



Texas School for the Blind and Visually Impaired
Outreach Programs

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Consideration of Assistive Technology for Young Braille Learners

February 4, 2020 from 3:00-4:00 PM (CT)

Presented by:

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Developed for:

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Consideration of Assistive Technology for Young Braille Learners

February 4, 2020

Topics

- Young braille learners
- Assistive technology (AT):
 - When to introduce
 - Why AT
 - Student skills
 - Tasks

Topics

- Planning:
 - Review data
 - AT trials
 - Implement AT use
- Tips and strategies
- Resources

Who are You?

Please write in Chat ...

- TVI
- COMS
- Family member
- Assistive Technology Specialist
- Administrator
- Paraeducator
- Related Services Staff
- Other



Figure 1 A collage of pictures of children (clockwise from top left): baby's hands in the sand, baby playing with pots and pans, child running through sprinklers, baby with a stick walking through a doorway, two young girls at a playground on the beach, a young boy reading Braille.

When do I need to look at?

Should I try a computer with a braille display or a note-taker?

It Depends ...

- Student's skills
- What does the team want AT to do for the student?

Introduction to AT

Planning is essential:

- Begin with an end in mind
- Everyone on the student's team, including family members, has buy-in
- Evaluation of needs is necessary

Why AT Now

- Student is unable to do a task
- Access to information and production of work
- Someone in the team asks about AT
- All students have to use technology in class
- Student is ready for "something" more than just a manual brailier

So much tech, so little time!



Figure 2 Picture of "think" bubble, magnifying glass and four cartoon figures putting together puzzle pieces

Student Skills

- Reading, writing, math
- Braille: identification, accuracy in reading and writing, proof-read, make corrections
- Listening skills
- Able to read tactile graphics
- Can produce simple tactile graphics

Listening Skills

- Is attentive in class; follows directions
- Listens for important information; can ignore other noises or distractions
- Shows patience by not interrupting when others are talking

* Refer to student's Learning Media Assessment for more information

Tactile Skills

- Participates in creating tactile graphics or artwork
- Gives feedback about tactile graphics (e.g. I can't read this; did you make a mistake?)
- Uses hands/skills for other tasks (e.g. returns braille onto a shelf, puts assignment into a tray independently, places cane appropriately)

Technology Skills

- Has experienced "playing" with a phone or mobile device
- Shows interest in listening to audiobooks, music or GPS directions in a vehicle
- Uses devices with assistance (e.g. make popcorn in the microwave, turn TV or computer on/off)

Keyboarding

When is a good time to introduce keyboarding?

- Starting at a young age is likely to help to develop good habits
- Student has basic reading and writing skills
- Student has patience to listen for audio feedback when keys are pressed
- Student remembers location of keys

Keyboarding Skills

- Touch typing is the goal
- Requires muscle memory
- Takes time to develop; improves with practice
- Plan lessons that include structured instruction and activities that capture student's interest (e.g. silly or make-up words)

Considerations

- Proper posture
- Furniture / ergonomics
- Minimize use of tactile cues on keyboard
- Keyboarding practices at home
- Organization: clean work space minimizes distractions; facilitates efficiency

Braille Technology

- Includes electronic brailers, note-takers and braille display
- What tasks will the student be doing using this type of technology?
- Consider student's maturity and abilities
- Type of assistance for student and staff

Considerations

- Accuracy in brailleing
- Basic editing knowledge (e.g. make correction of braille errors properly, leaves a space between words)
- Uses hardcopy braille
- Focus on the task(s) to be accomplished using braille technology

Tasks

- What does the student need to do in each class or activity?
- How much assistance is needed? What type of assistance?
- Where may the student experience challenges?
- Can AT help?

Planning

- Team's expectations for AT use by the student
- AT trials is necessary

Planning

- Everyone on the team has a chance to contribute to the process
- A written plan with action items helps the team to focus on student's AT use
- Assists the team to "begin with an end in mind"

Review Data

- Consider existing data:
 - PLAAFP
 - Grades
 - Reports (e.g. Learning Media Assessment, ECC)
 - Notes (e.g. from lesson plans, informal observations, communication with the team)
- Identify tasks that are challenging for the student
- Prioritize possible AT solutions

AT Trials

- Formulate a plan:
 - Begin and end dates
 - AT to be used for “challenging” tasks
 - Person(s) responsible for collecting data
 - Expectations for “success”
- Implement the plan
- Review results and make recommendations

Implement AT Use

- Makes recommendations to the IEP team
- AT is included in the student’s IEP
- Designate team members who will monitor AT use, including collecting data
- Is an ongoing process that promotes student achievement

Implement AT Use

- Set up technical support for the team
- Include resources such as “quick starts” and “cheat sheets”
- Review progress during grading periods
- Communicate with the team, including family members, regarding progress/lack of progress

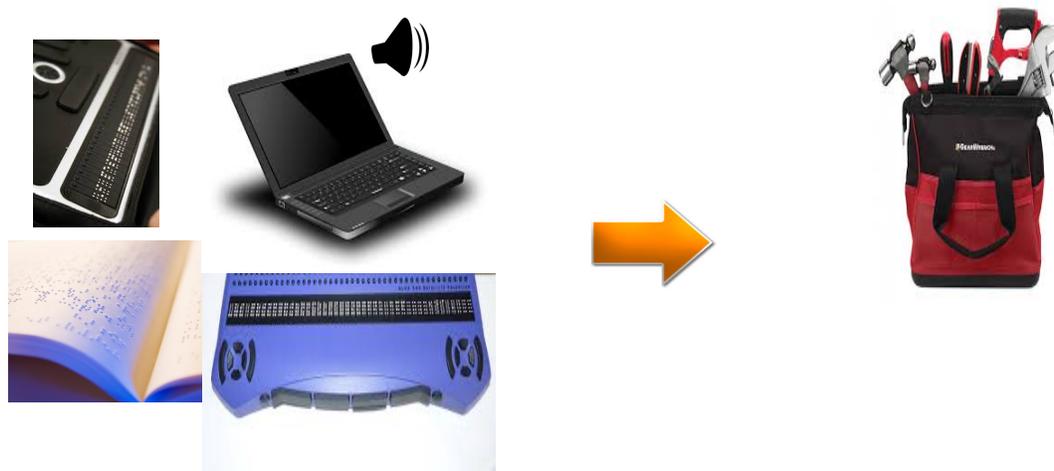


Figure 3 Picture of braille note-taker, braille book, computer and braille display all "pointing" towards a toolbag



Figure 4 Cartoon image of a man thinking with a question mark

Am I meeting the student where he/she is at?



Figure 5 Picture of foundation of a house

How can I help the student build a solid foundation of skills?

Tips and Strategies

- Capture student's curiosity to learning AT
- Encourage the student to talk about the AT
- Consider short lessons; repetition
- Use data to determine AT needs
- Consistent use of AT is necessary in order to yield usable data

Tips and Strategies

- Understand that AT implementation means **change**
- Establish supports for the student and team
- Keep the team informed of progress
- **High expectations** for learning and performance is a **MUST!**

Resources

Dynamic Assistive Technology Evaluation (DATE) Collaborative Worksheet

<https://www.texasat.net/Assets/date-eform-2013.pdf>

Includes Assistive Technology Trial Action Plan

A Developmental Sequence for Teaching Tactile Skills

<https://www.tsbvi.edu/summer-2017/565-tx-senseabilities/summer-2017/5512-a-developmental-sequence-for-teaching-tactile-skills>

Teaching Braille to the Whole Child: Considering the Impact of Social and Emotional Development on the Acquisition of Braille Skills

<https://www.tsbvi.edu/fall-winter-2019-issue/582-tx-senseabilities/fall-winter-2019/6085-whole-child>

Listening Skills Instruction

<https://www.teachingvisuallyimpaired.com/listening-skills-instruction.html>

Paths to Literacy: Listening Skills

<https://www.pathstoliteracy.org/blog/listening-skills>

Strategies for Teaching Touch Typing to Students with Visual Impairments

<https://www.perkinselearning.org/technology/blog/strategies-teaching-touch-typing-students-visual-impairments>

Software for Keyboarding

Learn Keys: Verbal Keyboard Feedback

<https://www.aph.org/product/learn-keys-verbal-keyboard-feedback-digital-download/>

Talking Typer for iOS

<https://www.aph.org/product/talking-typer-for-ios-devices-quota-purchase/>

Talking Typer for Windows

<https://www.aph.org/product/talking-typer-for-windows-digital-download/>

TypingClub

<https://www.typingclub.com/>

TypeAbility

<http://www.yesaccessible.com/home.html>

Typio

<https://www.accessibyte.com/typio-online-page>

Upcoming Events

2020 Texas Focus Conference: Self-Determination
February 27-29, Houston, TX

CVI Study Group
February 10 & April 4, 3:00 – 4:00 p.m.

Active Learning Case Studies
March 24, 3:00 – 4:00 p.m.

Thank you for joining us!

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Figure 6 TSBVI Logo



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Figure 7 IDEAs that Work logo and OSEP Disclaimer