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ASSESSMENT: PREPARING FOR THE ATP EXAM

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Learning Objectives

After this course, participants will be able to:

- Identify three components of an Assistive Technology assessment.
- List four components of the HAAT service delivery model.
- Recognize a measurable outcome.

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What we will be covering:

- Assessment
 - Importance
 - Components
 - Team members
- Assistive Technology Service Models
 - HAAT model
- Outcomes

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The ATP Certification

- The Assistive Technology Professional (ATP) certification is offered through the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)
- This demonstrates a basic level of competence in the practice area of Assistive Technology
 - Over 4000 people hold the ATP certification
- This series of courses will include information to prepare the candidate for this examination



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The ATP Certification

- The candidate must fulfill specific pre-requisites before taking the examination
- For Occupational Therapy Practitioners with a Bachelor's or Master's degree, 1000 hours of work experience is required over 6 years.
- For further information:
 - <http://www.resna.org/get-certified/exam-eligibility-requirements>



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Importance

- Why is Assessment important?
- As Occupational Therapists, we know that assessment is important in any practice area
- Assessment identifies client specific goals, needs and parameters and then matches these to appropriate solutions
- Rushing or skipping an assessment is likely to lead to poor outcomes

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Components

- Gather information
- Analyze information
- Identify goals and desired outcomes
- Define parameters that need to be met
- Problem solve potential interventions/solutions
- Make final recommendations

Assessment

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Team Members

- Assistive Technology (AT) assessment often involves multiple team members
- This varies with the type of AT evaluation



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Team Members

- Wheelchair Seating and Mobility
- Team members may include:
 - Clinician
 - Complex Rehab Technology (CRT) supplier
 - Manufacturer representative



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Team Members

- Augmentative Communication
- Team members may include:
 - Occupational Therapist
 - Speech Language Pathologist
 - Manufacturer representative



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Team Members

- Computer and/or Tablet Access and Use
- Team members may include:
 - Occupational Therapist
 - Speech Language Pathologist
 - Ergonomic specialist
 - Rehabilitation Engineer
 - Manufacturer representative



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Team Members

- Electronic Aids to Daily Living
- Team members may include:
 - Occupational Therapist
 - Home modifications specialist
 - Rehabilitation Engineer
 - Manufacturer representative



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Team Members

- Vehicle Accessibility
- Team members may include:
 - Occupational Therapist
 - Vehicle Modifications specialist
 - Manufacturer representative



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Team Members

- Home Accessibility
- Team members may include:
 - Occupational Therapist
 - Home modifications specialist
 - Contractor (preferably specializing in home modifications for people with disabilities)



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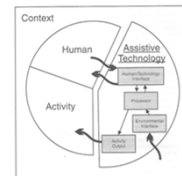
Assistive Technology Service Models

- Human, Activity, Assistive Technology (HAAT)
 - Al Cook and Jan Polgar
- Student, Environment, Task and Tools (SETT)
 - Joy Zabala
- Matching Person and Technology
 - Marcia J. Scherer
- Education Tech Points text
 - Penny Reed and Gayl Bowser

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The HAAT Model

- Much of the ATP certification exam is based on the HAAT Model
- It is important to remember the terminology used
- Some of this terminology may not be intuitive
 - Engineer bias
 - Canadian bias



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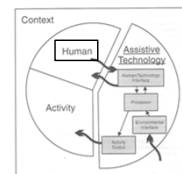
The HAAT Model

- Components:
 - The Human
 - The Activity
 - The Assistive Technology
 - The Context
- Components are considered individually and with each other to consider, design, select, implement and evaluate appropriate AT

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The HAAT Model

- Components:
 - **The Human**
 - The skills and abilities of the person with a disability
 - Physical
 - Cognitive
 - Affective



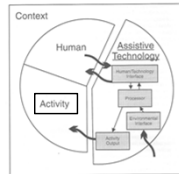
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The HAAT Model

• Components:

• The Activity

- Set of tasks to be performed by the person with a disability
- Self Care
 - Daily living
- Productivity
 - Work and productive activities
- Leisure
 - Play and leisure activity



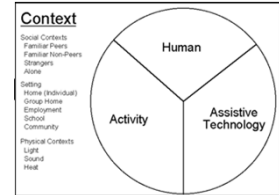
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The HAAT Model

• Components:

• The Context

- The setting or social, cultural and physical contexts that surround the environment in which the activity must be completed



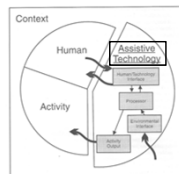
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The HAAT Model

• Components:

• The Assistive Technology (extrinsic enablers)

- Devices or strategies used to bridge the gap between the person's abilities and the demands of the environment
- The Human Technology Interface (HTI)
- Processor
- Output
- Environmental Interface/Physical Construction



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The Assistive Technology

• Human/Technology Interface

- More terminology! Hang in there!
- Input device or control interface
- Selection (or symbol set)
- Display layout/arrangement
- Selection method

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Human Technology Interface

• "Input Device" or "Control Interface" = Access Method

- Direct
 - Finger to display
 - Pointer
 - Eye Gaze
- Switch
 - Single or dual switch
- Joystick
- Mouse



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Human Technology Interface

• "Selection Set" or "Symbol Set"

• Example: Augmentative Communication

- Everything a person wants to say must be **represented on the display**
 - Letters, other individual characters (like a computer keyboard)
 - Words, sentences and paragraphs
- Symbols that represent vocabulary choices
 - Objects
 - Pictures
 - Other symbol sets



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Let's review

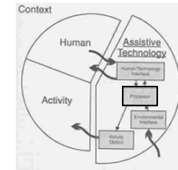
- Input Device/Control Interface = access method
 - i.e. switch
- Selection Set
 - The symbols used to represent choices
- Display Layout
 - How the symbols are arranged to maximize efficiency
- Selection Method
 - Strategies used for individual access methods to maximize efficiency



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Back to the HAAT Model

- Ok, we covered the Human Technology Interface as it pertains to AAC
- Next is the Processor



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Processor

- The Processor in the context of Assistive Technology refers to additional strategies to improve efficiency

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Processor

- Encoding Techniques
- Rate Enhancement
- Vocabulary Expansion
- Levels

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Processor

- Encoding Techniques
- We already discussed the Selection or Symbol Set
- Some of these Selection Sets use encoding techniques to provide access to a large amount of vocabulary from one primary set of symbols (semantic encoding)



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Processor

- Symbols are combined to form different words
 - i.e. Selecting the Apple and then the Sun to choose "Breakfast"
 - i.e. Selecting the Apple and then the Rainbow to choose "Red"



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Processor

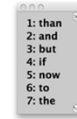
- Rate Enhancement
- Strategies to increase speed and efficiency in communication
 - Commonly used in AAC, Computer and Tablet applications
 - Word prediction
 - Word completion
 - Abbreviation Expansion

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Word Prediction

- Word prediction guesses the next word you want to type or say

This is easier



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Word Completion

- Word Completion guesses what you are currently typing
- In this case, the user can choose the number of the selection they want, saving extra keystrokes, switch activations, etc.

This is easier than it |



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Abbreviation Expansion

- Abbreviation Expansion automatically "expands" programmed abbreviations
- ASAP = As soon as possible
- Important to use abbreviations that don't begin common words

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Processor

- Levels
- Some older AAC and EADL devices used static levels, meaning that the client was limited to what was on the display or someone else had to physically change the display



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Processor

- Levels
- Most systems use a dynamic display that automatically changes what is displayed based on the last selection
 - AAC
 - PWC display
 - EADL display



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Output

- Visual
 - AAC - often a "message bar" for the listener or communication partner to read if the message was not heard or heard in full
 - EADLs - display may show last selected action



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Output

- Auditory
 - The client can choose to "speak" the message only after it is complete, rather than as composed
 - AT device may provide auditory feedback after an action is selected



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Output

- Coded
 - AAC
 - This refers to when a message from the AAC device is sent to another device, such as a computer
 - This is usually wireless
 - Many AAC devices are computer based and so do not need to send a signal to a separate computer



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Physical Construction

- Packaging
 - Dedicated
 - Computer based
 - Tablet based
 - Interfacing



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Dedicated

- Dedicated AAC devices are specifically for communication
- Dedicated EADL devices
- More battery life
- Often more durable



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Computer Based

- Computer based AAC devices may look like a dedicated device, but allow the client to access computer features, as well
- Some funding sources require these functions to be "locked out"



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Tablet Based

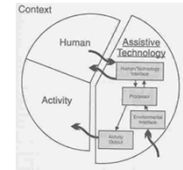
- Either an AAC App on a standard tablet or a specialized tablet
- Specialized tablets often offer more access options, better communication packages and boost auditory output
- Can get funding approval for the second type



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Back to the HAAT Model

- Human/Technology Interface
 - Input Device (i.e. switch)
 - Selection Set (i.e. letters)
 - Display Layout (i.e. QWERTY)
 - Selection Method (scanning)
- Processor
 - Strategies to improve efficiency (i.e. word prediction)
- Output
 - Visual, auditory or coded
- Physical Construction
 - Packaging (i.e. dedicated)
 - Mountability



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Outcomes

- Outcomes are an important component of Assessment
- Outcome measures are a means of determining if goals have been met



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Outcomes

- Outcomes can seem overwhelming at times
- Outcome measurement does not have to be complex, though a variety of tools are available
- Determine client and team goals
- At a pre-determined future time, assess if that goal was met

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Outcomes

- Example:
- Brady is being evaluated for a power wheelchair
- His goal is to be able to drive the power wheelchair within his home
- An Outcome may be:
 - "Brady will be able to drive a power wheelchair"



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Outcomes

- But the Outcome needs to be measurable with:
 - Desired end result
 - Qualifiers
 - Time, accuracy
 - Acceptance level
 - Standard, passing grade

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Outcomes

- So, instead of:
 - "Brady will be able to drive a power wheelchair"
- The measure could be:
 - "Brady will be able to drive a power wheelchair from his bedroom to the family room within 10 minutes and not contacting the wall more than one time."



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Outcomes

- It is important to remember that the Outcome isn't a test that must be passed in order to recommend AT devices
- Outcomes are a means to determine if the intervention is successful
- If the client has not achieved the Outcome, then further intervention may be required

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Resources

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Thank you!

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