Assistive Technology in the Workplace

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Presenter

• RESNA Certified ATP
• M.S. in Rehabilitation Science and Technology
• Taught undergraduate and graduate level assistive technology courses at East Carolina University
• Developed an online graduate certificate program in AT for East Carolina University

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Key Learning Objectives

- Review legislation and statistics
- Explore accommodation options
- Explore built-in accessibility features
- Apps, Universal Design, & Resources

Legislation/Stats

- Section 504 of the Rehabilitation Act
- Americans with Disability Act
  - Perform the core duties of a job
  - Provide new equipment
  - Modify existing office equipment or assistive technology
  - Perform marginal or non-essential functions
  - Request must not impose an undue hardship
  - Includes accessible websites
Legislation/Stats

- In 2010
  - 46% of working adults between ages of 18 & 64 with a learning disability were employed

- Only 19% of young adults stated that their employers were aware of their disability

- Only 5% reported receiving accommodations in their workplace

Workplace Assessment

- Declaration of Disability
- Define the Situation – job functions that need to be accommodated
- Explore AT Options
  - May already be proficient with a specific AT system
  - Contact an AT specialist (JAN); State VR agency; State AT Tech Act; RESNA
- Choose & Implement AT
- Monitor and Upgrade AT
Computer Access

Accessibility

Alternate Input

- Alternative Mouse
  - Ergonomic Mice
  - Trackballs
  - Joysticks
  - Touchpads
Alternate Input

- Alternative Keyboard
  - Ergonomic
  - One-handed
  - Enlarged
  - Mini

Computer Access

- Touch Screens
- Eye gaze
- Head mouse
Computer Access

- Voice recognition software
  - Limited muscle control or hand-use
  - Learning Disability
  - Carpal Tunnel Syndrome/Repetitive Stress Syndrome

- Built-in Solutions:
  - Microsoft
  - Google Docs

- Other Solutions
  

Computer Access

- LV/Blindness
  - Refreshable Braille Keyboards
  - Screen Readers
  - Screen Magnifiers
  - Large Print Keyboards
Computer Access

• Screen Access
  • Screen magnifiers
    • Built-in zoom features for Windows and Mac
  • Magic
  • SuperNova
  • ZoomText

Computer Access

• Screen Access
  • Screen Readers
    • Dolphin
    • JAWS
    • Built-in
      • Voice Over – Mac
      • Windows 10
Computer Access

- Reading
  - Text-to-Speech

- Writing
  - Word Prediction
  - Voice Recognition
  - Graphic Organizers

Built-in Accessibility Features

- OS Systems have built-in accessibility
  - Keyboard
  - Mouse
  - Screen Access
    - Increase size/font
    - High Contrast
    - Magnifier
  - Voice Input
  - Text-to-Speech
Apps

Cornucopia of Apps

• Timers
• Reminders
• Calendar
• To-Do Lists
Apps

- Hearing Impairments
- Vision Impairments
- Learning Disabilities

Meetings, Training, Phones

Accessibility
Meetings & Training

• Live captioning

• Video conferencing

• Assisted listening systems

• ILA – Instant Language Assistant

Telephone Access

• Captioned telephone systems
• Neck loop listening device
• Amplified phones
• Smartphone accessibility features
• Headset
Ergonomics

Proper Positioning

- Posture
  - Screen clips
  - Microphone headsets

- Seating
  - Lumbar support
  - Adjustable armrests
  - Footrests
  - Standing desks
  - Alternative/flexible seating

- Repetitive stress syndrome/Carpal Tunnel
Universal Design

Useful to many employees

Reduces need to purchase additional equipment

Key is interoperability (compatible with other technologies and support integration of AT)

7 PRINCIPLES OF UNIVERSAL DESIGN:
- Equivalence
- Flexibility
- Simple & Intuitive
- Perceptible Information
- Tolerance for Error
- Low Physical Effort
- Size & Space
Universal Design

• Employers should:
  • Consider equipment with UD features (OS)
  • Assess information systems for interoperability with AT
  • Evaluate maintenance of equipment
  • Upgradability – what is needed when software/systems are upgraded

Workplace Accessibility
Inclusive Practices
Workplace Accessibility

• Create inclusive environments

• Product accessibility

• Empowering employees

• Education

[Further content on accessing technology in the workplace, JAN resources, TechCheck for assessing workplace technology accessibility, and Accessible Technology Action Steps guide for employers.]

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References/Resources


Questions
## Any Questions after Webinar

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