

Introduction to Assistive Technology in

Special Education

(A concise, organized guide for teachers, administrators, and support staff)

1. What Is Assistive Technology?

Term	Definition
Assistive Technology (AT)	Any device, equipment, or system that enables a student with a disability to access the curriculum, participate in school activities, and achieve independence .
Low-tech AT	Simple, often inexpensive tools (e.g., pencil grips, visual schedules, magnifying glasses).
High-tech AT	Complex electronic or digital solutions (e.g., speech-generating devices, screen-reading software, eye-tracking systems).
Universal Design for Learning (UDL)	A design framework that creates accessible learning environments for all students , reducing the need for individualized AT.

2. Why AT Matters in Special Education

1. **Improves Access to Curriculum** – Bridges gaps between a student's abilities and academic expectations.
 2. **Promotes Independence** – Enables self-advocacy and reduces reliance on adult assistance.
 3. **Enhances Communication** – Provides alternative ways to express thoughts (e.g., AAC devices).
 4. **Supports Inclusion** – Allows students to participate fully in general-education settings.
 5. **Boosts Motivation & Engagement** – Interactive and personalized tools increase interest in learning tasks.
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3. Core Components of an AT System

1. **Hardware** – Physical devices (e.g., tablets, adaptive keyboards).
2. **Software** – Applications and operating-system features (e.g., text-to-speech, dictation).

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3. **Accessories** – Peripheral items (e.g., switch adapters, stylus pens).

4. **Training & Support** – Instruction for students, teachers, and families on effective use.

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4. The AT Decision-Making Process (The AT Cycle)

Step	Key Actions	Who's Involved
1. Identify Need	Observe barriers; gather data from assessments and IEP goals.	Teacher, OT/PT, SLP, parent
2. Evaluate Options	Research low- and high-tech solutions; consider cost, durability, compatibility.	AT specialist, school admin
3. Select & Procure	Choose the best-fit tool; arrange funding (IDEA, Section 504, grants).	District purchasing, parent
4. Implement	Set up device, integrate into lesson plans, provide initial training.	Teacher, AT trainer
5. Monitor & Review	Collect usage data, observe outcomes, adjust as needed.	All team members, student
6. Document	Record decisions, progress, and any changes in the student's file.	Special educator, case manager

5. Categories of Assistive Technology

Category	Typical Tools	Example Use Cases
Communication	Speech-generating devices (SGDs), AAC apps, picture exchange systems	Student with expressive language disorder can answer questions verbally.
Mobility & Access	Adaptive chairs, standing frames, switch-activated devices	Student with limited motor control can navigate a computer using a switch.
Literacy & Writing	Text-to-speech, word-prediction software, graphic organizers	Student with dyslexia reads digital text aloud while following along.
Math & Numeracy	Virtual manipulatives, calculator apps with large keys, number lines	Student with visual impairment solves equations using auditory feedback.

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Category

Typical Tools

Example Use Cases

Organization &

Executive Function

Digital planners
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