




TBI in the School Setting:
 Strategies and Considerations for
 Assistive Technology



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AT Possibilities

"...however difficult life may seem, there is always something you can do and succeed at."

Stephen Hawking

Learning Objectives

Participants will be able to...

- understand and define assistive technology (AT)
- understand AT consideration process
- gain awareness of AT tools and strategies
- recognize AT for executive function skills




AT Definitions: IDEA

What is an Assistive Technology device?

“...**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 functional capabilities of a child with a disability.”

(§ 300.5; Authority: 20 U.S.C. 1401(1))



AT Definitions: IDEA

What is an Assistive Technology Service?

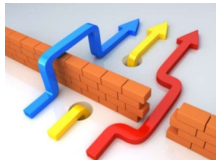
“...**any** service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device.”

(§ 300.6; Authority: 20 U.S.C. 1401(2))



In English Please!

Practical Definition:



“**any** device, software or equipment that can help kids with learning and attention issues work around their challenges.”

<https://www.understood.org/en/school-learning/assistive-technology/assistive-technologies-basics>



Individuals with Disabilities Education Improvement Act, 2004

- Mandates a free appropriate public education (FAPE) for children and youth with disabilities.
- Provides procedural safeguards to ensure that children/youth with disabilities receive the special education and related services required in order to benefit from their educational program.



Individuals with Disabilities Education Improvement Act, 2004

The law states that:

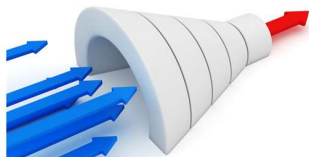
- The assistive technology needs of a student must be **considered** at IEP meetings
- The IEP team has the power to determine if a student receiving special services needs AT in order to receive a FAPE

<https://sites.ed.gov/idea/>



AT Consideration Process

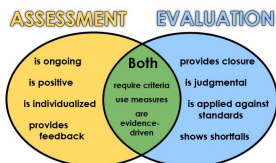
- The IEP team completes an active process to determine what, if any, technology a student needs to guarantee a FAPE
- It is a "Process" by which the team "considers" (assesses) the need based on data



??? Hmmm ???

How is an assessment different than an evaluation?

- Evaluation is related to eligibility (LD, OHI, TBI)
- Assessment is related to determining needs.



Wisconsin Assistive Technology Initiative, 2009

Where Do I find it in the IEP?

Section 3: Needs for Learning and Present Level of Academic Achievement and Functional Performance, Course of Study, Transition Service Needs

Factors to Consider in Order to Provide a Free and Appropriate Public Education (FAPE)

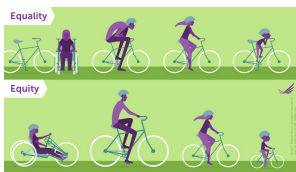
- Consider (check) each of the following and comment as appropriate:
- strengths of the student
 - parent input and concerns for enhancing the education of the student
 - results of an initial evaluation or the most recent reevaluation of the student
 - progress on the current IEP annual goals and objectives
 - student's anticipated needs or other matters
- Comments:
- Consider (check) each of the following. Needs in any of the following require a statement in the comments below:
- communication needs of the student
 - positive behavior intervention, supports, and strategies for students whose behavior impedes learning
 - language needs for students with limited English proficiency
 - Braille instruction for students who are blind or visually impaired
 - communication and language for students who are deaf or hearing impaired
 - the need for assistive technology devices or services
- Comments:



Supplementary Aids and Services

Section 5: Supplementary Aids and Services

Supplementary Aids/Service/Support	Amount of Time/Frequency/Conditions	Location
Access to assistive technology to support memory, planning, and organization.	Daily during instructional periods.	General/Special education setting



The Framework for Consideration and Assessment of AT

S tudent

E nvironment

T ask

T ools

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SETT: 8-Step Decision-Making Process

1. Identify areas of concern
2. Gather information on aspects related to concerns
3. Analyze information
4. Generate and prioritize potential solutions
5. Develop a plan
6. Work the plan and collect data on effectiveness
7. Revise the plan as indicated by data
8. Document

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SETT Example Forms

The SETT Framework
For Considering Assistive Technology

S	
Student	
E	
Environment	
T	
Tasks	
T	
Tools	

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www.joyzabala.com Palm Beach County Schools

So what qualifies as AT?



AT Exists on a Continuum

No Tech: mnemonic devices, graphic organizers, visual supports, calendar, notebook organizers

Low Tech: communication boards, pencil grips, slant boards, timers

Mid Tech: switches, keyboards, pointing devices

High Tech: computers, tablets, ChromeBooks, eye-gaze devices, home assistants, AAC devices, wearables



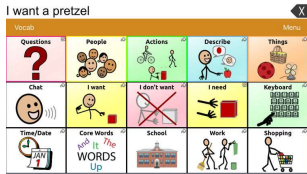
The Best AT Interventions

- Support compensatory strategies
- Match the student's functional needs
- Are minimally intrusive
- Foster independence
- Do not have a steep learning curve

Kirsch, et al. 2004

Alternative/Augmentative Communication (AAC)

- [Lost Voice Guy](#)
- [TouchChat](#) (iOS)
- [Proloquo2Go](#) (iOS)



AT for Students with Access Limitations

Eye Gaze

- Tobii/Dynavox – [PCEye Go](#);



Alternative Access

- [Sip and Puff Switch](#)
- Proximity Switches



Don't Forget about Service

- Training is essential:
 - User needs training
 - Teacher needs training
 - Paras, if involved, need training
- Technical support is key:
 - District technology services need to be on board
 - Restrictions need to be modified



Executive Function

- Definition:
 - *“The executive functions are a set of processes that all have to do with managing oneself and one’s resources in order to achieve a goal. It is an umbrella term for the neurologically-based skills involving mental control and self-regulation.”*

12 Areas of Executive Function			
Response Inhibition	Working Memory	Emotional Control	Sustained Attention
Task Initiation	Planning / Prioritization	Organization	Time Management
Goal-Directed Persistence	Flexibility	Metacognition	Stress Tolerance

Lafe, Lost, and Unprepared by Joyce Cooper-Kahn, Ph.D. & Laurie Dietzel, Ph.D., pp 9-14

AT for Memory

30/30

Photo Reminders

- Programmable time keeper
- Set time limits for tasks and breaks
- Great for homework and brain breaks
- Can be customized for certain settings
- Free iOS

- Sort reminders by groups
- Photo, text, sound reminders
- Record voice message
- Reminders can be shared by teacher, caregiver, parent
- \$.99 iOS

AT for Planning

Visual Schedule

**First Then
Visual Schedule**

- View events daily, weekly, monthly
- Can embed audio/visual supports
- Images, videos, icons
- Assists with transitions
- Timer, checklist, reminders
- \$.14.99 iOS

- Supports tasks with visual/audio
- No calendar
- Activity based
- Easily customizable
- \$.14.99 iOS

AT for Organization



myHomework

- Helps keep track of homework, quizzes, tests, projects, papers, etc.
- Calendar based
- Denotes upcoming, due, and late assignments
- Free iOS/PC/Android



Google Keep

- Simple, yet powerful, tool does more than organize
- Collaborate, share notes
- Notes, lists, photos, audio
- Reminders notify at time or place
- Works offline
- Free iOS/Android/PC



AT for Writing



Snap Type Pro

- Imports or scans documents for markup
- Helps students with fine motor issues complete worksheets
- Converts colored sheets to B&W
- Applies colored backgrounds for those who need visual contrast
- Free (lite version); Paid \$4.99



Co:Writer Universal

- Excellent word prediction
- Accessibility features for font size, color, and contrast
- Topic dictionaries
- Flexspell technology recognizes inventive spelling
- Grammar support
- Text to speech
- Free iOS (requires paid subscription; \$4.99/mo)



AT for Emotional Control



Breathe2Relax

- Step-by-step guide to the "belly breathing" technique
- Graphics, animation, narration and videos to lead user through breathing exercises
- User-adjusted stress-level scale with touchscreen functionality
- Developed for military originally
- iOS only
- Free



Stop, Breathe, & Think

- Promotes mindfulness and metacognition
- Prompts user to go through self-assessment
- Recommends activities based on assessment
- iOS, Google Play, Web
- Free w/ in app purchases



Parting Thoughts

- AT augments instruction; it does not replace it.
- AT exists to assist the user and support staff in eliminating and/or reducing barriers due to disability.
- AT exists on a continuum from no tech to high tech; redundancy is key.
- The best AT is AT that the student will use.

Questions?

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