OT, SLP & AAC

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Abstract

The purpose of this presentation is to discuss what augmentative and/or alternative communication (AAC) is, the OT's role in supporting clients who use AAC and how to document/write goals related to AAC. In order to maintain best practice and client-centered approach as an OT, it is important to understand how AAC relates to our field. To best serve our clients, we need to advocate for interdisciplinary treatment and collaboration. We will talk from the perspectives of both OT and SLP, using video examples and real life cases, in order to communicate clear treatment examples and facilitate conversation.

Learning Objectives

- Identify common AAC systems

- Understand the OT role in AAC accessibility & use

- How to co-treat & collaborate with SLP regarding a client who is using AAC

- How to integrate AAC into individual OT sessions

- How to appropriately document AAC within the care plan/goal/daily note continuum

Who We Are

- Currently employed at Community Mental Health - Clinton, Eaton, Ingham
  - Consumers must qualify for clinical services during intake
  - Referred by case managers, then script is obtained by physicians

- Caseload Make-up (all primarily peds with DD diagnoses)
  - Autism
  - Cerebral Palsy
  - Trisomy 21
  - Chromosomal Anomalies

- Current Insurances We Work With
  - Blue Cross Blue Shield, Blue Care Network, PHP
  - Medicare & Medicaid

Community
MENTAL HEALTH
CLINTON • EATON • INGHAM

Who are you?

■ Who is familiar with AAC (heard about it somewhere)?

■ Who is able to co-treat with SLP?

■ Who is able to collaborate with SLP?

■ How have you seen or how are you seeing AAC in your setting/practice?

What is AAC?

AAC stands for augmentative and/or alternative communication

- Augmentative - supports existing speech
- Alternative - when speech is absent or non-functional

AAC includes all forms of communication (other than oral speech) that are used to express thoughts, needs, wants, and ideas*

- May be temporary or permanent
- NOT the same as a visual schedules, token strips, first/then
- AAC can be used as a visual tool to help the client comprehend directions (through aided language modeling - described later)

Benefits to AAC – Beyond Access to Communication

- Multi-sensory convergence = auditory, visual and tactile input methods
  - The more sensory feedback available when learning a new task, the easier it is to learn
  - When these 3 sensory inputs occur together, they become "wired" in the brain forming stronger connections which makes learning quicker
- Acts as visual reminder of the words the child can say/use
- Our kids with ASD are visual learners – this is their strong suit!!
- Speech is not concrete (you say words and they disappear) whereas AAC is concrete and may be easier to learn for our concrete learners
- Auditory output through the device is the same every time (for high-tech)
  - *We might say a single word 10 different ways based on our pitch, stress and inflection, which can all sound different to a child with processing deficits (ASD)*

Types of AAC Systems

- Unaided forms – rely on the user's body
  - Facial expressions, body language, gestures, sign language
  - We do many of these on a daily basis!
- Aided forms – require use of tools or equipment
  - No/Low tech – writing, Picture Exchange Communication System (PECS), communication/letter boards, PODD, GoTalk, yes/no cards,
  - High tech – speech-generating devices (SGD), eye-gaze systems, iPads, tablets, switches
    - Communication apps - Proloquo2Go, LAMP Words For Life, TouchChat, Snap+Core First, GoTalk+ for iPad
- *Many* options out there, all depends on client's skill set and needs!

AAC Examples

- PODD (Pragmatic Organization Dynamic Display)
- Tobii Dynavox I12+ Series with eye-gaze
- Switches with scanning options
- GoTalk 20+
- PRC Accent 1000
- iPad - Proloquo2Go
- iPad - LAMP Words For Life
- Pencil & paper
- ASL
- Picture Exchange Communication System (PECS)
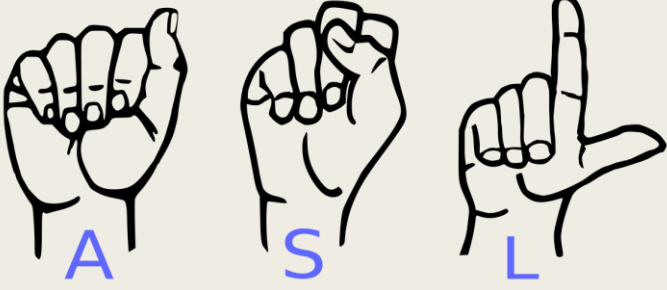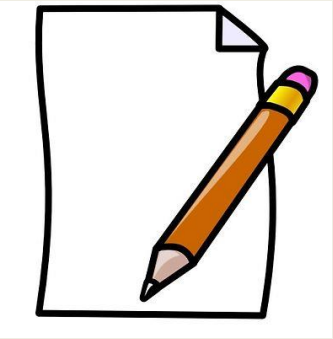
SLP Role in AAC

- Evaluate/assess need for AAC

- Promote AAC awareness and acceptance

- Guide clients through trial/funding process for insurance/Medicaid/Medicare

- Train clients and family members/caregivers on AAC navigation/usage

- Train school staff and other disciplines regarding AAC

- Ongoing programming and modifications

- Troubleshooting and assistance with AAC systems

- Speech and language therapy as usual with AAC

Types of AAC Competency using the DAGG-2

Competency Areas

- <u>Linguistic</u> - Expressing and understanding language; learning and using vocabulary in increasing number, variety and complexity; learning and using linguistic codes unique to one's AAC system.

- <u>Operational</u> - The ability to operate and maintain the communication system to the greatest extent possible.

- <u>Social</u> - Skills needed to communicate effectively in social situations (discourse strategies).

- <u>Strategic</u> - Strategies to overcome or minimize the functional limitations of the AAC system (e.g., speed, lack of prosody) and to prevent or repair communication breakdowns.

Ability level for each competency (scores given for Understanding, Expression, Literacy, Social & 'Other')

- Emergent

- Emergent-Transitional

- Context-Dependent

- Transitional-Independent

- Independent

Collaborate with your client's SLP so that you're <u>aware</u> of what the client can do independently vs. needs assistance with!

OT Role in AAC

- Familiarity with device
  - What system do they use? How do they access it?
- Understand client competency
  - Where are they at in learning their system/language development?
- Collaborate with speech therapist, family
  - Gain answers to the above questions & learn how to support your client
  - Accessibility
  - Co-treat
- Advocate for device use and consistency across client's environments
- Participate in Aided Language Modeling

Achieve Accessibility

PERSON

- Visual perception
- Coordination/motor planning
- Sensory regulation
- Fine motor
- Visual motor
- Portability

ENVIRONMENT

- Positioning
- Seating
- Sensory Input

Collaboration – Common Conversations We Have

- Straps - handle, shoulder strap, chest harness
- Grid size/Visual field/Color contrast
  - *(Visual perceptual skills)*
- R/L side
- Mounting/wheelchairs
- Sustained point (dwell time)/multiple hits
- Stylus/Direct selection
- Praxis skills
- Biofeedback from keyguard for motor learning

Motor Learning & LAMP

A "set of processes associated with practice or experience leading to relatively permanent changes in the capability for movement" (Zwicker & Harris, 2009, p. 30).

- Cognitive Stage - initial exploration

- Associative Stage - self-correcting

- Autonomous Stage - motor schema

Dukhovny, E., & Thistle, J. (2017).

Motor Learning & LAMP
(if motor planning is a barrier to using AAC)

Frequency, length & variability of practice

- <u>Distributed Practice</u> - high frequency, short duration

- <u>Massed Practice</u> - less frequent, longer duration

- <u>Random Practice</u> - different motor sequences practiced in mixed order

- <u>Blocked Practice</u> - motor sequences practiced separately, with multiple trials of a single skill drilled back-to-back

Dukhovny, E., & Thistle, J. (2017).

OT Support During AAC Eval & Training

- **Autism** (Dziuk et al., 2007; Halloran, 2017; Izadi-Najafabadi, Mirzakhani-Araghi, Miri-Lavasani, Nejati, & Pashazadeh-Azari, 2015; Wek & Husak, 1989)
  - Impaired fine motor control and/or dyspraxia
  - Explicit learning strategies = implicit motor learning

- **Cerebral Palsy** (Burtner, Leinwand, Sullivan, Goh, & Kantak, 2014; Thorpe & Valvano, 2002)
  - Reduced speed and accuracy of motor movements
  - Practice motor actions = improved completion of action

- **Trisomy 21** (Latash, 2007; Vicari, 2006; Bussy, Charrin, Brun, Curie, & Des Portes, 2011)
  - Slower and less precise motor movement
  - Practice improves simple motor movements and coordination

Carter H

- 7 y.o old male nonverbal, emerging vocalizations

- Cerebral Palsy and FAS

- OT goal – upper extremity coordination, proximal shoulder stability, core strength and visual motor planning

- Speech goal – yes/no responses, functional communication through PODD

Eli B

- 5 y.o male, minimally verbal

- ASD

- OT Goal –

- Speech Goal – functional communication through LAMP, engagement, attention and play skills

What Our Co-treats May Look Like

- Christian

- 5 y.o male nonverbal

- ASD

- OT Goal – bilateral coordination and motor planning

- Speech Goal – functional communication with Proloquo2Go

Advocate for Interdisciplinary Approach

- Ask questions of SLPs to encourage collaboration

- Inform device choice for best accessibility (matches client's skill)

- Educate SLPs on positioning, vision, fine and gross motor skills needed for AAC success

- AAC is the task that we adapt/modify for optimal independence

Integrate AAC into Individual Sessions

- Importance of using AAC even if OT doesn't feel comfortable
  - How to **get comfortable** with incorporating it into session - use it! Try it!
  - Having it **readily available** at all times
  - Carrying it during **transitions**
    (we wouldn't leave a child's wheelchair in the hallway
    or glasses up on a shelf, just like we shouldn't let their
    AAC collect dust)
- Use Aided Language Modeling

- Make sure you know and understand speech goals; how many words you should be using and what you can expect from that client
  - AAC learner vs. an established AAC user
- Carrying over scaffolding expectation; *not* adding new expectations that the speech therapist hasn't taught them yet

Case Example
6 y.o. minimally verbal w/ ASD

	OT Addressed	Collaborated to Address	SLP Addressed
Initial treatment	Attention, play skills (interact with toy in meaningful way, parallel play), teach cause and effect with toy, accept physical assistance, fine motor skills	20 min SLP 20 min co-treat 20 min OT Collaborate to increase attention/imitation skills	Attempted to use an iPad - client didn't have cause-effect understanding or direct selection (point). Also had poor engagement, imitation and limited interest in SLP.
Progression	OT introduced iPad (case-effect), worked on finger isolation (developmental FM skills); interactive play	Discontinued co-treat as child now able to participate in separate sessions; improved attention/imitation skills	Introduced PECS to teach initiation, worked on engagement and play skills, re-introduced the iPad with communication app
Current status (1.5 years)	Integrate AAC into OT sessions using Aided Language Modeling; explore, label, and learn about foods to support feeding goal	X	Client has his insurance-funded personal SGD and uses it to support his developing speech skills

Aided Language Modeling

- Pairing our spoken language with visuals during natural communicative opportunities

- Takes the stress out of communication while clients are learning to use language

- No demands are placed on the child, we just model!

BY 18 MONTHS babies have heard **4,380 HOURS** OF SPOKEN LANGUAGE and we don't expect them to be fluent speakers YET

If AAC learners only see symbols modeled for communication twice weekly for 20-30 minutes, it will take **84 YEARS** for them to have the same exposure to aided language as an 18 month old has to spoken language.

statistic from Jane Korsten - QIAT Listserv 2011
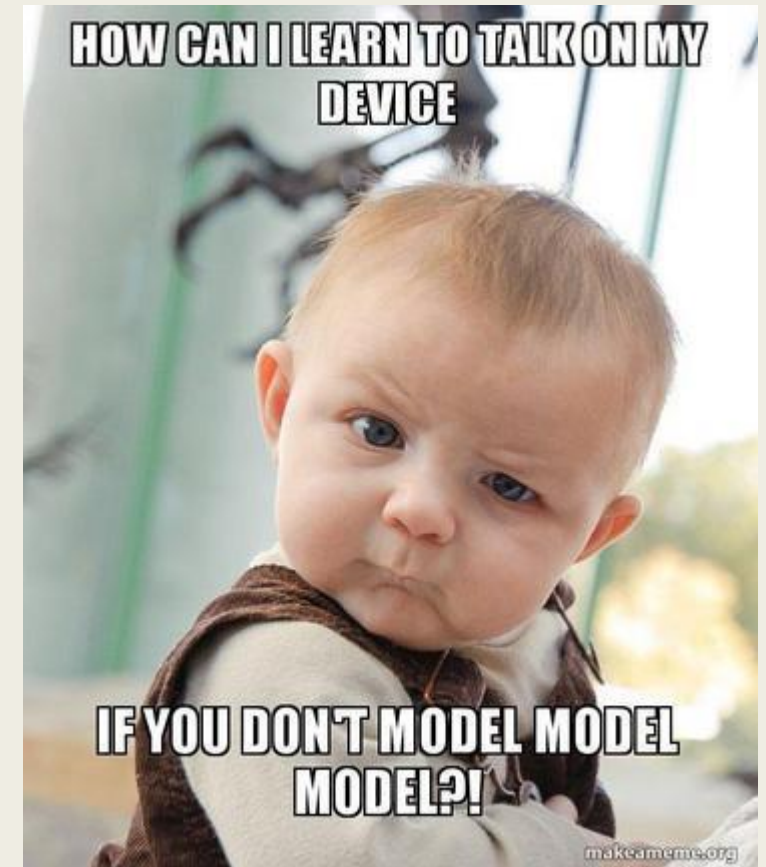photo by Rachael Langley - AAC Specialist

Josie & Johnny

- https://www.youtube.com/watch?v=fIFNMky22-U

Aided Language Modeling Benefits

- Helps serve as a communication opportunity

- Helps AAC facilitators slow language down

- Helps AAC facilitators become competent with AAC system

- To learn AAC you need to speak AAC

- To speak AAC you need to be taught AAC

- Strong research showing effectiveness of ALM

- Helps AAC user see the importance of device

Families using AAC

- We Speak PODD https://www.youtube.com/watch?v=OIcYr42xRgo

- Kreed's World https://www.youtube.com/watch?v=z5YAfFBGxJA (conversation)**

- Kreed's World https://www.youtube.com/watch?v=DKzGyNzikNw

- Lotsacomptons https://www.youtube.com/watch?v=8IKqvfNEP4U

- Lotsacomptons https://www.youtube.com/watch?v=Nz1jVfQOXAE (Peer modeling)*

YouTube Channels: Lotsacomptons, We Speak PODD, Kreed's World

OT Aided Language Modeling

- ■ Alex T
  - – *6 y.o. male, minimally verbal*
  - – *ASD*
  - – *OT Goal – FM, VM*
  - – *Speech Goal – functional communication with Proloquo2Go, yes/no responses*

Practice Aided Language Modeling

- Bubbles
  - Go, up, more, wow!, big, my turn
- Snack
  - Eat, more, all done, I want, give, open
- Shoes
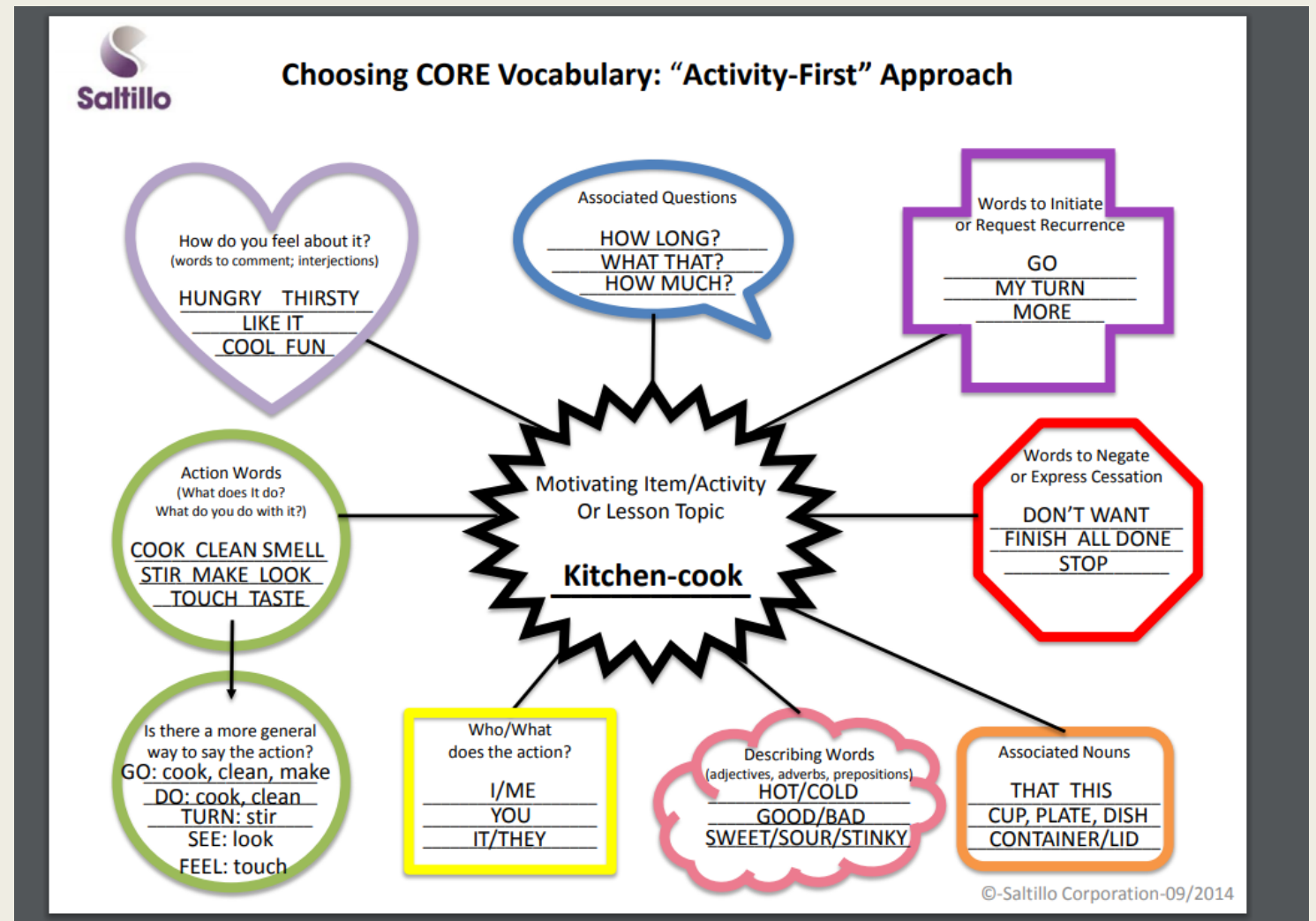 - On, in, you, look, put, help

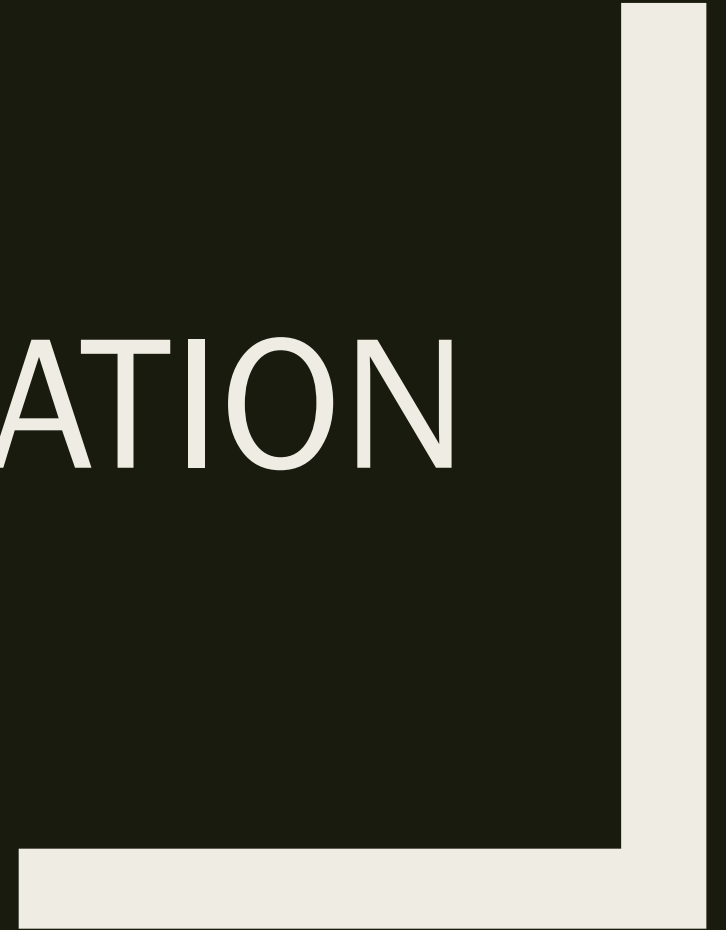## Model the same word, four times.
Close your eyes on the 5th model…

Could you still remember where the word was (or a close approximation?) = MOTOR PLANNING!

How Can You Integrate AAC Into Your Practice?

- Think of an activity or intervention that you often do…. How could you use Aided Language Modeling during this activity?

DOCUMENTATION

Example Speech vs. OT AAC Goals

Speech	OT
John will send more intentional messages by requesting desired objects, actions and/or people using AAC (sign, speech-generating device) provided a level 4 (moderate) assistance as rated on the ASHA Scale of Communication Independence in 60% of opportunities during a session.	John will utilize an adaptive device in order to access his AAC device with set up assistance during educational activity at tabletop 4x/day within 6 weeks.
Steph will accept/reject items with yes/no using her switch and/or gestural head nod provided a level 4 (moderate) assistance as rated on the ASHA Scale of Communication Independence, in 80% of opportunities during 5 out of 7 dinners per week.	Steph will activate her yes/no AAC device using corresponding switch when verbally prompted for a drink during mealtime with 80% accuracy for 4 consecutive meals.
Henry will independently compensate for his unintelligibility by using alternative methods of communication (text-to-speech application) to participate in conversation in all opportunities when his speech is not understood by the listener.	Henry will independently utilize AAC accessibility tool in order to communicate with his family via Skype by December 31, 2018.
Lily will express intentional messages to request things she likes/wants by using AAC (Tobii Dynavox I-Series) in 80% of opportunities provided minimal assistance as documented by parent report.	Lily will demonstrate improved head and ocular motor control in order to activate her AAC device for social interaction using eye gaze system AEB successful activation 5/5 trials, for 3 consecutive sessions.

Documentation in OT SOAP Notes

Speech tracks prompts to use device (receptive) and device output (expressive/pragmatic functions). OT tracks assist to <u>access</u> device.

SOAP examples:

- O: John was unable to sustain isolated point in order to access buttons on AAC device. A stylist was trialed with physical prompt x4. John was able to sustain grasp of stylist and activate x4 buttons on AAC device within 1 min with gestural prompt.

- A: John was able to use adaptive device to access AAC device as necessary to compensate for poor fine motor coordination.

- O: Josie completed peg puzzle while in tall kneel at sensory table with AAC device placed on her left side. With minimal assistance, Josie utilized R hand to cross midline and request puzzle piece.
- A: Per SLP, Josie is able to request using device; therapeutic positioning utilized to increase bilateral coordination via crossing midline and encourage hand dominance.

- O: Tyler's AAC device was placed on his right side with contrasting color velcro highlighting activation buttons.
- A: Due to left neglect and poor figure ground skills, Tyler requires AAC device to be placed on his right side with increased visual contrast and tactile prompt for increased accessibility.

ADDITIONAL INFORMATION

Stimming vs. Learning on high-tech devices

- Repetition is part of exploration
    - When you get a new electronic device, how do you learn it?
- Taking device away, turning device or volume OFF is not an option
    - What if someone put duct tape over a typically developing 5-year old who only wants to talk about dinosaurs during circle time?
- Being disruptive
    - Use it as a teaching opportunity by engaging the learners, providing aided language input, and create a brief interaction around what they said
    - When ignoring the repetition isn't an appropriate option, we can consider using the same consequences we provide to speaking language learners, or use a safety signal or countdown board.
- Just stimming?
    - Figure out WHY - are they bored? Are they overwhelmed?
- Allow time for exploration
    - Put it in their schedule, give them breaks to explore their words

http://praacticalaac.org/praactical/stimming-or-learning-considerations-for-kids-who-repeat-themselves-with-aac/

AAC Myths

- AAC will hinder speech development - FALSE
    - Research shows that using AAC does not stop natural speech development. Instead, there is early evidence showing that AAC interventions can have positive benefits for natural speech production.

- My child/client will not use verbal speech if they use AAC - FALSE
    - Children will always use speech, <u>if they can</u>, as it is the most efficient and accessible method of communication. However, speech does not come naturally or easily to every child; therefore, a child might find AAC easier (even if they already have some speech).

- Speech is delicate and particular – one wrong move and the output is skewed

- Many individuals with ASD have difficulties with motor planning (coordinating the muscles in the mouth), so using their fingers to select icons on a core board or device might be easier than articulating a word.

QUESTIONS

Resources & References

- https://www.asha.org/public/speech/disorders/AAC/

- https://www.asha.org/Practice-Portal/Professional-Issues/Augmentative-and-Alternative-Communication/

- Rocky Bay Positive AACtion Information Kit for AAC teams

- www.praacticalaac.org

- The Dynamic AAC Goals Grid 2 http://tdvox.web-downloads.s3.amazonaws.com/MyTobiiDynavox/dagg%202%20-%20printable.pdf

- https://aaccommunity.net/2018/03/modeling-aac-with-adults/

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