COMMON TYPES OF DISABILITY

Disability is an umbrella term for long-term physical, mental, intellectual, or sensory impairments

IMPAIRMENT

A problem in body function or structure for example loss of a limb, vision loss or memory loss

ACTIVITY LIMITATION

Difficulty executing a task or action for example walking or problem-solving

PARTICIPATION RESTRICTION

Problems an individual may experience in involvement in life situations (e.g., facing barriers to attend school or social activities).

In a classroom, a disability happens when a student's condition meets a barrier. When we design a lesson for a student with a disability, we often make it better for everyone

ACCESSIBILITY

Accessibility is not only for people with disabilities, it's about making sure everyone can study and participate in our society.

Physical Accessibility

Creating a good learning environment for all people to be able to navigate, enter, and use spaces independently and safely

Digital Accessibility

Ensuring that technology and digital content can be used by everyone, regardless of their abilities

Cognitive & Sensory Accessibility

Creating content that is versatile enough to be comprehended and interacted with by a broad spectrum of individuals

COGNITIVE ACCESSIBILITY IN PRACTICE

1

Chunk the lesson and signpost the structure

Tell students at the start what the three or four parts of the lesson will be, then mark each transition out loud and on the board.

2

Pair every spoken instruction with a written or visual cue.

When you give a task, write the steps on the board as a short numbered list and leave them up

3

Slow down the pacing of new vocabulary and check comprehension specifically.

Introduce new terms one at a time, write them, say them, give an example, and ask a student to explain

4

Make instructions concrete and one-step-at-a-time for tasks.

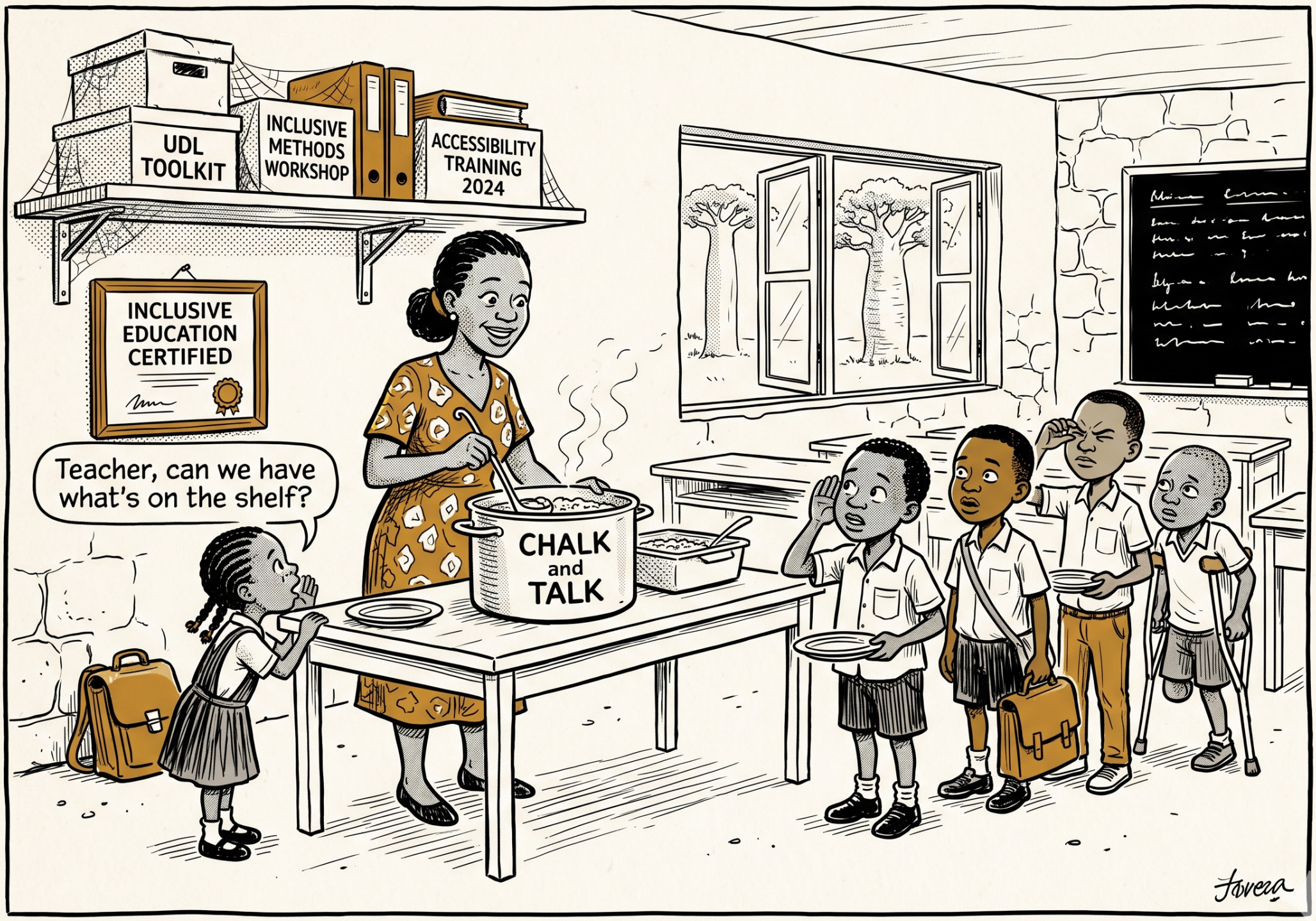
Instead of "open your books, find page forty, read the second paragraph, and answer questions one to three," break it into single steps with pauses.

5

Build in recovery routines, not just delivery routines.

Have a predictable way for a student to catch up if they got lost , a partner check-in, a summary written on a corner of the board, a two-minute

Attitudes, Values, Accessibility



- **Accessibility is not only for special needs students, it benefits the whole class**
- **Offer options and flexibility, an inclusive classroom is built, not waited for.**
- **Universal Design for Learning is not a special diet for separate lessons, it is for everyone.**
- **What helps one learner reach the lesson helps every learner stay with it.**

How to meet People

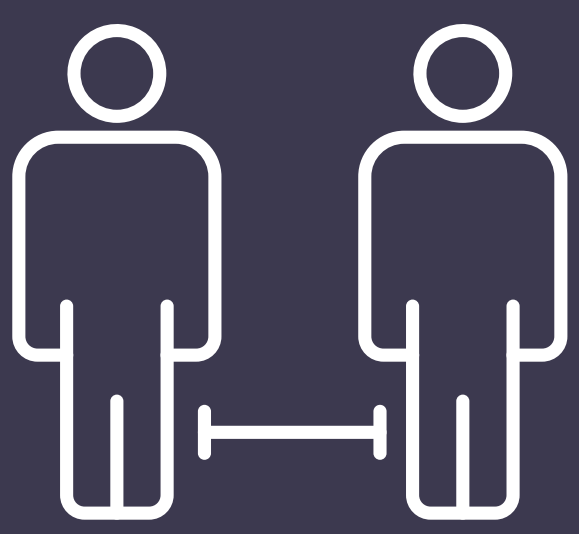
Some helpful tips to accessible interactions

Communication

Always speak directly to the person, not their companion or interpreter.

Ask Before Helping

Do not assume someone needs help. Ask, "How can I best assist you?" and listen to their instructions.

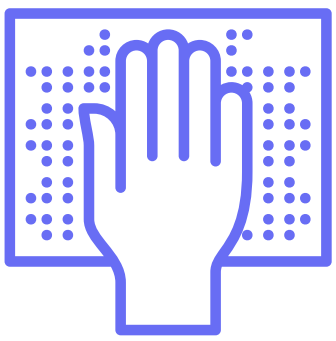


Respect Personal Space

Wheelchairs, canes, and service animals are extensions of personal space. Do not touch them without permission.

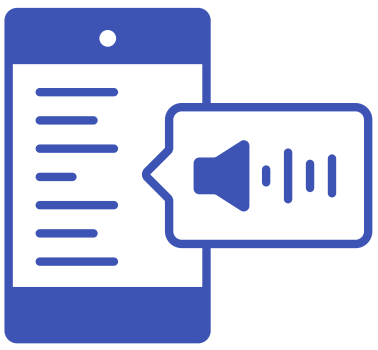
ASSISTIVE TECHNOLOGIES IN EDUCATION

BRAILE DISPLAYS



Orbit Reader 20 Refreshable braille displays

SCREEN READERS

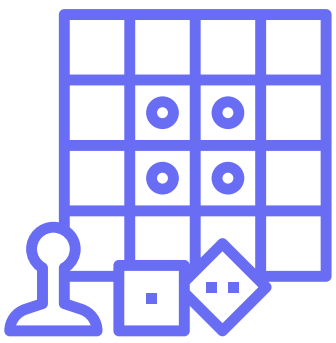


NVIDA Screen reader software can read digital textbooks

ALTERNATIVE INPUT DEVICES

Controlling on-screen cursors with limited movement

DO IT YOURSELF



For example Low-Tech Picture Boards

TEXT TO SPEECH

Voice activated softwares to write essays

TRANSCRIPTION

Google Live Transcribe on tablets or smart screens

Alternative input devices

What are alternative input devices?

Alternative input devices are assistive technologies that **allow users to control a computer without using a standard keyboard or mouse**.

Enable and help people access computers and digital systems, and support independence in school, work, and daily life.

Enables people to perform tasks that might otherwise be difficult or impossible.

Examples

Adaptive keyboards
- Larger or high-contrast keys, custom layouts, and keyguards.
- Easier typing for users with motor difficulties.

Alternative pointing devices
- Joysticks and trackballs, touchscreens, and head-controlled mice.
- Used instead of a standard mouse for easier control.

Voice recognition systems
- Control device using speech, dictate text instead of typing.
- Converts speech into commands or written text.

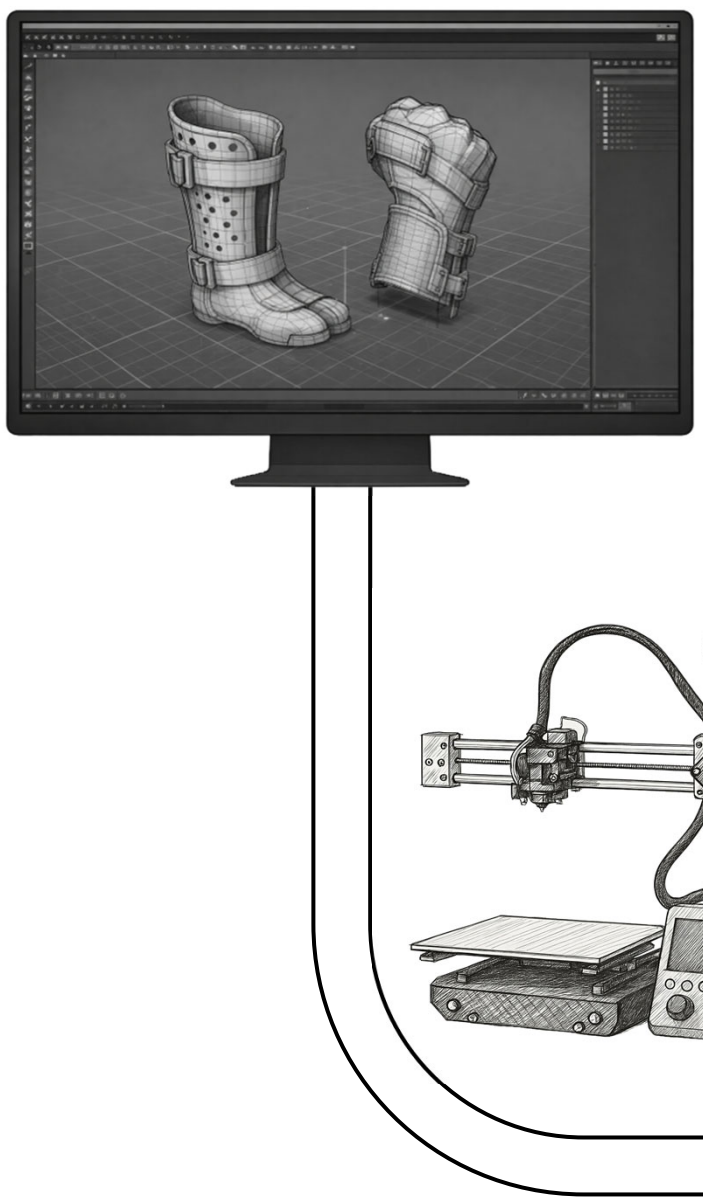
Eye-tracking systems
- The cursor is controlled by moving eyes and selecting items by looking.
- Useful for users with severe physical disabilities.

Switch devices
- Connect simple buttons that are activated by movement with hands, feet, or head.
- Convert small actions into computer commands.

Head and motion controls
- Head mice (moves the cursor with head movement), sip-and-puff systems (controlled by breathing).
- Allow hands-free computer use.

Communication devices (AAC)
- Speech-generating devices, communication boards, or apps.
- Help users express their thoughts and communicate.

Design and 3D printing



Digital fabrication

A process of creating physical objects from digital designs using computer-controlled machines.

A digital fabrication machine, such as a **3D printer**, can produce a wide range of items, making it ideal for **prototyping and custom production**, including spare parts.

Allows designers to test rapidly, modify, and improve designs, enabling fast collaboration, feedback, and adaptability.

Democratizes the design, production, and maintenance of assistive technology.

Examples

Custom grips for kitchen utensils and tools improve independence for people with limited hand mobility.

Mobility aids such as wheelchair attachments and custom brackets enhance mobility and comfort.

Communication devices and accessories, such as AAC switch mounts and enclosures, can be produced using 3D printing.

Orthotic braces.. Digitally-scanned and 3D-printed orthoses create better-fitting, lightweight supports.

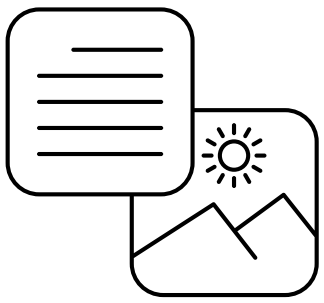
Classroom ATs, including tactile learning tools and adapted educational equipment, such as reading plates and pencil holders.

Other examples include **AT spare parts**, key turners, medication organizers, tactile maps, and custom switches.

CREATING ACCESSIBLE DOCUMENTS

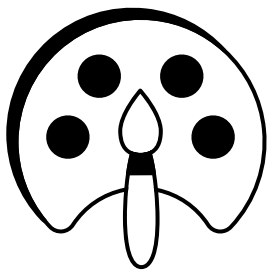
Checklist

Remember ALT text



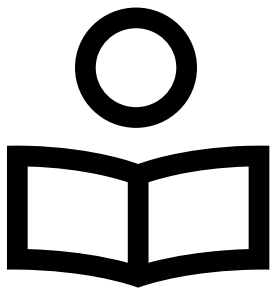
Allows screen readers to describe and image

Consider How you Use Colors



Contrasting colors are easier to read

Use Easy Language



Complicated language is hard to make sense of

Fonts

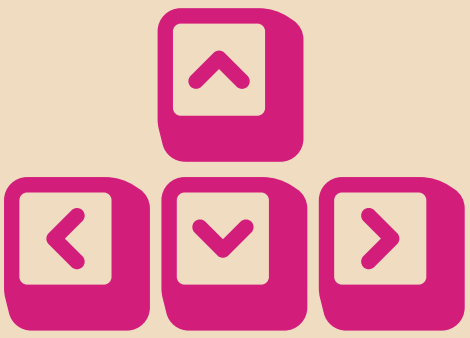
Use readable fonts with a good font size

Use Headers and Hiearachy

Easier to understand text organisation

KEEP IT SIMPLE, CLEAR, ACCESSIBLE

WEB ACCESSIBILITY
Web Content

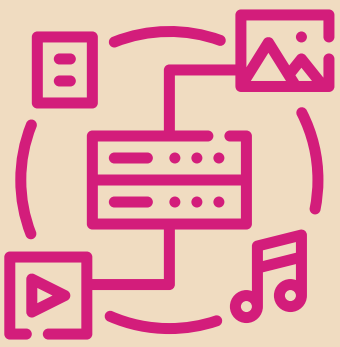


Navigation

Ensure websites and apps are keyboard-navigable and logically organized.

Hyperlinks

Avoid "Click Here." Use descriptive text like "Download the Accessibility Guide PDF."



Multimedia

Provide transcripts for audio and closed captions for all video content.

Forms and Labels

Input fields must have a clear, permanent label so users know exactly what information is required.

Accessible Learning Management System Content

Semantic HTML
Use the built-in heading styles (H1, H2, H3)

Clear Instructions
To reduce cognitive load and anxiety

File Formats
Provide materials in multiple formats

Link Audits
To verify if links are active

NOTE: Key features when choosing an accessible LMS include screen reader compatibility, keyboard-only navigation, closed captioning, and alt text for images