



# ***Exploring How Strategies for Neurodiverse Students Positively Impact All***

**Rhode Island Teaching and Learning**

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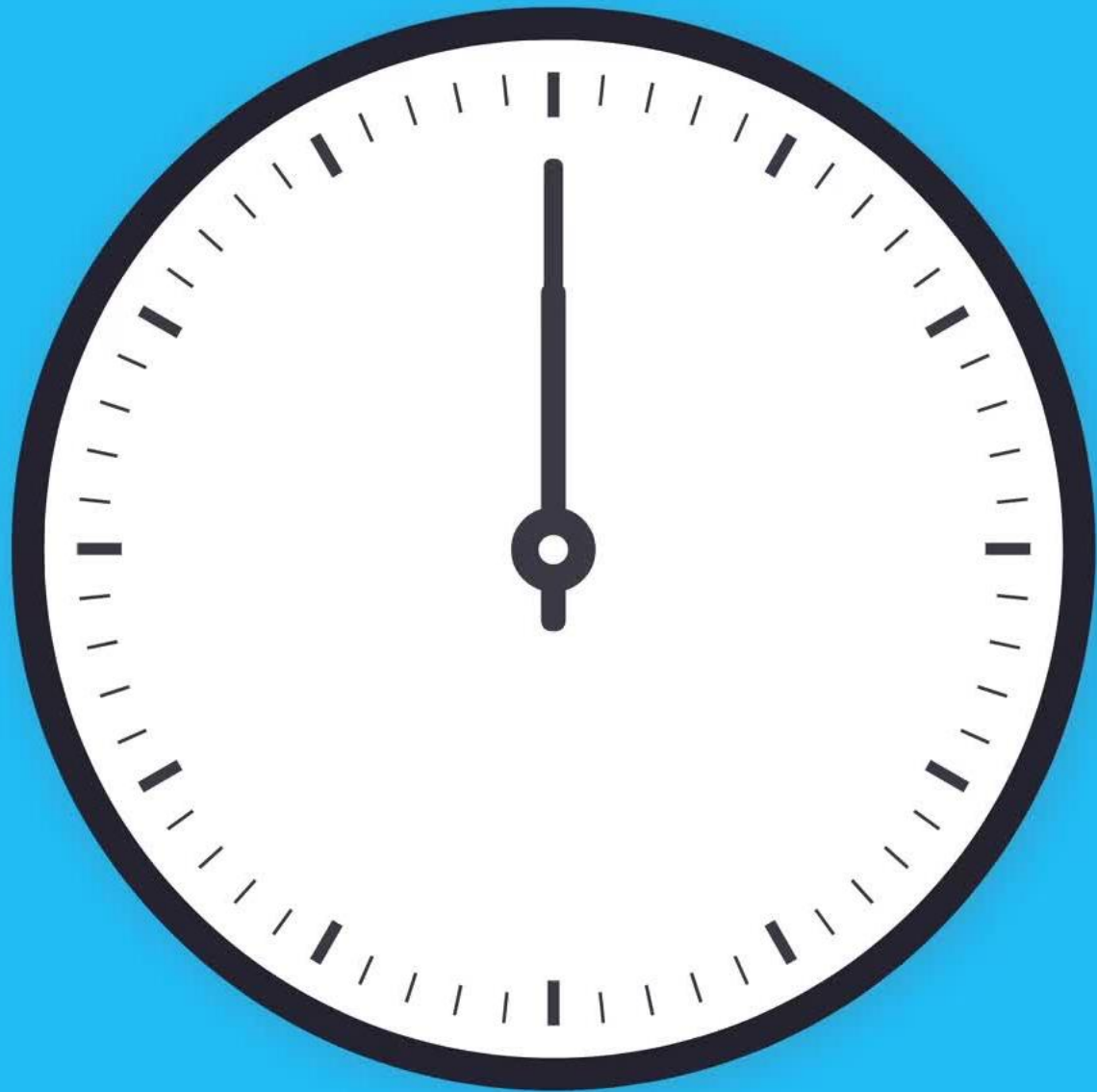
Kirsten Behling, MA

# What you can expect today:

- Our morning session will last about 2 hours.
- We will explore what neurodiversity means.
- We will consider how we can create spaces that are accessible and inclusive.
- We will have a fantastic lunch and take a break.
- We will spend an hour sharing challenges and brainstorming possible solutions.

# What I ask of you:

- Engage in a manner that is comfortable to you.
- Silence your phones.
- Turn off your emails 😊
- Be open to new ideas.
- Reflect on your own experiences.
- Take a break when needed.
- Where hats/ glasses/ layers/ whatever you need.



# **I've brought a clock.**

Overview of neurodiversity (about 30 mins.)

Overview of UDL (about 15 mins.)

Application of UDL to impact neurodiverse learners (50 mins.)

Lunch

Workshop opportunity (60 mins.)

# **Let's work towards answering this question today:**

**How can you create a welcoming, accessible and inclusive environment for all?**

What other questions should we aim to answer?



**“A system without diversity has no resilience.”**

– Christy Hutton

# Framing Neurodiversity

There is no one "right" way of thinking, learning, & behaving.

Differences are not viewed as deficits.



## “Myth of Average”



If you have met one person with a disability,  
you have met one person with a disability.





# The Environment Is the Barrier – Not the Human

EQUALITY



EQUITY



JUSTICE



# The history of neurodiversity

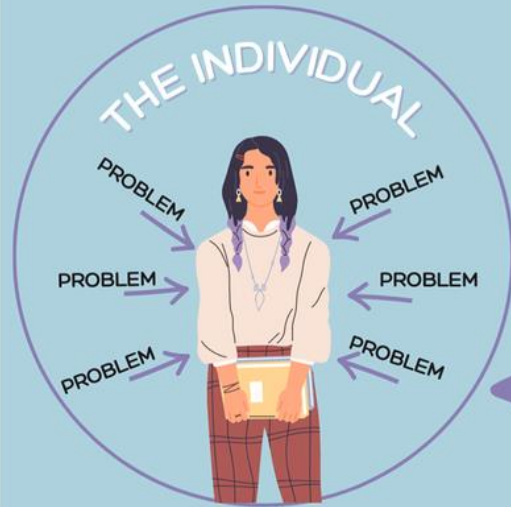
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- Judy Singer coined the term “neurodiversity” in the 1990’s
- The neurodiversity movement is relatively young, and no movement is completely homogenous.



# MODELS OF DISABILITY

## MEDICAL MODEL



Disabilities cause all of the problems for neurodivergent individuals.

## SOCIAL MODEL

The difficulties faced by neurodivergent people are often caused by the way society and infrastructure are designed.



University  
seal  
removed for  
blind review

(The Democracy, Disability and  
Society Group, n.d; Dwyer, 2022)

# PILLARS OF NEURODIVERSITY

1

Neurodiversity  
occurs naturally



2

No neurotype  
is better than  
another



3

Neurodiversity  
operates like  
other  
dimensions of  
equality and  
diversity



4

There is a  
collective  
value and  
strength in  
diversity



ADAPTED FROM FLETCHER-WATSON (2022) AND WALKER (2021)

**The Neurodiversity  
Paradigm**

**– Nick Walker**



# Common terms

- **Learner Variability** – Each student has their own strengths and challenges that are interconnected and vary according to context.
- **Neurotypical** – A social construct that suggests brains must fall within a “typical range.”
- **Neurodivergent** – Opposite of Neurotypical, brains that fall outside the “typical range.” Does not necessarily equate to a disability. There are no medical criteria or definitions of what it means to be neurodivergent.
- **Neurodiversity** – Credited to Autism communities in the 1990’s. The idea that there is nothing wrong with our brains. Everyone just has a slightly different brain.
- **Neurodiverse** – A group of people with “different” brains. Students in your class are neurodiverse.

# Neurodivergent Umbrella

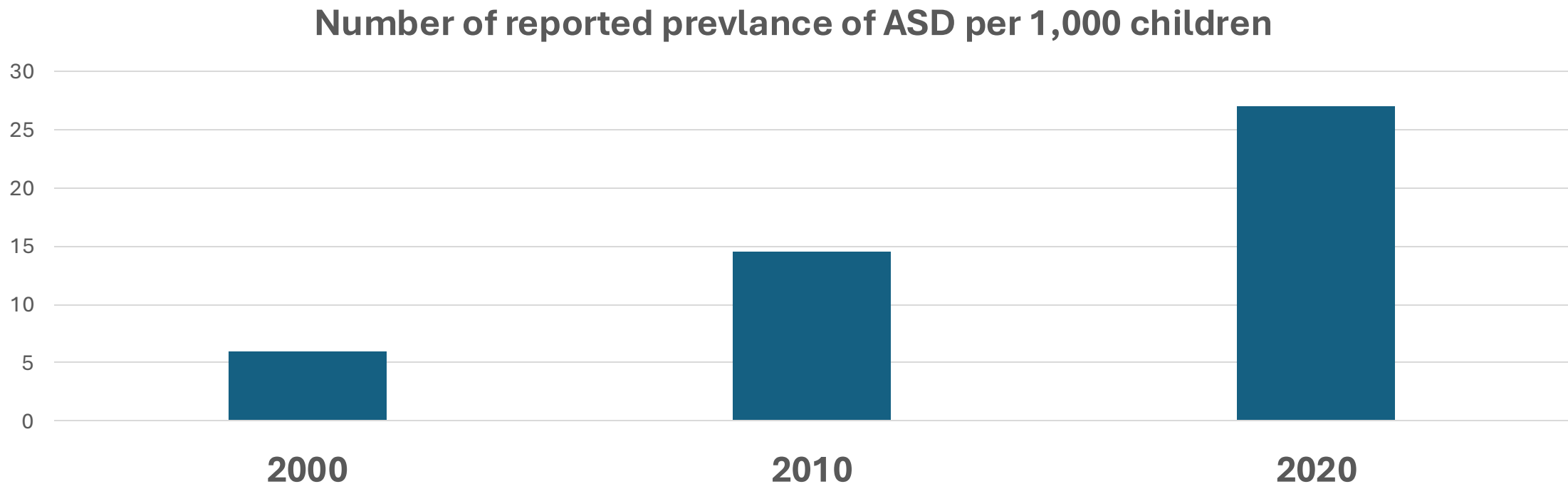
Autism Dyslexia Bipolar Down Syndrome OCD  
Plurality ADHD CPTSD Stuttering Anxiety  
Epilepsy Hearing Voices Dyspraxia Plurality  
Dysgraphia Alzheimer's Intellectual Disabilities  
FASD Tourettes Psychosis Eating Disorders  
Acquired Brain Injuries Dyscalculia  
Synesthesia DID & OSDD Cerebral Palsy Giftedness

\*non-exhaustive list

# How many people identify as neurodivergent?

- 19% of adult citizens identify as neurodiverse
- Though these numbers are not accurate because:
  - Stigma
  - Acquired neurodiversity
  - Lack of understanding as to what neurodiversity means

## Data from the CDC showing an increase in the reported prevalence of autism spectrum disorder:





## **Challenges often associated w/ neurodiversity in higher education**

### **Broadly**

- Social exclusion and isolation
- Racism, sexism, ageism, ableism, etc.
- Bullying and discrimination
- Suicidal ideation
- Mental and physical illness
- Comorbid neurodevelopmental disorders
- Struggles with employment/ poverty

## **Strengths often associated w/ neurodiversity**

- Strong understanding of strengths
- Diversity in thought and thought process
- Innovative ideas
- Comfort in questioning how things are done
- Ability to draw connections between obscure points
- Detail oriented
- Empathy
- Specialized knowledge

# Observations that you shared:

- Challenges supporting students with diverse learning backgrounds, when doing team-based work.
- Lack of consistency among effort in the course (great on exams, don't turn assignments in).
- Students don't seem to respond to instructions provided (whether in the class, work study or elsewhere).
- I am neurodivergent – teaching/ mentoring neurotypical can be challenging.



# **Strategies for welcoming everyone**

**“When you understand learner variability you see a design challenge, not a student problem.”  
- Barbara Pape**

PLEASE JOIN US FOR A

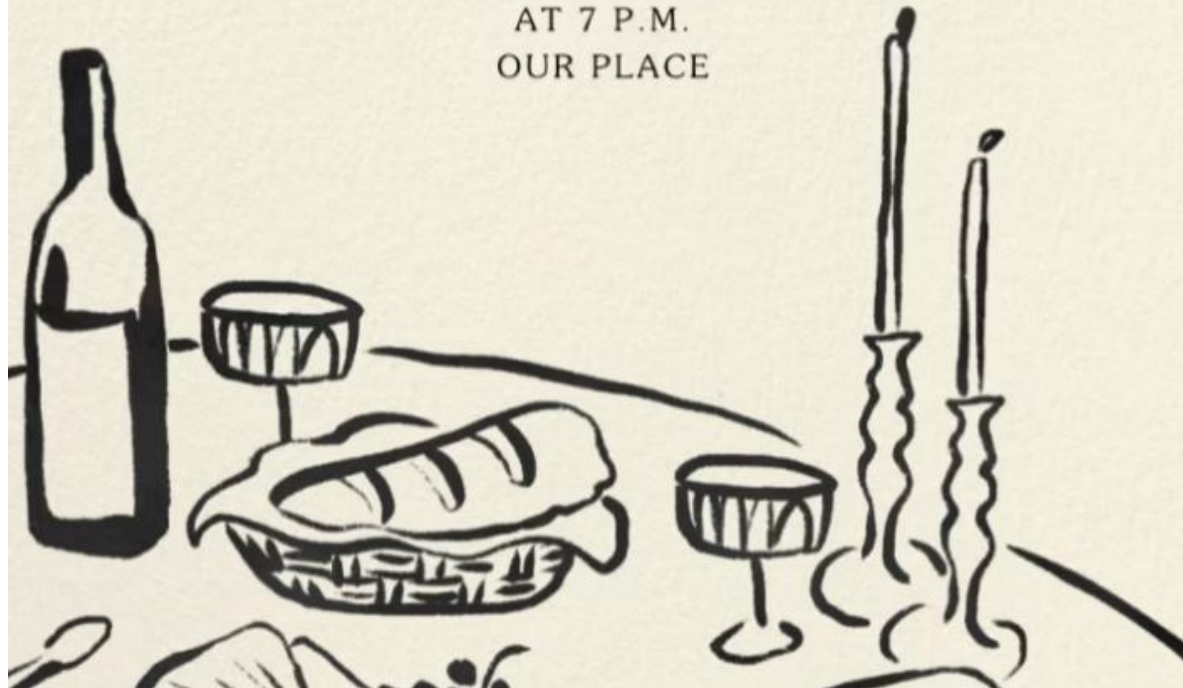
# dinner party

WITH FOOD, FRIENDS, AND FUN CONVERSATION

SATURDAY, MARCH 29TH

AT 7 P.M.

OUR PLACE









# Ensuring an accessible and welcoming environment

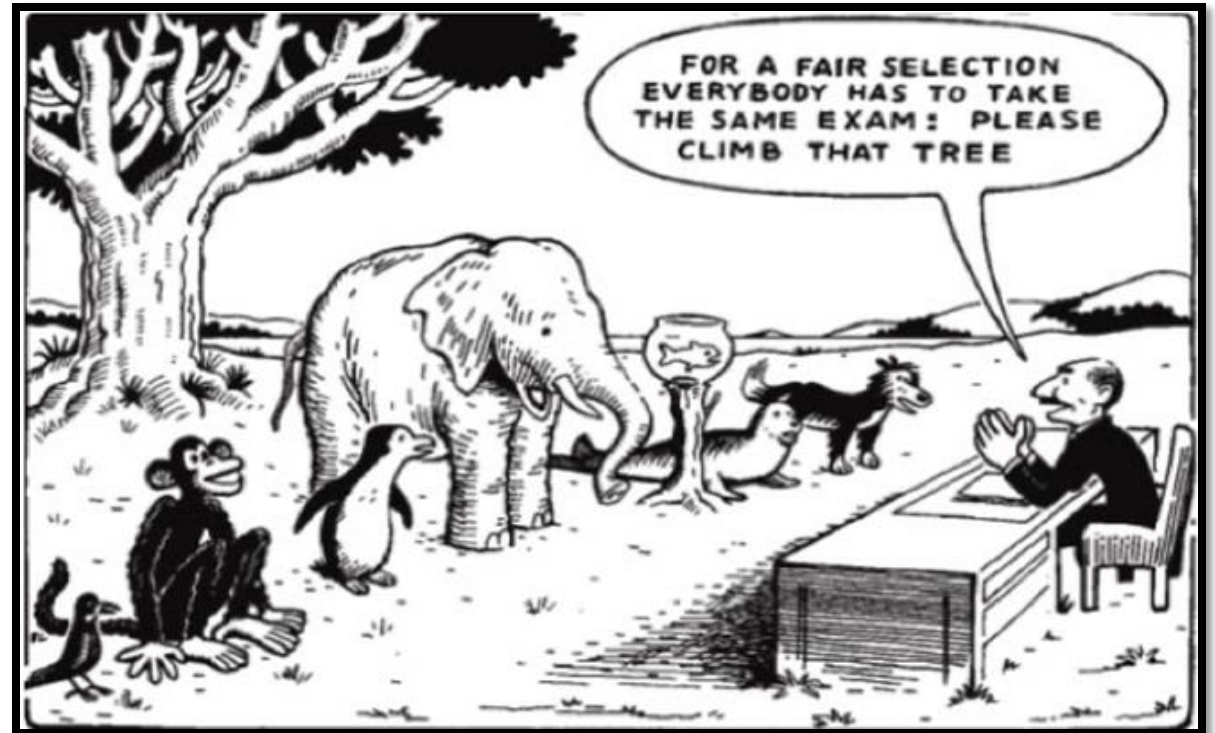




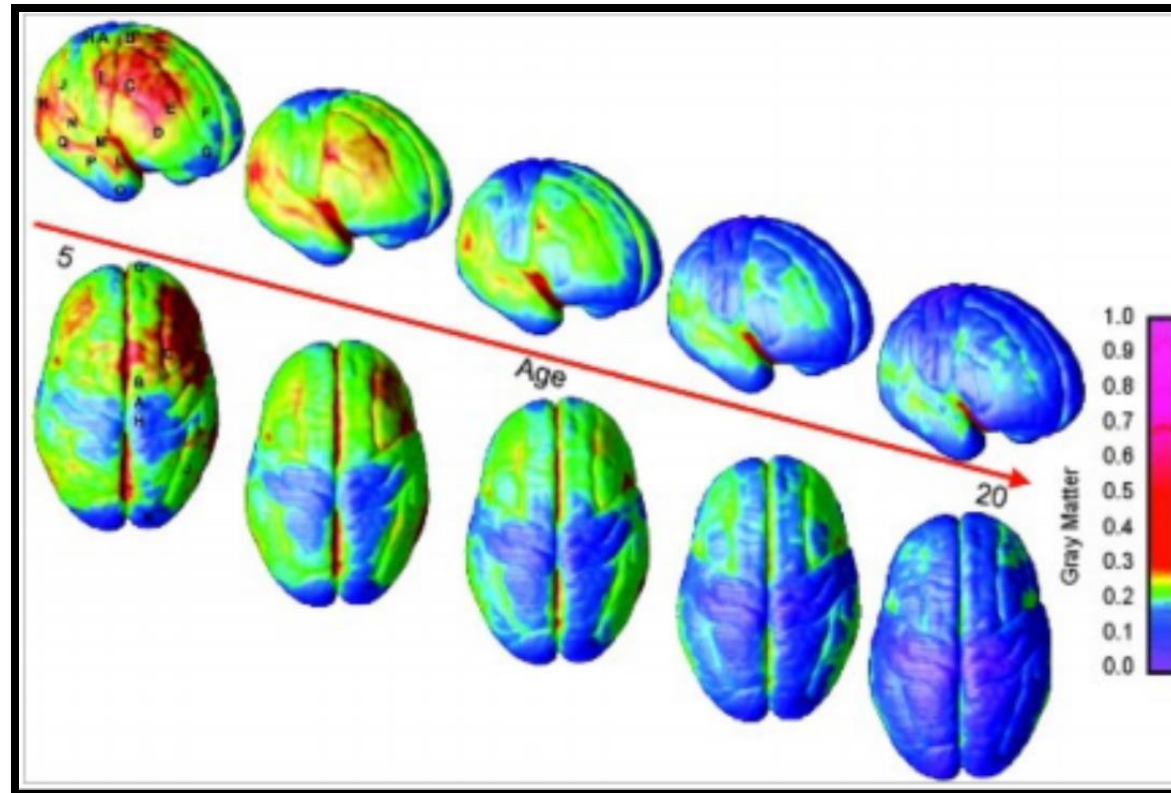
Oh No Rex!



**Just climb Jumbo!  
Climb!**



# Universal Design for Learning – Brain-based origins



### Multiple Means of Engagement

Stimulate motivation and sustained enthusiasm for learning by promoting various ways of engaging with material.



### Multiple Means of Representation

Present information and content in a variety of ways to support understanding by students with different learning styles/abilities.



### Multiple Means of Action/Expression

Offer options for students to demonstrate their learning in various ways (e.g. allow choice of assessment type).



## Universal Design for Learning

## Design Multiple Means of Engagement



Access

### Design Options for Welcoming Interests & Identities <sup>(7)</sup>

- Optimize choice and autonomy (7.1)
- Optimize relevance, value, and authenticity (7.2)
- Nurture joy and play (7.3)
- Address biases, threats, and distractions (7.4)

## Design Multiple Means of Representation



Support

### Design Options for Perception <sup>(1)</sup>

- Support opportunities to customize the display of information (1.1)
- Support multiple ways to perceive information (1.2)
- Represent a diversity of perspectives and identities in authentic ways (1.3)

## Design Multiple Means of Action & Expression



Executive Function

### Design Options for Interaction <sup>(4)</sup>

- Vary and honor the methods for response, navigation, and movement (4.1)
- Optimize access to accessible materials and assistive and accessible technologies and tools (4.2)

### Design Options for Sustaining Effort & Persistence <sup>(8)</sup>

- Clarify the meaning and purpose of goals (8.1)
- Optimize challenge and support (8.2)
- Foster collaboration, interdependence, and collective learning (8.3)
- Foster belonging and community (8.4)
- Offer action-oriented feedback (8.5)

### Design Options for Language & Symbols <sup>(2)</sup>

- Clarify vocabulary, symbols, and language structures (2.1)
- Support decoding of text, mathematical notation, and symbols (2.2)
- Cultivate understanding and respect across languages and dialects (2.3)
- Address biases in the use of language and symbols (2.4)
- Illustrate through multiple media (2.5)

### Design Options for Expression & Communication <sup>(5)</sup>

- Use multiple media for communication (5.1)
- Use multiple tools for construction, composition, and creativity (5.2)
- Build fluencies with graduated support for practice and performance (5.3)
- Address biases related to modes of expression and communication (5.4)

### Design Options for Emotional Capacity <sup>(9)</sup>

- Recognize expectations, beliefs, and motivations (9.1)
- Develop awareness of self and others (9.2)
- Promote individual and collective reflection (9.3)
- Cultivate empathy and restorative practices (9.4)

### Design Options for Building Knowledge <sup>(3)</sup>

- Connect prior knowledge to new learning (3.1)
- Highlight and explore patterns, critical features, big ideas, and relationships (3.2)
- Cultivate multiple ways of knowing and making meaning (3.3)
- Maximize transfer and generalization (3.4)

### Design Options for Strategy Development <sup>(6)</sup>

- Set meaningful goals (6.1)
- Anticipate and plan for challenges (6.2)
- Organize information and resources (6.3)
- Enhance capacity for monitoring progress (6.4)
- Challenge exclusionary practices (6.5)

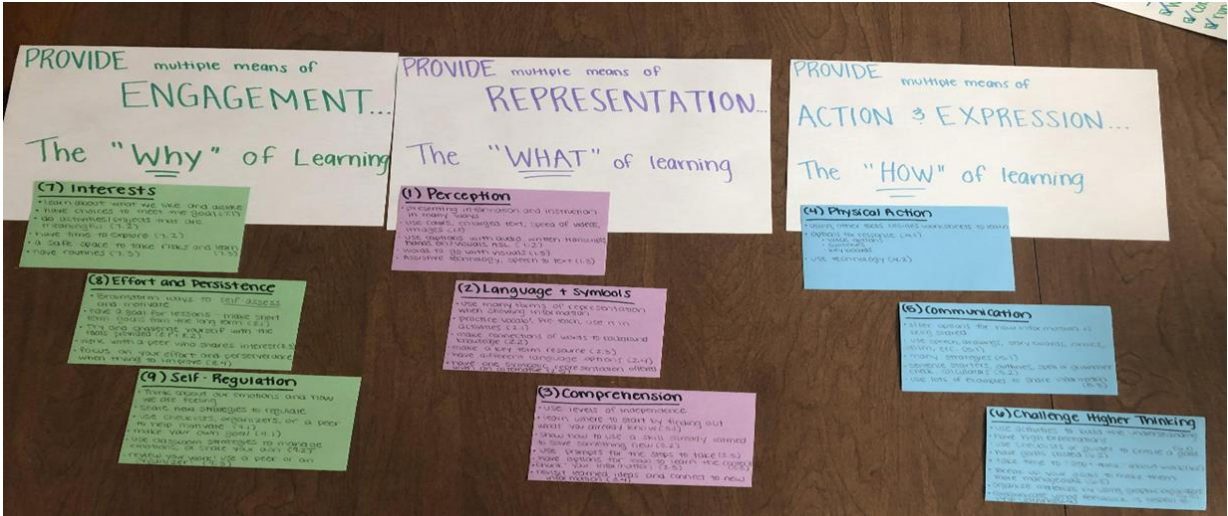
# Cultivating Learner Agency for All

- Focus on executive function and what it means for learning.
  - Start together – Create a predictable routine.
- Build learner agency.
  - Goal setting and reflection – Students set goals and reflect on their learning experiences.
- Co-design options with learners.
  - Jigsaw activities – Divide students into groups, have them research and teach their peers.
- Recognize and elevate student voice as a means of removing bias and exclusionary practices.
  - Incorporate personal experiences – Provide opportunities personal stories.



# Let's apply it:

Options for Engagement	Options for Representation	Options for Action & Expression
<b>Options to Recruit Interest</b> <ul style="list-style-type: none"><li></li><li></li><li></li><li></li></ul>	<b>Options for Perception</b> <ul style="list-style-type: none"><li></li><li></li><li></li><li></li></ul>	<b>Options for Physical Action</b> <ul style="list-style-type: none"><li></li><li></li><li></li><li></li></ul>
<b>Options for Sustaining Effort &amp; Persistence</b> <ul style="list-style-type: none"><li></li><li></li><li></li><li></li></ul>	<b>Options for Language &amp; Vocabulary</b> <ul style="list-style-type: none"><li></li><li></li><li></li><li></li></ul>	<b>Options for Expression &amp; Communication</b> <ul style="list-style-type: none"><li></li><li></li><li></li><li></li></ul>
<b>Options for Self-Regulation</b> <ul style="list-style-type: none"><li></li><li></li><li></li><li></li></ul>	<b>Options for Comprehension</b> <ul style="list-style-type: none"><li></li><li></li><li></li><li></li></ul>	<b>Options for Executive Functions</b> <ul style="list-style-type: none"><li></li><li></li><li></li><li></li></ul>



# Here are some of the strategies you shared that you do:

- Flexible deadlines on assignments.
- Provide examples of different group roles for group work.
- Build guard rails for students throughout the semester to check-in on their learning and progress.
- Offer mini-graded assignments throughout the semester.
- Help students pair up on projects based on interest or skill level.
- Flip the class, such that new learning is done outside of class and application is done in class.
- Ask students to lead short discussions on the topics covered in the assigned work.
- Share instructions verbally with an accompanying diagram of what steps to take first.
- Embrace the technology that students are using daily – finding Tik Tok videos related to course content.
- Ask students to turn in their chapter notes (in any format comfortable to them) in lieu of online homework.
- Dim the overhead lights in an office/ classroom.
- Create a parking lot for questions comments that students want to share but the moment might not be right.
- Offer a token system for late work (or late arrival to a job) – students get 2 free tokens to use anytime during the semester without a need for an explanation.
- Make sure the required texts are also available in audio format.
- Make sure all course content is audio-captioned. Alerting students to how to use zoom and you tube captions.
- Use of TILT (Transparency In Learning and Teaching) for assignment instructions.

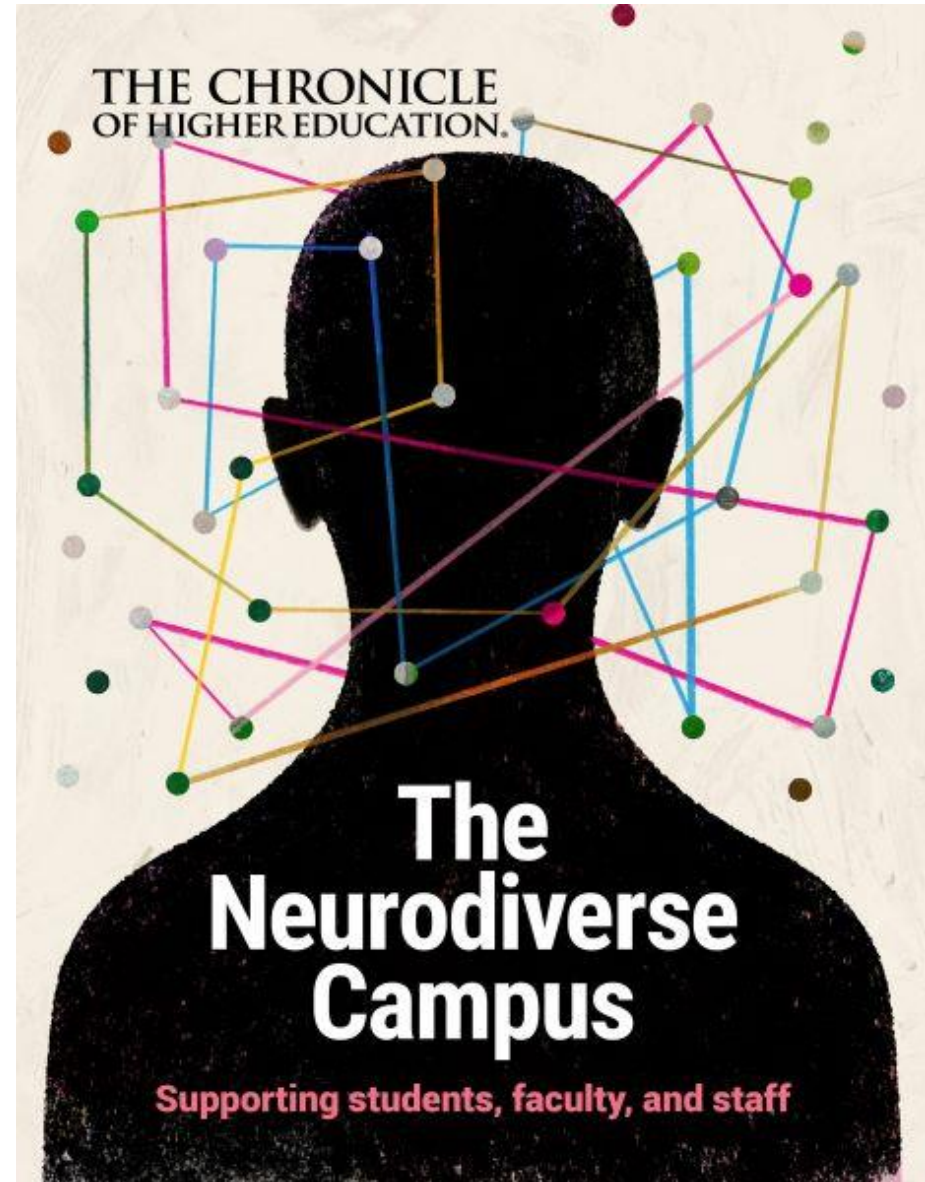
# UDL and the +1 Approach

- UDL does **NOT** mean teaching a course or designing a program 30 different ways.
- UDL means offering one more choice → +1 approach
- Adding +1 choice offers students choice in how they **engage**, **comprehend** and **demonstrate** their new knowledge.



# Neurodiversity and UDL:

Students, Staff & Faculty



# Addressing Student Challenges

## Common, *but not exhaustive*, challenges for students:

- The tension between trying to be “normal” and embracing their identity.
- Executive functioning may look different (highly focused, or not so much).
- Social interactions may be scary or super exciting (hesitancy, or over involvement).
- Avoidance of help to try and pass college w/o “special treatment.”
- Stigma may be sought or avoided (proud neurodiversity, avoidance of support).
- Asking for help may be very comfortable or not at all (in your office all the time, loads of emails, or hidden concerns).

# Plus 1 strategies to support executive functioning tasks

- Scaffold course content and assessments
- Organize your course LMS to reduce cognitive energy (hunting to find things)
- Be transparent as to “why” you're doing this assessment – have very clear goals and objectives
- Offer initial guidance in how you do something (read a journal article, cite research, run analysis)
- Help students break the work down (chunk reading)
- Avoid large blocks of text
- Verbalize instructions, while also giving out written instructions
- Be thoughtful of sensory overload (music, light, noise, avoid bright contrasting PPTs)
- Encourage them to make a checklist of things they must do to complete an assignment

# What might be on the checklist?

## FINALS WEEK CHECK LIST

*Are you  
prepared?!*

*Finals week survival guide!*



### 1 A STUDY SCHEDULE

Creating a schedule will help you visualize exactly what needs to get done so you don't end up randomly studying here and there for each test. Determine the amount of studying needed for each exam and then plan appropriately (just don't forget to schedule a healthy amount of breaks!)

### 2 ELECTRONIC DEVICES

You'll need your laptop to access your notes if you type them but did you know your laptop can also be a great source for looking up other information that may help you study? But why include your phone on the list? To access amazing apps like *tútit*, of course!

### 3 ALL NOTES + REVIEW MATERIAL

Class notes, textbooks, printed out articles, etc. Basically any materials you may need to write that paper or to study for that test!

### 4 HEALTHY SNACKS

Hunger can be a HUGE distraction so take a trip to the grocery store and stock up on health snacks that give you energy, fuel your brain cells and keep you concentrated!

### 5 A FEW QUIET STUDY SPOTS

Stake out the perfect study spot or spots! Whether you like more natural light or a comfortable seat to spend hours in, picking out spaces that allow you to concentrate and study your best will help tremendously!

# Plus 1 strategies for supporting social interactions

- Begin the course with course norms (develop them as a group).
- Verbalize and write your expectations down.
- Use essential questions to guide each class session.
- Consider prompts for assignment work (what is the focus, why is it assigned?)
- Offer flexibility around participation.
- Be mindful of emotional triggers (red pens, all capped emails).

# Plus 1 strategies for supporting students with group work

- Detail what group work will look like (roles, grading structure, methods to express concerns).
- Provide explicit instructions on how to work in groups including.
- Offer guidance around how to make decisions about workload, etc.
- Encourage them to share personal contact information.
- Ask them to develop a group communication plan.
- Help them to adopt a collaborative mind set.

# Plus 1 strategies for navigating stigma and asking for help:

- Create a welcoming environment from the start – include a statement on your syllabus about accessibility.
- Talk about neurodiversity in the first class, that you recognize none of us learn a like. Show the cockpit video.
- Remind students of different ways to ask for help – office hours, email, before/after class, library, learning center, disability center.
- Remind students of available resources multiple times throughout class.

**Let's apply these strategies to one of your  
case studies**





# Start with these questions:

**01**

**Why** are students completing this task/exercise, learning this information, what is the goal?

**02**

**What** information are your students expected to absorb/demonstrate?

**03**

**How** are your students expected to access/demonstrate this information?

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# What is the pinch point?

What barriers might a neurodiverse student face in your course?





**Freshman Seminar: Heroes, Lovers, and Demons: British Literature from  
Beowulf to the Eighteenth Century**



## Step 1: What is goal?

### Goal:

- To foster productive, meaningful discussions about the fictional texts we are reading.



## Step 2: What is the design to reach that goal?

### **Goal:**

- To foster productive, meaningful discussions about the fictional texts we are reading.

### **Curriculum Design:**

- Read the text between classes, come to class with 1) observation of the text and 2) a clarifying question.
- Share your observation and question in class.

## Step 3: What is the pinch point?

### **Goal:**

- To foster productive, meaningful discussions about the fictional texts we are reading.

### **Curriculum Design:**

- Read the text between classes, come to class with 1) observation of the text and 2) a clarifying question.
- Share your observation and question in class.

### **Pinch Point:**

- Students are not reading the text ahead of class.
- Students do not seem to be paying attention when others are speaking in class.

# Step 4: Add in your Plus One Strategy

## Goal:

- To foster productive, meaningful discussions about the fictional texts we are reading.

## Curriculum Design:

- Read the text between classes, come to class with 1) observation of the text and 2) a clarifying question.
- Share your observation and question in class.

## Pinch Point:

- Students are not reading the text ahead of class.
- Students do not seem to be paying attention when others are speaking in class.

## Plus 1 Strategy(ies):

- Make sure the book is also available in audio format (tell students where they can get that).
- Pair students up for 5 minutes to reflect on their observations. Ask the pair to report out a new clarifying question after that conversation. Ask students to record, on the board, their questions. Pair up again (new partner) and consider the questions. Report out.





## Step 5: Reflect

- What options **worked well** to support the learning? How do you know (i.e., exit tickets, student surveys, personal reflections, etc.)
- Where were there **still barriers**? What design can you do next?

# Strategies for All in Different Types of Situations

## Supporting People who are Neurodivergent

### General Accommodations in Any Setting



Utilize dimmed lighting

Reduce the use of strong smells (perfume, cologne, etc.)

Have quiet spaces without loud/sudden noises

Adjust the environment to provide accessible services to the client

Minimize clutter and distracting patterns

Ensure settings are easy to physically navigate



Utilize directional signs and signs that clearly identify the purpose of the area

Offer physical devices that increase the individual's comfort (e.g., technology, sensory soothing objects, etc.)

Provide conversational accommodations (e.g., visual aids, etc.)

Offer alternative ways to schedule appointments

Provide online and/or text reminders of appointments



University seal  
removed for  
blind review

(Clarke & Westmore, 2022; Davis, 2020; Simpson, 2016)

# Common challenges for faculty and staff:

- Executive functioning may look different (highly focused, or not so much).
- Navigating discourse may include tactics or avoidance (excited to debate or withdrawing completely).
- Social interactions may be daunting or super exciting (hesitancy, or over involvement).
- Stigma may be sought or avoided (proud neurodiversity, avoidance of support).
- Avoiding disclosure for fear of judgement, may impact chances of promotion.
- Other “characteristics” that you want to share.



# Supporting neurodivergent colleagues

- Meetings (send agendas ahead of time, note the sensory of the room, have a note taker, when possible, allow zoom).
- Emails (be direct and concrete).
- Allow for flexibility where possible (choose teaching times, choice of online s. in-person teaching, etc.).
- Designate and remind each other of the quiet areas and mitigate the effects of overstimulating environments.
- Communicate proactively about scheduling and changes.
- Give clear directives, so the invisible expectations become visible.
- Differentiate PD and offer topics related to executive function and organization.

# Strategies for inclusive faculty/ staff interactions

- Offer small adjustments to a workspace to accommodate any sensory needs, such as:
  - Sound sensitivity: Offer a quiet break space, communicate expected loud noises (like fire drills), offer noise-cancelling headphones.
  - Tactile: Allow modifications to the usual work uniform.
  - Movements: Allow the use of fidget toys, allow extra movement breaks, offer flexible seating.
- Inform people about workplace/social etiquette, and don't assume someone is deliberately breaking the rules or being rude.
- Try to give advance notice if plans are changing, and provide a reason for the change.

# Strategies for inclusive faculty/ staff interactions

- Use a clear communication style:
  - Avoid sarcasm, euphemisms, and implied messages.
  - Provide concise verbal and written instructions for tasks, and break tasks down into small steps.
- Don't make assumptions — ask a person's individual preferences, needs, and goals.
- Be kind, be patient.

# **Mandatory Employee Training**







## Step 1: What is goal?

### **Goal:**

To provide mandatory Title IX training to new employees.



## **Step 2: What is the design to reach that goal?**

### **Goal:**

To provide mandatory Title IX training to new employees.

### **Curriculum Design:**

- New employee in-person 3-hour training.
- Combination of lecture, videos and case scenarios.

## Step 3: What is the pinch point?

### **Goal:**

To provide mandatory Title IX training to new employees.

### **Curriculum Design:**

- New employee in-person 3-hour training.
- Combination of lecture, videos and case scenarios.

### **Pinch Points:**

- New employees are unable to maintain focus.
- Some employees come late or need to leave early.
- The content of some of the training appears to impact some employees negatively.



## Step 4: Add in your Plus One Strategy

- **Goal:**
  - To provide mandatory Title IX training to new employees.
- **Curriculum Design:**
  - New employee in-person 3-hour training.
  - Combination of lecture, videos and case scenarios.
- **Pinch Points:**
  - New employees are unable to maintain focus.
  - Some employees come late or need to leave early.
  - The content of some of the training appears to impact some employees negatively.
- **Plus 1 Strategy:**
  - Incorporate breaks throughout the training.
  - Provide an agenda for the training, noting when triggering content might be shared.
  - Offer alternatives to the in-person training, asynchronous self-paced modules.



## Step 5: Reflect

- What options **worked well** to support the learning? How do you know (i.e., exit tickets, student surveys, personal reflections, etc)
- Where were there **still barriers**? What design can you do next?

# Summary: to design for neurodiversity

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1. Know the **goal**
2. Identify **pinch points** in current design
3. Identify **plus one strategies**.





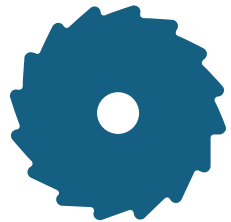
# Distinguishing between UDL and Accommodations

- **UDL** – Designing courses, meetings, trainings to be usable by the greatest number of people from the start.
- **Accommodations** – individualized supports for one person.

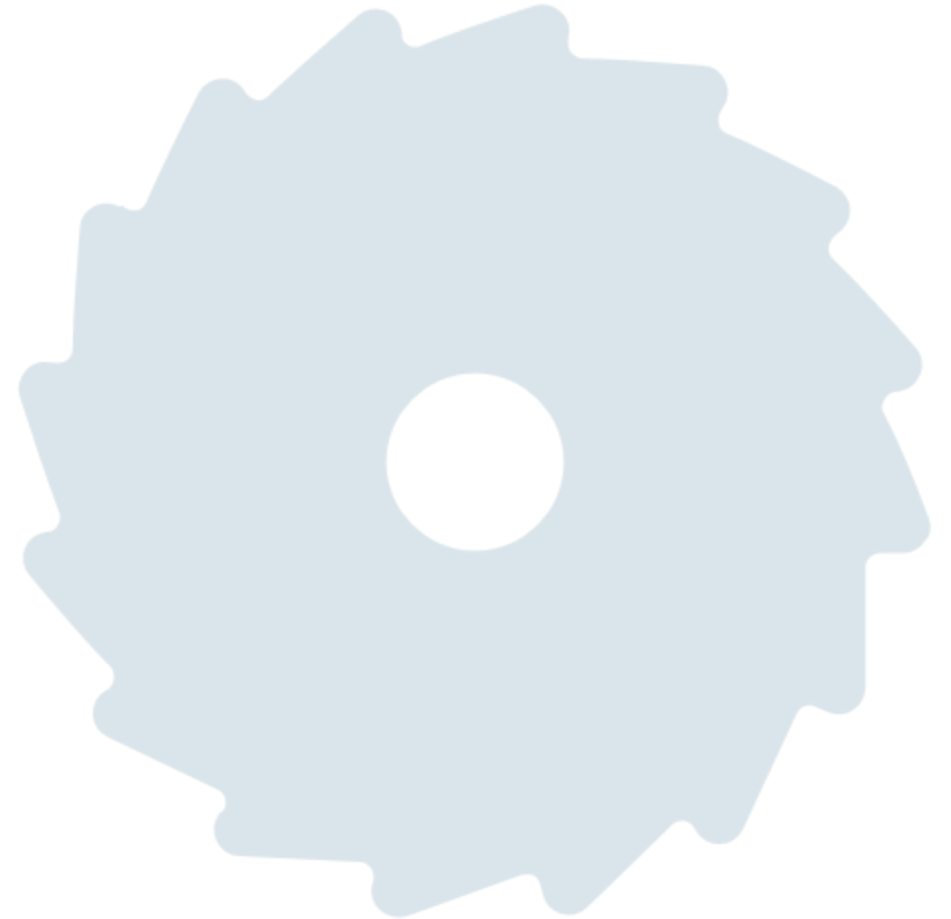
A strong suggestion: Do not informally accommodate.

# Lunch





# **Workshop**





# What you can expect now:

- Our session will last 1 hour.
- We will apply UDL strategies to our work, with a goal towards creating an inclusive space for all.
- Engage in a manner that works for you.
- I will encourage you to connect with others to get new ideas, if you'd prefer to work alone, that is fine too.



## A reminder: UDL and the +1 Approach

- UDL means offering one more choice → +1 approach
  - Adding +1 choice offers choice in how our communities **engage, comprehend** and **demonstrate** their knowledge.
-



# Start with these questions:

**01**

**Why** are students completing this task/exercise, learning this information, what is the goal?

**02**

**What** information are your students expected to absorb/demonstrate?

**03**

**How** are your students expected to access/demonstrate this information?

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# Identify your pinch point

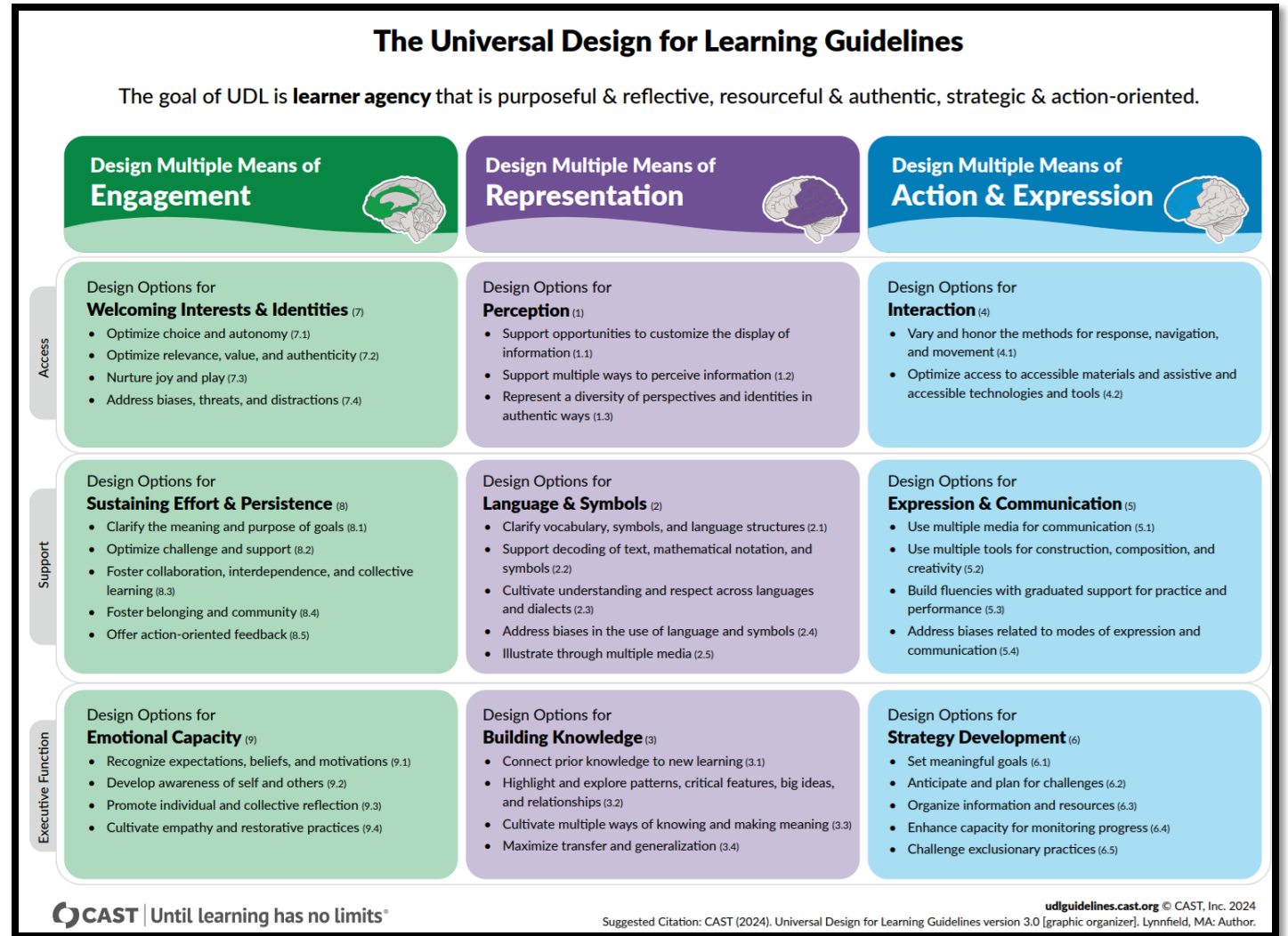


What barriers might a neurodiverse community member face in this situation?

Explore the UDL Guidelines

Take notes

Make connections to what  
you already do





## **Step 1: What is goal of the course/ activity?**

**Goal:**



## **Step 2: What is the design to reach that goal?**

**Goal:**

**Curriculum/ Meeting Design:**



## Step 3: What is the pinch point?

- **Goal:**
- **Curriculum/ Meeting Design:**
- **Pinch Point:**

# Step 4: Add in your Plus One Strategy

**Goal:**

**Curriculum/ Meeting Design:**

**Pinch Point:**

**Plus 1 Strategy:**





## Step 5: Reflect

- What options **worked well** to support the learning? How do you know (i.e., exit tickets, student surveys, personal reflections, etc).
- Where were there **still barriers**? What design can you do next?





**Report back**

# Summary:

## Design for neurodiversity

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- Know the **goal**
- Identify **pinch points** in current design
- Identify **plus one strategies**





## **Planning My Next Steps**

Use the worksheet to think about your UDL efforts over the next 20 days and 20 months. These strategies might be more involved than the strategies we worked through today.

# Thank you

Questions?

Bragging opportunities?

Please share them with me at:  
[Kirsten.Behling@tufts.edu](mailto:Kirsten.Behling@tufts.edu)

