THE BRIDGE SCHOOL

Summer Institute: CVI/AAC

This 2022 The Bridge School launched its first annual Summer Institute. The topic of this weeklong institute was CVI and AAC, so as part of our partnership with Dr. Christine Roman-Lantzy, internationally known expert on Cortical Visual Impairment (CVI), we put together a strong comprehensive program for professionals and families.

We believe in the importance of an Interprofessional Collaborative Practice Approach, which is of special importance when working with children who have CVI and use Augmentative and Alternative Communication (AAC), so for this institute we had 40 professionals ranging from Teachers of the Visually Impaired, Speech and Language Pathologist, Special Education Teachers, Psychologists, Occupational Therapists and Assistive Technologists who conformed interprofessional teams that worked with 10 students who have CVI and use AAC.

This interprofessional practice and collaborative work could be seen in the variety of areas of specialty of our speakers, while highlighting the high caliber, professionalism, dedication and expertise of each one of them. This year, we were honored to have the participation of the following speakers:

Aileen Arai has been a Special Educator for 27 years. She has been designing and supporting staff in implementing strategies that support students, parents, districts, and all members of a student's educational team in the development of curriculum within the Common Core State Standards for students with significant physical impairments who use AAC systems. Since 2012 she has been addressing intervention strategies and assessments as they relate to Cortical Visual Impairment protocols and tools developed by Dr. Christine Roman-Lantzy. She received The Perkins-Roman CVI Range Endorsement from The Perkins School for the Blind, an authorization that supports her evaluating a student's CVI for purposes of ongoing intervention.

Christine Roman-Lantzy is The former Director of Pediatric View in Pittsburgh Pennsylvania. She was the first CVI Project Leader for The American Printing House for the Blind. Christine provides workshops and consultations through CVI Resources and has had the honor to be invited to all parts of The United States and many countries outside The U.S. She is the author of *Cortical Visual Impairment: An Approach to Assessment and Intervention (2007, 2018)* which won The Bledsoe Award in 2008, and *Cortical Visual Impairment: Advanced Principles (2019).* She taught at The University of Pittsburgh and Marshall University Graduate College for a total of 17 years.

Christine Wright-Ott is an internationally known Occupational Therapist who specializes in research and development of assistive technology for children with complex communication needs and severe physical disabilities. She has been a consultant at The Bridge School for over 15 years where she integrated self-initiated mobility into the educational curriculum.

Christine was the principal investigator and designer of the KidWalk, Gobot and MiniBot Projects, while working at the former Rehabilitation Engineering Center at Stanford. She has worked at California Children's Service, Children's Hospital at Stanford and West Valley College High Tech Center. She is a frequent lecturer at international and national conferences and local universities. She has authored the chapter "Mobility" in previous and now the 7th Edition of the book, Occupational Therapy for Children.

Elisa Kingsbury is a Speech and language pathologist with over 25 years of experience providing school-based AAC services. Collaborated with and learned from children, families, and professionals at The Bridge School and in Berkeley, Alameda and Mt Diablo Unified School Districts. In her 19 years at Bridge School, she worked in the Elementary, Transition and Research programs and helped to develop the Preschool program adapting the Language-Focused Curriculum from the Language Acquisition Preschool at the University of Kansas.

Providing children with access to play, movement and language has been a joy for her. Working with a team to improve a child's communication outcomes and enhance their quality of life has been the most meaningful work she could imagine.

Gabriela Berlanga, is a Speech and Language Pathologist and is the founder and consultor for CATIC in Mexico city, current Associate Executive Director at the Bridge School and Vice-President for Conferences at ISAAC (The International Society for Augmentative and Alternative Communication).

Founder and member of the North American Alliance for Communication Access.

Consultant for the Special Education Technology Department @prende of the Ministry of Education in Mexico.

She has collaborated with Dr. Christine Roman-Lantzy since 2011 as part of CATIC's International Collaboration Program run by Dr. Sarah Blackstone.

The Enos family has a genuine love for the Bay Area. Anna and Joey proudly have deep family roots in the Bay Area that go back generations. After commuting for two years, the family recently moved from Oakland to San Mateo to be closer to the Bridge School. Anna majored in fine arts at UC Santa Cruz, and the year Sammy was born, Joey received his Masters of Fine Arts from UC Berkeley. With a background in art and music, Sammy's parents have always incorporated these modalities into all aspects of Sammy's life. His diagnosis of cerebral palsy and CVI made communication and education challenging. Yet, through his intense and early love for music and books, it was clear Sammy had an undeniable need to communicate and learn. At age 3, Sammy received an early intervention evaluation from AAC Specialist Judith Lunger-Bergh and reached out to the Bridge School. With the curriculum focus, specialization in AAC and CVI, the family knew that The Bridge School was the school Sammy needed to reach his full potential. Sammy has been at The Bridge School for three years. He is thriving in this fun, creative, and engaging environment.

Lynn Elko is first and foremost a Mom. Her daughter, Emma, 20, began to benefit from CVI adaptations and interventions at age 15. After learning how profoundly CVI impacts everything in a child's world and witnessing Emma's life change after implanting intentional, strategic CVI interventions, Lynn became a fierce advocate for children with CVI and supporting their needs.

In previous iterations of her life, she was a VP of Production for an educational professional development company, working with organizations such as NASSP, NAESP and the Joseph P. Kennedy Jr. Foundation**,** and a social entrepreneur for which she received her Chamber's Businessperson of the Year award. She, along with 2 other CVI Moms, was honored with the Hall of Fame award in 2019 from the Pediatric Cortical Visual Impairment Society for spearheading the development of the PCVIS.vision website.

When Emma's life and medical needs are not shifting their family's axis, Emma and Lynn's collaborative efforts to make learning, life and communication accessible to her through a CVI adapted, custom AAC system can be found at See CVI, Speak AAC (@seeCVIspeakAAC).

Matt Tietjen is a certified teacher of students with visual impairments and an education consultant for the Bureau of Education and Services for the Blind (BESB).

He is a CVI specialist who has completed the 2 year CVI Leadership Institute as well as the Perkins-Roman CVI Endorsement.

He is a nationally and internationally recognized speaker.

Rebecca Matthews is a Speech Language Pathologist at The Bridge School. Received her M.S. In Speech Language and Hearing Sciences from San Francisco State University where she was a member of the Project Building Bridges grant specializing in AAC.
Did her school internship at The Bridge School and continued as a Clinical Fellow and eventually fully licensed SLP.
She works in the elementary classroom where she is a member of an interdisciplinary team and co teach alongside the special educator.

Sarah Blackstone is a world recognized SLP and AAC specialist.
Past president and fellow of ISAAC (The International Society for Augmentative and Alternative Communication).
Member of the Board of Directors of The Bridge School.
Director, CVI/AAC Project at The Bridge School.
Author: *Social Networks: A Communication Inventory for Individuals with CCN and their Community Partners, Patient Provider Communication: Roles for SLPs and other Health-care professionals*. "Retired": Augmentative Communication Inc., AAC-RERC, Berkeley Unified School District, Kennedy Institute/Johns Hopkins Medical School, Pittsburgh Rehabilitation Center.

Tara McCarty is a licensed speech language pathologist who worked in school-based settings for 7 years before returning to Penn State University to pursue doctoral studies. Tara's current research focuses on augmentative and alternative communication (AAC) design and intervention solutions for children with communication needs and cortical visual impairment (CVI).

Dr. Vicki Casella has been involved in the education of children and adults with special needs for over 55years. Her professional experience includes classroom and clinical teaching, public and private school administration, and university teaching and administration. She has taught at the University of Alabama, the University of Nevada, Reno, and San Francisco State University. While a professor in the Special Education Department at San Francisco State University, Dr. Casella initiated the first adaptive technology academic courses in the United States. Her areas of expertise were focused in teacher preparation in deaf/hard of hearing, learning and multiple disabilities and she was the Director of the Deaf and Hearing-Impaired Program. For the past 18 years she has served as the Executive Director of The Bridge School, a special school dedicated to ensuring that children with severe physical impairments and complex communication needs develop the education and communication the skills they need to become active participants in their communities and that the effective strategies employed at The Bridge School are disseminated throughout the national and international community.

TAKE AWAY PACKAGE

Name of student: James Lydon
Parents: Rose Lydon
Interprofessional Collaborative Team:
Jessica Han , TVI.
Haley Dayel, SLP.
Tracy Shaw-Green, SLP, AT.
Christin McKeown, SE, AT.
Rachel Tsipan, student.

Dates:
June 12th – 17th 2022

Content

Disclaimer:
This document was created by the student's assigned interprofessional team at The Bridge School Summer Institute CVI/AAC. The team had access to the supervision of our Institute's presenters when requested, however as our staff was not part of the entire process, The Bridge School does not endorse the content of the information presented in this document.

COMMUNICATION FORMS AND FUNCTIONS

Communicative Function	Sample Context	What child says/does	How communication partners respond
Request attention	Adult gives attention to another person	Uses his device to say "I have something to say" Multiple kisses to get attention "I feel lonely"	Wait for scanning to get to his preferred words
Request affection	Adult approaches child when hurt	Reaches for person, says I love you on his device	Parent reciprocates response
Request assistance	Child needs help with task	Kiss sound/movement	Partner asks what he needs help with, prompts for responses on talker
Request information	Child sees something or someone new	Has difficulty in this area. Will ask "What's your favorite color"?	Partner will prompt "Do you have any questions?"
Request permission	Child wants to go outside	Request for Netflix on his device	Conversation partner will provide the activity (if appropriate)
Request peer interaction	Child sees another child using a favorite toy	Demonstrates interest, will go to a peer and ask (do you want to play etc.) With parent prompting	Peers respond
Request adult interaction	Tickle child and then pause	Multiple kisses to gain attention	Check in with James, ask questions (based on context) to see what he wants or needs
Request food or object	Wants object out of reach	Will use his talker to say " I want to play Nintendo"	Conversation partner will provide the object (if appropriate)
Refusal	Offer him something he doesn't like	Lack of response or engagement to item or activity. Multiple kisses means that he needs or wants something	Partner asks James if he wants something different, needs the volume higher, wants a new activity, etc.
Protest	Needs to participate in task & doesn't want to	Lack of response or engagement to item or activity. Will use hi talker to say "I feel bored"	If it is an academic task, partner informs him how much work is left. If it is a non-necessary activity, she will offer a different one
Cessation	Wants to be finished with meal or task	Lack of response or engagement to item or activity.	Partner offers a different task or asks if he needs a break
Greetings	a familiar person arrives or is leaving	Will say Hello on his talker. One kiss means goodbye	Conversation partner reciprocates greeting
Affirmation	Ask him if he wants a favorite food.	Sometimes will say 'yeah' or mouths yeah primarily with lower jaw	Verbally responds or confirms James' choice
Comment: object	Sees an interesting person or object	Laugh to popper and spiderman shooter, full body reaction to cause effect	Comments: "that's funny", etc

Comment: action	Sees an interesting action	Laugh to popper and spiderman shooter, full body reaction to cause effect	Comments: “Whoa”, “You did it”, “Uh-oh”, etc.
Comment: mistake	Child accidentally spills or drops something	Laugh when something dropped, full body reaction to cause effect	Comments: “Uh-oh”, etc.
Express humor	Adult laughs at something funny	Laughed when playing with the toy. Looked to the left and played	Parent responded to laugh and described action
Express confusion	Child is given an unfamiliar task	Uses his talker to express “confused”	
Express fear	Child hears something frightening	Used his talker to express	
Express frustration	Child is having difficulty with a task.	Used his talker to express	
Express anger	Child has to stop doing favorite activity.	Used his talker to express	
Express happiness	Child is doing a favorite activity	Smile, laugh, talker	
Express sadness	Child experiences something sad.	Used his talker to express	
Non-interactive comments	Utterances to direct own actions; echoed or routinized/habitual utterances to self	Goes to body parts and will say “My arm hurts”, or sometimes selects other messages without the desire of communicating them.	Partner can check on positioning of arm, redirects him if this has been corrected

(Based on Quill; 1995; form compiled by Mary Hunt-Berg; Ph. D.; CCC-SLP)
Forms and Functions Adapted by Mary Hunt-Berg from the work of Amy Weatherby (1995) and Kathleen Quill (1995) The Bridge School.
AAC/CVI Summer Institute. (2022). The Bridge School.

Conclusions:

James uses kisses, word approximations and his communication device to express a variety of communication functions that sometimes would require clarification or expansion by a familiar communication partner. So a suggested next step would be to find tools that would support the use of his vision or continue using auditory scanning remembering that through multimodality he could use different tools at different moments depending on what better works for him and will help him to become a more independent communicator.

In the following documents we will describe some options we tried during the Institute week.

CVI RANGE SCORE

FIGURE 5.9 ***CVI Range: Cover Sheet and Across – CVI Characteristics Assessment Method (Rating I) Form***

The CVI Range

Student/child's name: James Lydon Age/Birthdate: 11 yrs
Evaluator(s): Tracy, Kristin, Jessica, Haley, Rachel and Rose Evaluation Date: 6/14/22, 6/15/22

This assessment protocol is intended for multiple evaluations over a period of time.[1]

Further assessments will require a new form.

Totals:	Evaluation #1 (red)	Evaluation #2 (blue)	Evaluation #3 (green)
1. Score for Rating I	5+++		
2. Score for Rating II	4.5		

Plot Rating I and rating II on the number line below to demonstrate the range

Phase I
Primarily dorsal stream visual function

Phase II
Dorsal and beginning ventral stream visual function

Phase III
Refinement of ventral stream visual function

The CVI Range: Across-CVI Characteristics Assessment Method

Rating 1
Rate the following statements as related to the student/child's visual behaviors by marking the appropriate column to indicate the methods used to support the scores:

O = information obtained through observation of the student/child
I = information obtained through interview regarding the student/child
D = information obtained through direct contact with the student/child

In the remaining columns, indicate the assessed degree of the CVI characteristic:

R Represents a visual behavior that is resolving or approaching typical behavior

[1] For the purposes of Endorsement, this form is limited to a single assessment

+ Describes current functioning of student/child

+/- Partially describes student/child; emerging

- Does not apply to student/child

CVI Range 1-2: Student functions with minimal visual response

O	I	D	R	+	+/-	-	
			R				May localize, but no appropriate fixations on objects or faces
			R				Consistently attentive to lights or perhaps ceiling fans
			R				Prolonged periods of latency in visual tasks
			R				Responds only in strictly controlled environments
			R	+			Objects viewed are a single color
			R	+			Objects viewed have movement and/or shiny or reflective properties
			R				Visually attends in near space only
			R				No blink in response to touch or visual threat
			R				No regard of the human face

CVI Range 3-4: Student functions with more consistent visual response

O	I	D	R	+	+/-	-	
				+			Visually fixates when the environment is controlled
			R				Less attracted to lights; can be redirected
				+			Latency slightly decreases after periods of consistent viewing
				+			May look at novel objects if they share characteristics of familiar objects
				+			Blinks in response to touch and/or visual threat, but the responses may be latent and/or inconsistent
			R				Has a "favorite" color
				+			Shows strong visual field preferences
				+			May notice moving objects at 2 to 3 feet
				+			Look and touch completed as separate events

CVI Range 5-6: Student uses vision for functional tasks

O	I	D	R	+	+/-	-	
				+			Objects viewed may have two to three colors
				+			Light is no longer a distractor
					+/-		Latency present only when the student is tired, stressed, or overstimulated always present
				+			Movement continues to be an important factor for visual attention
				+			Student tolerates low levels of background noise always?
				+			Blink response to touch is consistently present keep testing
				+			Blink response to visual threat is intermittently present
	✓				+/-		Visual attention now extends beyond near space, up to 4 to 6 feet can I always detect 20 at 6 ft?
	✓			+			May regard familiar faces when voice does not compete

CVI Range 7-8: Student demonstrates visual curiosity

O	I	D	R	+	+/-	-	
	✓			+			Selection of toys or objects is less restricted; requires one to two sessions of "warm up"
	✓				+/-		Competing auditory stimuli tolerated during periods of viewing; the student may now maintain visual attention on objects that produce music
						−	Blink response to visual threat consistently present
						−	Latency rarely present
						−	Visual attention extends to 10 feet with targets that produce movement
				+			Movement not required for attention at near distance
					+/-		Smiles at/regards familiar and new faces
				+			May enjoy regarding self in mirror
		✓	R				Most high-contrast colors and/or familiar patterns regarded
				+			Simple books, picture cards, or symbols regarded

CVI Range 9-10: Student spontaneously uses vision for most functional activities at a level approaching near typical

O	I	D	R	+	+/-	-	
					+/-		Selection of toys or objects not restricted to the familiar; visually curious in new settings
					+/-		Only the most complex environments affect visual response
				+			Latency never present
					+/-		No color or pattern preferences
						-	Visual attention and interpretation of the environment extends beyond 20 feet
					+/-		Views and interprets information from non-backlit two-dimensional materials and simple images
					+/-		Use of vision to imitate actions
					+/-		Demonstrates memory of visual events
						-	Displays typical visual-social responses
						-	Visual fields unrestricted
						-	Look and reach completed as a single task
						-	Views and interprets information from non-backlit two-dimensional images presented on complex, visually dense backgrounds

Demonstrates visual curiosity in familiar an environments with low sensory

at home, hour - hour ½ hard visual work = fatigue
15 min visual break
* need to recommend sensory balance assessment in school setting * to measure

Provide visual opportunities at near, distance, at home or 1:1 setting, audio/tactual supports at school to balance visual fatigue

anticipates double doors and approaching car within
↳ visually shoulders thinking about other people showing a struggling kid next to him
↳ expanding on showing Jaden's emotions/feeling your auditory, tactual, and visual accommodations needed

high contrast 2D text only, not pictures size 2" font,

FIGURE 5.9 ***CVI Range: Within – CVI Characteristics Assessment Method (Rating II) Form***

The CVI Range: Within-CVI Characteristics Assessment Method

Rating II

Determine the level of CVI present or resolved in the 10 categories below and add to obtain total score. Rate the following CVI categories as related to the student/child's visual behaviors by circling the appropriate number (the CVI Progress Chart may be useful as a scoring guide)

0 Full effect of the characteristic is present
.25 Behavior on this characteristic has begun to change or improve
.5 The characteristic is affecting visual functioning approximately half the time
.75 Occasional effect of the characteristic; response is nearly like that of individuals the same age
1 Resolving, approaching typical, or response is the same as others of the same age

4.5

	Not Resolved		Resolving		Resolved
1. Color Preference	0	.25	.5	.75	1
Comments:					
2. Need for movement	0	.25	.5	.75	1
Comments:					
3. Visual latency	0	.25	.5	.75	1
Comments:					
4. Visual field preferences	0	.25	.5	.75	1
Comments:					
5. Difficulties with visual complexity[2]	0	.25	.5	.75	1
Comments: object .5 environment .5 faces .25 array .25					
6. Need for light	0	.25	.5	.75	1
Comments:					
7. Difficulty with distance viewing	0	.25	.5	.75	1
Comments:					
8. Atypical visual reflexes	0	.25	.5	.75	1
Comments:					
9. Difficulty with visual novelty	0	.25	.5	.75	1
Comments:					
10. Absence of visually guided reach	0	.25	.5	.75	1

[2] See the Rating II Scoring Guide for the full range of visual complexity to consider

CVI/AAC SCHEDULE

Name: James Lydon		Date: June 16, 2022		
Activity	**Student Goal Communication Forms and Functions**	**AAC Tools, Strategies and Accommodations**	**CVI Accommodation (from The CVI Range Assessment)**	**Other (mobility, Tactile, Auditory, AT)**
Activity 1: Social Studies	Participate in social studies activities and learning. Answer questions Ask questions for clarification. Requesting assistance Requesting permission ("I'm tired and I need a break")	Help page → "I'm tired" → "I need a brain break", "My eyes are tired, please describe this verbally", "My body is tired" Other advocacy for "changing the activity" - "Take turns" "make a choice" "move my body" or "clean up"? Groups page to Self Advocacy (make a page to navigate to for further clarification)	Reading a map of California. James should have access to a color coded map of California Salient Features: coast - shape of coast next to blue water Land - green Water - blue Concepts: N, S, E, W - a cardinal directions	Tactual map of California
Activity 2: Math	Participate in Math activities and learning. Answer questions Ask questions for clarification. Requesting assistance Requesting permission ("I'm tired and I need a break")	Help page → "I'm tired" → "I need a brain break", "My eyes are tired, please describe this verbally", "My body is tired"	Present problem on White board on right side in preferred field, read problem to James and allow him to look at problem and signal when he is ready to answer and then present Partner assisted scanning ABCD board.	Present answer with ABCD Partner assisted scanning board with 3 second pause between answers or with ABCD page on communication device
Activity 3: My School Day	Sharing information about the school Commenting using adjectives to describe events at school.	Partner-assisted scanning board with choices (ex: terrible, okay, fun) Create separate page to describe school day, include adjectives from his main page and add new ones such as 'boring;		

Activity 4: Playing a prank	Build social interactions and engagement through humor. Commenting	SGD: Include a funny sounds effects (ex: “wha wha”) for commenting		

VLLCP FRAMEWORK ACTIVITY
-Vision, Language, Learning, Communication, Participation-

Child's Name:James	Date:6/15/2022
Phase: I II III	The CVI Range Assessment Score:4 – 5
Team Members: Kristin, Tracy, Rachel, Haley, Jessica and Rose	

Activity

- Activity: To play a board game trivia questions using a new more efficient ABCD answer format to help James scan, using partner assisted scanning in a linear format.

- Phrases or language used to motivate or prompt child's participation: Right answers:

The activity included opportunities to build on the function of commenting with use of two step-by-step voice outputs to make positive and negative comments.

Positive Comments:
"Oh yeah! I'm the best!"
"Oh yeah!"

Incorrect trivia answers:
"Wa-wa-wahh"
"Oh no…."
"Aww man"

Characteristics of the Child, Vision, Language & Communication		
Language and Communication	**Vision**	**AAC-CVI Intervention**
Communication function to address for this activity: ● Function: Providing information and Commenting ● Current form: James provides information and comments with his talker but may need more time to respond during social interactions which requires patience in conversation partner. ● Form to be used: Providing information and commenting	CVI characteristics to be considered for this activity: ● Color: A blue colored outline was fixated to the ABCD board to provide a visual opportunity to highlight the answer choice. ● Visual Field: All visual materials are positioned in James' upper right visual field. ● Complexity of array: A high contrast black and white letter display was created using large print font (letters 2'' in size) in a linear format (to match and also reinforce James' linear scanning of A, B, C, D on his device)	Communication Partner Strategies: - 3 second pause between answers - Consistent language salient features - Other consistent language: A,B, C,D - Sensory balance: auditory with visual support - Visual breaks Environment: - non complex background - Minimal background noise

	● Complexity of environment: The doors were closed to reduce the complexity of the environment and eliminate unnecessary background noise. Position James with his right side away from windows or light. One speaking voice was used at a time, providing 3 full seconds of quiet wait time when scanning through choices. ● Complexity of faces: When approaching James, each new conversation partner introduced themselves. If they were out of his visual field, they stated where they were standing. ● Light: Backlighting was used on a tablet to provide James with a visual opportunity to view the answer written in large print text. ● Visually guided reach: Position James' materials central to his right arm rest (choice boards should be centered where the middle of the board is even with his right arm rest).	Materials: - Speech Generating device - switch placed on left side of head rest - ABCD partner assisted scanning tool - White Board - dry erase marker - 2 Step by steps (one with positive comments; one with negative comments) Physical (access considerations): - Remind James that he can respond by hitting his switch with his head rather than by moving his arm.

Communication Tools How child will express these functions?	**Strategies and Accommodations to Support Communication using AAC Tools**
No Tech (body-based): Mouths "yes" to affirm	
Low-tech (non-electronic): ABCD Partner-Assisted Scanning Board, Moves head to hit switch (unplugged) to indicate selection	- Position scanning board in James' best visual field, about 12-15 inches away from James' face - Slide blue plastic square on ABCD board to highlight each selection on the board as you present options - Allow 3 seconds pause time between choices

Roman-Lantzy, C. (2019). Cortical Visual Impairment: Advanced Principles. New York: APH Press
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AAC/CVI Summer Institute. (2022). The Bridge School.