Assistive Technology Options for Blind Youth during the Transition Years

Arielle Silverman, Ph.D.

July 9, 2018
What is assistive technology (AT)?

• AT assists with disability-related access needs.
• For people who are blind or visually impaired, AT converts print into an accessible reading medium.
• Enables the blind user to read, write, and use computers without relying on print.
Devices and Outputs

- Large print: software or a video magnifier to enlarge print on the computer screen.
- Text-to-speech: computer software reads screen contents aloud, using the computer speakers.
- Braille: specialized notetaking device or braille display uses refreshable pins to display braille.
Hardware: Computer Based AT

• Assistive software can be run on a standard computer.
• Examples: ZoomText, Magic, JAWS, NVDA, VoiceOver
• Advantages: multiple modalities; inexpensive; computers are powerful
• Disadvantages: less portable; not all applications work with assistive software
Hardware: Braille Notetakers

• Specialized PDAs with built-in braille and speech output.
• Brands: Braille Note, Pac Mate, Braille Sense
• Advantages: self-contained; portable; easy to use; braille integration
• Disadvantages: expensive; not very powerful OS
Hardware: Mobile Devices and Tablets

• Magnification or text-to-speech software run on a mobile device or tablet, with optional braille display connected.
• Examples: VoiceOver (iPhone and iPad); Zoom; TalkBack (Android).
• Advantages: mainstream device; multiple modalities; relatively affordable.
• Disadvantages: not very powerful OS; may not be able to handle academic demands.
Peripheral Devices

• Closed-circuit television (CCTV): produces video magnification of print.
• Scanner: converts print to a digital image which can be converted to speech or braille.
• Braille embosser: used to produce hard-copy braille.
Choosing the Right AT

• What are the academic expectations?
• Which modality works best for the student?
• What nonacademic tasks does the student wish to perform with AT?
Technology Goals for Transitioning Students

• Independent notetaking skills.
• Computer skills: word processing, spreadsheets, presentations.
• Web searching and email skills.
• Ability to explore and self-teach new technology.
Contact Information

• Disability Wisdom Consulting
• 240-630-1154
• Arielle@disabilitywisdom.com
• www.disabilitywisdom.com