Profectum's
3rd Annual New York DIR® Conference
Overcoming Barriers to Progress:
Vital Pathways to
Advance Development

Relationship Based Augmentative
Approaches with Non-Verbal Learners:
The Continuum of
Augmentative Approaches Tailored to
Individual Needs

Panel: Lynn Abelson, MA, CCC-SLP, OTR/L
Elisa Chrem, MA, CCC-SLP &
Janet London, MS CCC-SLP AAC Consultant
Lauren Blassak, BA &
Lisa Romaine, BA Communication Consultant
Moderator: Serena Wieder, PhD

Multimodal Communication
Approach

• All communicative modes are valued and
couraged to develop
• Enables the individual to “own” the
modalities she chooses to communicate her
needs and intentions, share her feelings,
and express her knowledge
• Strategies and tools may be combined to
meet a wide range of communication
intentions/functions

Spotlight on R

• R is a delightful, engaging, and spunky 17
year old teenage girl
• She has a medical diagnosis of Trisomy 21
(Down Syndrome) and has an educational
classification of Multiple Disabilities
• She has severe cognitive delays and low
muscle tone and uses a walker to ambulate
• She has been attending the Phoenix Center
since 2010 and has captured the hearts of
many classmates and ALL her teachers!

AAC History

• The first day R walked through our doors, it
was obvious she had a lot to say
  • She used facial expressions, body language,
gestures, signs, vocalizations, and one to two
words/approximations to express herself
• She came to our school with a communication
book but made it clear she had no use for it
  • She was, however, receptive to using visual
support (picture symbol cards, boards, & schedules)
• School records and parental report reveal no
history of an AAC assessment or trials with
a voice output device
The Missing Link to Multimodal Communication

R epitomizes the perfect candidate for the Multimodal Communication Approach as she enthusiastically uses a wide array of non-verbal and verbal communicative means to communicate needs, engage in affective exchanges, and share her knowledge.

Baseline AAC Competencies

- R's beginning AAC skills include:
  - Scans, locates, and discerns a pictorial message from a field of six to twelve two inch messages
  - Accesses (through pressing) small messages (one inch) with index finger
  - Demonstrates a preliminary understanding that pictorial messages can represent preferred items/activities, significant others, feelings, etc.
  - Displays a basic understanding of categorization through accessing desired messages via folders (e.g., classmate folder leads to a preferred peer)
  - Picks up and transports a small device (e.g., iPod)

Rationale for AAC Assessment

- R demonstrates basic AAC competencies during speech and language trials, has SO MUCH to share, and TRULY ENJOYS interacting with others!!
  - A voice output device that enables her to communicate and share her knowledge with ALL listeners was sought
  - Her educational team, family (mom) and R collaborated with an AAC Specialist and the iPod Touch was chosen
    - Educational team includes: classroom teacher, one-to-one aide, SLP, OT, PT, and in-house and district case managers

R's Voice Output Device

- The iPod Touch is a small and light device she can independently carry while using her walker
  - R had input in choosing her device carrying case which looks like an attractive purse
- Pages from the communication application were designed for success
  - At first it was limited to 4 messages that were highly meaningful and motivating to R
  - All pictures were highly visible – with a contrasting background color
Partnering with Family

- R’s mom was totally on board with the AAC communication device and intervention plan
  - She participated in training sessions
  - She provided the SLP with vocabulary words and family pictures to input into R’s iPod
- Mom’s hopes and dreams were for R to:
  - Play games with her younger brother
  - Tell her about her school day
  - Be more engaged during extended family gatherings through responding to and initiating conversations

Partnering with Educational Team

- Establish and maintain an ongoing dialogue with the classroom teacher(s) and other staff
- Provide vocabulary to facilitate participation in classroom instruction throughout the school day including specials, lunch time, leisure and independent life skills
  - Focus on classroom instruction that is repeated on a regular basis (e.g., morning meetings)
- Guide classroom staff and other team members in acknowledging and embracing R’s wide range of communication modes

Adaptations to Support Fun & Learning

- R and SLP engage in a structured leisure activity
- Modified Charades is chosen by SLP - it’s a preferred and familiar activity played in class
  - R relates very positively to “big” gestures, high affect, vocal variation, and playfulness
- A gameboard is incorporated as one of mom’s hopes is for R to participate in games with her younger brother
- Adaptive equipment and seating is provided
Warming Up to iPod

• The first video clip was taken soon after R received her iPod Touch
  ✓ She was just beginning to integrate it into her wide array of communicative strategies
• You will note R does not use the iPod during the game and her intent was respected
  ✓ R uses a wide array of non-verbal and verbal communicative means to engage in affective interactions, share her knowledge, and have fun playing a preferred game

Please Consider...

• Does her participation in closing eyes indicate an understanding of guessing?
• Did you get a window into her emotional range during the activity?
• Why does the SLP accept R saying “all done” rather than encourage her to respond to her farewell greeting?
• Any downside in using a game board and visual supports (pictures, board)?

Please remember to respect this family’s privacy and confidentiality

Close Your Eyes & Guess

Abelson AAA_NYC_1

Let’s Reflect!

• R loves the playful interactions surrounding the “closing eyes” component of the game but does not seem to connect it with the concept of guessing
• The play acting of the SLP crying evoked an emotional reaction in R that led to her initiating an interactive exchange more robust and affect laden than typically seen
  ✓ Speaks to the POWER OF AFFECT!
Let’s Reflect!

- SLP gives R the time, space, and respect to use the iPod on her terms and takes all her responses as intentional and meaningful
  - SLP interprets “all done” as a communicative means to end the game/interaction and did not pressure R to wave or use iPod to say “bye”
- Gameboard added visual spatial, motor planning, and cognitive demands
- Visual supports may have contributed to R’s challenges with initiating play acting during game
  - R is familiar with using picture cards/boards to provide a response through matching and pointing

Current AAC Competencies

- R’s AAC skills have notably expanded and include:
  - Independently turns device on/off, clears messages, scrolls through pages in her communication application, and accesses her camera roll to share pictures
  - Scans, locates, and discerns from a field of sixteen half-inch adjacent messages
  - Demonstrates a solid understanding that pictorial messages represent preferred items/activities, significant others, feelings, etc.
  - Generally can navigate through up to four pages to access desired messages and discriminates between a wide range of categories

A Shining Example

- The next video clip was taken nine months later
- R provides a shining example of the respect, flexibility, and empowerment provided by a Multimodal Communication Approach
- R fluidly shifts from using a wide array of non-verbal communicative means, her iPod Touch, and verbal speech to sustain regulation, share affective exchanges, and have FUN!
  - Over the months, R progressed from rarely using her iPod Touch, to ONLY using it, to the “happy medium” you will see shortly

Please Consider...

In this clip R and her SLP are playing charades without the support of the static picture board

- Note the wide array of communicative means R’s uses and the interactive and communicative skills she displays
- How does the clinician increase the challenge of the activity? How does R respond?
- What support is in place to facilitate the discard of cards? Why is it used?
A Shining Example

insert clip Abelson AAC-NYC_2

Let’s Reflect

• R uses one or more of the following communicative means (i.e., facial expressions, body language, vocal intonation, gestures, picture cards, environmental cues (cat on bag), iPod Touch (beginning to string 2 messages) and verbal speech (1-2 words)) to:
  ✓ Share physical state (tired)
  ✓ Express affection for a male staff member & SLP
  ✓ Acknowledge presence of a preferred staff member
  ✓ Respond to questions and conversational bids and maintain a conversational flow with SLP

Let’s Reflect

• SLP increases the challenge by acting out a charade without using a card and encourages R to do the same
  ✓ R does not use a card but repeats the same charade SLP uses and points to the cat on her lunch bag as a visual reference
  ✓ On R’s next turn, she picks a card which suggests:
    o She may not be ready to create and enact ideas without visual support
    o She is having difficult comprehending direction

Let’s Reflect

• Discarding a card in a container decreases the motor planning and visual spatial demands of placing it under the deck
• This decrease in demands may be one of the flames fueling the interactive flow between R and her SLP!
Teaching Comprehension through Immersion with Visuals

- The goal is to expose the student to PCS symbols arranged contextually throughout the day in multiple environments.
- Students must be immersed in the pictures, in the same manner that you would typically expose a child to verbal language.
- Initially there is no expectation to respond.

How Do We Decide When A Student Is Ready?

- Assessment of the student’s profile.
  - Receptive and Expressive Language
  - Cognition
  - Praxis
  - Visual Spatial
- WHAT HAS BEEN TRIED BEFORE – were there bright spots? What were the problems?
- There are NO pre-requisite skills needed – you can’t swim unless you are in the water!
- Counter indications may arise – be ready to switch gears.
What Is The Sequence Of Immersion Into AAC?

• Introduction to a symbol system via topic boards and visual supports
• Develop an individualized communication system with consideration of the students' profile, e.g. PODD, PECS, and/or an SGD.

Examples of Visuals

Factors that Matter

• Younger the better
• Consistency and patience on the part of the facilitator matters most
• High affect

Sample trajectories of communication systems based upon developmental levels

- Start with 40 symbols per page, 20+ pages
- Keyboard
- Add new messages by page

- Start with 9 symbols per page, 6 pages
- More repetition needed
- New messages added slowly
Challenges

• Cognitive Deficits
• Visual Impairment (not acuity)
• Severe Processing Deficits
• Ideation
• Want or Drive to Communicate

PD Profile

Age: 14 years
Diagnosis: PDD

Individual Differences
- Regulatory Capacities: generally under-reactive, visually, he can navigate complex obstacles.
- Motor Capacities: has purposeful gestures, can problem solve steps with his body to move in space.
- Receptive Capacities: able to follow 1-2 step functional directions.
- Expressive Capacities: mirror gestures, use of affective tones to convey intentions and emotions, non-verbal.
- Visual Spatial Capacities: can switch visual attention between self and others, poor body awareness but has sense of safety.

PD Profile Cont’d

Praxis: full body deficits, however, can sequence and plan, severe oral/verbal deficits.

Social Emotional Capacities:
- Level 1: Regulation – needs support
- Level 2: Engagement – constricted
- Level 3: Circles of Communication – limited 3-4
- Level 4: Shared Social Problem Solving – with maximal support

VID 1 PD
How the PODD has aided comprehension for PD

- Provided consistent available visual support in all environments
- Caregiver is providing affect
- Constant visual support in terms of placement of the PODD
- Repetition with core vocabulary
- He responds to the attention of the facilitator and that relationship motivates the comprehension

MZ Profile

Age: 15
Diagnosis: Autism

- Regulatory Capacities - under-reactive except for auditory
- Motor Capacities - limited use of gestures, limited ability to problem solve with his body in space
- Receptive Capacities - cannot switch auditory attention, or follow multiple step directions
- Expressive Capacities - minimally verbal, single words to express needs and protest. Best channel through typing and SGD
- Visual Spatial Capacities - cannot switch visual attention, very poor body awareness and minimal safety comprehension

MZ Profile Cont’d

- Praxis – full body deficits, poor ideation, planning and executing deficits
- Social Emotional Capacities:
  - Level 1 - Regulation – needs support
  - Level 2 - Engagement – constricted
  - Level 3 - Circles of Comm. – 20-30 when motivated and his body is supported
  - Level 4 - Shared Social PS – islands of capacity when given support
  - Level 5 - Creating Symbols & Ideas - understands symbols and has ideas, needs support to express them (typing, SGD)
  - Level 6 - Building bridges - maximal support

VID 2 MZ
How an SGD aided comprehension for MZ

- Taps into his strengths in reading, typing and vocabulary
- The extensive array of choices (80 cell) matched his learning style
- Auditory processing so impaired – in the absence of the written word, he has tremendous difficulty responding. The device helps him organize enough to learn

Integration of the Approach

- Integration is the KEY ELEMENT!
- Extensive training with all facilitators
- The SLP is responsible for teaching the power of the system
- Co-treats aide the other disciplines

Role Of The Family

- Counsel parents using research that use of AAC facilitates development of verbal language
- Engage siblings
- Often families anticipate needs, no need then to communicate. Teach reducing help, waiting, and repetition.

Best Outcomes

- Students communicate their thoughts
- Increase Ideation
- Learn grammar, spelling, syntax to be socially appropriate and communicative with the world (email, text, research)
- Increase circles of communication
Dan’s Journey
Supported Typing

Student History
- Current Age 11-DOB 9/5/2002
- Started CTC February 2007
- Diagnosed ASD- Comorbid feeding and possible underlying medical conditions
- Severe Dyspraxia impacts all areas of development
- Initially presents as extremely challenged

Profile
- Very low tone/ Weak core
- Severe Motor Planning/ Praxis Challenges
- Seeks Movement and Pressure to support awareness of body and organization
- Visually and auditorily overwhelmed/ disorganized
- Visual-Spatial/ Perceptual Challenges
- Some sounds

TYPES OF COMMUNICATION SUPPORTS TRIALED
- Had some words and sounds - Regressed
- PECS
- Visuals
- GO Talk - 9 cell
- Cheap Talk- 2 cell
- Dynavox
- Some basic sign
- Gestures and range of affect
Current Research shows that in order to support Fine Motor Development (Verbal Language/ Speech, Utilizing Pictures, AAC devices, Gestures, Sign) that we have to take a look at underlying gross motor and visual thinking/perceptual areas.

The parallel process of working on developmental gaps that were skipped over in movement, motor and other “thinking areas” has made the most difference in terms of Dan’s ability to execute and demonstrate his intent more purposefully. Ideation we now know was not the issue - the ability to use his motor system to execute ideas and integrate with other systems was holding him back from communicating and strengthening all areas of his development. In addition always focusing on the DIR Levels and where he was developmentally were and continue to be critical.

5. DAN HAT 1

30 MINUTES LATER......
6. DAN HAT 2

ANOTHER

30 MINUTES LATER...

7. DAN HAT 3

8. DAN PT
What are some underlying foundations to support Speech/Language and Communication?
- Emotion
- Motivation
- Motor Planning
  - Gross Motor/ Fine Motor
  - Planning/ Sequencing
- Integration of Sensory Systems
- Visual-Spatial
- Comprehension/ Background Knowledge
- Executive Function
- Individual Differences/ Sensory Profile
- Oral-Motor
- Medical/ Structural Challenges
- INTERDISCIPLINARY- should not be compartmentalized

Introduction of Supported Typing

WHAT IS SUPPORTED TYPING?
Supported Typing Training is a form of Augmentative and Alternative Communication (AAC) in which people develop their pointing skills for communication utilizing pictures, symbols, letters and/or words.

WHO IS A CANDIDATE FOR SUPPORTED TYPING?
- Any individual who does not have an effective, reliable, functional means to communicate.
- Not an approach for individuals able to string words and sentences together verbally.
- Age is not a factor
- Diagnosis is not a factor
- Functioning level is not necessarily a factor
- To be used as PART of a total communication approach

What are Movement Issues that Indicate Candidacy?
- Poor eye-hand coordination
- Difficulty scanning a communication display
- Sequencing problems
- Low muscle tone
- High muscle tone
- Tremor
- Difficulty isolating or extending index finger
- Undecided hand dominance
- Radial ulnar instability
Movement Issues, Con't

- Range of movement limitations
- Initiation problems
- Impulsivity
- Perseveration
- Unstable sitting position
- Proximal instability
- Reduced proprioception

- Dyspraxia
- Obsessions
- Automatic Completions
- Inability to stay still
- Self-confidence issues
- Involuntary movements
- Dysmetria

Specific issues identified as impacting Dan’s ability to access a communication system

- Poor initiation
- Poor eye hand coordination
- Difficulty isolating index finger
- Low muscle tone
- Proximal instability
- Dysmetria (using peripheral vision)
- Reduced proprioception
- Dyspraxia
- Possible Medical

Training Process

- Began with simple word activities with FULL support
- Training for staff and family members working with Dan.
- Moved to multiple choice activities
- Slowly moved to open ended communication completely open

Video of Early Typing

B. Surprised
**Current status with communication**

- Using supported typing with his support person in the classroom to access academics, peer interaction and conversation
- Initiating typing during semi structured activities
- Support is being faded to the elbow for open communication and can be faded to the shoulder for predictable communication
- Accepting support from multiple people at home and school
- He continues to communicate that his desire is to speak using his mouth

**Validation Examples**

- Red Car
- Chanukah

9. Video Dan Passport

**Do students still need support if they reach Independence?**
12. VIDEO ALEC WHY

Impact of Presuming Competence and Offering Appropriate Communication Supports

- Increased Regulation
- Increased Engagement
- Increased Sense of Self
- Increased Initiation and Participation
- Decrease in Negative Behavior

10. Dan - Less support

Thing to Consider

- Do you believe the individual you are working with has more to communicate than can be directly observed—regardless of motor abilities?
- Does the individual you work with have an effective and reliable mode to communicate?
- When looking at a child’s communication ability or lack of, are we judging their intellectual capacities?
- Does the individual have severe sensory and motor challenges that prohibit ability to understand their body in space, organize and execute ideas?
Huma and Dan

Thank you for your participation and I hope this presentation was informative!

[Logo]

Follow us on Twitter @MyProfectum
Join us on Google+ Profectum Foundation

Like Us On Facebook

Help us get the word out!