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Using Visual Scene Displays to Support Communication for Children who Use AAC

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Speaker Disclosure

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- **Michelle Therrien** receives a salary for conducting research at Florida State University. The work presented in this session was funded in part by:
 - The Penn State AAC Leadership Project, a doctoral training grant funded by the U.S. Department of Education, grant #H325D170024
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- **Kelly Whalon** receives a salary for conducting research at Florida State University. The work presented in this session was funded in part by:
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- **Emily Laubscher** receives a salary for conducting research at Regis College. The work presented here was supported in part by funding from:
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Session Disclosure

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- This presentation will focus exclusively on using visual scene displays and video visual scene displays and will not include information on other similar or related AAC display options. It will provide a list of available VSD creation applications – the presentation is not limited to discussing one particular product.

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Learning Objectives

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Through participation in this session, attendees will be able to:

- Describe two improvements to communicative interactions for children who use AAC in the summarized studies as a result of intervention.
- Describe* how to create one static visual scene display with three communicative hot spots.
- Describe* how to create one video visual scene display with two communicative hot spots.

*and demonstrate!

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Session Evaluation and CEUs

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- Session Feedback Evaluation
 - Your feedback is very important to us. Please be sure to complete the session evaluation through the ATiA mobile app.
- CEUs
 - This presentation is CE approved for:
 - AOTA
 - ASHA
 - ACVREP (start code: pink31)
 - CRC
 - IACET
 - Please https://s3.goeshow.com/atia/orlando/2023/ceu_sessions.cfm

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Background

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Motivation for our research

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- Interactions with capable communicators facilitate language learning for young children (Vygotsky, 1978)
- Play with peers is an important context for learning in childhood (Schuler & Wolfberg, 2000; Charlop et al., 2018)



Unfortunately, children with complex communication needs (including children with ASD) can face challenge to participation (Charlop et al., 2018) such as:

- Communication that is unconventional and/or not easily understood by communication partners
- Play that is unconventional, or delayed acquisition of symbolic play skills



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What's a VSD?

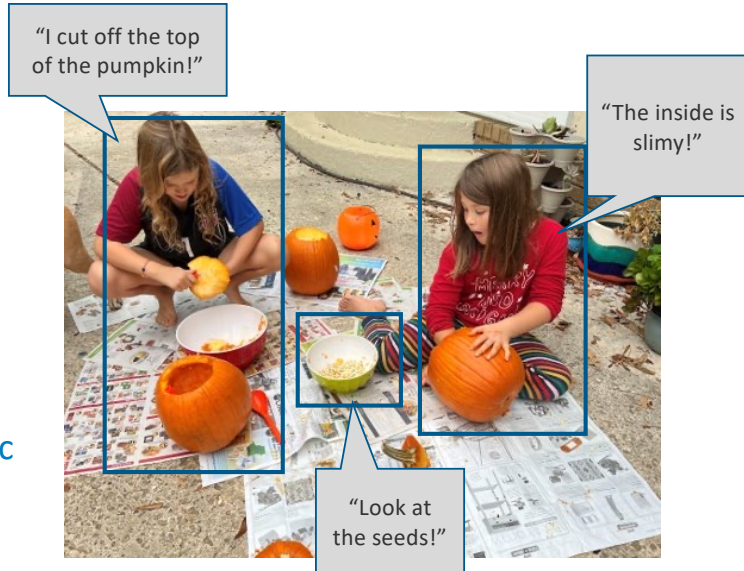
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Visual Scene Display

- Digital picture
- Communication hot spots

Why?

- Capitalize on quick visual processing
- Quick access to context-specific (& often social) vocabulary



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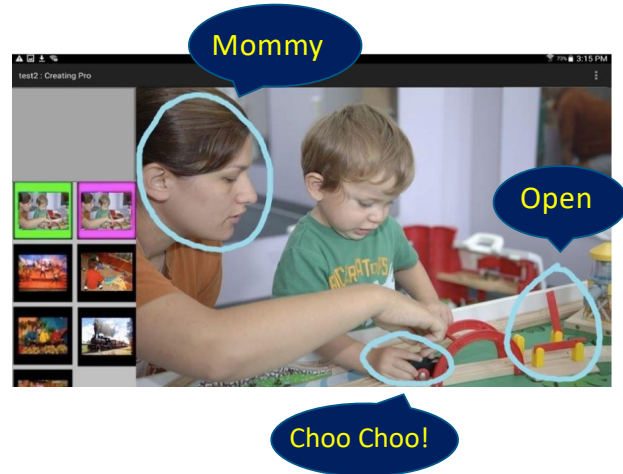
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Video VSDs

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Video VSDs offer an approach to support play & communication simultaneously.

- Video provides a model for play actions or sequences (Fragale, 2014) and gives children something to do together
- Embedded VSD supports communication
 - Language presented in a meaningful context
 - Hotspots provide voice output and give children something to say as they play.



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Our Research

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Using Storybook VSDs with parents & peers

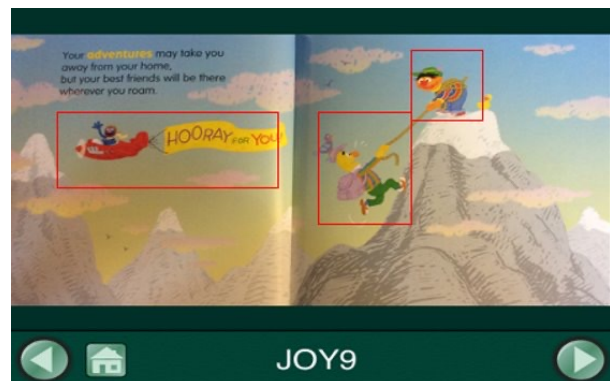
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Storybook VSDs

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Provide a way

- For a child with CCN to immediately communicate about a story
 - Comment
 - Question
- For communication partners to model language
- For children with CCN to meaningfully engage in emergent literacy activities



(Therrien, 2021; Therrien & Light, 2016; 2018)

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Strategies taught

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Peers: Show, Tell, Wait (Therrien, 2021; Therrien & Light, 2016; 2018)

Parents: Read MORE (Whalon et al., 2022)



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Dyadic Peer Training

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- Work with a child who uses AAC & a classroom peer
- SHOW your friends something in the book
- TELL them about it.
- WAIT while your friend shows you something

Video
Examples

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READ MORE
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READ MORE includes two primary steps:

1. Read the text aloud.
2. Do MORe

Video Example

- Model using the VSD
- Create an Opportunity for Communication
 - Open ended questions
 - Naturalistic time delay
 - Joint attention prompts
- Respond to all communication acts
 - Contingent imitation
 - Expansion

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Collaborating with Teachers & Parents
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Teachers:


- In-person & online training
- Programming storybook VSDs
- Implementing IMAPAL

Parents & Practice-based Coaching:

- Joint planning and action steps
- Focused observations
- Reflecting on performance-based feedback
- Collaborative partnership

I'M A PAL: Circle Time Peer Interaction Practice

I - introduce with enthusiasm
 M - model the skill
 A - assisted practice
 P - provide feedback
 A - accessible AAC (in the reading center)
 L - let children know the rules



Name: _____ Coach: _____ Date: _____

My Goal for This Week

Model

- Initiating - (1) expectant pause; (2) secure attention

Responding - (3) questioning

Respond to All Communication Acts

- Repeat
- Expand
- Repair (when the communication act is unexpected)

Possible Read MORE Goal(s):

I will model using the VSD by _____

I will create opportunities for X to initiate by _____

I will create opportunities for X to respond by _____

I will respond to all X's communication acts by _____

My Goal(s)	What supports and resources/materials do I need?	Date to be Completed

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Findings from Collective Research

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Children with Complex Communication Needs & Their Peers:

- Increased their frequency of communication acts
- Increased their engagement in the activity and with their communication partner

Parents:

- Increased their use of strategies to support children's communication

Teachers:

- Learned to program VSDs and support their use among children in the preschool classroom

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Video VSDs during play with peers



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Goals

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Provide video VSDs to children with ASD and their peers to support interactive play

- Something to do together
- Something to say

Teach the children how to use the video VSDs and investigate

- Changes in communication
- Changes in interactive play between the children
- Generalization of potential gains to new (untaught) play activities

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Study Activities

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Children were paired into dyads

Dyads engaged in play activities together

- First without access to video VSDs
- Then with video VSDs available to use as they played
- Play activities selected based on mutual interests

Dyads were provided with instruction in how to use the video VSDs



Car Garage

Pets

Food

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Video VSDs

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Videos demonstrated play actions or short sequences (2 actions)

- Multiple videos/play scenarios available for each toy set
- Each play action/scenario involved an important role for both children

Embedded VSDs provided vocabulary related to the play scenario

- Concepts that were developmentally appropriate for beginning communicators (e.g., content words salient to the activity, sound effects)
- Concepts that were fun and social (e.g., crash, wow, uh oh, watch out!)

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Video VSDs

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Video Examples

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Instruction

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Provided to both children at the same time

- Both children treated as equals; the peer was not viewed as a “helper”

During instruction sessions:

- Children in each dyad took turns choosing toys to play with
- Children were provided with least-to-most prompting to:
 - Complete a cooperative play action following the video model
 - Use the hotspots to communicate

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Findings

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The majority (86%) of participants with ASD demonstrated increases following instruction

- Communication directed toward their peer partner
- Play actions related to the toys

Participants with ASD generalized these gains to new activities and previously unseen video VSDs

Gains were seen in children

- With a range of expressive language skills
- With both mild-moderate and severe ASD

Children and teachers reported favorable views of the intervention

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Step 1: Take Pictures of the Book

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- Open the camera app. 
- Take pictures of the cover and pages of your storybook.
- Open your photos app to see the photos and crop them as needed.






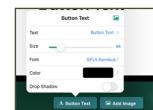
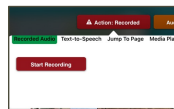
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Step 2: Create a new Storybook VSD

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- Open the Go Talk NOW app 
- Select Page Editor 
- The first page will be a grid-based “home” page
- Select “Tap to add button”
- Use buttons to:
 - Add a photo of your book cover 
 - Select “Button Text” and clear the text
 - Under “Action” click record, and record the book title





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Step 3: Create your first book page

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- Select the large orange & white plus symbol 
- Select “add blank scene page”
- On the new page, select the shapes button & add your photo of the book’s first page 
- Manipulate your image so that it fills the screen, touch the shapes button again & select “Lock Image”
- Click on “Page 2” and rename the page “<Book Title> 1” (e.g. Blue Truck 1)

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Step 4: Add hot spots

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- Select the green & white plus to add hot spots & a blue square will appear 
- Move and resize the blue square
- Touch the blue square and select “Set Action”
- Select “Recorded Audio”
- Select “Start recording” and speak what you wish the hot spot to say.

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Step 5: Create your next book page

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- Select the large orange & white plus symbol 
- Select “add blank scene page”
- On the new page, select the shapes button & add your photo of the book’s second page 
- Manipulate your image so that it fills the screen, touch the shapes button again & select “Lock Image”
- Name your page “<Book Title> 2”
- Repeat step 4 to add hot spots
- Continue repeating until all book pages have been added.

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Step 6: Configure navigation

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- Click on the stacks button and select the “home” page
- Select the button with your book cover
- Select “After action” then “Jump to Specific Page”
- Select “Change”
- Select “Set” and your book’s first page
- Select “Done” 

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Step 7 – Read your book!

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- Select the house button to go back to GoTalk’s main menu page
- Click on “Player”
- Choose the book you want to read from your home page
- Read!
- To access GoTalk’s main menu from player mode, swipe 3 fingers down the screen

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Thank you!

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References



<https://bit.ly/3iS0dHX>

