Evidence-Based AAC Assessment: Integrating New Protocols and Existing Best Practices

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What’s on the CD that you will receive?

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What is the Goal of AAC Assessment?

To facilitate the most effective communication possible across a variety of communication environments, situations or frameworks
Traditional speech/language evaluation focus is on describing the nature and extent of the communication disability, estimating prognosis, designing an initial framework for intervention.

AAC assessment assumes that the communication disorder is chronic and that natural language is not likely to occur. Therefore, the focus on the assessment shifts to designing an AAC system that will provide for the highest level of generative communication that can be achieved.
The Basis for Successful AAC Outcomes

- Knowledge about the Client
- Information about devices and AAC systems
- EBP
- Best Practices
Three Types of Information

Evidence Based Practice (EBP) is a Decision Making Process

- Current high quality research evidence
- Clinician’s expertise
- Consumer’s values and preferences
Knowledge of client involves assessing the individual, communication partners and environment to identify:

- Individual’s current communication competencies, needs and goals
- The person’s strengths and abilities
- Possible barriers preventing the individual from achieving his/her full communication potential
- The aids and adaptations needed to accomplish the individual’s goals given his/her strengths and abilities, and current circumstances?
While expert knowledge of devices is critical to outcomes, remember that AAC is not just technology and devices.

Technology discontinuance varies from 8% to 75% depending on type of technology (About 1/3 of all technology is abandoned). Phillips & Zhao, 1993; Scherer & Galvin, 1994

Technology is ever changing and it is critical that the practitioner knows where to obtain reliable and objective information about technologies, devices and aids.

- Vendors most knowledgeable about their products and offer loan programs
- Tech Act programs, lending libraries and demonstration centers
- The Internet, as well as traditional media, offers an array of information

Knowledge about devices, technology and systems
Thoughts on Testing

- It is the responsibility of clinicians to seek out, learn techniques, strategies, approaches that will maximize the potential AAC user’s
- There is no complete formal assessment tool or battery of tests for AAC assessment
- Clinician must rely on having a comprehensive understanding of communication, language and its development to utilize and interpret procedures, protocols and informal measures
- AAC evaluation involves more than assessing the individual, it looks at the potential AAC user, the environment and the communication partner
Thoughts on Testing

- Issues in AAC assessment are complex and at times, teams over-evaluate; however incomplete assessment can lead to erroneous outcomes.
- Testing places time and energy demands on the potential users and others which can be counterproductive.
- Assessment is not a one shot deal, it is an ongoing process. Training, treatment or programming are essential components of ongoing assessment or follow along.
Testing Guidelines

- How an individual responds to an evaluation task may give more insight than whether the response is correct/incorrect
- Attempt to determine stimulability or potential for learning or using various AAC systems
- Focus on what client can do not what can’t do
- Use pre-evaluation questionnaires & results from previous tests to gain information
- Be transdisciplinary: observe and assess with others thus avoiding duplication – make a video to share
- Testing can be tiring so have necessary materials prepared and equipment available
- Don't test what is not needed
Components of AAC Assessment Process

- **Preparation**
- **Potential AAC Candidate**
  - Sensory/perceptual
  - Positioning/Access
  - Linguistic
    - Communication continuum/Language
    - Cognitive skills
    - Literacy skills
- **Communication Partners/Social Networks**
- **Environmental Factors**
- **System Selection – Feature Matching**
- **Completion of current assessment (report writing funding) is the initiation of the ongoing evaluation process**
Pre-Assessment Preparation

- Questions at Initial Contact
  - Preservice Questionnaire

- Information that can be obtained prior to assessment session
  - Pre Evaluation Questionnaires
    - Obtaining previous reports, evaluations and supplemental information
  - Communication Questionnaire

Others AAC Techconnect.com
Assessment of the Individual

❖ Sensory/Perceptual: Goal is to determine size, type, placement of symbols and identify language input and output options

❖ Positioning/Access: Goal is to identify optimal seating & positioning and motor technique for access

❖ Linguistic: Goal is to identify AAC techniques & strategies & select types of symbols

(adapted from Beukelman & Mirenda 2005)
Sensory/Perceptual

Goal is to determine size, type, placement of symbols and identify language input & output options

Vision

- Visual Acuity
- Visual Field
- Oculomotor Functioning
- Light Sensitivity
- Color Perception
- CVI

Incidence of Vision Problems

48% - 75% of children & adults with developmental disabilities and/or cerebral palsy

75% - 90% of children with severe/profound cognitive disabilities

Hearing

- Standard Assessment
- Functional Use of Hearing

http://www.augcominc.com/newsletters/index.cfm/newsletter_34.pdf
ACCESS

Goal is to identify optimal seating & positioning and motor technique for access

USER CHARACTERISTICS

- Identify Proper Position  Don’t Wait for New Seating System
  - Reposition
  - Modify current
  - Recommend as appropriate

- Determine Anatomic Site/Action
  - What part(s) of the body & what action will be used to activate the device

- Determine Potential Contact Surface (area on input device)
  - Identify the quality and orientation of the functional movement pattern
ACCESS

USER CHARACTERISTICS - DETERMINE ANATOMIC SITE AND ACTION

What part(s) of the body & what action will be used to activate the device?

Hierarchy of Anatomic Sites
- Hands
- Head/Voice
- Feet
- Arms/elbow
- Legs/Knees
ACCESS

USER CHARACTERISTICS DETERMINE POTENTIAL CONTACT SURFACE

*The Potential Contact Surface is the area on input device:*
*Identify the quality and orientation of the functional movement pattern*

**Range:** What is the client’s usable range (area and orientation)

**Resolution:** How accurate is the movement

*The minimum size of activation site, possible number of activation sites, spacing of activation sites will be determined by resolution*

**Consistency:** Can the movement be made reliably and repeatedly

**Strength:** How much force is needed to activate the device?

**Speed:** How fast can user activate and release input device?

**Energy-Expenditure:** How long or how often can movement be made before client fatigues?

**Reflex Stimulation:** Will reflex stimulation affect the ability to use the device?

**Inadvertent Activation:** Can the client avoid making selections when not intending to do so?

*Size and Location & Activation Site Will be Determined by Resolution*
ACCESS

Goal is to identify optimal seating & positioning and motor technique for access

DEVICE ATTRIBUTES
Determine Input System Requirements

- **Sensitivity**
  
  *Amount of pressure/force needed to activate the cell/system*

- **Feedback Requirements**
  
  *Tactile, Visual, Auditory*

- **Selection or Activation Method**
  
  *Direct selection, Scanning, Encoding*
Continuum of Input Devices

Keyboard
Mouse Technology
Proportional Joystick
Switched Joystick
4 Switches
3 Switches
Single Switch Scanning
2 Switches
Single Switch
Goal is to identify optimal seating & positioning and motor technique for access

SYSTEM REQUIREMENTS
Implications for functional use of system

- Mounting
- Portability
- Transferability
- Flexibility
- Ease of setup
- Visibility
- Backup systems
- Independent access
- Access to other technologies
- Other users
- Access to activities (dining, work, school, leisure)
ACCESS

- Assure that access method can be used repeatedly without fatigue, discomfort or embarrassment across all environments
- Identify possible need for multiple means of access
- In summary the access assessment identifies device features and system input requirements including minimum size of the activation site and possible number, sensitivity, selection methods, and physical access
- During assessment or device trials consider offering systems that match personality of user
Goal is to identify AAC techniques & strategies & select types of symbols

- Cognition: Examines how individual perceives world and how might use communication within his understanding
- Communication/Language: Assesses the individual’s skills on the communication continuum from emergent to context dependent to independent. Examines use of a single word vocabulary to common language structures
- Symbol Selection: Examines how an individual can communicate with symbols & possible symbol types
- Literacy: Assesses reading, spelling, and writing skills
Many of these assessments have been performed prior to an Augmentative Communication Evaluation and results should be obtained from those evaluations.

Modification of existing assessment instruments may be necessary along with the expertise to interpret results; requires sound knowledge of language development and communication, and understanding of what each test is designed to assess.

Informal assessment are often necessary when standardized tests are not sensitive enough to accurately depict levels of communicative functioning.
Continuum of Communication Independence
A continuum used to describe an individual's expressive communication based on observable communication behaviors that is useful in intervention planning.

Patricia Dowden, Ph.D., CCC-SLP  Clinical Assistant Professor
University of Washington
http://depts.washington.edu/augcomm
Emergent

Does not have a reliable method of expressive communication through symbolic language

Not indicative of cognitive deficits

- Tends to rely on non-symbolic communication strategies
Continuum of Communication Independence

Context Dependent

Symbolic communication is reliable, but limited to particular contexts or partners

- Relies on AAC techniques with vocabulary chosen by others
- AAC strategies that are effective only with familiar partners

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Continuum of Communication Independence

Independent

- Not limited in what they can talk about or whom they can talk to
- The ability to communicate anything on any topic to anyone in any context
Assessment Goals

- **Emerging Communicators**
  Identify their 1st method of symbolic communication.

- **Context-Dependent Communicator**
  Identify the SGD that will expand vocabulary and partners and contexts.

- **Independent Communicator**
  Evaluate their goals and desires for improved communication.

At all levels of the Continuum, the evaluation should also provide recommendations for AAC/SGD implementation strategies and intervention.
**Literacy**

- Goal for AAC assessment is to identify where individual is on the continuum from emergent to conventional literacy.
- Formal literacy assessments may have been performed prior to an AAC Evaluation and results should be obtained from those evaluations.
- Modification of existing assessment instruments may be necessary along with the expertise to interpret results; requires sound knowledge of literacy skills and an understanding of what each test is designed to assess.
- Informal assessment may be necessary for those with emerging literacy skills.
Symbol Selection

- Practitioners must be familiar with the variety of symbol sets and understand the characteristics and features of each symbol system to aid in identifying the appropriate system for each individual.
- Critical to remember that symbols are learned.
- Selection of symbols will be dependent on sensory, cognitive and perceptual issues as well as individual preferences.
- There is not a hierarchy of symbols but rather a continuum.
- Symbol selection should be based on current needs and future considerations.
COMMUNICATION PARTNERS

- Are there partners who recognize and acknowledges need for AAC and appropriate positioning?
- Are there partners who have the skills and opportunity to assist in setting up or programming the device?
- Are the expectations of communication partners on target or realistic?
- Collect information through observation and interview
Environments might include physical space, people present, emotional atmosphere, situation, activity or task

Work with communication partners to identify all environments and what needs to be communicated in each of those

Identify needs for accommodations or modifications to physical environments, routines, or tasks

*Communication Supports Checklist* from National Joint Committee for the Communication Needs of Persons with Severe Disabilities (McLean, Miller, Paul-Brown, Romski, Rourk, Yoder, & McCarthy) – available used from various online dealers
TOOLKIT - see resource CD

- Objects, photos and symbols
- Dry erase board
- Display board with Velcro sensitive fabric
- Sequencer
- Progressive communicator
- Auditory choice making communicator or Talk 4 with levels
- Switch activated devices (toy or fan or vibrating Pillow)
- Battery adaptor
- Array of Switches
- Switch Interface
- Switch Mounting system
- Laptop computer or tablet computer
- Touch Screen
  - Dynamic Display Software
  - Download AAC Evaluation Genie
  - PowerPoint
AAC Assessment Toolkit Resources

- Toolkit Resources 2011
  Digest of cost-effective assessment tools needed for a basic [AAC Evaluation Toolkit](#)

- AAC Lite Tech Evaluation Toolkit
  - [www.enablingdevices.com](http://www.enablingdevices.com)

- ACES Toolkits and Evaluation Assistant
  - [www.aactechconnect.com](http://www.aactechconnect.com)

- GPAT Toolkit Chart
  - See resource CD
AAC Lite Tech Evaluation Toolkit

Enabling Devices

NEW!
ACES Toolkits

www.aactechconnect.com

#1 ACES Low-to-Lite Tech Evaluation Toolkit... a bag full of 27 communication tools to get you started – only $1995

#2 ACES High-Tech Evaluation Toolkit... emulates a variety of the more expensive AAC devices for only a fraction of the cost – at $3395

#3 ACES Evaluation Toolkit Bundle... includes both #1 and #2 for a special price of only $5300!
Assessment Instruments

- Limited selection of formalized and standardized AAC assessment tools
  - Must adapt and modify existing instruments
  - Must search for and find additional protocols, tools and techniques

- Must have expertise to interpret informal/nonstandardized assessment

- Insufficient availability of formal tests often results in unorganized and incomplete recording of what was tested, how it was tested and exact results

- Regardless of the type of assessment used, thorough documentation is necessary to communicate results across people and time
Sensory Assessment

- Locate an ophthalmologist or optometrist who is sensitive to testing those with disabilities
- Gather as much information as possible prior to assessing so that there are appropriate materials and supports for the evaluation
- When assessing always consider lighting, contrast, size of symbol/print, color, near & distance viewing, placement, number of items, and visual discrimination
- Employ guidelines and suggestions to address visual factors (Visual Considerations for Students Who Use AAC PA Dept. of Ed.)
- Utilize VI specialists when available
Access Assessment

- Critical to have professional assessment of seating and positioning to assure that individual is positioned correctly
- Employ checklists and guidelines to assure that there is a comprehensive assessment of functional movement patterns (Feature Matching Checklist Adaptive Switch Assessment by P. Justice)
- Utilize various sizes activation sites such as symbols/pictures, switches and input devices as well as potential mounting systems
- Utilize materials and manipulatives that are motivating to the individual
Assessment of Functional Communication for Individuals with Intellectual Disabilities

A formalized, comprehensive review of the various functions of communication and the daily environments in which communication occurs.

This assessment permits examination of the contextual and interactive aspects of communication not measured by standardized tools.

It has been designed to examine communication at unintentional, early intentional and intentional levels.

Information collected through observation, elicitation and reported behaviors.
Literacy Assessment Tools

- Concepts in Print
- Home Literacy Inventory
- The PAL Assessment
- The Bridge
- The Troll
- Adult-Child Interactive Reading Inventory
Literacy Assessment Tools

- **Concepts in Print**
  - Can purchase from [www.heinemann.com](http://www.heinemann.com) or [www.amazon.com](http://www.amazon.com)

- **Home Literacy Inventory**

- **The PAL Assessment**
  - Can purchase from [www.slatersoftware.com](http://www.slatersoftware.com)

- **The Bridge**

- **The Troll**

- **Adult-Child Interactive Reading Inventory**
  - [http://www.brookespublishing.com](http://www.brookespublishing.com/)
Concepts of/about/in Print

Marie Clay
http://www.heinemann.com/

Assessing concepts of print refers to determining how well the individual understands how print is used.
Concepts about Print Assessment:

Might Include

- Book orientation
- Which way to read (start)
- Front and back of book
- Beginning and ending of book
- Title
- Graphics have meaning
- Left to right
- Words not graphics is way to read book
Concepts about Print

- Concepts about Print Assessment (demonstration)
  http://teams.lacoe.edu/documentation/classrooms/patti/k-1/teacher/assessment/print/conceptsqt.html

- Concepts of Print Assessment (example)
  http://web.archive.org/web/20040630063110/wilearns.state.wi.us/apps/PDF/print_prompts.pdf

- Concepts about Print Assessment (example & demonstration)
Concepts about Print

- Concepts of Print Assessment (Example & Demo) http://www.mlpp-msl.net/assessments/conceptsofPrint/default.htm

- Concepts About Print Assessment Data (Example, Recording Forms and Implications for Teaching Concepts) http://rwproject.tc.columbia.edu/assessments/reading

Home Literacy Inventory

- Designed to reflect current and past family interactions with print and print-related conversations
- Interventionists are guided to look at non-print activities, reading activities, writing activities and current reading and writing abilities.
- Information may be gathered over time either directly from the inventory completed by the family or on home visits by the intervention
PAL (Picture-Assisted Literacy) Assessment

Complements Picture Assisted Literacy Slater Software

- Intended to identify behaviors in communication, reading and writing.
- Designed to determine use and understanding of symbols for communication and for using pictures to support reading and writing text.
- Items describe student behaviors with examples.
- Each booklet has four scoring/observation periods to monitor/track progress.

http://www.slatersoftware.com/
The Bridge

Designed to Investigate
Literacy and Language Development

- **Foundations of Reading**
  (Book Knowledge/Appreciation/Print Awareness/Story Comprehension)

  How individual interacts with books
  How child interacts with symbols/print?
  How person engages in the act of reading?

- **Foundations of Writing**

  How individual draws/writes (Motor item)
  How child uses print? (Cognitive/linguistic item)
  How person writes his name? (Motor & Cognitive item)
  How individual interacts with/uses letters of the alphabet?
Designed to Investigate
Literacy and Language Development

Phonological/Phonemic Awareness

How individual demonstrates phonological awareness
How child demonstrates phonemic awareness

Oral Language
(related to literacy activities)
How individual interacts during literacy related activities
How child engages in story telling
The Troll
The Teacher Rating of Oral Language and Literacy

- Designed to track literacy and language development
- For use by classroom teachers or reading specialists
- No formal test training needed
- Administered for each child in app. 5 minutes
- Can be reused over year to track progress
Adult–Child Interactive Reading Inventory (ACIRI)
By Andrea DeBruin-Parecki

Measures quality of interactions between adult and child during shared reading

Assesses child and adult behaviors in these areas:
- Enhancing Attention to Text
- Promoting Interactive Reading
- Supporting Comprehension, and Using Literacy Strategies

Includes intervention activities

http://www.brookespublishing.com/
AAC Assessment Tools

- Social Networks
- Communication Partner Skills
- TASP
- Inventory of Symbolic Functions
- SETT
- WATI
- Triple C – Checklist of Communication Competencies
- Augmentative & Alternative Communication Profile
- A Continuum of Learning
- Communication Matrix
- SGD’s
- AAC Evaluation Genie
Social Networks

- Written by Sarah Blackstone and Mary Hunt-Berg, available from Attainment
- Enables collection of information from individuals, their families, and involved practitioners, about their communication partners and current modes of expression to assist in guiding and refining intervention
- Based on principles of functional goal setting and person centered planning
Communication Partner Skills

- Draft of checklist to collect information about communication partners and communication environment.
- Will utilize observation, direct inquiry or reported information.
Test of Aided-Communication Symbol Performance (TASP)

A tool for the assessment of symbol-based communication skills

- Symbol size and number
- Grammatical encoding
- Categorization
- Syntactic performance
- Establishes basal & ceiling for each subtest
### Inventory of Symbolic Functions

<table>
<thead>
<tr>
<th>RESPONSE TO “HELLO”, OR OTHER GREETING</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td></td>
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<table>
<thead>
<tr>
<th>APPROPRIATE RESPONSE TO “HOW ARE YOU”</th>
<th>Y</th>
<th>N</th>
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<tbody>
<tr>
<td>Description</td>
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<table>
<thead>
<tr>
<th>APPROPRIATE RESPONSE TO “WHERE IS (PERSON)”</th>
<th>Y</th>
<th>N</th>
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<tbody>
<tr>
<td>Description</td>
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### Inventional-Unintentional Behaviors
- Circle (Y) Yes or (N) No and indicate if spontaneous (S), early intentional (I), or intentional (E) and describe.

<table>
<thead>
<tr>
<th>DOES INDIVIDUAL VOCABULARY</th>
<th>Y (UE I)</th>
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<tbody>
<tr>
<td>IMITATE SOUNDS/SOUNTS WORDS</td>
<td>Y (UE I)</td>
</tr>
<tr>
<td>IMITATE GESTURES</td>
<td>Y (UE I)</td>
</tr>
<tr>
<td>IMITATE WORDS</td>
<td>Y (UE I)</td>
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<table>
<thead>
<tr>
<th>ENGAGE IN TURN TAKING ACTIVITIES</th>
<th>Y (UE I)</th>
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</table>

| DOES INDIVIDUAL POINT TO BODY PARTS | Y (UE I) |

- Stimulus ________

- Y N MOUTH    Y N EYE    Y N HEAD    Y N NOSE    Y N EAR    Y N DOCKING

#### Designed for use with children or adults
- Determine individual’s potential for using symbolic communication,
- Identify the type of symbol set that meets the strengths/weaknesses of individual
- Ascertain the possible size, number and position of symbols.
- Examines word knowledge, stimulability for learning symbols skills in categorization of concepts.
- Addresses objects, cut out photos of the objects, photographs, and graphic symbols
- Based on core vocabulary for children and for AAC vocabulary used by adults and clinical experience of the authors
Student, Environment, Task, and Tool Framework (SETT)

- **The Student**
  - Abilities and Current Communication Needs

- **The ENVIRONMENT**
  - Available Supports and Tools

- **The TASKS**
  - The Student Needs to Perform in Each Environment

- **The TOOLS**
  - Assistive Devices and / or Techniques Needed for the Student to be Successful

**AAC Assessment Tools**
WATI adapted the SETT framework across all AT domains

Assessing students' needs for assistive technology (ASNAT) 5th edition

16 chapters; chapter 3 AT for communication

Each chapter includes a comprehensive assessment and intervention guide
The Triple C – Checklist of Communication Competencies Revised Edition 2009
by Karen Bloomberg, Denise West, Hilary Johnson & Teresa Iacono
available from Resource Center-SCOPE Box Hill, Vic Australia

Designed for use with adolescents or adults with little or no speech. Assesses early functional communication skills. Can be used by untrained communication partner though it is recommended that a communication specialist be part of confirming the final results.

A Communication Independence Model:
For People with Severe Communication Disabilities
by Yvonne Gillette, The University of Akron
Attainment Company


Designed for use with individuals with complex communication needs of all ages. Assesses communication opportunities and skills. Provides strategies for intervention based on the information gathered in the assessment process.
Contains four Areas of Learning (Operational, Linguistic, Social and Strategic) adapted from J. Light [1989]). Each area assesses skills through five ability-based levels called Skill Set Levels. Measures subjective, functional skills. Developed for children using speech generating devices and can be used for adults who do not have acquired communication disorders and use AAC.
AAC Assessment Tools

- Communication Matrix
  www.communicationmatrix.org
- Communication Assessment for Parents & Professionals
- Assessment protocol for individuals of all ages who function at the earliest stages of communication
- Evaluates 7 levels of communication from pre intentional to symbolic language
Virtually all manufactures include some level of AAC assessment within their SGD’s.

Usually are very short screening protocols

Good choice to use as a screening measure to get a “snapshot” of language and access capabilities.
Developing The Language Representation Model

With Persons With CCN

Diagnostic trials should be geared towards collecting observations that enable the evaluator to begin to build a working hypothesis about how the person’s language skills work to support AAC techniques.
Building word based AAC systems are a priority over phrase based systems

- Follows developmental language models
- Builds a stronger foundation for both word fluency and literacy development
- Leads to generative communication capabilities
Informal diagnostic tool to evaluate the skill areas that relate specifically to the language representation methods commonly found on augmentative communication systems.

Not intended to identify a particular device, but rather build a framework for selecting an appropriate AAC device for ongoing evaluation and / or device trial.

The entire protocol can be administered in as little as 17 minutes using touchscreen/mouse, 30 minutes using linear scanning (fast) and 20 minutes using headpointing (1 second dwell).
AAC Evaluation Genie

- Includes 10 subtests
  - Visual Identification
  - Visual Discrimination
  - Noun Vocabulary
  - Verb Vocabulary
  - Function Vocabulary
  - Category Inclusion
  - Core Vocabulary
  - Icon Patterns
  - Picture Description
  - Word Prediction
Visual Identification & Discrimination subtest evaluates symbol identification, tracking and discrimination across an increasingly complex grid array.

Vocabulary subtests evaluates basic vocabulary identification, organization and generalization of meaning across contexts.

Core Vocabulary and Patterns evaluate ability to recognize multiple associated word meanings.

Picture Description: Evaluates the basic ability to sequence symbols to describe a picture. Yields a mean length of utterance in words.

Word Prediction: Evaluates ability to identify a target word from a list of choices.
AAC Evaluation Genie Features

Comprehensive Data Tracking

Access Methods
- Touchscreen/Mouse
- Linear Scanning
- Dwell / Headpointing

Freeware

Available at www.humpsoftware.com
Given this information about the user, additional diagnostic probes are administered to evaluate language use and complexity, as well as stimulability for further cognitive-communication development.
Stimulability Assessment

- Part of the assessment process is evaluating the person's prognosis for further cognitive-communication development
- Explicitly tied to clinician expertise
- Recall and retrieval of vocabulary and newly learned symbols
- Parts of speech recognition and usage
- Responsiveness to expectant delay strategies
- Responsiveness to aided language stimulation & SGD modeling
For persons with weak categorization skills, use a static display

- This does not mean a low tech display
- Many persons are able to use Unity with the activity row to support fringe vocabulary needs
- Picture Word Power Phrases and Categories is an excellent language representation system for persons with symbol sequencing deficits
Diagnostic Activities Generalities

- Probe basic semantic relations constructions
- Follow Browns Stages to assess morphology use and/or stimulability
- Use familiar and readably available tools

- Puzzles
- Illustrated books
- Music
- Animal scenes

- Mr. Potato Head
- Cars
- Bubbles
- Trucks
At this point, you can start thinking about how the person's language skills function, and what SGD functions will support their need for augmentative communication.

In other words, you have gathered enough data to “paint a picture” about how the person's language skills are working for them.
Evaluation Session Resources

- Attempt to talk with all participants at the beginning and end of each evaluation session.
- Provide written summary at the conclusion of each session:
  - Means of sharing information that helps everyone to understand what was done.
  - Way to communicate what will happen next.
  - Method of recording information to use for report writing.
- Utilize a method or form to provide consistent means of recording information during the evaluation session.
- Use of form helps to promote an organized method for keeping work records.

Evaluation Consult Summary

Evaluation Notes Form

Contact Log
Matching Persons To Technology

A successful match of person and technology results from examining:

- Characteristics of the Milieu
  - The environment(s) in which the technology will be used
  - Pertinent Features of the Personality, Preferences, and Temperament
  - The needs and preferences of the user

- Salient Characteristics of the assistive technology itself
  - The functions and features of the technology.

- If the match is not a quality one from the standpoint of the consumer, the technology may not be used, or will not be used optimally.
AAC Feature Matching

Predictive Assessment that attempts to match:

- The language representation and hardware features of AAC systems
- The access methods of AAC system
- The feedback methods of an AAC system
- To the current and future capabilities and needs of individuals with complex communication needs.
How Does Feature Matching Fail The AAC User?

- Focus is solely on current needs and abilities without considering anticipated future needs and capabilities.
- AAC team overemphasizes (caught up) with device features.
- Fails to take into account the user’s preferences while negotiating a device recommendation that will support current or future abilities for generative communication.
- A “match” and capabilities to use a device does not account for all of the components needed for success. The whole is more than the sum of its parts.
AAC Feature Matching

- Additional features that are highly desired (telephone, ECU, texting)
- External factors that influence feature matching process
  - Funding issues
  - Skilled provider
  - Motivation
  - Support
AAC Feature Matching: Features To Consider

- Type and number of messages, vocabulary size, coding system, symbol sets, message retrieval.
- Size, layout, system memory, optical indicators, auditory prompts, rate enhancement, programmability, computer compatibility.
- Type of input method (e.g., switches, mouth stick, head pointer, alternative keyboard, and direct selection, scanning, encoding).
- Type of output (e.g., speech print, LCD, Braille).
- Mounting and portability.
- Extent of training required to use the system and availability of training and technical assistance for its use.
- Availability of customer service by manufacturer or supplier.
## AAC Feature Matching: Features To Consider

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<thead>
<tr>
<th>AAC User</th>
<th>AAC System</th>
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<tbody>
<tr>
<td>Sensory-Motor Component</td>
<td>Sensory-Motor Component</td>
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<tr>
<td>• Physical</td>
<td>• Access Features</td>
</tr>
<tr>
<td>• Sensory</td>
<td>• Auditory Feedback</td>
</tr>
<tr>
<td>• Sensory-Motor</td>
<td>• Visual Feedback</td>
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<tr>
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<td>• Tactile Feedback</td>
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<tr>
<td>Cognitive Component</td>
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<tr>
<td>• Cognitive</td>
<td>• Operational Skill Required</td>
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<tr>
<td>• Language</td>
<td>• Language Content &amp; Organization</td>
</tr>
<tr>
<td>• Literacy</td>
<td>• Flexibility To Accommodate Evolving Needs</td>
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<td>• Academic Needs</td>
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<td>• Vocational Needs</td>
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<tr>
<td>Environmental Component</td>
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<tr>
<td>• User Milieu</td>
<td>• SGD Programming</td>
</tr>
<tr>
<td>• AAC Needs</td>
<td>• SGD Maintenance</td>
</tr>
<tr>
<td>• Motivation</td>
<td>• SGD Durability</td>
</tr>
<tr>
<td>• Skill</td>
<td>• SGD Repair</td>
</tr>
<tr>
<td>• Supports</td>
<td>• Mounting / Portability</td>
</tr>
<tr>
<td>• Additional Needs</td>
<td>• ECU Features</td>
</tr>
<tr>
<td></td>
<td>• Telephone Capabilities</td>
</tr>
</tbody>
</table>
AAC Feature Matching: Physical Considerations

- **Direct selection**
  - Manual, head pointing, headpointing, eye gaze
  - Indirect selection
  - Switch access site
  - Single switch vs. Switch array
  - Scanning pattern
  - Scanning / switch feedback
  - Interpreted eye gaze access / e-tran
  - Partner assisted scanning
  - Wheelchair / switch mount / walker attachment
  - SGD weight considerations for ambulatory user
Hierarchy of switch access sites

- Hands
- Head/voice
- Arms/elbow
- Legs/knees
- Feet

Two or more input methods may use multiple sites for access
AAC Feature Matching: Sensory Considerations

- Visual field and perceptual considerations
- Display size
- Magnification of icons, text
- Auditory scanning
- Tactile symbols
- Braille symbols
- Visual output???
AAC Feature Matching: Cognitive Considerations

- Attention
- Task focus
- Literacy level
- Symbol recognition
- Executive functions
- Memory impairment
- Language impairment
- Metalinguistic skills
AAC Feature Matching: Other Considerations

- Consumer preferences
- Family / peer / support
- Educational support / needs
- Vocational support / needs
- Skill of communication partners
- Motivation to communicate
- Funding source requirements
- SGD battery capacity
- Intervention and follow-along support
- Will the SGD meet current and future needs?
AAC Feature Matching: Protocols

- Grid or worksheet based designed to synthesize assessment data to AAC device feature needs and identify possible devices for recommendation.

- Areas of assessment are translate to feature match guide for AAC
  - Motor Capabilities
  - Literacy Assessment
  - Positioning and Seating
  - Cognitive/Linguistic Capabilities
  - Sensory/Perceptual Assessment
## AAC Feature Matching: Protocols

- **Grid or worksheet design**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>User’s Abilities</th>
<th>User’s Needs</th>
<th>Device Features Needed</th>
<th>Rationale For Features Needed</th>
<th>Device A</th>
<th>Device B</th>
<th>Device C</th>
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<tbody>
<tr>
<td>Input device</td>
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AAC Feature Matching: Protocols

- **Grid or worksheet design**

<table>
<thead>
<tr>
<th>SGD Device Needs</th>
<th>Springboard Lite</th>
<th>Vantage Lite</th>
<th>DynaVox V</th>
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<tr>
<td>Keyguard</td>
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<td>X</td>
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<tr>
<td>Dynamic &amp; Static Display</td>
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<td>X</td>
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<td>Extensive Message Memory</td>
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<td>Icon Prediction</td>
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<td>Language Monitor Software</td>
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<tr>
<td>Semantic Compaction</td>
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</tbody>
</table>
Organizing and Summarizing Data

- Summary of Language Usage, Organization, and Representation

- Feature Matching – Device Selection Worksheet

- Report writing is often an important part of the decision making process since many clinicians use this process as a time to summarize and analyze all of the information, data and insights collected.

- Having an evaluation format can assist in assuring that all areas of assessment have been addressed.
AAC Feature Matching: Electronic Database

AAC TechConnect

- **AAC Tech Connect Device Assistant (DA)**
  - http://www.aactechconnect.com/
  - Provides a feature-match tool to search for AAC devices
  - Specifications for up to 40 different categories for each device

- **AAC Tech Connect App Assistant**
  - http://www.aactechconnect.com/
  - Provides a feature-match tool to search for AAC Apps for Idevices
  - Apps meet a criteria for inclusion
  - Over 120 Apps reviewed
  - Available November 2011
Device Knowledge

❖ Analyzing & Reviewing Devices
  ❖ Short Review or In-depth review

❖ Resources
  • The Resource For Lite Tech Low Cost AAC Chart

❖ Special Education Technology - British Columbia
  ▪ AAC Device High Tech Feature Comparison (2008)
  ▪ AAC Device Low Tech Feature Comparison (2008)

❖ AAC Vendors
  ▪ Websites
  ▪ Charts
  ▪ Catalogs
Device Trials

Arrange for and/or conduct device trials or loaner periods

- Good start for identifying vocabulary needs
- Person(s) performing or assisting with trials must be familiar with the device to assure an effective examination period; vendors can be an excellent resource for training and support
- Findings from Brown & Johnson (2004) stated that some subjects indicated that being able to try out a device before buying was a factor leading to successful use of AAC
Reports Resources

- www.aacinstitute.org
- www.aacfundinghelp.com
- www.aacproducts.org
- www.aac-rerc.com
- www.aactechconnect.com
- www.asha.org
- www.tobiiati.com
- www.cms.hhs.gov/medicare/
- www.cms.hhs.gov/states/default.asp
- www.dynavoxtech.com
- www.prentrom.com
- www.words-plus.com
- www.zygo.com
Ongoing Review
Follow Along

- Confirm that the system continues to work for the AAC user
- Establish that vocabulary and symbol selections remain relevant
- Determine if communication needs have changed
- Ascertain whether communication partners have and use the tools necessary for maximizing communication
- Survey environments for changes; decide whether system should be altered to fit environment, or vice versa
References

- David Beukelman. Models of AAC Assessment and Intervention, 04/02/99 Retrieved from http://aac.unl.edu/drb/AAC_Assessment/index.htm
- Hill, Katya Data Collection and Monitoring AAC Intervention in the Schools. Perspectives on Augmentative and Alternative Communication 2009 18: 58-64
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Thank You!