work with. When teachers understand this, they get creative with their assignments, give multiple options on how to do or show the work, and in return, the student is able to work to the best of their abilities. For example, the survey for my colleagues included a section asking to describe any experiences they had with accommodating a neurodivergent student and if it was successful. One response discussed a time they worked with a general educator to switch an assignment from writing based to drawing based, and the student was motivated to complete their work because they were given the opportunity to work in a way where they were able to show their knowledge of the material. As a result, the creative thinking of the educators taught the student they were just as capable when things are adapted for their neurotype.

Inclusion for All

The most important lesson I have learned from researching what an inclusive classroom is has been how inclusion is not just for neurodivergent students. Inclusion means including everyone, from every demographic, so they can feel comfortable and supported in their education. Research shows how, “The presence of diversity in the classroom allows students to consider perspectives and opinions beyond those they’ve already formed or were shaped in early life by family and friends” (American University, 2019). Students with complex needs, English

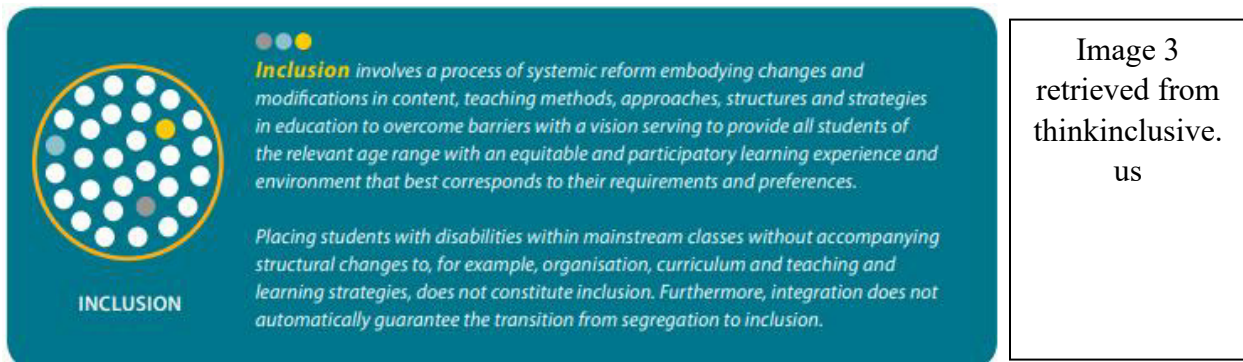


Image 3
retrieved from
thinkinclusive.
us

language

learners, as well as at-risk students are typically separated from their peers. Students who identify as LGBTQ+ who feel underrepresented, and black indigenous students of color also need the safety of an inclusive classroom. Although some students are in classrooms specifically designed for them, such as sub-separate classes for students with disabilities, their peers miss out on learning opportunities relating to tolerance and accepting others. In short, it is not enough to practice integration, which excludes students from one another for most of the day.

Creating an Inclusive Classroom

In classrooms today, it is not unusual to see a pile of soft, comfy furniture taking up a corner of the room. “Mindfulness” spaces have become a common section in classrooms recently to encourage relaxation while learning. This has made huge strides in how teachers and school personnel think about education, considering a majority of students with disabilities have anxiety compared to their neurotypical peers (Nelson, 2011). Although teaching relaxation techniques is a great step toward helping neurodivergent students, as well as neurotypical students, the main idea is not only to give students a “safe” space to work, but to give them work they can complete based on their strengths, *while* relaxed.

Here are some ways you can make your classroom more inclusive and comfortable:

- Have a class agenda/schedule for all students to see.
- Add comfy and adaptive seating arrangements.
- Decorate your classroom as “home-y” as possible.
- Provide examples when necessary for all assignments.
- Post students’ work on the wall.
- Inspirational posters never hurt!
- Add an inclusion clause to your class syllabus or expectations.
- And finally, try to seek references from people of different demographics to share with your students (like LGBTQ+ authors and posters of anti-racism advocates).

What Educators Need to Know About ADHD/VAST

ADHD (attention deficit hyperactivity disorder) is an example of a neurotype educators come into contact with often, if not the most common. Students diagnosed with ADHD typically show an inability to concentrate on one single task that is expected of them to do. As of 2019, the CDC reports about 9.8% of school-aged children, ages 3-18, in the United States have ADHD. Boys are more likely diagnosed than girls, and both non-Hispanic black and white students are diagnosed more often. (CDC, 2023). Those who identify with one or more of these profiles are at higher risk of obtaining poor grades, receiving detentions and suspensions from school, and developing unhealthy peer relationships. (Gintner, 2015). Students with ADHD are typically characterized as people who have a hard time focusing on one thing. Of course, this is more noticeable when it comes to in schoolwork and assignments.

Educators are critical for identifying traits of ADHD because of their exposure to different neurotypes over the course of their careers. With an abundance of students receiving additional assistance and modifications, both learning support and general educators earn experience and recognize similar traits in their students with ADHD. The best support a student with ADHD could receive is if there is, “A sound ADHD knowledge base may not only improve in-school services but also enhance collaboration and advocacy efforts with parents and other allied professionals” (Gintner, 2015). So, when educators take the time to learn more about ADHD, their students with ADHD can be better supported and overall more successful in the classroom.

Depending on the topic, a student with ADHD may be very passionate/fixated about it, or simply explain their thinking verbally rather than in writing. This is important for teachers to

know because it shows a student can focus on a topic and talking about it in depth. Therefore, some accommodations for students with this neurotype can be oral assignments instead of written, and opportunities to complete daily tasks with choices, such as working in a small group, independently, or with the work broken down with frequent check-ins.

One educator on the survey reported that they strive to promote oral presentations for students instead of tests. Some students would take the test, as their peers did, but were given the opportunity to explain their answers further if they could explain better verbally. Their students felt more confident in their school performance, thanks to the flexibility of their teachers.

What is VAST?

Contrary to popular belief, there is not necessarily a problem with maintaining attention, it is what the attention is going to that is difficult. Advocates and people diagnosed with ADHD are moving towards a more inclusive acronym. VAST, or variable attention stimuli trait, is a more descriptive and less demeaning description of ADHD. It highlights the attention still there, showing the capability these people still possess, and removing “disorder” from the diagnosis sends a message that having VAST is not something negative. Also, it includes the word “stimuli,” indicating the need for stimulation in order to complete tasks. Simply put, without some sort of motivation or desire to do something, it cannot and will not be done, and it is not the fault of the student. Neurologically, students with ADHD/VAST are unable to do what is expected of them unless they feel a personal need to do so (Hallowell & Ratey, 2022). Educators, therefore, could really benefit from knowing this information. Instead of discipline and exclamations of frustration, adjusting a lesson or offering multiple ways to complete an assignment could show an improvement of behavior and schoolwork completed more efficiently.

What Should Educators Know?

Students with ADHD/VAST are less likely to ask for assistance, even though about 9 out of 10 diagnosed students receive some form of additional support and aid within their classrooms. (CDC, 2023). Without stimulation to work on an assignment, asking for help or modifications can be a terrifying task. Unfortunately, many teachers see this as “laziness” and not wanting to work, leading to some form of discipline, which creates anxiety. The reality is, “Those with VAST are often embarrassed to ask for encouragement, so supporters have to remember to offer accolades for goals met, effort expended, and movement in the right direction” (Additude Magazine, 2022). Celebrating the small accomplishments and giving positive feedback when a student is showing improvement is extremely important for educators to know about their students with ADHD/VAST.

It is important for educators to learn more about ADHD, how the community represents themselves (including those who identify as being diagnosed as VAST) and passing along this information to their students through modeling and their teachings. With more flexibility and a little trial-and-error, teachers can make a major difference in how students with ADHD/VAST feel about themselves and their performance in school, ultimately moving toward a more inclusive and welcoming classroom environment.

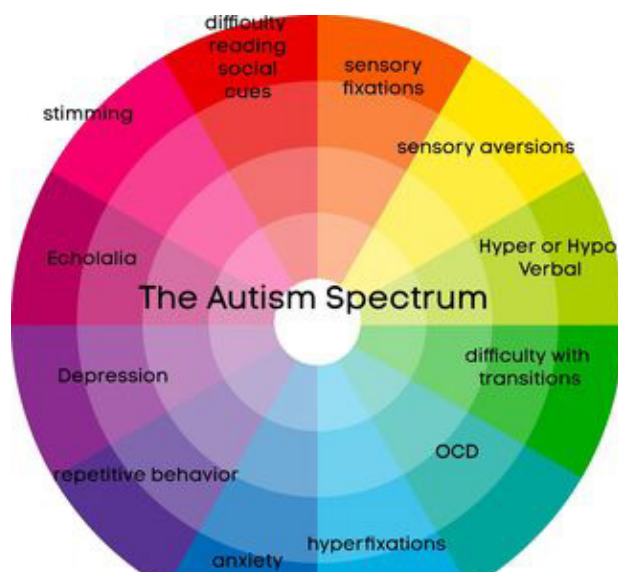
Takeaways and Important Points

- Frame instructions so a goal/motivator is more highlighted.
- Keep checking in with a student, they may depend on it to stay on task.

- If a student is off task, simply guide them back to their work and give positive feedback on what they've done so far or give the instructions again.
- Students with ADHD/VAST are less likely to ask for help due to a fear of discipline.

What Educators Need to Know About Autism

Autism is another neurotype that general educators are seeing in their classroom more than ever. As the world continues to understand what Autism *is*, I have been unable to find an official definition with inclusive language. To the neurotypical world, Autism is described as having problems with socialization, focusing, as well as having a lack of awareness of their surroundings. However, the Autistic community has consistently pushed back on these notions as the neurodiversity movement has been spreading. Autism is simply a neurotype, not a developmental disorder or a neurological disease.



Jessica Penot, LPC, from *Psychology Today*

Because Autism affects every person differently, it is important for teachers to seek out education techniques and accommodations that promote a positive learning environment for their autistic students. Statistically, “In 2015, about 91% of autistic students in the United States were in general education schools, and about 40% of these students were placed in general education classrooms for at

least 80% of the day” (Bolourian, 2021). This alone is why general educators should be looking into adaptations they can make on their own.

The Autistic Community

As mentioned before, autistic people express themselves in various ways, which is why Autism is typically described as a spectrum. Looking at the image, the color wheel represents different symptoms of Autism and the degrees of how they can be shown. For example, some autistic students may need some form of fidget to help focus and regulate (a sensory aversion), while the same students socialize with their peers in a typical manner, and others might have more difficulty reading social cues, but transition well and are hyper verbal.

These variations are a major reason why the Autistic community and the neurodiversity movement are advocating to remove functioning labels when describing Autistic students. If a student appears successful in one or more categories, it can mask what they struggle with, but because of what their educators have labeled them as, the focus will be reduced despite the difficulties the student actually needs assistance on. To put into perspective, “When we are called high functioning, it often invalidates how disabled we feel and how much we struggle to do daily living skills, mask, and maintain. It invalidates our life experience” (Penot, 2022).

Instead of terms like “high vs. low functioning,” one can say they are independent in some categories but need assistance in others. Or highlight what the student is successful in but keep in mind the challenges they still face in certain aspects of life.

Important Terms

Masking is a term used in the Autistic community that has now been associated with other neurodivergent diagnoses recently. It is described as, “When a neurodivergent person has to change their behaviors to be more ‘socially acceptable’ in our culture” (Olsen, 2023). To be accepted in society, we all have conformed to the social standards in certain situations, regardless of neurotype. For neurodivergent individuals, however, masking is an everyday occurrence. Autistic and other neurodivergent people have a need to fit in out of fear of being excluded from opportunities neurotypical people enjoy without worry, such as social gatherings and completing schoolwork with other classmates.

Spoons is a theory that represents how much mental or physical capacity a person has for the day. It is commonly used in the neurodivergent community to highlight energy levels. As someone with anxiety and depression, some days are difficult for me to power through due to whatever mental blockage I may be having that day (i.e., worried about an assignment, bills, something from the past, etc). The theory is designed for neurotypical people to understand how neurodivergent people feel in a visual representation. When someone states they are lacking spoons, it should be honored as a sign that a student is having a tough day or feeling overwhelmed by their environment or incidents from the past (like being sick over the weekend, losing a baseball game).

Stimming is necessary for regulation and, “Refers to movements - such as flapping their hands or tapping the fingers - that help relieve anxiety that comes with overstimulation” (Nerenberg, 2021). This could look like nail biting, needing a fidget toy, vocalizing, or rocking back and forth. Yes, some stims can be destructive to the individual or objects, such as skin

picking and intensive head banging, but brainstorming other ways to stim with the same soothing effect will improve classroom performance.

Autism Advocacy

The Autistic community, with the help of the neurodiversity movement, is speaking out about how society views them and how our world has a mindset that everyone should be acting a particular way in order to be a positive and contributing member of society. Ableism, or to be ableist, “Either subtly or directly, portrays individuals who are being defined by their disabilities as inherently inferior to nondisabled people” (Dunn, 2021). For the neurotypical, it is taught that Autistic people need help adapting to the community, such as using eye contact at all times when talking to someone, as well as reducing how much they stim in public.

Many autistic people see this as “cure culture,” a way to “fix” Autistic people to fit a better norm. This is more damaging than good, in fact, “Cure culture is the ultimate way to show autistic people that you do not accept them for who they are” (Gray-Hammond, 2022). Some other examples of cure culture include:

- Autistic people are “missing” a part of themselves.
- Vaccines causing Autism, insinuating that Autism is a disease.
- Using functioning labels.

It is also important to research Autism organizations and influencers before pledging support.

They may be speaking a different message than the Autistic community believes in. Also, while some still refer to themselves as having Asperger Syndrome, or creatively an “aspie,” the

diagnosis has been removed and placed under Autism since 2013. A large reason for this was who Hans Asperger was, and his ties to Nazi Germany during World War II.

Autistic Students in the Classroom

Creator of the Neurobeautiful blog, Annie Kotowicz, explains how, as an Autistic person herself, “Autistic people process information differently, because our brains are hyper-connected in some places and less connected in others” (Kotowicz, 2022). It is unfair to expect Autistic students to fit into a typical classroom setting, therefore general educators need to be flexible on how they deliver instruction and assist those students. Autistic individuals need questions and instructions repeated, which is often misunderstood as not listening or paying attention. They also may prefer to work alone, which should also be accommodated when possible. For inclusive language, my understanding from the Autistic community is that someone can either choose Autism or person-first language, but the majority prefer Autistic person.

The less anxiety, the better, and sometimes that means trying out accommodations a teacher may be unsure about honoring. As a whole, “When we make the environment more comfortable for neurodivergent people, we generally make it more comfortable for everyone” (Gray-Hammond, 2022). The goal is to work comfortably, not under pressure to conform.

Takeaways and Important Points

- Be patient with processing times, it is important not to interrupt when a student is processing information or formulating a question.²
- If requested, a student should be allowed to work independently. If it is a group work assignment, discuss with the student what parts are independent and how much is done in a small group. Social situations can be intimidating for Autistic students.
- Ignore stimming, and if stimming is too distracting, discuss with the student other ways to stim in the same manner but with a new tool or plan to regulate.
- Stop using functioning labels, they are not accurate and misrepresent a student's profile.
- Do not force compliance, compromise instead, and be flexible.

What Educators Need to Know About Down Syndrome

Students with Down Syndrome are included in this synthesis for a couple reasons. For one, I have worked with this population of students since the start of my teaching career, and they provide a great joy and energy to anyone a part of their lives. The second reason is, as the world provides more inclusive opportunities, “Individuals with Down syndrome are becoming increasingly integrated into society and community organizations, such as schools, health care systems, work forces, and social and recreational activities” (National Down Syndrome Society,

² I personally like to count to 10 in my head before repeating/rephrasing the question.

2023). Therefore, general educators should look forward to more students with Down Syndrome attending their classes.

Keep in mind, “Many children with DS are not so different from their peers in an academic sense. That is, with supports, children with DS can often participate quite well in academics and classroom activities” (Stein, 2016). Given the proper support, students with Down Syndrome can be just as successful as their peers, and understanding the general needs of these students is a head start for a general educator to implement those supports. For example, Down Syndrome not only has a cognitive component, but it is also physical, especially with the senses. It is common for people with Down Syndrome to have a form of visual impairment as well as hearing loss. They also tend to have speech delays and impediments, so it is important to interact with the student and familiarize themselves with their speech production (Center for Parent Information and Resources, 2017). It is not the job of the general educator to correct speech, however, it is their job for their students to know they can freely communicate with them knowing a teacher is doing their best to hear and support them.

On this note, general educators should meet and learn more about the specialists the student sees during their school day. As with any student on an IEP, general educators need to correspond with the case manager assigned to the students with IEPs in their classroom. In terms of speech, it is a good idea to keep a line of communication open between them and the speech/language pathologist in the school to help keep an eye on the student’s progression.

Supporting in the Classroom

Students with Down Syndrome need predictability and “sameness” in order to be set up for success. What is most important, however, is creating a positive environment for students with Down Syndrome to feel supported. Of course, this goes for any student, but students with Down Syndrome depend on lessons being as descriptive as possible so they know what to expect. For example, breaking assignments down into smaller pieces allows them to complete tasks at their own pace and feel successful. It also helps them keep track of what to do next, to promote predictability.

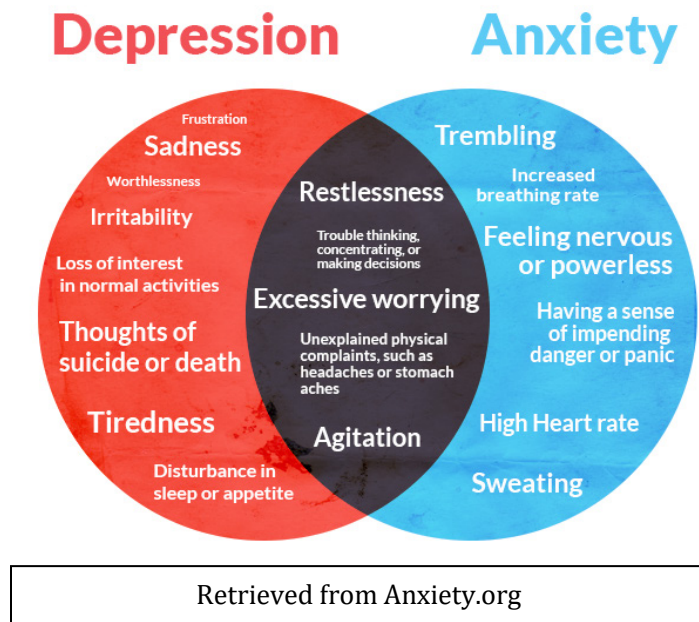
From the novel *Count Us In* by Jason Kingsley and Mitchell Levitz, these two individuals with Down Syndrome shared their lives of growing up with DS and attending public school with their neurotypical peers by reciting their thoughts to their mothers. Their education was a success in part because their parents were able to get their general education teachers “onboard” with what accommodations they wanted for their sons. They stated, “In an environment of encouragement and optimism they constantly surprised and delighted us – and their teachers – with accomplishments we’d never dreamed of” (Kingsley & Levitz, 1994). When students with DS are able to complete work and participate with the help and flexibility of their educators, they thrive.

Understanding how to address a person with Down Syndrome is another example of inclusive language. It is either a person with Down Syndrome, or a person with DS. It is inappropriate to refer to someone as having “Down’s” or “a Down’s person.” Person first language is important for people with DS.

Takeaways and Important Points

- Stay in-the-loop with students' therapists and see how you can support the student with their guidance.
- A positive environment is a stable environment.
- Keep in mind physical conditions typical for people with Down Syndrome.
- Break instructions down.
- Be patient, students with Down Syndrome take their time processing information, and sometimes need sentence starters or repeats of what is being asked of them.
- Process over product, meaning the hardest work is done while the assignment is happening, not when it's finally completed.

What Educators Need to Know About Anxiety/Depression



Because these typically cohabiting conditions are different for everyone, “Anxiety and depression are complex disorders and how they affect people depends on many variables. One minute a student could seem fine and the next they may experience an outburst or panic attack. Teachers and staff need training to be able to properly handle these unexpected occurrences” (*Impact*

of Anxiety and Depression on Student Academic Progress Impact of Anxiety and Depression on Student Academic Progress, 2019).

Anxiety

The statistics currently show that anxiety alone is the most diagnosed mental illness, and those who were diagnosed at a young age typically carry it through their adult lives. However, adolescents have a habit of hiding things from adults, including their concerns over their mental health (Minahan, 2021). In fact, about one third of students have had anxiety that has affected their education, whether it be due to in-school and/or out-of-school situations. The numbers may be even higher considering masking techniques and nondisclosure of how teens and preteens are truly feeling mentally (Minahan, 2019).

McLean Hospital, a renowned psychiatric hospital located in Belmont, Massachusetts,

has reported how, “Anxiety disorders have the potential to affect every part of a young person’s life, including their physical health, emotional well-being and social skill development” (McLean Hospital, 2023).

Despite all this, “Few teachers receive significant training in their teacher preparation programs in mental health and behavioral best practices. By and large, teachers are left on their own to learn about the effects of anxiety on learning and behavior and to figure out how to address it in the classroom” (Minahan, 2019). This is to say that it is not at the fault of general educators to be unaware of what is supportive to those with anxiety. Education has always had an overlap with psychology, but training regarding neurodiverse conditions let alone anxiety are not usually offered to general educators in my experience.

Depression

Depression is difficult to detect in adolescents, contrary to popular belief. It manifests in multiple ways - from acting out in school to being distant and quiet. Truly, the statistics on depression among school-aged children are lacking because so many students are undiagnosed. It is typical for adolescents to feel sad and angry at times, “When a sad or bad mood lasts for weeks, months, or even longer — and when it affects a student's ability to do well in school and with peers — it might be depression” (Kids Health, 2022).

Teachers are often ill-equipped to see these signs as depression and may see them instead as defiance and disruptive behavior. It is important to keep a guidance counselor or school psychologist in the loop as to the student’s behavior in class and remove a sense of judgment. A lack of awareness can easily be helped by researching reputable sources and hearing personal

experiences from adults with depression when they were in school.

Personal Experience³

People who are neurodivergent are encouraged by the community to share their struggles and spread awareness. Notions about mental illness and disabilities are being challenged now more than ever, and in order to help the next generation, sharing the most troublesome parts of our lives and how we've overcome in a world not designed for us could potentially be lifesaving.

I say "us" because the most important lesson I have gained from this project is realizing that I myself am neurodivergent. I was born into a very privileged family that loved me deeply and did everything they could for me. I had a great childhood - trips to the Cape every summer, family gatherings on holidays, and parents that were involved. As a baby, I had three open heart surgeries by the age of two due to an underdeveloped right ventricle. I am very lucky in the sense that I have been healthy ever since and experience little to no complications despite my heart condition, but because of my surgeries, I was on an IEP until second grade in case I had any developmental delays.

I was a very anxious child, and when I started elementary school, I could tell I was "different." I was more energized as a child than my peers and got in trouble often for my hyperactivity. As I got older, I began being bullied by older students, and eventually by my peers. Cyberbullying became popular when I was in 6th grade, and kids were saying things to me they never would have had the guts to say to my face. I didn't want to go to school anymore - I often faked illnesses so I could stay home. Whenever I blocked a screen name, a new one would come up and continue with the bantering. There was no escape from the insults either in or out of

³ This section discusses surgeries, bullying, self-harm, and suicidal thoughts.

school. Despite reaching out to my teachers, whatever interventions they put in place made things worse. No one liked me, and no one could force them to.

The cyberbullying continued, and soon it became prevalent in school. I was already hypersensitive, I was anxious over my current friendships disintegrating like the others did before, and during a time where attractiveness meant everything, as many preteens believe, I felt no reason to try anymore. I had poor grades; I wouldn't do homework. I second guessed all my relationships with people, and as a freshman in high school, I nearly reached my breaking point. Due to my grades, I was in classes for students who needed extra support, but I was never reinstated on an IEP, so I truly felt I had no educator to help me. I self-harmed. I clung to the few friends I had to the point where I experienced separation anxiety. The bullying wouldn't stop.

On a particularly bad day, I decided to tell my father what had been going on with me. I had thoughts of suicide and didn't know how to handle it. The next day, my guidance counselor grabbed me from my Latin I class to speak with me privately in her office. "You can't tell people you're suicidal," she told me, "Because people will think you're unstable, and you'll be held in a psych ward for weeks or months with no freedom."

If I had an educator who knew what I know now, the rest of high school would not have been so traumatic for me. A simple sentence imprinted on my brain for the rest of my life, keeping me from getting the help I needed because I was afraid to be called crazy. This changed my thinking pattern forever, that if I don't say anything, people will like me, and I will be safe.

It took me until the month of my 21st birthday to finally seek help, and after years of being afraid to speak up, it turned out to be the best decision of my life. Nothing my guidance counselor said was true for me, and I was able to see a psychiatrist and go home with a therapist's number and a prescription in hand in a span of an hour. I was finally able to cope with

what had been happening to me, and my thinking patterns became reasons why I believed the things I was telling myself.

Because there is such little data on adolescents with depression, I hope my story can be something to reflect on. Although I had many friends who supported me, what was occurring in my mind hurt me everyday and I chose to hide it. Check in with students as often as possible and make sure you understand your school's mental health resources to properly explain them to students who may be in need.

What Educators Need to Know

- Students with either depression or anxiety have heightened sensitivity. They need calmness and the ability to regulate, and an inability to do so is not overreacting. It is okay to be sensitive.
- Adolescents hide symptoms.
- Outbursts could be out of fear.
- Connect with your school's mental health team.
- The word "crazy" in terms of behavior is derogatory.

Conclusion

The trend of inclusion is growing, and general educators need the opportunity to learn more about neurodiversity and correlate with the learning support teacher. Building an inclusive classroom means making sure everyone feels represented and is not just for accommodating neurodivergent students. However, this synthesis focused on neurodiversity and education techniques/examples to motivate general educators with encouraging creative thinking skills.

The survey helped me get a baseline on what my colleagues understood about neurodiversity, and through them I was inspired to research their questions and provide clarifying information on inclusive terms, classroom set up, as well as reframing our thoughts on certain diagnoses. By using Action Research methods, I dedicated a year to researching neurodiversity and classroom assistance. Through my own personal experience, I believe it to be beneficial for general educators to design accommodations that fit a student's neurotype and preferred learning, and research neurodiversity on their own to boost their teaching capabilities.

The benefits of inclusion are positive for both neurodivergent and neurotypical students. In fact, inclusion is for everyone, and practicing inclusive language and improving on an inclusive classroom environment helps all students feel welcomed and supported. Mindfulness spaces are a great start, and integrating a message of acceptance into your classroom design and environment is pivotal.

If we want to improve the lives of our students, all educators need to research and devise inclusive lesson plans. For general educators, taking the time to learn more about specific diagnoses can inspire a creative mindset and ideas to design assignments that benefit a certain neurotype. Unlearning and reframing our understanding of ADHD/VAST, Autism, Down Syndrome, and Anxiety/Depression opens the door to new possibilities and ways of educating. My curiosity of these diagnoses lead me to the neurodiversity movement, and in order to write this synthesis, I needed to take the time to find reputable sources with a focus on neurodivergent authors. At the start of this project, I had my own questions regarding neurodiversity, and my willingness to be flexible and reframe my own thinking has helped me understand and practice different approaches for certain neurodivergent students. I took time to observe situations for me

to research later and understand why they happened, and what can be done to prevent it next time.

In the end, this year's journey through the Critical and Creative Thinking program has changed my thinking of educating neurodivergent students forever, and I have the motivation to continue my advocacy and learn from both personal and first-hand experiences from other neurodivergent people. I have learned that my diagnoses mean I perceive the world differently than most, and although it is scary, I now know I have others who think and go through the same challenges I do every day; I am not alone.

I have anxiety, depression, and the acquired neurodivergent diagnosis of PTSD. My thinking and processing patterns have always been neurodivergent, but situations in life made my symptoms worse. I am here today as someone trying to spread a message, when in turn the message was more personal than I expected. I am neurodivergent, and I am proud to be helping my neurodivergent students by telling you why neurodiversity acceptance matters in the classroom.

REFERENCES

- Amelines, A. (2021, September 1). What is neurodiversity? YouTube. Retrieved February 16, 2023, from <https://www.youtube.com/watch?v=xsfml3yVh1g>
- Amelines, A., & Hedley, D. (n.d.). What is Neurodiversity. Neurodiversity Hub. Retrieved January 10, 2023, from <https://www.neurodiversityhub.org/what-is-neurodiversity>
- Baumer, N. (2021, November 23). What is neurodiversity? Harvard Health. Retrieved January 10, 2023, from <https://www.health.harvard.edu/blog/what-is-neurodiversity-202111232645>
- Bolourian, Y. (2021, September 21). General education teachers' perceptions of autism, inclusive practices, and relationship building strategies. *Journal of autism and developmental disorders*, 3977-3990. <https://doi.org/10.1007/s10803021-05266-4>
- Data and Statistics About ADHD. (2022, May 22). CDC. Retrieved January 19, 2023, from <https://www.cdc.gov/ncbddd/adhd/data.html>
- Down Syndrome. (2017). Center for Parent Information and Resources. Retrieved March 10, 2023, from <https://www.parentcenterhub.org/downsyndrome/#education>
- Dunn, D. S. (2021, December 14). Understanding ableism and negative reactions to disability. American Psychological Association. Retrieved March 20, 2023, from

<https://www.apa.org/ed/precollege/psychology-teachernetnetwork/introductory-psychology/ableism-negative-reactions-disability>

EDI Inclusive Language Guidelines. (2023). American Psychological Association. Retrieved April 10, 2023, from [https://www.apa.org/about/apa/equity-diversity-inclusion/languageguidelines#:~:text=inclusion%3A%20an%20environment%20that%20offers,capacity%0\(APA%2C%202021b\)](https://www.apa.org/about/apa/equity-diversity-inclusion/languageguidelines#:~:text=inclusion%3A%20an%20environment%20that%20offers,capacity%0(APA%2C%202021b)).

GEM Report UNESCO. (2020, June 22). Inclusion and Education: #AllmeansALL. YouTube. Retrieved April 10, 2023, from <https://www.youtube.com/watch?v=kEyjlqixq9c>

Gintner, G. G., & Mooney, P. (2015, August). Attention to ADHD: DSM-5 Changes, Practice Guideline Updates and Implications for Schools. *Beyond Behavior*, 24(2), 20-29. JSTOR. Retrieved January 18, 2023, from <https://www.jstor.org/stable/26341296>

Gray-Hammond, D. (2023). *The New Normal: Autistic Musings on the Threat of a Broken Society*. Amazon Digital Services LLC - Kdp.

Hallowell M.D., E. (2022, January 10). ADHD Is Not Actually a Deficit Disorder: A Better Name. *ADDitude*. Retrieved January 18, 2023, from <https://www.additudemag.com/attention-deficit-disorder-vast/>

Hehir, T., & Friesen, H. (2016). *INCLUSIVE EDUCATION*. Instituto Alana. Retrieved April 11, 2023, from http://alana.org.br/wp-content/uploads/2016/12/A_Summary_of_the_evidence_on_inclusive_education.pdf

- Inclusive Classroom Climate | Poorvu Center for Teaching and Learning. (2021). Yale Center for Teaching and Learning. Retrieved April 11, 2023, from <https://poorvucenter.yale.edu/ClassClimates>
- In conversation with Judy Singer... (2020, March 10). Autism Awareness Australia. Retrieved March 13, 2023, from <https://www.autismawareness.com.au/>
- Kingsley, J., & Levitz, M. (2007). *Count Us in: Growing Up with Down Syndrome*. Harcourt.
- Kotowicz, A. (2022). What I Mean When I Say I'm Autistic: Unpuzzling a Life on the Autism Spectrum. Neurobeautiful.
- Lochrie, A. S. (2022). Depression Factsheet (for Schools) (for Parents) - Nemours KidsHealth. Kids Health. Retrieved April 15, 2023, from <https://kidshealth.org/en/parents/depression-factsheet.html>
- Mooney, J., & Boren, R. (2022, March 27). *Neurodiversity*. Stimpunks Foundation. Retrieved March 7, 2023, from <https://stimpunks.org/glossary/neurodiversity/>
- Nerenberg, J. (2021). *Divergent Mind: Thriving in a World that Wasn't Designed for You*. HarperOne.
- Olsen, B., & Njoroge, S. (2021, September 24). What is Masking and Why Do Neurodivergent People Do It? - LGBTQ and ALL. LGBTQ and All. Retrieved March 24, 2023, from <https://www.lgbtqandall.com/what-is-masking-and-why-do-neurodivergent-people-do-it/>
- Pachana, N. A., & Needham, B. (2015, June 23). *Distinguishing Depression From Anxiety In*

Older Adults. Anxiety.org. Retrieved February 9, 2023, from <https://www.anxiety.org/diagnosing-anxiety-in-older-adults>

Penot, J. (2022, August 23). Why Many People With Autism Dislike Functioning Labels. Psychology Today. Retrieved March 13, 2023, from <https://www.psychologytoday.com/us/blog/the-forgotten-women/202208/why-many-people-autism-dislike-functioning-labels>

Qvortrup, A., & Qvortrup, L. (2017, November 28). Inclusion: Dimensions of inclusion in education. *International Journal of Inclusive Education*, 22(7), 803817. Retrieved February 10, 2023, from <https://www.tandfonline.com/doi/epdf/10.1080/1360316.2017.1412506?needAccess=true&role=button>

Ratey, J. J., & Hallowell, E. M. (2022). *ADHD 2.0: New Science and Essential Strategies for Thriving with Distraction--from Childhood Through Adulthood*. Random House Publishing Group.

Silberman, S. (2016). *Neurotribes: The Legacy of Autism and the Future of Neurodiversity*. Penguin Publishing Group.

Singer, J. (2017). *Neurodiversity: The Birth of an Idea*. Judy Singer.

Singer, J. (n.d.). What is Neurodiversity? Reflections on the Neurodiversity Paradigm. Retrieved February 15, 2023, from <https://neurodiversity2.blogspot.com/p/what.html>

Stein, D. S. (2016). *Supporting Positive Behavior in Children and Teens with Down Syndrome*:

The Respond But Don't React Method. Woodbine House.

Taylor, P. J., & Szteiter, J. (2012). *Taking Yourself Seriously: Processes of Research and Engagement*. Pumping Station.

The Benefits of Inclusion and Diversity in the Classroom | American University. (2019, July 24).

American University's School of Education Online. Retrieved April 8, 2023,
From <https://soeonline.american.edu/blog/benefits-of-inclusion-and-diversity-in-the-classroom/>

Understanding Anxiety in Children & Teens. (2023, March 24). McLean Hospital. Retrieved

March 27, 2023, from <https://www.mcleanhospital.org/essential/anxiety-kids-teens>

Villegas, T. (2021, July 7). *Inclusion, Exclusion, Segregation, and Integration: How are they*

different? Think Inclusive. Retrieved March 19, 2023, from <https://www.thinkinclusive.us/post/inclusion-exclusion-segregation-and-integration-how-are-they-different>

What is ADHD? (2023). CDC. Retrieved January 19, 2023, from <https://www.cdc.gov/ncbddd>

[/adhd/facts.html](https://www.cdc.gov/ncbddd/adhd/facts.html)

Wise, Sonny Jane. "Neurodivergent Umbrella." Instagram, Meta, 21 December 2021,

<https://www.instagram.com/p/CYBlmiPcCL/>