



# National Center for Learning Disabilities

**Advocate Academy 101: Assistive  
Technology**

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# Assistive Technology: What Is It?

## What is Assistive Technology?

Anything (item, piece of equipment, system, etc)

No matter where it comes from (custom made, off the shelf, modified, etc)

AT can help students with their educational challenges whether they are in reading, writing, math, or another subject. AT can help students thrive in both school and life. AT can also help grow a student's independence and confidence.

## Individuals with Disabilities Education Act

IDEA defines assistive technology as: “Any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a child with a disability.”

In 2004, IDEA was revised to include the provision, that **all** students who are blind and individuals with print disabilities in elementary schools and secondary schools have access to print instructional materials-including textbooks- in accessible format, **free of charge**.

## Section 504 & the Americans with Disabilities Act

- Assistive technology can be provided as an accommodation, however there is no specific schedule for consideration or assessment for AT under 504 or ADA Title II.
- ADA Title II requires appropriate “auxiliary aids and services” which AT may be part
- ADA TITLE II specifically requires that a student with disabilities have the same opportunity to be as effective at communicating as a student without disabilities.

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# Assistive Technology: Why is it important?

# Benefit of Assistive Technology

The National Longitudinal Transition Study-2 (Bouck, 2016), answers **why AT is so important**. When analyzing post-secondary outcomes for students with high-incidence disabilities, the study revealed that those who received AT performed significantly better than those not receiving AT.

Outcome	With AT	Without AT
Graduation	99.8%	79.6%
Postsecondary enrollment	80.9%	40.1%
Paying job	80%	50.8%

(Table from *Leading the Way to Excellence in AT Service: A guide for school administrators* (p. 2) by Gayl Bowser and Penny R. Reed, 2018, Wakefield, MA: CAST Professional Publishing. Copyright 2018 by CAST, Inc.)

The use of technology is not to take the place of direct and explicit instruction but rather provide access to grade-level and course curriculum while skills are being developed through explicit instruction.

(Hecker & Engstrom, 2005)

Joy Zabala, Ed. D created the SETT Framework, which is a “four part model intended to promote collaborative decision-making in all phases of assistive technology, service design and delivery from consideration through implementation and evaluation of effectiveness.”

- **S**-Student
- **E**-Environment
- **T**-Task
- **T**-Tools

AT depends on the individual student, their environment, the task they need to complete, and what tools are available or are necessary. When choosing AT for your child, focus on the area or areas that your child needs help with, and work with the school to find AT that works.

Examples of AT for students who struggle with reading:

- Text-to-Speech (TTS): can be used with books, websites, and emails
- Audiobooks or Digital TTS books
- Optical Character Recognition (OCR): reads out loud text from images and pictures
- Graphic Organizers
- Annotation Tools: Allows the user to take notes and make comments while reading
- Display Control: Allows the user to control how the text is displayed when reading
- Dictionary or Thesaurus

Examples of AT for students who struggle with writing:

- Handwriting Tools: pencil grip or slanted writing surface
- Keyboards and Touchscreens
- Dictation (speech-to-text)
- Word Prediction
- Spell Check and Grammar Check
- Text-to-Speech (TTS)
- Graphic Organizers
- Dictionary and Thesaurus

Examples of AT for students who struggle with math:

- Calculators
- Math Notation Tools
- Graph Paper
- Graphing Tools
- Drawing Tools
- Equation-Solving Tools
- Manipulatives
- Graphic Organizers
- Text-to-Speech
- Dictation

Examples of AT for students who struggle with executive functioning:

- Calendars & Planners
- Visual Checklists
- School Supply Caddy
- Colored Pocket Folders
- Graphic Organizers
- Reading Strategies
- Personal Listening Devices
- Noise Canceling Headphones
- Audio Recorders
- Captioning
- Text-to-Speech Software
- Audiobooks

A list of linked articles and resources from the IDEA presentation.

- [AT for Reading](#)
- [AT for Writing](#)
- [AT for Math](#)
- [AT for Auditory Processing Disorder](#)
- [AT for Executive Functioning](#)
- [Assistive Technology Basics](#)

Unfortunately, myths and misperceptions exist about AT.

- AT provides an “unfair” advantage
  - AT provides **equity** for students with disabilities.
- AT is only “high-tech”
  - AT can be **anything** from a pencil grip to a note taking app
- AT can only be used in a classroom
  - AT can be used **anywhere** at **anytime**
- AT is “one size fits all” for students with disabilities
  - What works for one student in one setting may not work for that same student in a different setting. Find what AT works for your child and collaborate with the school.

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“For most people technology makes things **easier**. For people with disabilities, however, technology makes things **possible**. In some cases...technology becomes the **great equalizer** and provides the person with a disability a **level playing field** on which to compete.”

-Mary Pat Radabaugh,  
a former employee with the  
IBM Disability Support Center

# Is *all* technology AT?

Mainstream technology *becomes* Assistive Technology when it increases, maintains or improves a functional capability for someone with a disability.

Assistive technology acts as a support to help the student *overcome the barrier* posed by the disability. AT provides educational and employment equity.

These questions can help identify when technology is *mainstream or assistive*:

- What does the tool do for a student?
- What would happen to the student if the tool were taken away?

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# Where to Find Help

- National Center for Learning Disabilities:  
[www.nclld.org](http://www.nclld.org)
- Edutopia.org  
[www.edutopia.org](http://www.edutopia.org)
- Learning Disabilities Association of America:  
[www.ldaamerica.org](http://www.ldaamerica.org)
- Understood  
[www.understood.org](http://www.understood.org)

- Reading Rockets  
[www.readingrockets.org](http://www.readingrockets.org)
- Parent Center Hub:  
[www.parentcenterhub.org](http://www.parentcenterhub.org)
- Center for Applied Special Technology (CAST)  
[www.cast.org](http://www.cast.org)
- Wisconsin Assistive Technology Initiative (WATI)  
[www.wati.org](http://www.wati.org)

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[facebook.com/NCLD.org/](https://facebook.com/NCLD.org/)

- For general information questions: [info@nclld.org](mailto:info@nclld.org)
- For policy questions: [policy@nclld.org](mailto:policy@nclld.org)

## Advocate Academies 101:

- [An Introduction to IDEA and Section 504](#)
- Assistive Technology. What is it?
- How to Prepare for an IEP Meeting (will include: how to read evaluation reports, words, phrases, acronyms, and goals)
- How to Prepare for a 504 Plan Meeting (will include: how to read evaluation reports, words, phrases, acronyms, and accommodations)
- Tying It All Together: How has all this work and advocacy helped our kids transition into adulthood?

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# Thank you!