Visual Scene Displays (VSD) to Promote Early Literacy Skills with Children with Complex Communication Needs

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Shared Storybook Reading

Shared storybook reading helps a child develop reading and writing skills

- Promotes increased interest in books
- Supports making connections between print and language
  - Recognizing books by their covers
  - Understanding that words convey meaning
- Develops story comprehension skills

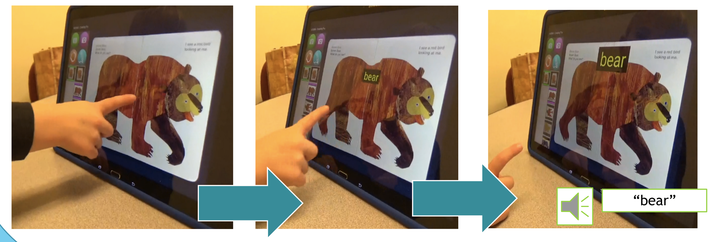
Shared Storybooks for Children with CCN

Shared storybook reading for children with CCN should support literacy development and create communication opportunities.
Adapted books should be:

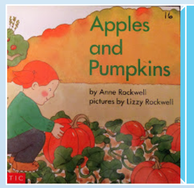
- Interactive and Engaging
- Easy to create
- Customizable

Visual Scene Displays (VSD)

VSD are pictures or photographs programmed with "hotspots" using specialized software or apps on tablet computers.
The "hotspots" are highlighted areas in the pictures.
Hotspots can produce a sound and text when touched.

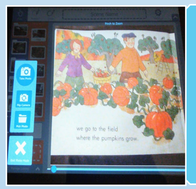


START! Reading



Select Book

- Few words per page (5 or fewer)
- Large, bold, narrative print
- Repeated text



Take Pictures

- Large
- Colorful
- Appealing

Add Hotspots

- Hotspots should be planned to support comments and questions throughout the story

Record Audio

- A spoken label for the item
- A sound effect
- A short phrase

Turn on T2L Feature

- The Transition to Literacy (T2L) feature can provide text for the hotspot

Visual Scene Displays can be created with a wide variety of apps. The Transition to Literacy (T2L) feature is available in SnapScene and GoVisual. The T2L feature was proposed by Light, McNaughton, Jakobs, and Hershberger (2014), and developed by the RERC on AAC. The RERC on AAC is funded by The National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant #90RE5017)

VSDs in the Classroom

VSD storybooks

- Eliminate the need for a child to split their attention between a book and a communication device; the VSD can serve as both
- Can benefit all students (including those without disabilities) making it an efficient Universal Design for Learning (UDL) tool
- Are easy to incorporate into everyday routines
- Can be personalized to the child's needs and interests

What does the Research Say?

- Therrien & Light (2016): Increases in turn-taking between pairs of young children (with and without disabilities) using VSD storybooks as a shared social activity
- Mandak et al (2018): Increases in sight word knowledge for young children (ages 3-4) reading VSD storybooks with an adult
- Boyle et al (2017): Increases in sight word knowledge for both children with language delays, and children without disabilities, in shared VSD storybook reading with an adult

References:

- Boyle, S., McCoy, A., McNaughton, D., & Light, J. (2017). Using digital texts in interactive reading activities for children with language delays and disorders: A review of the research literature and pilot study. *Seminars in Speech and Language*, *38*, 263-275.
- Light, J., McNaughton, D., Jakobs, T., & Hershberger, D. (2014). Investigating AAC technologies to support the transition from graphic symbols to literacy. RERC on AAC: Rehabilitation Engineering Research Center on Augmentative and Alternative Communication. Retrieved from https://rerc-aac.psu.edu/research/r2-investigating-aac-technologies-to-support-the-transition-from-graphic-symbols-to-literacy/
- Mandak, K., Light, J., & McNaughton, D. (2018). Digital books with dynamic text and speech output: Effects on sight word reading for preschoolers with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 1-12.
- Therrien, M. C., & Light, J. (2016). Using the iPad to facilitate interaction between preschool children who use AAC and their peers. *Augmentative and Alternative Communication*, *32*, 163-174.