



Considerations When Designing for Students with Disabilities

Language, Accommodations & Space Design



INTRODUCTIONS



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CEU Purpose

- This CEU explores the driving factors for the design of educational spaces that are adaptable and responsive to the needs of diverse learners, specifically students with disabilities.
- It is essential for educators, designers, and other professionals involved in the design and implementation of spaces for students with disabilities to have strong collaboration and communication to best serve the needs of students and educators.
- Attendees will learn key terms and definitions, federal requirements for accessibility, universal design for learning, and the overall impact of space design on this topic.
- Attendees will also develop a greater awareness of the factors that can impact the learning experience for students with disabilities and how to apply this knowledge to communication, design, and engagement within K-12 and Higher Education.

Learning Objectives

1. Define disability and identify the national scale and impact on K-12 schools, colleges and universities.
2. Understand the legal protections afforded to those with disabilities through Law and Definitions, including the Americans with Disabilities Act (ADA) and Individuals with Disabilities Education Act (I.D.E.A).
3. Familiarize yourself with the terminology, definitions, and preferred language used in discussing disabilities in education.
4. Define the principles of Universal Design for Learning (UDL) and how they can be applied to create inclusive education spaces for students with disabilities.
5. Describe the importance of designing education spaces that support the needs of students with disabilities and explain the impact such spaces can have on K-12 school, colleges, and universities.



Learning Objective #1: **Definitions**

Define disability and identify the national scale and impact on K-12 schools, colleges and universities.



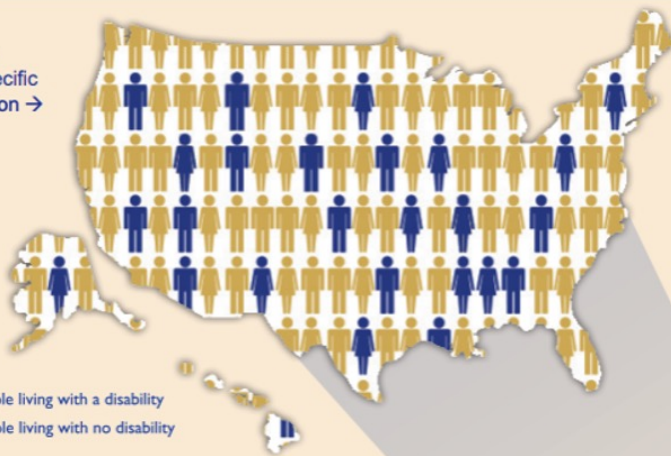
What is a Disability?

Disability Impacts ALL of US



61 million adults in the United States live with a disability

Click for
state-specific
information →



■ People living with a disability
■ People living with no disability

26% of adults in
the United States
have some type
of disability
(1 in 4)

The percentage of people
living with disabilities is
highest in the South

The CDC defines a **disability** as any condition of the body or mind that makes it more difficult for the person with the condition to do certain activities (activity limitation) and interact with the world around them (participation restrictions).

- Vision
- Movement
- Thinking
- Remembering
- Learning
- Communicating
- Hearing
- Mental health
- Social relationships
- [Disability and Health Overview | CDC](#)

Visibility Matters

SOME DISABILITIES LOOK LIKE THIS



SOME LOOK LIKE THIS



What are some examples of invisible disabilities?



Learning Objective #2: **Legal Protections**

Understand the legal protections afforded to those with disabilities through law and definitions, including the Americans with Disabilities Act (ADA) and Individuals with Disabilities Education Act (I.D.E.A)



Americans with Disabilities Act (ADA)



Americans with Disabilities Act (ADA)

Americans with Disabilities Act (ADA) protects people with disabilities from discrimination.

ADA guarantees that people with disabilities have the same opportunities as everyone else to enjoy:

- employment opportunities
- purchase goods and services
- participate in state and local government programs

I.D.E.A.: Individuals with Disabilities Education Act

At a Glance



- The Individuals with Disabilities Education Act (IDEA) requires public schools to provide alternative education services to eligible students.
- This law covers the students/families from birth to high school graduation or age 21 (whichever comes first)
- I.D.E.A. covers 13 disability categories.
- Schools must find and evaluate students thought to have disabilities at no cost to families.
- College students coming from this environment

Not every student who struggles in school qualifies as having a disability.

Not every student who qualifies requires individualized instruction.

I.D.E.A. Recognized Disabilities

1. **SLD (Specific Learning Disability)**- Most common in schools
2. **OHI- (Other Health Impaired)**- Medical Diagnosis that has effect on attention and executive functioning.
3. **ASD- (Autism Spectrum Disorder)**- social, cognitive, behavior
4. **ED- (Emotional Disturbance)**- anxiety, depression, bipolar, etc. can also be under OHI in some instances.
5. **SL (Speech and/or Language Impairment)** - speaking and expression
6. **VI (Visual Impairment)**- if corrected with eye- glasses, not considered
7. **Deafness**- no hearing with hearing aides
8. **Hearing Impairment**- hearing loss, not deafness
9. **Deaf-Blindness** (combined needs not covered in one separate program)
10. **OI: (Orthopedic impairment)**- Lack of body function ex. Cerebral Palsy
11. **ID (Intellectual Disability)**- below average intelligence, could have poor communication, social skills, and self-care. Ex. Downs Syndrome
12. **Traumatic Brain Injury**- Caused from Accident or physical force.
13. **Multiple Disabilities** -student has more than one qualifying disability and needs can't be met in one single category.

Disability Services in Higher Education



Disability Services

- Students must seek out resources and support from the institution.
- Different institutions have a variety of policies, staffing structures, and resources
- Examples:
 - Students with asthma need air-conditioned rooms.
 - Student breaks their foot and lives in building without an elevator
 - Visual impairment requires all documents to be read by specific software



Learning Objective #3: **Terminology**

Familiarize yourself with the terminology, definitions, and preferred language used in discussing disabilities in education.



Environments Defined



Least Restrictive Environment

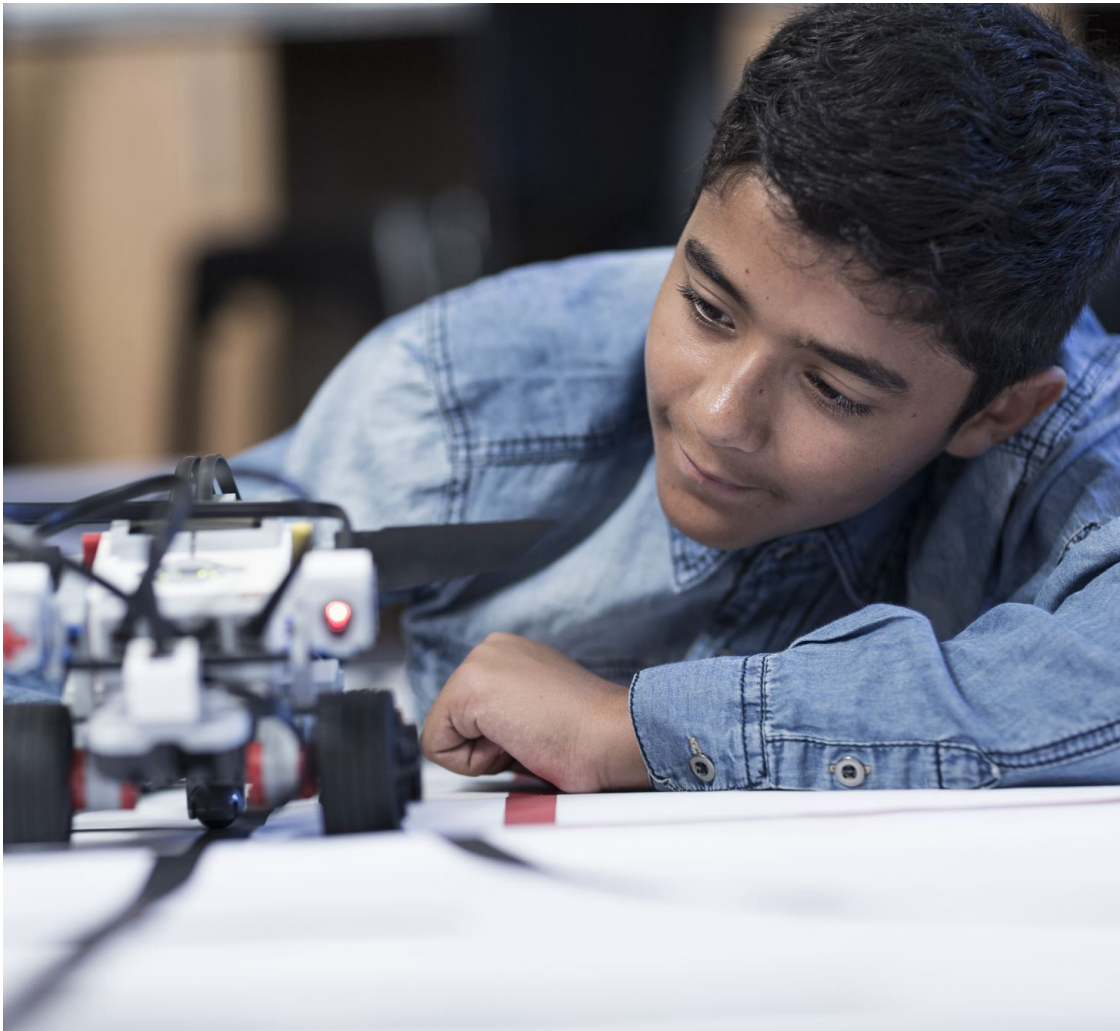
- Any placement outside the general education classroom must be justified by the child's individual disability-related needs. Students must have meaningful access to same-age peers without disabilities, when appropriate.



Inclusive Classroom

- A general education classroom where students with and without learning differences learn together
- An additional specialized teacher will join to assist with subjects like reading and/or math

Definitions



Definitions

Separate Setting

- A self-contained classroom designed to provide students with specialized support and interventions

Understanding & Updating our Language



Non-preferred language

- Special Ed/Special Needs
- SPED
- The “R” word
- Handicapped
- He or she IS disabled
- High Functioning vs. Low Functioning
- Abnormal



Preferred language

- Use **first person** language:
 - She has a speech disability, He has epilepsy
- **Neurodivergent**
 - Describes brain differences affect how someone’s brain works
- Learning or Physical **Differences**
- Persons requiring accommodations or modifications
- Uses a wheelchair ~~vs. wheelchair bound~~
- Don’t name disability unless it is relevant to the discussion

When in doubt, Just ask!

You should feel comfortable asking for someone's preferred language.

Accommodation vs. Modification



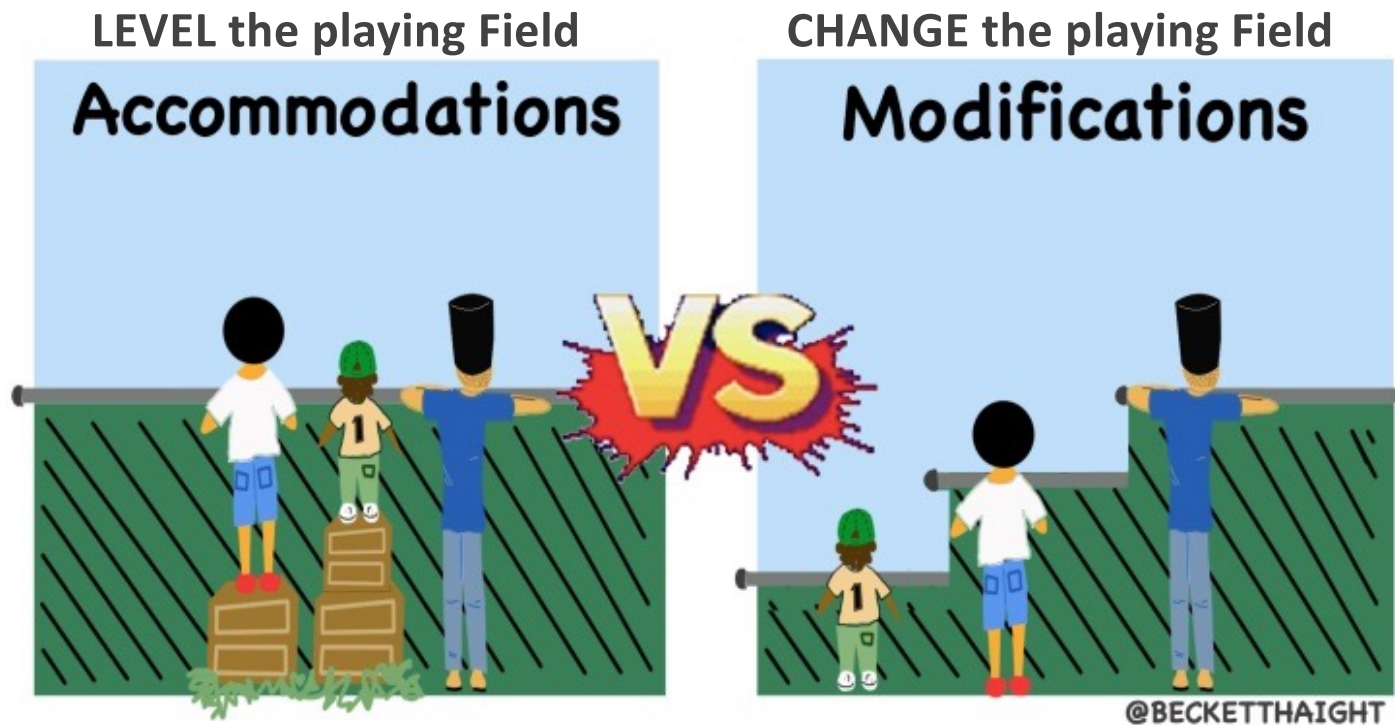
TIME TO TALK:

What do you notice about this graphic?

What are the similarities? Differences?

Why would this be important in Education?

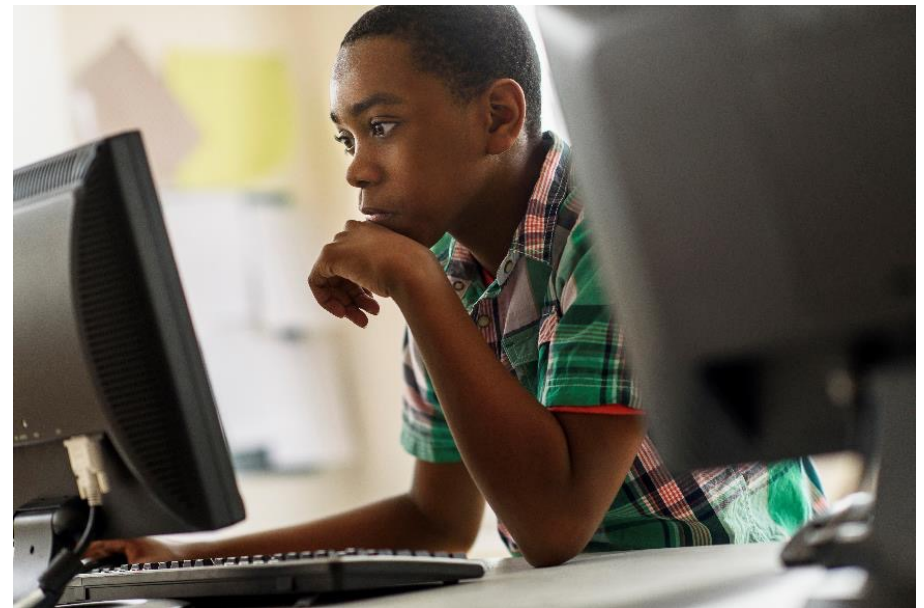
Accommodation vs. Modification



Let's try this one... What do you notice? Similarities? Differences? Why does this matter?

Accommodation Examples

- Digital tools required
 - Storage for equipment
- Preferential seating for student
- Divider screens, separate space in classroom
 - Need for limited distractions
- Service animal in classroom
- Access to or use of a sensory tool
 - Headphones, fidgets, wobble stools
- Alternative Instructional format
 - small group, individual, audio lesson, computer



Modification Examples

- Space for more staff support in the classroom.
- Students may require a separate setting for learning.
- Students may test in a separate setting other than classroom.
- Desks and seating may need to be modified





Learning Objective #4: **Universal Design**

Define the principles of Universal Design & Universal Design for Learning (UDL) and how they can be applied to create inclusive education spaces for students with disabilities.



Universal Design



Equitable Use

Flexibility in Use

Simple and Intuitive

Perceptible Information

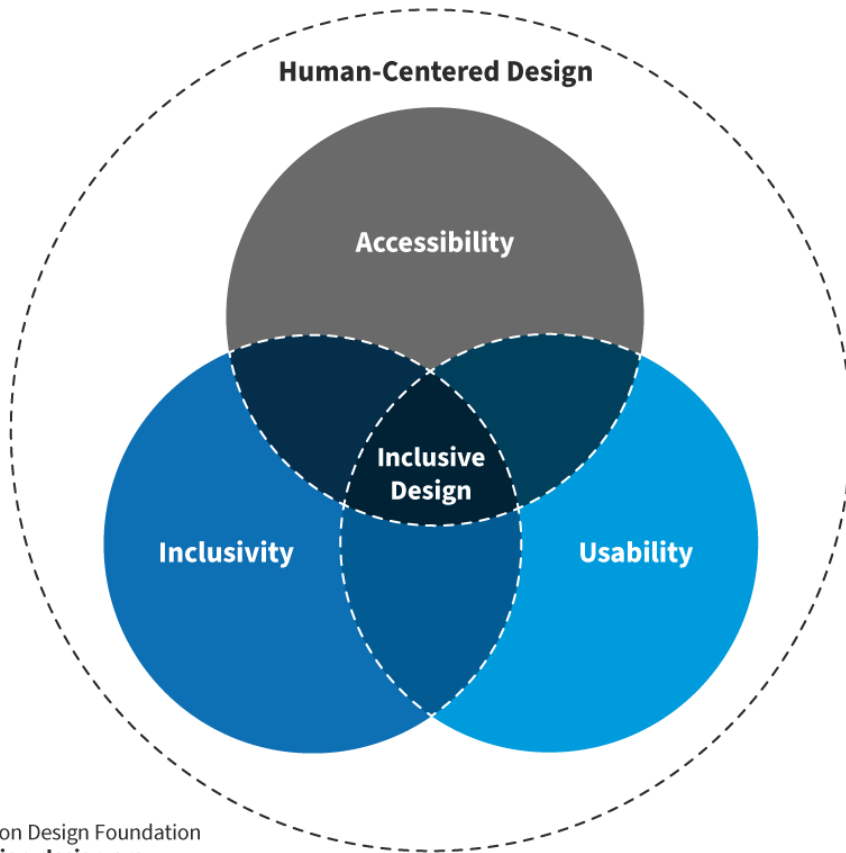
Low Physical Effort

Tolerance for Error

Size and Space

- Universal design aims to make physical, learning, and work environments usable by a wide range of people regardless of age, size, disability status, etc. It is an anti-discrimination measure seeking to design for all abilities without the need for adaptation or specialized design
- Accessibility is NOT the same as Universal Design

Inclusive Design



Interaction Design Foundation
interaction-design.org



- Inclusive design describes methodologies to create products that understand and enable people of all backgrounds and abilities.
- Inclusive design may address accessibility, age, culture, economic situation, education, gender, geographic location, language, and race.
- The goal is to fulfill as many user needs as possible, not as many users as possible.

Universal Design in Higher Education Framework

Applying universal design principles to all campus offerings

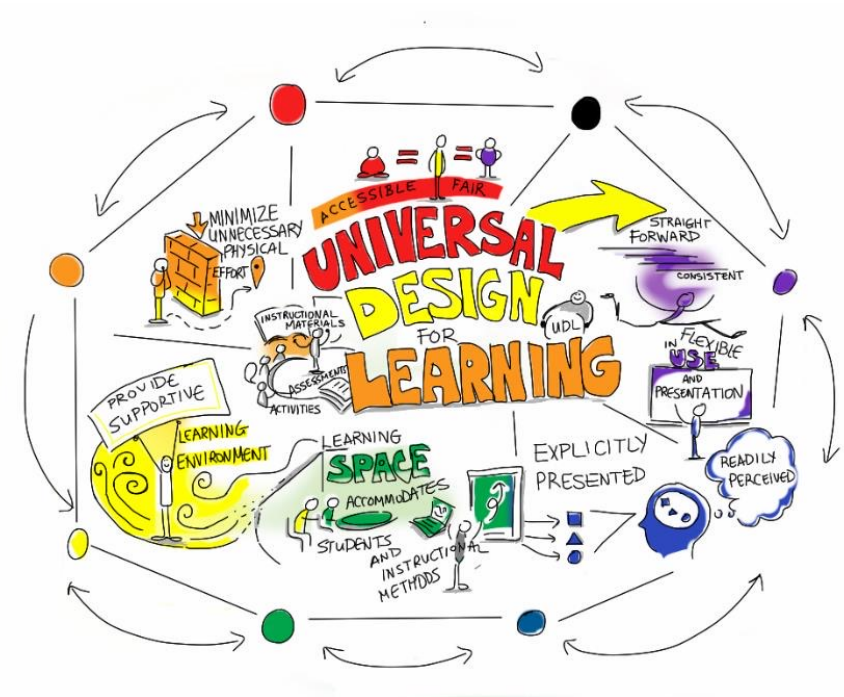
1. **Equitable use.** The design is useful and marketable to people with diverse abilities.
2. **Flexibility in use.** The design accommodates a wide range of individual preferences and abilities.
3. **Simple and intuitive use.** Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.
4. **Perceptible information.** The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
5. **Tolerance for error.** The design minimizes hazards and the adverse consequences of accidental or unintended actions.
6. **Low physical effort.** The design can be used efficiently, comfortably, and with a minimum of fatigue.
7. **Size and space for approach and use.** Appropriate size and space is provided for approach, reach, manipulation, and use regardless of the user's body size, posture, or mobility.



UDHE Principle	Example of UDHE Practices
UD 1. Equitable use	Career services. Job postings are in formats accessible to people with a great variety of abilities, disabilities, ages, racial/ethnic backgrounds, and technologies.
UD 2. Flexibility in use	Campus museum. An exhibit design allows a visitor to choose to read or listen to descriptions of the contents of display cases.
UD 3. Simple and intuitive	Assessment. Testing is conducted in a predictable, straightforward manner.
UD 4. Perceptible information	Dormitory. An emergency alarm system has visual, aural, and kinesthetic characteristics.
UD 5. Tolerance for error	Instructional software. An application provides guidance when a student makes an inappropriate selection.
UD 6. Low physical effort	Curriculum. Software includes on-screen control buttons that are large enough for students with limited fine motor skills to select.
UD 7. Size and space for approach and use	Science lab. An adjustable table and flexible work area is usable by students who are right- or left-handed and have a wide range of physical characteristics.
UDL 1. Multiple means of engagement	Courses. Multiple examples ensure relevance to a diverse student group.
UDL 2. Multiple means of representation	Promote services. Multiple forms of accessibly designed media are used to communicate services provided.
UDL3. Multiple means of action and expression	Course project. An assigned project optimizes individual choice and autonomy.
WCAG 1. Perceivable	Student service website. A person who is blind and using a screen reader can access the content in images because text descriptions are provided.
WCAG 2. Operable	Learning management system (LMS). A person who cannot operate a mouse can navigate all content and operate all functions by using a keyboard (or device that emulates a keyboard) alone.
WCAG 3. Understandable	Instructional materials. Definitions are provided for unusual words, phrases, idioms, and abbreviations.
WCAG 4. Robust	Application forms. Electronic forms can be completed using a wide range of devices, including assistive technologies.

What if Classrooms Were Designed to be Accessible?

- Universal Design for Learning (UDL) is a teaching and learning philosophy that prioritizes giving **all** students equal opportunity to learn by anticipating possible learning barriers, thus giving flexible learning choices.
- UDL benefits all learners. And designing for all students impacts the entire school!
- Tenets include providing multiple means of:
 - **Engagement** (the WHY of learning)
 - **Representation** (the WHAT of learning)
 - **Action and Expression** (The HOW of learning)



Universal Design for Learning in Practice

Universal Design for Learning Guidelines

Provide multiple means of
Engagement →

Affective Networks
The "WHY" of learning



Provide multiple means of
Representation →

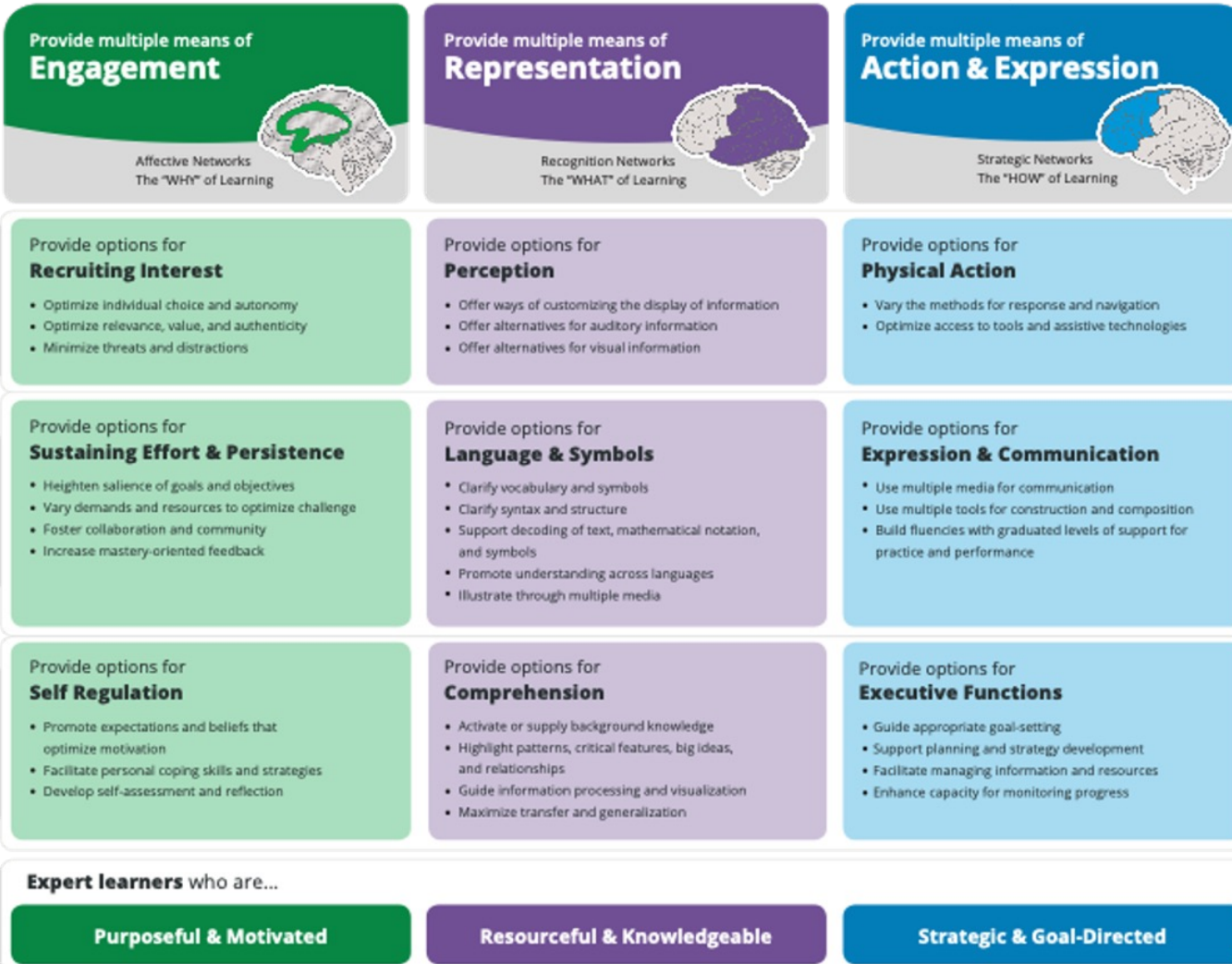
Recognition Networks
The "WHAT" of learning



Provide multiple means of
Action & Expression →

Strategic Networks
The "HOW" of learning







Learning Objective #5: **Space Impact**

Describe the importance of designing education spaces that support the needs of students with disabilities and explain the impact such spaces can have on K-12 schools, Colleges, or Universities.



ADA Within Schools & Classrooms

Americans with Disabilities Act (ADA) protects people with disabilities from discrimination.

- Example: In a school without an elevator, a student can be assigned to a first-floor classroom if the class includes a student with a mobility disability.
- Example: Student with visual impairment requires a seat near the front of the classroom.
- Examples of specifications and layouts you've done to account for ADA?

Impact of ADA





Impact of ADA

ENVIRONMENT MATTERS

- The Environment has a huge effect on the student experience and extent of disability.
- Inaccessible environments create barriers that often hinder the full and effective participation of students with disabilities in classrooms and education environments.

STUDENT ENVIRONMENT



What matters on campus?

- Living on campus 24/7
- Access to all resources, centers, and events
- Dining and Housing
- What else?

STUDENT ENVIRONMENT



What matters in classroom spaces?

- Pathway for transportation
- Design and set-up
- Accessibility
- What else?



Sensory Areas

Sensory Rooms: A therapeutic space with a variety of equipment that provides students with disabilities personalized sensory input—helps students calm and focus themselves so they can be better prepared for learning and interacting with others.

Sensory Space within the classroom: A space in the classroom where students can go when they are feeling overwhelmed or overstimulated and can calm themselves or regroup/refocus.



Wellness Rooms

Wellness Rooms

Wellness Rooms: dedicated spaces where students can take a break, practice self-care, and then return to learning.

- Spaces are staffed with personnel trained to support students in identifying triggers and effective coping strategies.
- You may also see these for the educators in the school

Why have a wellness room? Stress and anxiety is a bigger problem for both students and staff today and schools are taking notice.

Recap - Learning Objectives

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CEU Sources

- [Slide 8: Disability and Health Overview | CDC](#)
- [Slide 14: A History of the Individuals With Disabilities Education Act](#)
- [Slide 19: equity and equality actually have vastly different meanings.](#)

THANK YOU!

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