NEURODIVERSITY, CULTURAL COMPETENCY, AND INCLUSIVE PRACTICES

Sue Mann Dolce – Accessibility Resources

Kyle O'Neill – Human Resources

Rachel Bonnette – Graduate School of Education

Jeremy Raymore - Student

Goals for Today

Provide an opportunity to learn about issues like neurodiversity, mental health, allyship, and how to be inclusive.

Give you information from actual self-identified neurodivergent UB students

Cultivate respect and acceptance for neurodivergent individuals of all kinds.

Identify and commit to best practices in helping neurodivergent students

Icebreaker: Strengths and Struggles

Do you…

- Lose your keys regularly?

- Put hot sauce on your spicy food?

- Respond quickly in a crisis?

- Feel uncomfortable during small talk?

- Prefer eating with small spoons over big spoons?

- Tell great stories?

- Need your daily coffee to function?

- Use your left hand more than your right?

What is Neurodiversity?

Autistic Self Advocacy Network: Neurodiversity refers to *variation in neurocognitive functioning*. It is an umbrella term that encompasses neurocognitive differences as well as 'normal' neurocognitive functioning, or neurotypicality.

Included Conditions

Usually

- Autism
- ADHD
- Dyslexia
- Developmental Coordination Disorder* (Dyspraxia)

Often

- Dyscalculia
- Dysgraphia
- Tourette's
- Pathological Demand Avoidance
- Epilepsy
- Bipolar Disorder
- Schizophrenia
- Depression Disorders
- Anxiety Disorders
- Obsessive Compulsive Disorder

*Disorder is not a phrase often used in neurodiversity circles

Neurodivergent individuals are those whose brain functions differ from those society considers neurologically typical, or neurotypical.

Identifying as neurodivergent is a personal choice, and while it may overlap with mental health diagnoses, it does not require them.

The Neurodiversity Movement

- Judy Singer coined the term "neurodiversity" when she presented her sociology honors thesis in 1998

- Neurodiversity was originally a movement of *uniting with community*, not simply an identity term.

- "Neurodivergent" was meant as a label for group alignment, not 'self-diagnosis'

http://www.myspectrumsuite.com/meet-judy-singer/

Judy Singer

"I have to say that Neurodiversity is really just a new word for a very old idea – a fancy 21st century way of repeating the old adage:

'From each according to their ability; and to each according to their need.'

This is an ideal to be strived for though it may not always be reached."

Medical Model vs. Social Model

Medical Model

- The individual is the problem.

- The individual needs to change.

- Disabled people are victims, clients, have no responsibility and are disempowered.

- Information on impairments is used to categorize people.

Social Model

- Barriers are created by society.

- Society needs to remove barriers.

- Disabled people have independence, control, and choice.

- Information on access is shared when needed to ensure inclusion

Adapted from Fareham College

The Social Model in Practice

- Physical disability – when people who use wheelchairs navigate buildings with ramps and elevators, their environment isn't disabling.

- Neurodiversity – when autistic and ADHD folks navigate buildings with soft lighting and adequate noise reduction, their environment isn't disabling.

- Design is made for "typical" populations (what is considered the majority or normal), but environments and social spaces can be designed for neurodivergent inclusion.

- This language – around disability and access – will change again!!

Adapted from Fareham College

Neurodiversity Needs Questionnaire

Spring 2022

Survey designed collaboratively to learn about UB Neurodivergent students' experiences and needs.

Support from UB Student Life Assessment using Qualtrics

Distributed primarily through Accessibility Resources (AR) List serve and SEAS

Collaborative Survey Design Team

Rachel Bonnette	• Graduate School of Education (GSE)
Sue Mann Dolce	• Accessibility Resources (AR)
6 Students	• 2 Neurodivergent Students • 4 Student Allies
Dean Letitia Thomas	• School of Engineering and Applied Sciences (SEAS)
Jared Strohl	• Office of Inclusive Excellence (OIX)

Survey Design

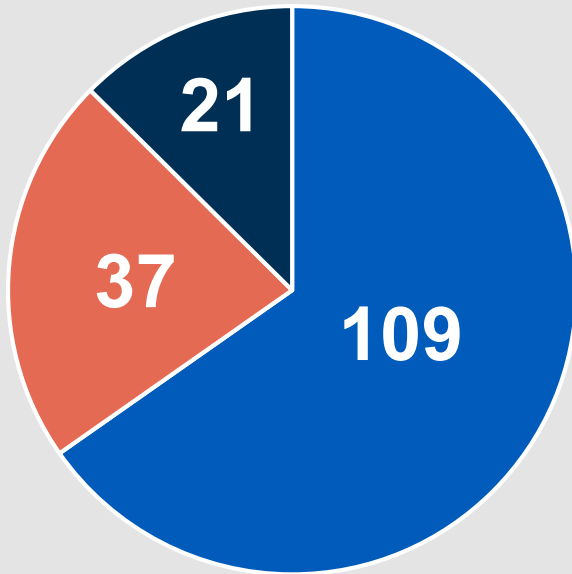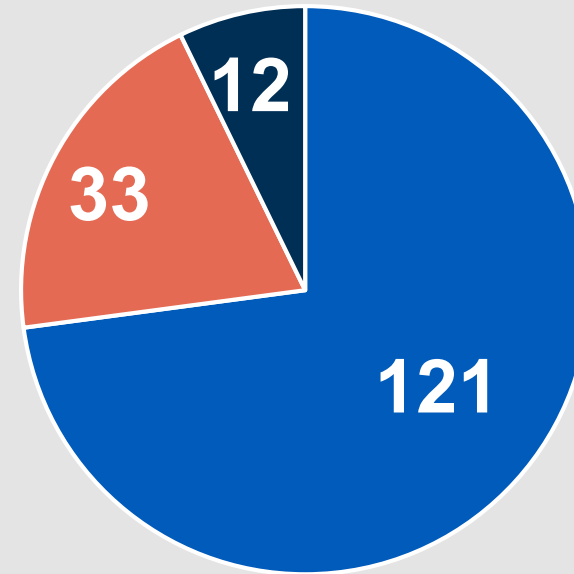|	
12	Questions with write-in response options
13th	Question for additional student comments • 21 added write-in answers
4	Demographic Questions
300	Write-in responses in total

167 Respondents

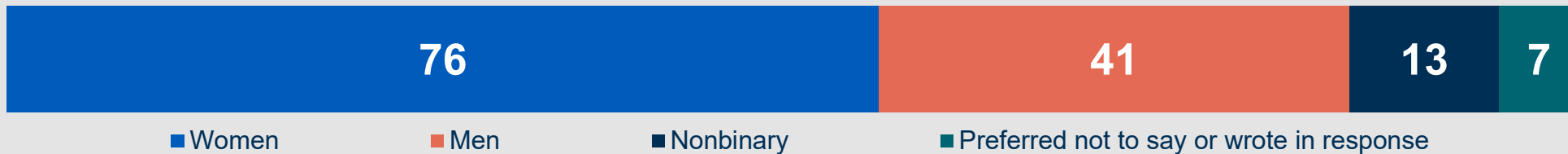83 Work with Accessibility Resources at UB

- ■ Diagnosed
- ■ Possible, but not diagnosed
- ■ Allies

- ■ Neurodivergent only
- ■ Other Disabilities
- ■ may have disabilities but undiagnosed

Demographic Information

Gender Identity

76	**41**	**13**	**7**

■ Women   ■ Men   ■ Nonbinary   ■ Preferred not to say or wrote in response

Grade

20	**19**	**22**	**28**	**47**

■ First Year   ■ Second Year   ■ Third Year   ■ Fourth Year   ■ Graduate

- Many minority identities, many intersectional identities
- Students from all UB Programs except the Dental School

Areas of Improvement

Environment
- Welcoming sensory spaces

Personal Academic Performance
- Time awareness and management

Academic
- Peer and Instructor Awareness and Knowledge of Neurodiversity
- Instructor Approachability
- Lecture Format

Connection and Community

Environment

79% Agree Safe and welcoming sensory places needed across campus

- Lack of quiet spaces
- Crowded hallways
- Noise and lighting in classrooms
- Shared spaces loud and chaotic with increased sound, light and other visual stimulation
- No where to go to recover from sensory overload

Environment
Student Comments

"My most salient request would be that a safe space or sensory room of sorts…This would help when overstimulated neurodivergents needed a safe place to go to recenter themselves instead of a dirty bathroom stall or getting shushed in the library."

"We don't need new cafes. We need new study space, club space, and otherwise areas for creativity and work."

"Build more study cubbies in Lockwood quiet floors and have monitors tell people talking on quiet floors to be quiet"

"More quiet study spaces."

"Create a sensory safe space."

Personal Academic Performance

94% Reported problems with time management and time awareness

80% Reported struggling with insomnia and other sleep challenges

Sleep and Time Management
Student Comments

"I will have days on end where I can't sleep which starts to impact my physical health to the point where I can't come to class."

"Sleeping has been all over the place sleeping too little and too much leading to tiredness in both cases at unexpected times throughout the semester."

"ADHD leads to bad time management skills, no matter how hard I try to organize and stay on top of tasks."

"Time Management - I have trouble estimating how long it will take for me to get something done, making planning difficult. I set reminders, write notes to myself, ask people to remind me of things & keep me accountable, I have calendars and still it is a struggle. This means I will often over schedule myself and as a result, end up running late to several things."

Academics

81%
- Indicated a need for greater peer and instructor awareness and knowledge of neurodiversity

72%
- Reported being uncomfortable approaching instructors
  - Including communicating needs, asking questions and discussing accommodations

72%
- Reported having a hard time following the lecture format of their courses

Peer and Instructor Understanding of Neurodiversity
Student Comments

"I have had a couple professors over the years say some insensitive things in response to disclosure (telling me to leave the lecture hall when ticcing, or telling me I shouldn't disclose because people think weird thoughts about "those things")."

"I did drop a class and pick up an alternate elective once because I got the sense trying to deal with the professor's views on neurodivergence was going to be more stress than the course was worth to me."

"Education for faculty"

"Mandatory training for each department on more inclusive teaching methods."

"It would really be an entire shift of classroom culture that would be difficult to fully explain"

Lectures and Assignment Instructions
Student Comments

"I find several public health professors are very good at giving instructions for assignments. The directions are stated in class, on UBLearns in a written format, broken into several steps, and sometimes descriptive videos and examples are given. This makes expectations very clear and assignments more accessible to everybody."

"lecture format - sometimes professors say they will not record their lectures or have lecture slides posted on UBLearns. This is meant to be an incentive to go to class. Which does work to an extent. Although, it is difficult because I often find it difficult to concentrate for the entire lecture and there will be blanks in my notes even if I am genuinely trying to pay attention with all willpower. Having lectures posted on UBLEARNS or combined with a recorded lecture would be extremely helpful especially in STEM classes."

"A lot of times the format of lectures makes in almost impossible to focus on what they're actually saying."

Connection and Community

Students believe they will benefit from:

Opportunities to connect with other neurodivergent students

Social events in spaces designed for sensory inclusion

A change in attitudes toward neurodiversity seen as contributing to innovation and excellence in the UB Community

Connection and Community
Student Comments

"Many neurodivergent students will not attend voluntary live events whether they're online or in person."

"It is often hard to make friends in classes or ask if there is anyone to have a study group with. For classes that are major specific it is slightly easier because there is a group chat for the club related to my major. But in general, it would be nice if for each class there was already a forum, maybe on UB learns, that students could be added to if they want to be contacted/ reach out themselves study groups."

"Making friends is very difficult for some of us with disabilities even outside of UB. Most people do not understand what it is like to be neurodivergent in general, but finding friends with similar experiences is difficult because most of us want everyone else to understand what we specifically are experiencing. Not many of us can handle everyone else's burdens while working through our own difficulties."

"If there were specific spaces on campus meant for neurodivergent students I would definitely make use of that, a lot of the time I'd feel more comfortable around those who I know struggle with similar things as me + it would help people make friends."

RESEARCH
CO-DESIGNING PROFESSIONAL DEVELOPMENT

Co-Designing Professional Development for STEM Faculty

Survey on student needs in STEM higher education programs

- Created with students and accessibility resources at the university
- Distributed to all students with accommodations and students in the STEM-related departments of the university

Analyze findings from survey

Build a co-design approach

Neurodivergent Student Challenges in STEM Classrooms

Table 1. Types of challenging experiences reported from most to least common.

Challenging Experience	Total (n=54)
Time management	66.667%
Insomnia or other sleep challenges	57.407%
Lecture format	53.704%
Environmental distractions and other sensory issues	53.704%
Instructor approachability (e.g., communicating needs, asking questions)	46.296%
Peer and instructor awareness and knowledge of neurodiversity	42.593%
Understanding assignment or project instructions	31.481%
Collaborating with other students on group work	29.630%
Having a support network within your program (e.g., sharing notes, study group)	25.926%
Access to tutoring	9.259%
Other	7.407%

Comparing Multiply and Singly Marginalized Experiences of Disability

Table 1. Types of challenging experiences reported from most to least common.

Challenging Experience	Total (n=54)
Time management	66.667%
Insomnia or other sleep challenges	57.407%
Lecture format	53.704%
Environmental distractions and other sensory issues	53.704%
Instructor approachability (e.g., communicating needs, asking questions)	46.296%
Peer and instructor awareness and knowledge of neurodiversity	42.593%
Understanding assignment or project instructions	31.481%
Collaborating with other students on group work	29.630%
Having a support network within your program (e.g., sharing notes, study group)	25.926%
Access to tutoring	9.259%
Other	7.407%

Table 2: Differences between multiply and singly marginalized neurodivergent students' reported challenging experiences in STEM programs, using Chi^2 test of independence.

Challenging Experiences	P-Value		Multiply Marginalized	
			Yes (n=34)	No (n=20)
Peer and instructor awareness and knowledge of neurodiversity	<0.001	***	61.765%	10.000%
Lecture format	0.001	***	70.588%	25.000%
Environmental distractions and other sensory issues	0.007	**	67.647%	30.000%
Time management	0.046	*	76.471%	50.000%

Statistical significance marked as follows: * P ≤ 0.05, ** P ≤ 0.01, *** P ≤ 0.001

Student Reflections

"I will have days on end where I can't sleep which start to impact my physical health to the point where I can't come to class. My professors are generally not understanding and it has severely impacted my GPA."

"I feel guilt whenever I've tried to explain myself to my instructors. I'm always behind deadline and missing assignments. It seems like and definitely feels like it is my fault that I have ADHD and I should not be here to waste other peoples' time."

Building the Course with Students & Faculty

Invited faculty who work closely with accessibility resources to co-design curriculum

Invited students who identify as neurodivergent to identify areas of need and design badges

Identified core topic areas from survey and literature

- Learning environment and materials
- Instructional practice
- Relationships
- Assignments and Exams

•Developed primer information, established norms, and organized design tasks

Curriculum Design
Universal Design for Learning
https://udlguidelines.cast.org/

Multiple means of strategic engagement	• Helping students to connect personally to their learning and capitalizing on existing sources of interest and motivation.
Multiple means of representation	• Thinking about how information is communicated to students of all abilities and consider what barriers could be removed.
Multiple means of expression	• Multiple options for students to submit work and demonstrate understanding without penalty.

Monthly Curriculum Development Cycles

Meet with students once monthly as a group to discuss topic-related needs → Meet with instructors once monthly as a group to discuss topic-related observations and practices → Weekly individual assignments informed by neurodiversity → Weekly one-on-one student meetings to informally discuss neurodivergent experiences → Reflection and analyses among research team

PRELIMINARY OBSERVATIONS AND FINDINGS

Multiply marginalized students (e.g., POC or female and neurodivergent) may expect rejection when requesting support.

- Echoed findings from preliminary survey data

- In STEM contexts, instructors are primarily white, male

- Instructors can work to educate themselves and build trust if they are aware of this problem

Multiple means of representation is important to comprehension.

- Multiple students talked about the importance of recordings and notes

- Instructors in this case worked together to prepare multiple versions of the same lecture

- Hearing one explanation does not guarantee comprehension
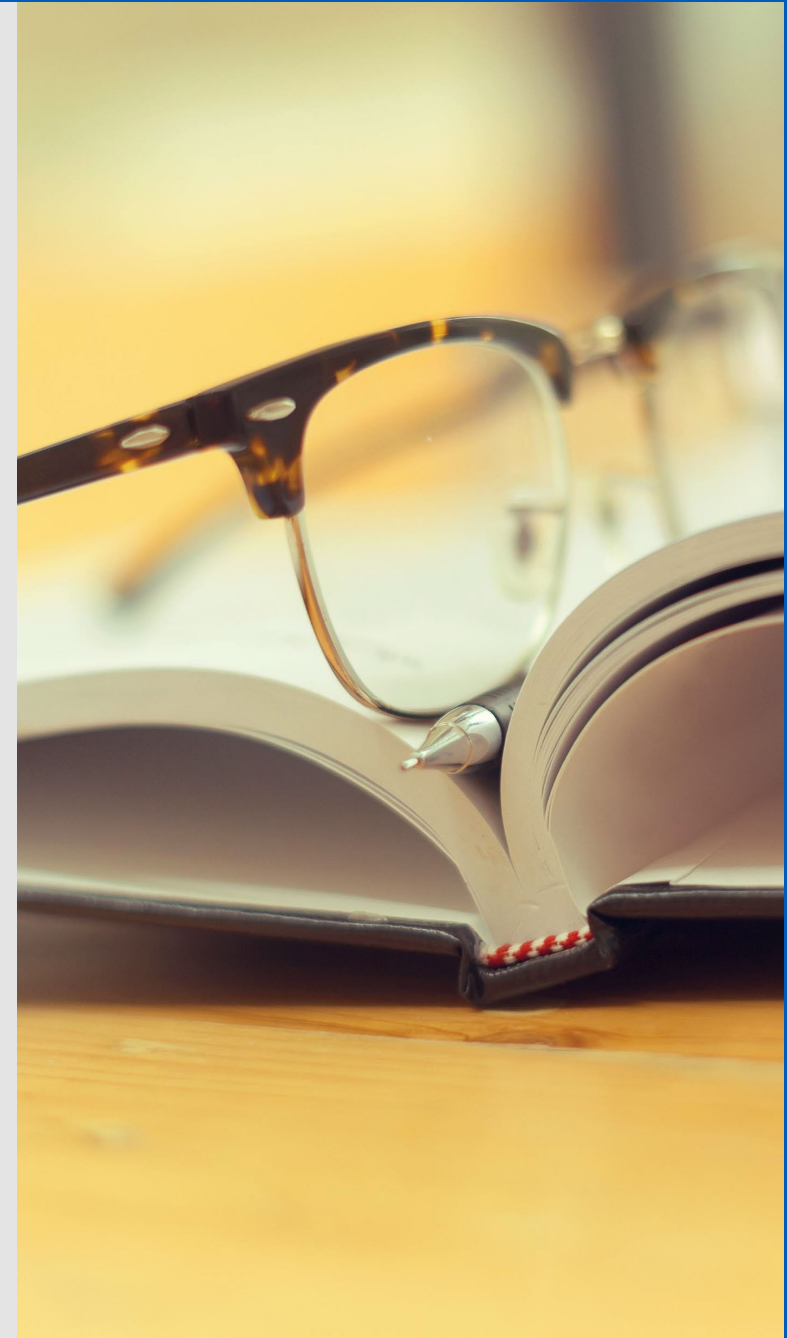
Instructors may already be using inclusive practices.

- Frameworks like Universal Design for Learning can help instructors identify what they are already doing well

- Collaboration between instructors can make UDL easier

Being neurodivergent does not guarantee a full understanding of all neurodivergent needs.

- Both instructors were neurodivergent

- Even between the instructors, different experience with and philosophies about supporting neurodivergence

Ongoing Adjustments

- Instructors provided richer data when they were given more context about neurodiversity

- Students struggled with providing written reflections on their experiences but were more comfortable speaking in a video call

- Consider barriers to student participation in research, much as you would for student participation in the classroom
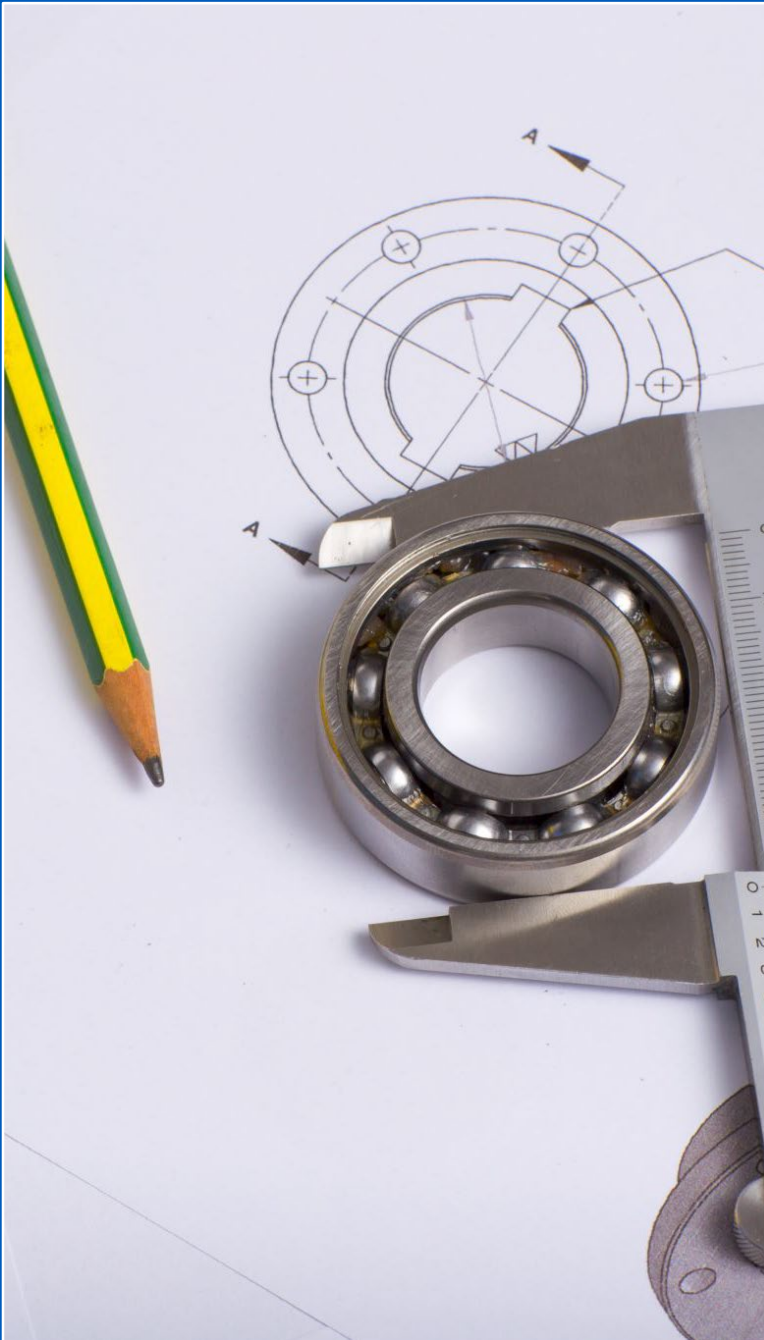
INCLUSIVE ACTIONS

Inclusive Action Categories

Plan for Different Types of Working Memory

Engage Different Processing Speeds

Coordinate Routine and Predictability

Manage Sensory Triggers

Strategize Communication
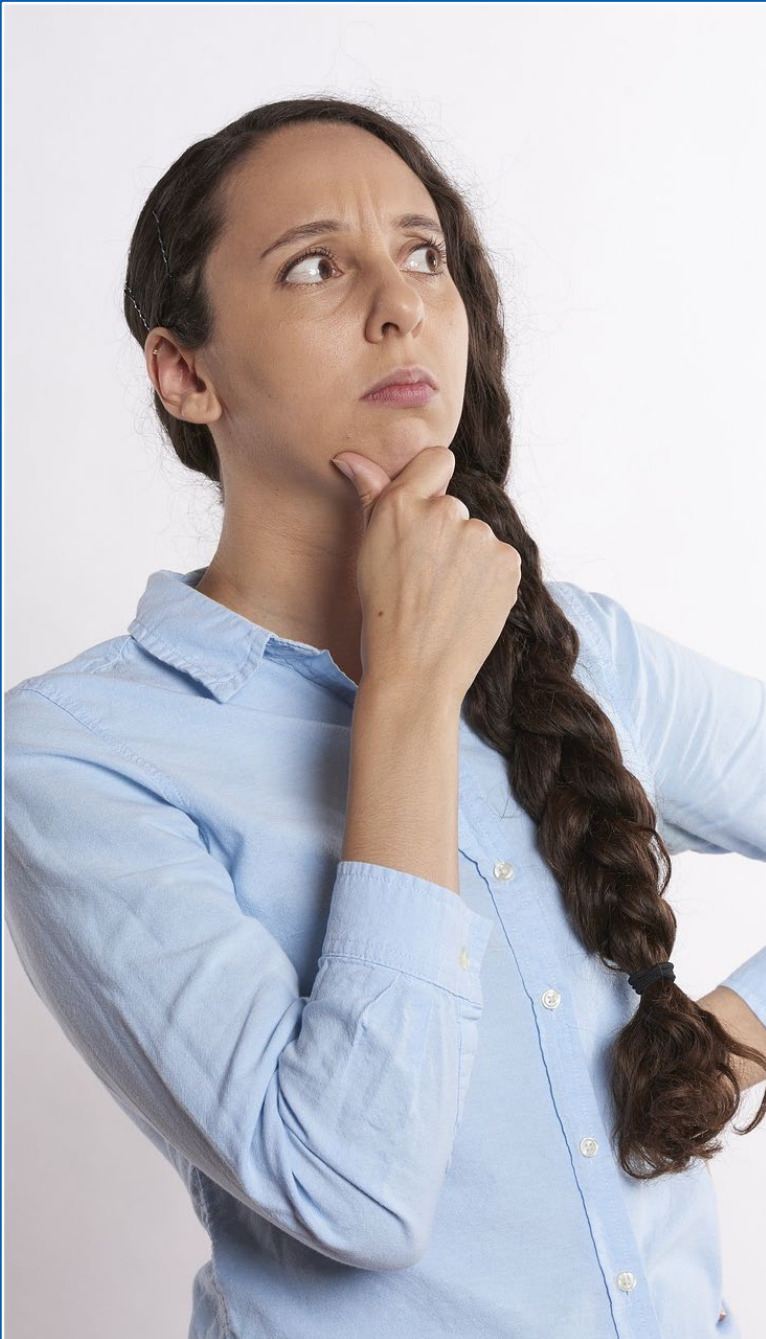
Engage Different Processing Speeds

- Allow extra time to process information
  - Not requiring an answer right away
  - Providing information in advance
- Try restating an idea rather than just repeating it
- Do not expect instant responses (including via email)

Coordinate Routine and Predictability

- Allow for consistent workspaces

- Do what you say you're going to do

- Use a group calendar of tasks and keep it as up to date as possible

- Inform others of changes in the schedule as soon as possible

- Establish routines with group consent
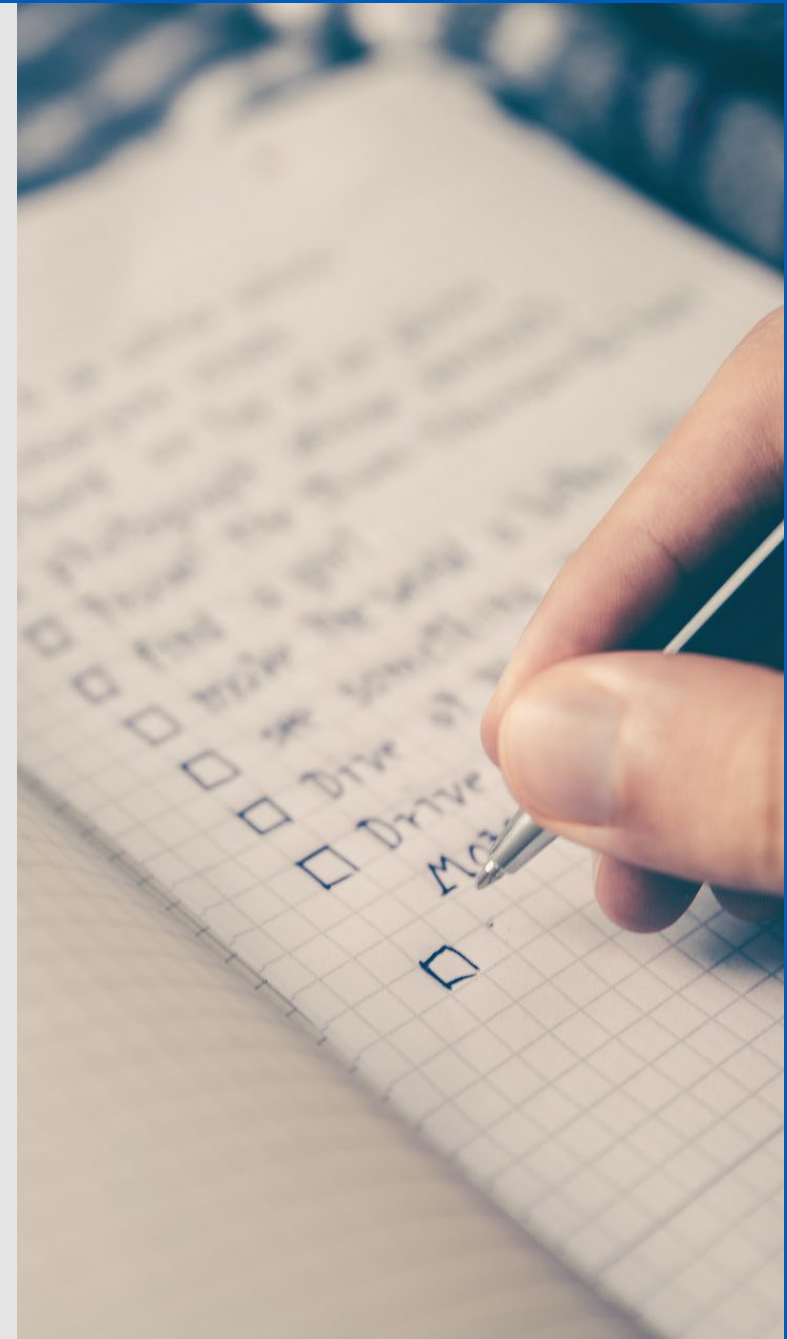
Self Regulation Skills

Planning

Memory

Attention

Goal Setting

Organization

Time Management

Manage Sensory Triggers

Sight
- Bright or flashing lights
- Many contrasting colors

Smell
- Food smells
- Cologne & Perfume

Sound
- Cross-conversations
- Background music

Taste
- Spices & Herbs
- Out of the ordinary tastes

Feel
- Handshake
- Fabric choices

Ideas for helping with sensory sensitivity

- Help everyone find workspaces that work for them, even if that means there will be switching

- Discuss ways to get attention if someone is wearing earplugs or noise cancelling headphones

- Dim lights from top brightness when possible

- Ask if music or food is bothering anyone

- Encourage each other to take turns working out of a conference room, or quiet communal area
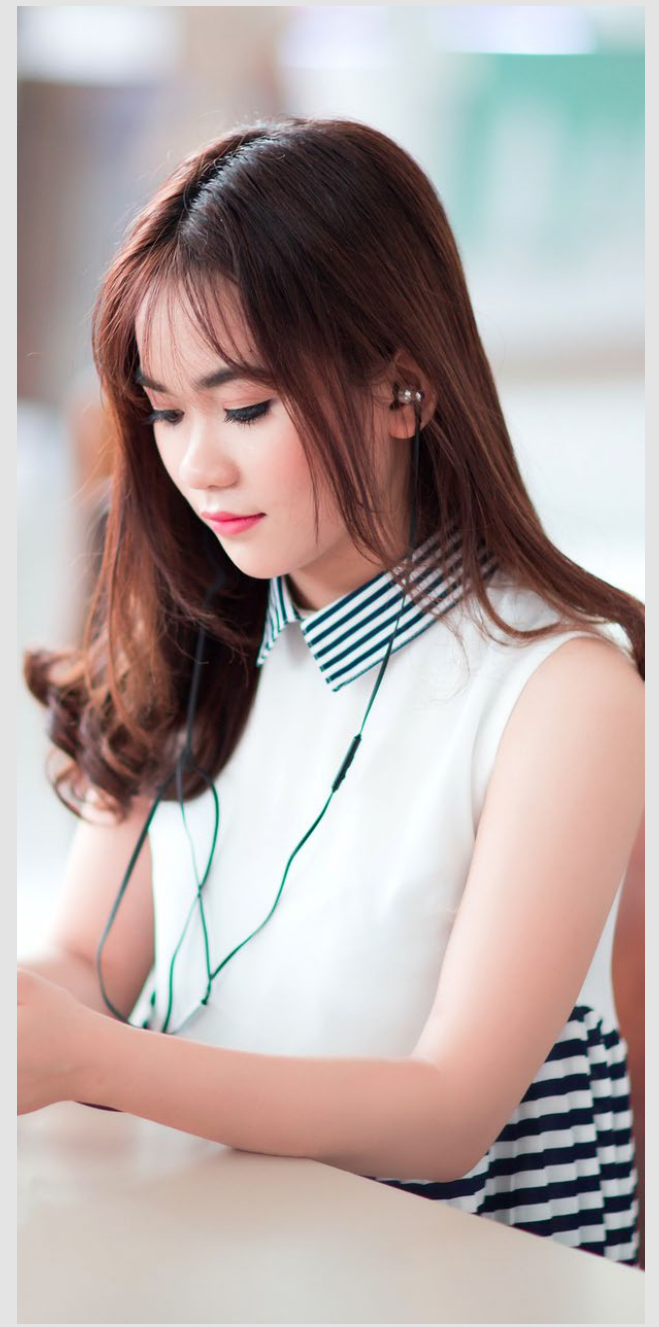
Strategize Communication
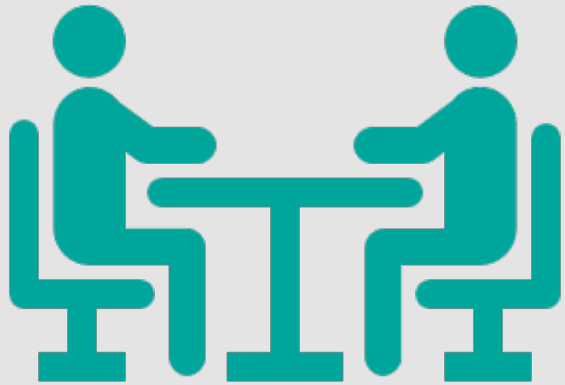
"Respecting communication differences and responding to them in a non-judgmental way will help to put neurodivergent people at greater ease during social interactions.

"Addressing people directly by name, simplifying questions …and sticking to pre-arranged commitments to reduce uncertainty can all enhance communication with neurodivergent people too." (Aherne, 2023)

Communication Format Guidelines

✏️ Written

- Sans-serif fonts
- Break up text blocks
- Bold for emphasis
- Avoid black text on a white background
- Avoid columns of run-on text
- Use bulleted or numbered lists

⫿ Verbal

- Follow others speech pattern
- Don't rely on non-verbal cues to get your point across
- Use a low-stimulation environment

(Honeybourne, 2019b)

Questions?