


Session #1088

## AAC Therapy in the Upper Grades: Aligning Activities with Evidence-based Intervention Strategies

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## Additional Resources

## Our AAC Students

- **Emerging Communicators:** Does not have a reliable method of expressive communication through symbolic language
  - Primarily non-symbolic communication; No reliable yes/no; Performance w/ AAC is still inconsistent
- **Context-dependent Communicators:** Has reliable symbolic communication but is limited to certain partners or contexts
- **Independent Communicators:** Is able to say anything to anyone in any context

Dowden, 1995

## Designing AAC Intervention

- Therapy plan is driven by AAC goals, **not** activities or materials.
- Learning outcomes improve when therapists provide **strong emotional and instructional support.**

## AAC Intervention Principles

- The most important part of any AAC therapy session is the **implementation of effective instructional strategies.**
  - Good activities don't make good therapy.
- Therapy plan should address a **sequence of instructional experiences** that lead to the desired AAC behavior.

## AAC Intervention Principles

- Generalization is an important part of all AAC therapy sessions.

For more info: Session #1652; Sat at 10:30 in CC/204C


## Planning Our Activities & Therapy Materials

- Activities which:
  - Are *effective* at building the target skill
  - Are *appropriate* for the where the student is in the continuum of learning: Initial instruction, practice, generalization
- Using materials that:
  - Are effective, engaging, and sustainable



## Informed clinicians want to know:

- What does the activity really accomplish?
- How well does it address the student's AAC goals?
- Where does this fall in the 'big picture' of the student's intervention?
- What's the evidence base? How do can I use it effectively?



## What does the activity really accomplish?

- It **introduces** a new skill.
- It **teaches** a new skill.
- It **gives practice** on an emerging skill.

Image Credit: Lynnette Estrada




## Getting Successful Outcomes

The Athlete	The Clinician
○ Warms up, stretches	○ Builds awareness & engagement
○ Trains, competes	○ Teaches & instructs
○ Cools down	○ Practices, reviews, reteaches




## What's the Primary Purpose?

- Build awareness & engagement
- Teach & instruct
- Practice & review



## What's the Primary Purpose?

- Build awareness & engagement
- Teach & instruct
- Practice & review



Let's look at another example.

**Diving Deep for Synonyms and Antonyms**  
Created by TEACHERS UNLEASHED

What's the purpose?

- Awareness?
- Teaching?
- Practice?

Welcome!  
My name is Wendy, and these are my diving mates, Pat and Diana. Together we will discover the beauty of the ocean, and describe what we find with synonyms and antonyms.

Teachers Unleashed

Teachers Unleashed

New information

Before we can dive in you need to understand what synonyms and antonyms are!

**Synonyms**  
Are words that mean the same

**Antonyms**  
Are words that mean the opposite

Let's take a closer look...

**A Closer Look....**  
For example: take the word 'happy'

Synonyms	Antonyms
content	sad
pleased	miserable
joyful	gloomy
glad	unhappy
cheerful	depressed

Teachers Unleashed

Practice & Feedback

Okay... Practice Time!  
On your whiteboard or piece of paper, make a T-chart and decide which words are **synonyms** and which are **antonyms**.

When you've finished... Check your work!  
**Synonyms** will turn **red**, and **Antonyms** will turn **yellow**!

Teachers Unleashed

Teachers Unleashed

More Practice & Feedback

When sharks are hunting for prey, they can seem **scary**.

kind	pleasant	frigid
chilling	terrifying	nice

When sharks are hunting for prey, they can seem **scary**.

kind	pleasant	frightening
chilling	terrifying	nices

Teachers Unleashed

Adapting Activities & Materials

- Why even use activities & materials that need to be adapted?
- To adapt successfully we need to know:
  - What's the target skill?
  - Where are we in the learning sequence?

Teachers Unleashed

## Why Adapt?

- One activity or set of materials must meet the needs of several students
- Activity and/or materials are geared for practice, not instruction
- Little/no prep time
- Student engagement

Let's look at some examples.

## Weekly Cooking Activity Makeover

Adapted in order to differentiate instruction

- Goal for Students **A**: Requesting
- Goal for Students **B & C**: Expand MLU
- Goal for Student **E**: Tier 2 vocabulary

## Harvest High School Life Skills Café

### Activity Sequence

- Week 1: Recipe selection, shopping list
- Week 2: Review visual recipe, develop menu
- Week 3: Cooking, eating
- Week 4: Write, share

## Tier 2 Vocabulary

	Instructional Strategies	Activities
<b>Wk 1</b> Pick recipe, shopping list	Focused language stimulation Dialogue	Identify Tier 2 descriptors Start semantic web Develop word bank
<b>Wk 2</b> Review picture recipe, menu	Focused language stimulation Dialogue Repetition with variety	Expand semantic web Sentence substitution Vocabulary collage
<b>Wk 3</b> Cooking, eating	Focused language stimulation Dialogue Repetition with variety	Expand semantic web Cloze sentence
<b>Wk 4</b> Writing, sharing	Focused language stimulation Dialogue Repetition with variety Recasts	Complete semantic web Grammaticalize sentences Vocabulary collage

## Soups

**Tomato:** Creamy tomato soup, spicy and rich, is Chef Brianna's favorite.

**Chicken Noodle:** An old classic recipe handed down from Brianna's grandmother is sure to please.

**Vegetarian Vegetable:** Our newest creation is a healthy alternative to a heavy meal.

Find the describing words.

Discuss.

Develop a word bank of relevant descriptors.

## Soups

**Tomato:** Creamy tomato soup, tasty and rich, is Chef Brianna's favorite.

**Chicken Noodle:** An old classic recipe handed down from Brianna's grandmother is sure to please.

**Vegetarian Vegetable:** Our spicy creation is a delicious alternative to a heavy meal.

Find the describing words.

Discuss.

Pick some to substitute.

Replace those with other words.



### Soups

**Mushroom:** This old favorite, hearty and \_\_\_\_\_, will warm you on cold nights.

**Pumpkin:** Chef Brianna's newest experiment, this \_\_\_\_\_ and \_\_\_\_\_ dish will leave you scraping the sides of the bowl.

Find the describing words.

Discuss.

Fill in the blanks.

### Soups

**Vegetarian Vegetable:**

Our most spicy creation is a delicious alternative to a heavy meal.

↓

Our spiciest creation is a delicious alternative to a heavy meal.

Change the descriptor to its superlative form.

### Speech Tube Activity Makeover

Adapted in order to add instruction

- Student Goal: Comment using core vocabulary from main screen

what	when	where	who	please	thank you	hey	got	worst	time	day	bad	good	hurt	see	take
mine	I	me	don't	no	to	be	come	feel	give	hurt	love	a	more		
he	my	can	not	think	go	have	work	love	love	this	the	that			
she	it	do	were	get	help	know	before	make	get	about	and	at			
they	you	am	is	the	need	play	stop	read	see	see	for	in	with		
we	your	have	could	never	watch	work	have	take	back	of	on	out			

hurt, see, take

**Instructional & visual supports added:**

- Aided language input
- Match to sample
- Forced choice responses
- Video model
- Talk Turns visual support

### When Selecting Materials

- Set a **top** priority: Know what you want to achieve
- Identify the instructional phase for the target skill
  - Build awareness & engagement
  - Teach & instruct
  - Practice & review

## How can we maximize positive outcomes?

THERAPY APPROACHES INTERVENTION STRATEGY TEACHING TECHNIQUES

**STRATEGIES**

INSTRUCTING SUPPORTING

## Selecting evidence-based strategies

Low-cost, clinician-authored materials

Content validity, efficacy?

## Selecting evidence-based strategies

6% SLPs who reported that they regularly served students with AAC needs

4 to 16% caseloads occupied by students with severe or profound communication impairments

ASHA, (2014); Costigan & Light, (2010)

## What does the research say?

## Selecting evidence-based strategies in AAC

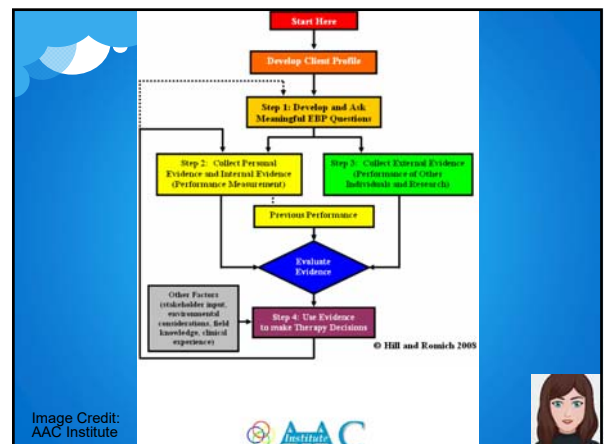
Clinical Expertise

Best Research Evidence

Client Values and Preferences

Knowledge about Client

AAC Device and Program



## Selecting evidence-based instruction for clinical use

- Emergent Communicator
- Context-Dependent Communicator
- Independent Communicator

## Selected Intervention Strategies

Direct	Indirect
◦ Strategy Instruction	◦ Aided Language input
◦ Graduated Prompting	◦ Communication Temptations
◦ Safety Signals	◦ Focused Language Stimulation
	◦ Think-aloud

## Direct Intervention: Strategy Instruction

**Figuring out metaphors**

1. Identify the metaphor
2. Determine what two things are being compared
3. Create an image in your mind
4. Provide an explanation

e.g., Adapted Strategic Instruction Model (Soto, Solomon-Rice, & Caputo, 2009; Thiessen, Horn, Beukelman, & Wallace, 2011)

## Indirect Intervention Strategy: Aided Language Input

- Augments speech of communication partners
- Clinician selects symbol on communication board/device while providing verbal model
- Slows the rate of speech
- Multi-modal

Drager, et al., (2006), Dada & Alant, (2009), Drager, (2009), Harris, (2004)

## Indirect Intervention Strategy: Communication Temptations

- Promote initiation
- Manipulating environment
  - Creating obstacles
- WAIT TIME!
- Build on communication



Wetherby & Prizant, (1989)

## Indirect Intervention Strategy: Focused Language Stimulation


- Provide frequent models to promote target language concepts
- Meaningful context
- Can be used for many language concepts
- Target words/phrases or language structure should be very obvious

Weismer & Robertson (2006), Girolametto, Pearce, & Weitzman (1996)

## Indirect Intervention Strategy: Think-Aloud

- Reveal internal thought process
- Problem solve
- Monitor progress
- Metacognition

Kent-Walsh & McNaughton, (2005)



## Jackson: Emergent Communicator

- **Age:** 21
- **Disorder:** Mixed expressive receptive language disorder secondary to ASD
- **Educational Setting:** Public HS special education classroom
- **AAC:** iPad with ChatAble app
- **Communication**
  - Strengths
  - Challenges



## Therapy Materials & Activities

- **Materials:**
  - iPad with ChatAble Application
  - Visual picture schedule
  - Customized activities (Puzzles, matching etc.)
- **Activities**
  - Vending Machine, Hop on, Art (Vocabulary Collage), Snack, Puzzles, Matching, Magazine





Bathroom




## Visual Schedule


- Began with an object schedule
- Transitioned to a picture schedule




## Puzzles of symbols on his SGD




Also provides opportunities for requesting



## Match-to-Sample



Match to symbols on his SGD





## Matching

Match to symbols on his SGD

Relevant life experiences (plane trip)

## Social Narratives

Build comprehension and understand expectations

## Intervention Strategies

### Direct

- Use of visual supports
- Explicit instruction
- Video self-modeling
- Hand-under-hand strategy

### Indirect

- Aided Language input
- Communication temptation
- Language extensions and expansions

## Involving Communication Partners

- Parent participation in therapy
- Active participation in session
- Demonstration of supportive strategies
- Coaching on AAC facilitation skills

## Creating Communication Opportunities

Need	Opportunity	Reinforcement
Jackson wants something to eat	Put preferred food times in unpredictable places	Jackson will received something to eat when he uses his device to request
Jackson wants to listen to music	Take out the batteries in the radio	Jackson will listen to music when he uses his device to request

## Responding in a Supportive Way

Teaching caregivers to:

- Provide Aided Language Input
- Model comments, instead of asking questions
- Allow wait time

Say "I like it"

instead of "Do you like it?" when referring to something you know Jackson likes (for example, listening to music).

Say "I don't like it"

instead of "What's wrong?" when you see Jackson reject an item by putting it off of his plate or away from him.

## Partner Training

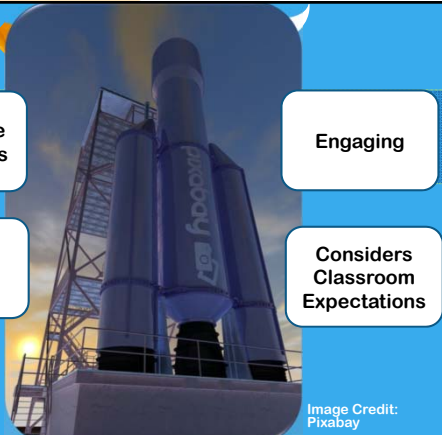
- o Aided language input
- o Communication temptations
- o Language extension and expansion



Based on these successes, the family began requesting support for additional life experiences (e.g., 1<sup>st</sup> plane trip)

## Alexander: Context Dependent Communicator

- Age: 15
- Disorder: Mixed expressive receptive language disorder secondary to ASD
- Educational Setting: Private special education school
- AAC: Proslate 8D with TouchChat WordPower 60 Basic
- Communication
  - Strengths
  - Challenges



Appropriate for his Goals

Engaging


Age Respectful

Considers Classroom Expectations

Image Credit: Pixabay

## AAC Device: ProSlate


TouchChat WordPower 60 Basic (Customized)

Original Version      Initial Customized Screen

## Therapy Activities & Materials

Activities	Materials
<ul style="list-style-type: none"> <li>o Greetings</li> <li>o Modified Sequential Phonic Instruction (Cunningham, 2000)</li> <li>o Shared Reading</li> <li>o Science Experiment</li> </ul>	<ul style="list-style-type: none"> <li>o Visual Supports                             <ul style="list-style-type: none"> <li>o Visual Schedules (greeting routine, session agenda)</li> <li>o Personal Participation &amp; Social Stories</li> <li>o Pictello &amp;/or Tar Heel Reader Stories (ipad, print)</li> </ul> </li> <li>o Realize Language</li> <li>o Letter tiles, Science materials</li> </ul>



Pictello Story

Printed Pictello Story & Experiment Mini Schedule

Session Schedule/ Agenda

### A New Talker



People talk in many ways. They say words. They write. They use their faces and bodies.

Some people also use Talkers.



### Charging My Talker



My Talker has a battery. The battery looks like this.



When the battery runs out, the Talker will not work.



Sometimes, we have to change the battery so that the Talker will keep working.



It is important to change my Talker.



When the battery runs out, the Talker will not work.



It is important to change my Talker.



When the battery runs out, the Talker will not work.




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It is important to change my Talker.



When the battery runs out, the Talker will not work.



It is important to change my Talker.




When the battery runs out, the Talker will not work.



It is important to change my Talker.


## Intervention Strategies

<b>Direct</b>	<b>Indirect</b>
<ul style="list-style-type: none"> <li>○ Visual schedules</li> <li>○ Mand-model</li> <li>○ Prompt hierarchies</li> <li>○ Safety signals</li> <li>○ Read, Ask, Answer, Prompt (RAAP)</li> </ul>	<ul style="list-style-type: none"> <li>○ Aided language input</li> <li>○ Communication temptations</li> <li>○ Extended pause time</li> <li>○ Language extensions &amp; expansions</li> </ul>





## Involving his Communication Partners

- Aided Language Input
- Building communication opportunities
- Contingent feedback



<b>MAND MODEL</b>	<b>Communication Temptations</b>
<b>Safety signals</b>	<b>Prompt Hierarchies</b>
<b>Extended pause time</b>	<b>Language extensions &amp; expansions</b>
<b>VISUAL SCHEDULES</b>	<b>Aided Language Input</b>

## Veronica: Independent Communicator

- **Age:** 18 years old
- **Disorder:** Cerebral Palsy; Expressive/Receptive Language Disorder
- **Education:** Public HS General Ed with some special ed classes
- **Type of AAC:** Tobii Dynavox V Max & Maestro, Gateway 60, iPad w/ Verbally
- **Communication**
  - Strengths
  - Challenges



## Therapy Materials

- Anchor charts & other visual supports
- Tier 2 Word Lists
- Narratives for recounts
- Story Grammar Marker




### Story Grammar Marker

Each symbol or icon on a SGM<sup>®</sup> represents an element of a story.

1. Character = Who it is about?
2. Setting = Where or when did it happen?
3. Kick Off = What happened?
4. Feelings = How does he/she/they feel?
5. Plan = What does he/she/they want to do?
6. Actions/Attempts = What does he/she/they do?
7. Consequence = How does it turn out?
8. Resolution = How does he/she/they feel now?

**"The Big Picture" Strategy Tracker**

When I read this story, I will be able to:

- Identify the main characters in the story
- Identify the setting of the story
- Identify the main problem of the story
- Identify the main events of the story
- Identify the main characters' feelings
- Identify the main characters' actions
- Identify the main characters' consequences
- Identify the main characters' resolutions

**Topic Conflicts**

- Character vs. Character
- Character vs. Nature
- Character vs. Society
- Character vs. Self
- Character vs. Supernatural
- Character vs. Technology
- Character vs. Environment
- Character vs. Other

### Sequencing Instructional Activities

Here is your summary of *The Wolf Princess*

*The Wolf Princess* takes place in Russia. It is about a girl named Sofia loving her dad's bedtime stories. Sofia goes to Russia on a school field trip. Along the way, Sofia's train stops in the middle of nowhere, and Sofia learns that she's a princess! This book had me on the edge of my seat, and I want to read it!

- For complex skills:
  - Break It Down
  - Focus on teaching component skills
  - Start with one aspect
  - Build slowly over time
  - End with carry-over activities (weekly homework)

### Goal: Using adverbs with -ly endings in grammatically correct sentences

- Teach the suffix meaning
- Teach the usage
- Find the errors
- Correct the errors
- Create your own in sentences
- Create your own in narratives

Let's add -ly to some of your adjectives.

- When I go to school, everything seemed **amused**.
- The puppy was **adorable**.
- I got frustrated when people are not **affable**.
- I am very **dependent** on my friends.
- They lived a **happier** life together.
- I felt **embarrassed** at the beach when I was alone.
- After working on, the boy said that he felt **relieved**.

These sentences are messy. Help me fix them!

- I drove **careless** to get to the beach through **crowded**.
- I thought **the** dog reacted when the child **was** in my **the** **unfortunate** **was** **struggle** **to** **play**.
- Finally, **then** **negative** **ended** **the** **picture**.
- Instead, **actually**, **the** **child**.

### Implementing Therapy Activities

- Use a predictable structure
- 1 at a time
- Work on multiple goals in some activities
- Review, review, review!

### Metalinguistics: Student scores her own sentences

**Narratives**

- 1= less than 4 sentences.
- 2= 4 sentences.
- 3= 5 or more sentences
- 4= 5 or more sentences and at least 1 conjunction

**Elaboration in Recounts**

- 0- there are no accurate supporting details of the narrative
- 1- only one accurate supporting detail is provided
- 2- two accurate supporting details are provided
- 3- three accurate supporting details are provided
- 4- three accurate supporting details are provided and some elaboration is present, but it is not all accurate
- 5- everything is sufficient detail and accurate elaboration

### Intervention Strategies

Direct	Indirect
<ul style="list-style-type: none"> <li>Visual Supports</li> <li>Scaffolding</li> <li>Adapted Strategic Instruction Model (A-SIM; Thiessen, Horn, Beukelman, &amp; Wallace, 2011)</li> </ul>	<ul style="list-style-type: none"> <li>Focused language stimulation (Weismer &amp; Roberston, 2006)</li> <li>Recasts</li> <li>Think-aloud</li> <li>Message co-construction (Soto, Solomon-Rice, &amp; Caputo, 2009)</li> </ul>

**Remember...**

- we've been working on conjunctions, you know what those are... last time we had them on the poster for you to look at, this time I want you to still use them as much as you can and we will track them, but I'm not going to remind you.
- We have also been working on vocabulary words with the suffixes -able and -ant.
- Today, we are going to focus on the suffix -able, since these are very tricky!
- During this session I will be listening for sentences with words ending in -able.

**-able**

- Do you remember what happens to a word when you add the suffix -able?
- Can you give me an example?

Adding -able to the end of a word can turn the word into an adjective (a word that describes a noun)

- Comfort = a condition of well-being or feeling a relief from pain. (verb)
- Comfort + able (comfortable)= providing physical comfort (adjective)

**Tracking Boards**

- We will use these boards to keep track of how many times I used words ending in -able and -ant in sentences, and how many times you do the same
- We will also track how many times each of us uses conjunctions to combine two thoughts or sentences.

**2. Conjunctions**

First, let's review our conjunctions and their definitions:

**Since**

- This word can refer to something that happened in a period of time.
- Mike has been promoted twice since he joined the company.
  - In this example, the conjunction since joins two clauses: 1. Mike has been promoted twice, and 2. He joined the company.
- This word can also mean because or as.
  - I think I'll stay home and watch a movie, since it's raining.
  - Since I just made \$40 baby sitting, I will go buy myself new shoes.

## Self-Determination

- Involve student in:
  - Goal setting
  - Data collection & review
  - Personal autonomy
  - E.g., Student selects some of the target vocabulary words
- Align with future directions & plans

Week 2 Activities: August 15-19

- Activity 1: Explore BCC's website <http://www.broward.edu/Pages/home.aspx>. Look around at all of the different subjects that you can choose to study. Using the Tier 2 word, optimistic, create 2 sentences about what subjects you're interested in.
- Activity 2: Explore BCC's page about all of their food options, <http://www.broward.edu/studentresources/dining/Pages/default.aspx>. Using two of your Tier 2 words [misunderstood, optimistic, incompetent], create 2 sentences about the food choices that BCC offers to the students.

Thank you!

bit.ly/AACupperGrades