Consideration of Assistive Technology for Young Braille Learners

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Developed for:
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Consideration of Assistive Technology for Young Braille Learners
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Topics
• Young braille learners
• Assistive technology (AT):
  o When to introduce
  o Why AT
  o Student skills
  o Tasks

Topics
• Planning:
  o Review data
  o AT trials
    o 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
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 brailler
So much tech, so little time!

![Image: "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 brailler 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 braillers, 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 brailling
- 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
Am I meeting the student where he/she is at?

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

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

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.perkinslearning.org/technology/blog/strategies-teaching-touch-typing-students-visual-impairments

Software for Keyboarding

Learn Keys: Verbal Keyboard Feedback

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!

Notes:
Texas School for the Blind & Visually Impaired
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Figure 6 TSBVI Logo

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Figure 7 IDEAs that Work logo and OSEP Disclaimer