# Experience Low-Tech AAC for Adults

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## Financial Disclosures
Mary Katherine Dally

**Disclosures:**

*Financial*— Compensation for presenting at WVSHA

*Nonfinancial*— Previous employee of Tobii Dynavox

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## Learning Outcomes:

**1** Describe the levels and types of Augmentative and Alternative Communication (AAC)

**2** Review benefits and challenges when implementing AAC in the adult neuro population

**3** Apply learned problem-solving skills utilizing case studies and multiple low-tech AAC examples

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## Within a 10-minute conversation…

- Planting bulbs , try to do themselves
- Hired someone last year
- CBD Oil , medication taken
- Dog had seizures
- Coke 8-10 a day
- Bubble gum packs
- Stereo, record player and records
- Younger generation will eventually sell all their records
- Selling their farm
- Buying a truck
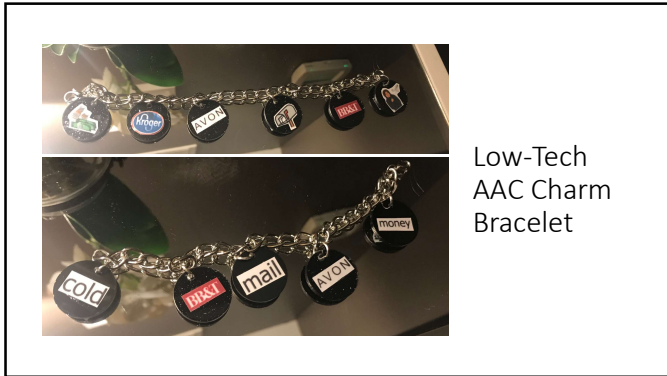
4

One size does not fit all for adult communication…

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Charm Bracelet

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Low-Tech
AAC Charm
Bracelet

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## Defining Augmentative and Alternative Communication:

- **AAC** is a set of tools and strategies that an individual uses to solve everyday communicative challenges

  - **Augmentative** = in addition to verbal speech
  - **Alternative** = instead of verbal speech

  - **Non-Aided** = no external items
  - **Aided** = including external items

Isaac-online.org

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## AAC Levels and Types

- Low-tech
- Mid-tech
- High-tech



Photo: Boardmakeronline.com

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## Layouts Low-Tech AAC:

- Visual Scene Display
- Grid Layout
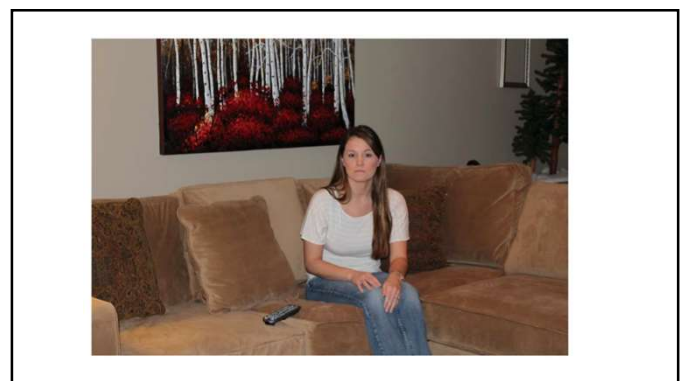- Hybrid



I have a pet …

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### Visual Scene Display

- Use of photographs ( personalized best )
- Represents events or situations
- Meaningful or personal activities ( activity based)
- Client, family or friend involved in photo
- Potential for hot spots
- Decreased navigation

ball

Sammy

*(Light, Wilkinson, Thiessen, Beukelman & Fagher, 2019)*

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## Slide 13

### Research Alert!

- PWA visually attend to scenes different compared to those in the control group

- During camera engaged scenes, PWA spent more time focused on background area and their areas of interest

- No major differences noted for task engaged scenes

- Take into consideration when setting up visual scenes and communication devices for display of information



Camera Engaged

Task Engaged          (Thiessen, Et al., 2016)

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## Slide 14



Do you have a pet?

What's your pet's name?

Script

I have a pet ...

My pet's name is ...

I love animals

Come here!

Sit and stay

Feed my pet

### Grid Layout

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## Slide 15

### Hybrid Layout



Script

Do you have a pet?

What's your pet's name?

I have a pet ...

My pet's name is ...

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## Slide 16

### Let's talk Low

- Low-tech is part of a com
- It doesn't die ( batteries)
- Back-up system ( screen s
- Speed of use ( simple yes
- Situation and location
- Simple, lower cost
- Comfort level for user
- Partner communication a



I want to eat …

Frosted doughnuts     Powdered doughnuts     Éclairs
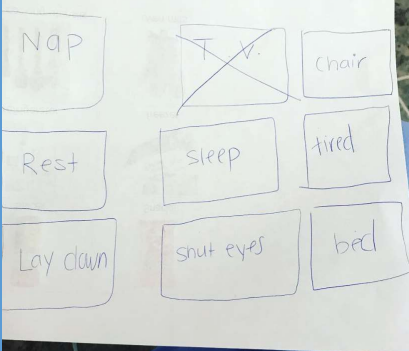
Glazed doughnuts      Chocolate doughnuts

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## Slide 17

### AAC and the Adult Population:

**Challenges/Resistance:**
- Not comfortable with technology
- ( client or caregiver )
- Once had language and know how fast it can be
- Depression
- Cognitive impairments
- Progressive or chronic disease
- Impaired language system ( aphasia )
- Feel like they are giving up on natural speech
- Limited communication partners
- Last resort for therapy



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## Slide 18

### But does my client need AAC?

**Tips:**
1. Great to use as baseline, reassessment and post-treatment assessment
2. Have client and caregiver fill out to note differences
3. A score of >5 indicates client might be a candidate for AAC



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## Slide 19

- • Restorative Treatment
  and/or
- • Compensatory Treatment

**End Goal:** *Maximize Quality of Life & Communication Success*

( www.ASHA.org )

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## Slide 20

### Theories of Neuropl

I want to eat …

1. Use it or lose it *
2. Use it and improve it *
3. Specificity – *the experien*
4. Repetition matters
5. Intensity matters
6. Time matters
7. Salience matters – *the ex*
8. Age matters
9. Transference
10. Interference

Frosted doughnuts    Powdered doughnuts    Éclairs
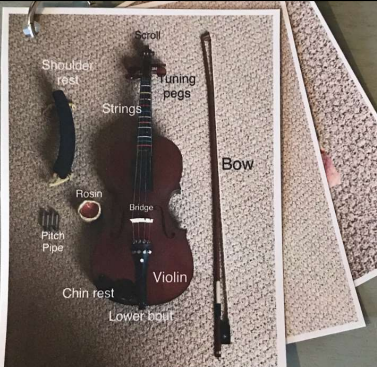
Glazed doughnuts    Chocolate doughnuts

**Lingraphica**
www.aphasia.com

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## Slide 21

### Low-tech Communication Book

- • Created using iPhone and editing tools
- • Added words
- • Printed
- • Keyring
- • **Client Diagnosis:** PPA
- • **Goal**: Communicate what needs to be fixed on his violin using actual photographs
- • **Layout:** Visual Scene with actual Photographs

Scroll
Shoulder rest
Tuning pegs
Strings
Bow
Rosin
Bridge
Pitch Pipe
Violin
Chin rest
Lower bout

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## Slide 22

### Low-Tech Communication Book

- • Created to simulate a rolodex
- • Index cards, glue stick, index card case and file folders
- • Printed cards placed in categories
- • **Diagnosis:** Alzheimer's Dementia
- • **Goal:** Increase social communication through what the client was comfortable with
- • **Layout:** 1x1 Grid / Hybrid

FRUIT    WOF    EARLY
I was born in:
INDEX CARD BOX
ELMER'S

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## Slide 23

### Low-Tech Communication Pillow

- • Created for a client and caregiver not as comfortable with high-tech AAC
- • Pillowcase, pillow and fabric transfer
- • Printed with Laser Jetink and ironed on
- • **Diagnosis:** ALS
- • **Goal:** Quick communication to express basic needs and wants for positioning, paint and temperature
- • **Layout:** Multi-grid layout

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## Slide 24

### Low-tech AAC Pillow

medicine    call doctor
music    blanket
massage    reposition
stretch    fan

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## Slide 25

### Low-tech AAC System

- Gestural system
- Instastix Mini 9 camera + film
- Photos with labels
- **Diagnosis:** Aphasia and AOS
- **Goal:** Increase communication via gestures, goals to practice phrases and visuals to teach family gestural meanings
- **Layout:** 1x1 Grid /Hybrid



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## Slide 26



- Created using Boardmaker Online
- Used for Thanksgiving Dinner
- Printed on cardstock
- Folded in half; placed on table
- **Client Diagnosis:** AOS , Dysarthria, Brain Tumor
- **Goal**: Use of visual to aid in verbal communication or supplement speech
- **Layout:** Gird layout
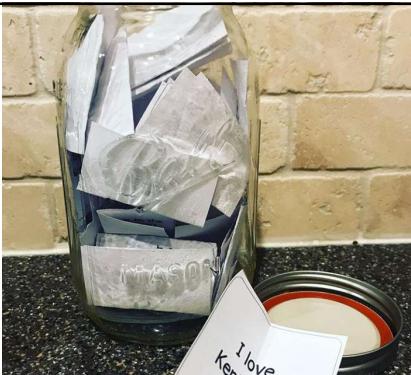
### Low-tech AAC System

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## Slide 27

### Repetition and Intensity Matter – HEP

- Take a low-tech AAC board with grid layout
- Cut each button message/button
- Put in a jar
- Have client pull one message each day
- Navigate on their low-tech AAC to locate



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## Slide 28
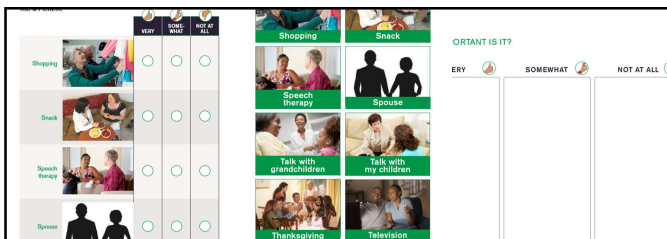
### Gathering Information:

As is common with many assistive technologies, *the development of early AAC technologies was driven primarily by the experiences and beliefs of clinicians in the field*. As the AAC field moves forward, there is an urgent need to integrate clinical experience *and consumer perspectives* with research on the visual, cognitive, motor, linguistic, auditory, and psychosocial processes of individuals with complex communication needs in order to ensure that AAC technologies are developmentally sound and optimally effective.

*(Light, Wilkinson, Thiessen, Beukelman & Fagher, 2019)*

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## Slide 29
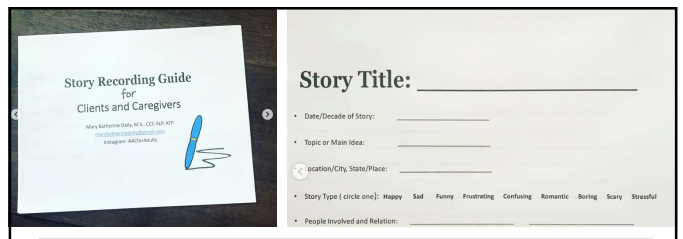


### Gathering Information

- Tobii Dynavox Interest Check-List
  - Picture based and simplified for client participation

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## Slide 30



### Gathering Information:

1. What would you like to be doing that you are not doing?
2. What would you like to be talking about?
3. What strategies are being used other than natural speech?
4. Are caregivers willing to learn strategies?

**Question:** 60-80 % of what we talk about is what?

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## Slide 31

**WHAT DO YOUR COMMUNICATION FACILITATORS NEED TO LEARN TO DO?**
- ❑ Not to interrupt
- ❑ Not to guess or fill in words unless I say it's OK
- ❑ To guess more efficiently by narrowing down the category of the target message
- ❑ Tell me what they do understand when I have difficulty communicating clearly
- ❑ Slow down when talking to me
- ❑ Give one item of info at a time when talking to me
- ❑ Write things down, draw, or gesture to help me understand better
- ❑ Help me answer yes/no questions by tagging them (yes….or no?)
- ❑ Ask me questions/give me opportunities to communicate
- ❑ Write down possible answers for me so I can point to them
- ❑ Help me find the correct pages/messages when I use my communication system

### Gathering Information

- Aphasia Needs Assessment (©) 1997, revised 2006,
- Kathryn L. Garrett & David R. Beukelman
- University of Nebraska – Lincoln
  - Includes reading and writing
  - In-depth topics
  - What communication partners need to learn

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## Slide 32

### Mini Communication Flip Books

- Emergency Information
- How to communicate with me
- How I communicate
- Other common phrases or questions
- Not just for adults !
- Free resource

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## Slide 33

### Other Considerations when creating low-tech AAC :

- Involve your client
- Use your session!
- Layouts
- Symbol type?
- Grid size (how many buttons)
- Color
- Boarder and spacing
- One Page? More than one page?
- Font Size- Aphasia
- Font Type- Alzheimer's
- Portability?

**Typing and fonts**
- Type your sentence top left
- Leave plenty of space around the text
- Use a font size between 14 and 18 pt
- Use a sans serif font
- Arial and Calibri are sans serif and easy to read
- Times New Roman is serif and is harder to read

**Gestures** can help

www.stroke.org/uk

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## Slide 34

### Free Stock Photos

**Pexels.com**
- Free stock photos
- Search option
- Consider for visual scenes, grid layout or hybrid

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## Slide 35

### Free Symbol Software

**Cboard**
- Free symbol software
- Premade boards
- Ability to edit text
- Limited symbols
- Blank boards to add your own photographs

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## Slide 36

### Free Symbol Software

**Picto- Selector**
- Free software download
- Multiple layouts
- Multiple symbol sets
  - Photographs
  - Line drawing
- Editing capability
- Programming?

Kentucky Basketball

Basketball Game

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## Symbol Software

### Boardmaker Online

- Free 30 day trial
- Adult symbols
- Templates
- Community to search for already created activities



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## Labels, Ads and Magazines



Photo from Walgreens.com

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Boogie Board

Wear N Write

## AAC Writing Tools

Photo credit: Amazon.com

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## Low-Tech AAC Alternative Access



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## Low- Tech AAC Partner Assisted Scanning

- Created using Boardm...
- Used in a memory car...
- Printed on cardstock +...
- Tabs included on page...
- **Client Diagnosis:** Ala...
- **Goal**: Provide choices... increased independen... preferred items
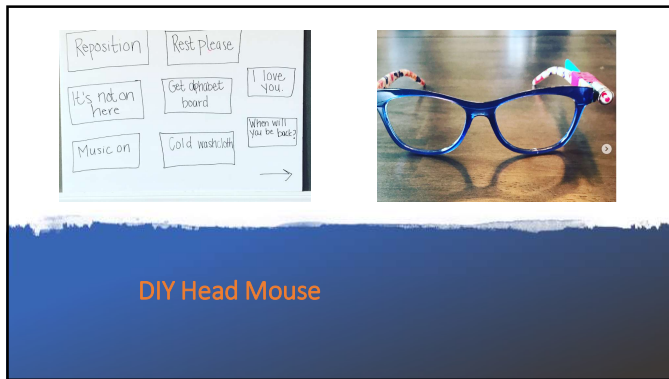- **Layout:** Gird layout 2...
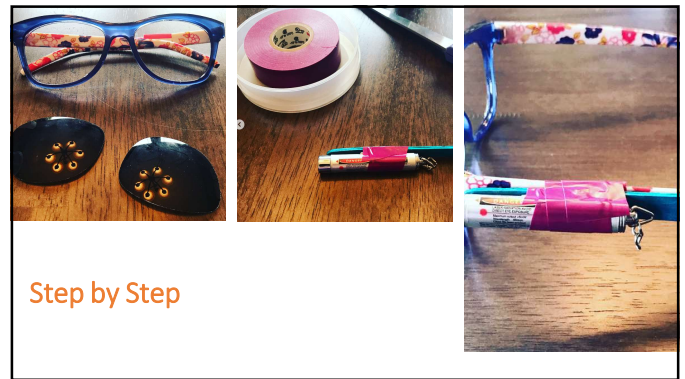
Yes/No Response ....



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## Low-Tech AAC Visual needs

- Created using Boardmaker Online
- Printed on cardstock + laminated
- Folded in half; taped together
- **Client Diagnosis:** MS
- **Goal**: Communication of needs/wants in medical setting, visual impairment and past knowledge for keyboard
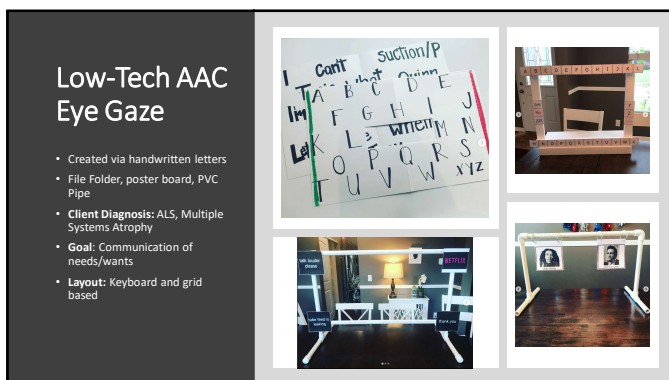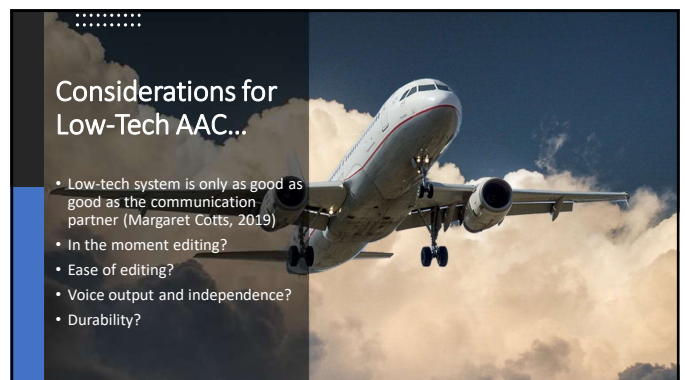- **Layout:** Gird Layout



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DIY Head Mouse

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Step by Step

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## Low-Tech AAC Eye Gaze

- Created via handwritten letters
- File Folder, poster board, PVC Pipe
- **Client Diagnosis:** ALS, Multiple Systems Atrophy
- **Goal**: Communication of needs/wants
- **Layout:** Keyboard and grid based



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## Considerations for Low-Tech AAC...

- Low-tech system is only as good as good as the communication partner (Margaret Cotts, 2019)
- In the moment editing?
- Ease of editing?
- Voice output and independence?
- Durability?



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## Top Tip: Conversation Mode

- Using the device to talk about what you like/dislike
- Items or things you have in common
- Common stories based on items
- Natural communication
- Input before output
- Errorless learning
- "modeling" for adult users
- Repetition and intensity matter!

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" In addition to learning more about the communication and cognitive skills that adults bring to the task of AAC, we must examine best ways to *represent language concepts*, *best ways to present language in low-tech and high-tech media*, and best ways to integrate the strategies into the *natural environments* for conversation."

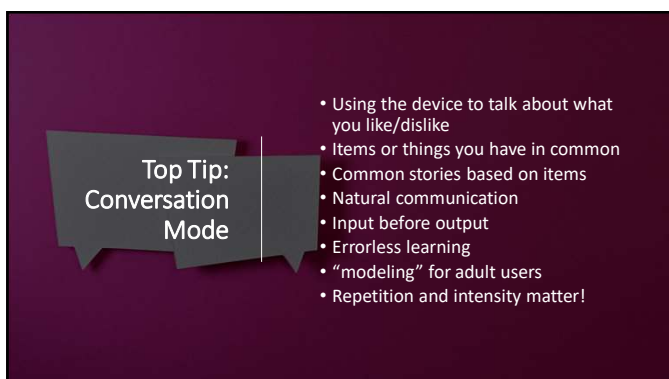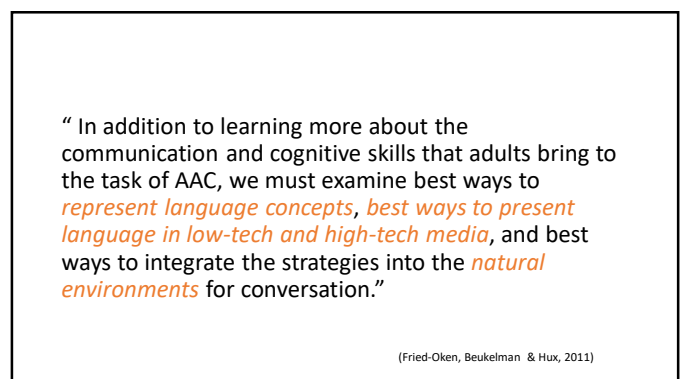(Fried-Oken, Beukelman & Hux, 2011)

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Remember!
One Size Low-Tech AAC does not fit all !

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Resources

Teachers Pay Teachers AAC for Adults :
https://www.

Lingraphica Continuing Education:
https://

Cough Drop AAC in the Cloud 2019:
https://www.

Boardmaker Online 30 Day Free Trial:
https://

Cboard:
https://

Pexels:
https://

Picto Selector:
https://www.pictoselector.eu/

Accessible Information Guidelines for Stroke:
https://www.stroke.org.uk/

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### References

Fried-Oken, M., Beukelman, D., & Hux, K. (2011). Current and Future AAC Research Considerations for Adults with Acquired Cognitive and Communication Impairments. Assist Technol, 24(1): 56–66.

Janice Light, Krista M. Wilkinson, Amber Thiessen, David R. Beukelman & Susan Koch Fager (2019): Designing effective AAC displays for individuals with developmental or acquired disabilities: State of the science and future research directions, Augmentative and Alternative Communication, DOI: 10.1080/07434618.2018.1558283

Thiessen, T., Beukelman, D., Hux, K., & Longenecker, M. ( 2016). A Comparison of the Visual Attention Patterns of People with Aphasia and Adults Without Neurological Conditions for Camera-Engaged and Task-Engaged Visual Scenes. Journal of Speech, Language, and Hearing Research, 59, 290-301.

ASHA Aphasia Link:
https://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=Treatment#Treatment_Approaches

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### Contact Information:

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