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What is CSA?

Communication Sampling and Analysis (CSA) is an assessment tool for difficult to test children with complex communication needs. It captures the non-verbal and verbal communication between child and partner(s) in interactive settings and contexts. The web-based application provides the SLP with tools and guidelines for collecting and analyzing a communicative sample, expedites the analysis process and produces reports with quantitative data showing means and functions of the child's communication.

Why should SLPs use CSA?

- Objectively evaluate a nonverbal or severely speech-impaired child that is difficult to test.
- Provide evidence that the severely challenged child is in fact communicating.
- Provide an inventory of the child's communicative behaviors and functions.
- Develop goals and objectives based on current level of communication functioning.
- Use as a pre-and post-treatment measure to document progress and justify continued treatment.

Communicator's Name: Child	Birthdate: 09-20-2004 Current Age: 2 Years 10 Months	Observer's Name: Marilyn Buzolich	Date of Sampling: 07-01-2007
Sampling Context: Home	Medical Diagnosis: Cerebral Palsy	Speech Diagnosis: Dyspraxia	

EVENT #	INTERACTIVE SETTING What's happening in the environment? What is the partner doing/saying right now? E.g.: While dressing her, Mom asks "Are you cold?"	OBSERVED BEHAVIORS OF COMMUNICATOR What behaviors does the Communicator use to initiate or respond? What unaided &/or aided means does the Communicator use with the partner? E.g.: Child smiles + vocalizes "ah"	MEANS	PARTNER RESPONSE TO COMMUNICATOR How does the partner respond to the Communicator? E.g.: Mom covers Child with blanket + says, "There you go."	FUNCTION
Context(s): Home					
1	Mom and Child playing in the living room with his toys, "Do you want to pick something right, do you want to get something?"	Moves toward toys, extends left arm toward blocks, gazes at blocks	PROX, REF, EYE	"The blocks? Should we start with the blocks?"	RQO
2	"You want to stand up...first?"	Touches block and then touches mom's hand and touches, looks, and points to blocks again	REF, REF, REF, EYE, REF	"You want to build a tower?"	RQA
3	"You want to build a tower?"	/yeah/	VERB	"OK, let's do it."	AF
4	"Bongo, knock it down" after Child knocks down the tower.	Signs "more"	SIGN	"more?"	RQA
5	Continued from previous partner response	vocalizes	VOC	"okay"	AF

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EVENT #	INTERACTIVE SETTING	OBSERVED BEHAVIORS OF COMMUNICATOR	MEANS	PARTNER RESPONSE TO COMMUNICATOR	FUNCTION
6	Building a tower, mom counts out "1, 2"	Reaches for mom's hands and pushes them together smiling	REF, REF, FAC	Claps hands and says, "Oh, good job"	RQA
7	Continued from previous partner response	Reaches for mom's hands again and pushes them together smiling.	REF, REF, FAC	Claps hands again and says, "Oh good job"	RQS
8	"Want me to put one on now, Should I do it?"	/yeah/	VERB	Mom put block on tower and said, "boink"	AF
9	"Child's turn"	Reaches for mom's hands and pushes them together	REF, REF	"Yes, want me to clap?" Mom claps hands and laughs.	RQS
10	"Child's turn"	Put another block on the tower, holds hands out by side and smiles	REF, REP, FAC	"Perfect, 1,2,3,4 Good job", claps hands	SAT
11	Child knocks down the tower, and mom says, "Aw, they all fall down."	Signs, "more"	SIGN	"more?"	RQA

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12	Continued from previous partner response	/ah/ /duh/	VERB	"Do you want to play with something else?"	RQA
13	"Do you want to put away the blocks?"	Creeps over to Animal Hospital Toy and touches it.	PROX, REF	"You want to play with that one, animal hospital?"	RQA
14	"Here Child, let's put these (blocks) away first, ready?"	Nods slightly, Puts blocks in wood box	REP, REF	"Thank you, good job"	AF
15	"Blocks" while mom and Child are putting blocks away.	Signs, "eat"	SIGN	"Are you getting hungry?"	COM
16	Book reading "Good night, sleep tight. The moon, where does the moon go Child?"	Pulls off the moon from the book and reaches up and back arching his back and smiling	REF, REF, DM, FAC	"goes up, The moon goes up"	RI
17	"Yes"	Comes forward with moon and down, smiling	DM, REF, FAC	"and then the moon comes down"	RI

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EVENT #	INTERACTIVE SETTING	OBSERVED BEHAVIORS OF COMMUNICATOR	MEANS	PARTNER RESPONSE TO COMMUNICATOR	FUNCTION
18	Continued from previous partner response	Reaches with arm above head arching back and smiling	REF, DM, FAC	"The moon goes up"	RQS
19	Continued from previous partner response	Comes forward with moon and down, smiling	DM, REF, FAC	"and the moon comes down"	RQS
20	Continued from previous partner response	Reaches with arm above head arching back and smiling	REF, DM, FAC	"The moon goes up"	RQS
21	Playing ball in living room	Throws ball, looks at mom, and then extends left arm out toward ball	REF, EYE, REF	"Mommy get it?"	RQA
22	Continued from previous partner response	/geh/ + hand wave in the direction of the ball	VERB, REF	Mommy got ball	RQA
23	Mom holding ball ready to throw it. "Ready?"	/heh/ /heh/ + bouncing up and down on knees	VOC, DM	"one, two, three"	AF

Communicator's Name: Child		Date of Sampling: 07-01-2007			
EVENT #	INTERACTIVE SETTING	OBSERVED BEHAVIORS OF COMMUNICATOR	MEANS	PARTNER RESPONSE TO COMMUNICATOR	FUNCTION
24	Continued from previous partner response	/geh/ + scoots up toward mom	VERB, PROX	"Go", Mom threw the ball to Child	RQA
25	"Where's the ball?" Where's the ball?"	Gazes in the direction of the ball, reaches with arm to the left	EYE, REF	"Is it over there, will you get it?"	RI

Communication Summary Report

Name: Joshua Maier		Birthdate: 09-20-2004		CA: 2 Yrs 10 Mos	Clinician: Marilyn Buzolich		Date: 07-01-2007	
Context(s): Home								
Communicative Means Summary								
Code	Means	Definitions	# in Sample	% of Sample				
Gestures			35	61.4				
DM	Discrete Motor Behaviors	Full or partial body movement that is distinct, differentiated, and conveys meaning; includes body extension or leaning	6	10.5				
REF	Referential Gestures	Gestures that indicate or call attention to an object, person, or event. Referent is present in the environment; e.g. show, give, touch, pull	24	42.1				
REP	Representational Gestures	Gestures used to convey meaning. Includes meaningful symbolic, conventional, culturally defined & idiosyncratic gestures	2	3.5				
SIGN	Formal Signs	Formal visual-motor language systems, e.g., ASL, SEE	3	5.3				
Vocalizations/Verbalizations			7	12.3				
VOC	Discrete Vocalizations	Vocalizations that are distinct and differentiated	2	3.5				
VERB	Verbalizations	Verbal word approximations, spoken words or phrases	5	8.8				
Facial Expressions			8	14				
FAC	Facial Movements	Facial movement, including idiosyncratic facial gestures conveying specific semantic content; e.g. smile, pout, kiss, tongue out ("yes")	8	14				
Eye Gaze			4	7				
EYE	Eye Movements	Gaze in direction of or fixate on person, object, or place; avert gaze; alternate gaze between objects, people, places; use of idiosyncratic eye movement to convey specific meaning	4	7				
Proxemics			3	5.3				
PROX	Proxemics	Approach a person, location or object; moving, crawling close	3	5.3				
AAC System			0	0				
AAC	AAC	Use of symbols, aid, strategies, techniques; activate SGD, point to or gaze at board, pictures, symbols; pick up & give symbol(s)	0	0				
Total Number of Communicative Means			57	100				
Single Modality Communication Acts			7	28				
Multimodality Communication Acts			18	72				
Communicative Function Summary								
Code	Functions	Definitions	# in Sample	% of Sample				
Behavioral Regulation			10	40				
RQO	Request Object	Behaviors used to demand a desired tangible object	1	4				
RQA	Request Action	Behaviors used to ask or direct another to carry out or cease an action, includes requesting assistance; focus is on the action	9	36				
PDR	Protest/Deny/Reject	Behaviors used to refuse, protest, or disapprove of an undesired object, action, or person; Includes any form of negation	0	0				
Social Interaction			11	44				
RQS	Request Social Routine	Behaviors used to command another to commence or continue carrying out a game-like social interaction. Partner demonstrates familiarity with the routine or interaction repeats	5	20				
SAT	Solicit Attention	Behaviors used to draw attention to self, others, objects, actions; includes teasing or conveying humor, warning, alarming or exclaiming to direct attention to self or something in the environment	1	4				
AF	Affirm	Behaviors used to affirm or confirm, e.g., "yes"	5	20				
GR	Greet	Behaviors used to express salutations & conventional rituals; e.g. hi	0	0				
ACK	Acknowledge	Behaviors used to indicate notice or recognition of partner's behavior, previous statement or action. Involves focusing or shifting attention to partner. Includes politeness markers like please, thanks	0	0				
RQP	Request Permission	Behaviors used to seek another's consent to carry out an action by oneself	0	0				
Joint Attention			4	16				
RI	Relay Information	Behaviors used to tell about something, initiated or in response to question or statement; to inform about object, event, person, activity	3	12				
RQI	Request Information	Behaviors used to solicit information about an object, event, person or activity	0	0				
COM	Comment	Behaviors used to express a belief or idea, or describe the physical attributes of an object, person, or event	1	4				
Total Number of Events			25	100				



Buzolich, Russell, Lunger-Bergh, & McCloskey
Revised January 2011

Communication Sampling and Analysis Narrative Report

Name: Joshua

Evaluator: Marilyn Buzolich

Birthdate: 2 years of age

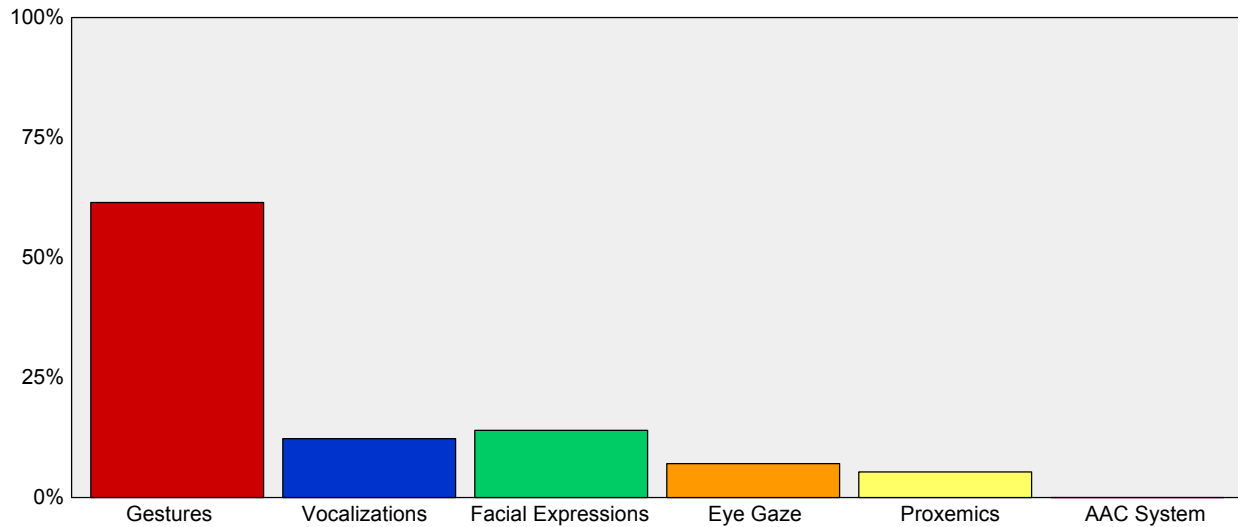
Sampling Date: 07-01-2007

Communication Sampling and Analysis (CSA) is an assessment tool designed for infants, toddlers, and children with multiple physical, sensory, speech, and/or cognitive/linguistic challenges. CSA provides speech/language pathologists an objective (clinical) measure for observing and analyzing communicative behavior in the natural setting. The purpose of the CSA is to capture and qualify the nature and extent of communication behavior of the communicative challenged with partners during interactive settings and contexts. This is important for establishing baseline levels of communicative functioning, setting goals for intervention, and evaluating the effectiveness of treatment. For children with multiple speech, motor, sensory, and cognitive impairments, nonverbal behavior is an integral part of the child's profile at all levels of development; even children who use augmentative communication systems. CSA provides a tool to objectify a process that has been based on anecdotal observation rather than objective data.

For the purposes of this evaluation, Communication Sampling and Analysis (Buzolich, Russell, Lunger-Bergh, McCloskey, 2011) was conducted in the home context(s). The actual sample is attached for reference purposes. Communication was sampled during interactive settings such as Joshua and mom playing in the living room with his toys and provided information regarding the child's means and functions.

The evaluator, as a third party observer, sampled and analyzed 25 interactive events. A summary of the communicator's means is shown below.

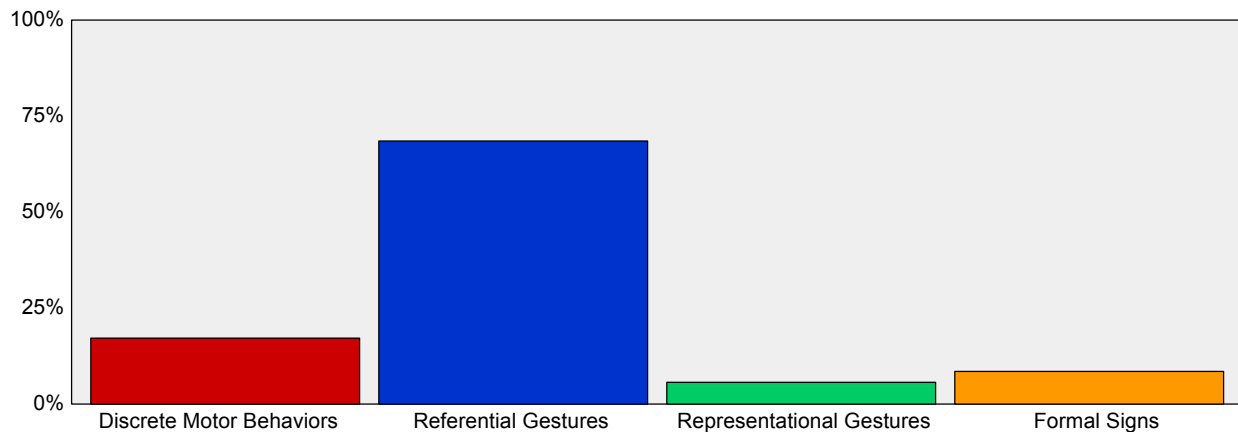
Communicative Means Graph



Of the interactive events sampled, 28% were single modality acts and 72% were multi-modality communication acts.

As shown in the graph above, 61.4% of the child's communication behavior was gestural. Of the gestures, 17% were discrete motor behaviors (e.g. arching back and moving his body forward or bouncing up and down), 69% referential gestures (e.g. pointing, reaching, touching, extending arm toward an object or location), 6% representational gestures (e.g. head nod), and 9% signs (e.g. more, eat).

Communicative Gestures Graph



Vocalizations occurred 3.5% in this sample. Verbalizations occurred 8.8% (e.g. /heh/, /yeah/, /ah/, /duh/, and /geh/).

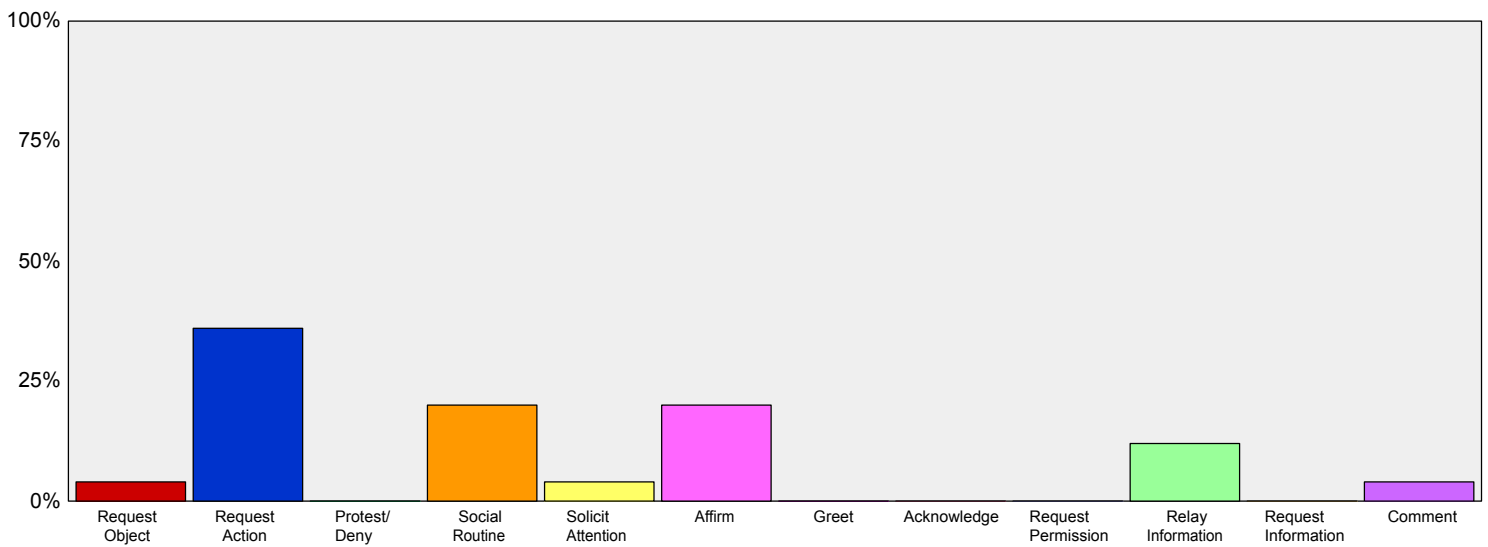
Facial expressions occurred 14% of the time and eye gaze occurred 7%. In this sample

proxemics occurred 5.3% of the time. AAC systems were not used in this sample.

Joshua is primarily using gestures (referential) to communicate. He has limited verbalizations, and is relying on multi-modality communication acts (72%) of the time to convey meaning. Single modality communication acts occurred only 28% of the time and usually when meaning was conveyed with a sign or verbalization. It is not surprising that when using symbolic communication (sign, verbal speech) he is able to make himself understood using single modality communicative means.

A summary of the child's communication functions graph is shown below.

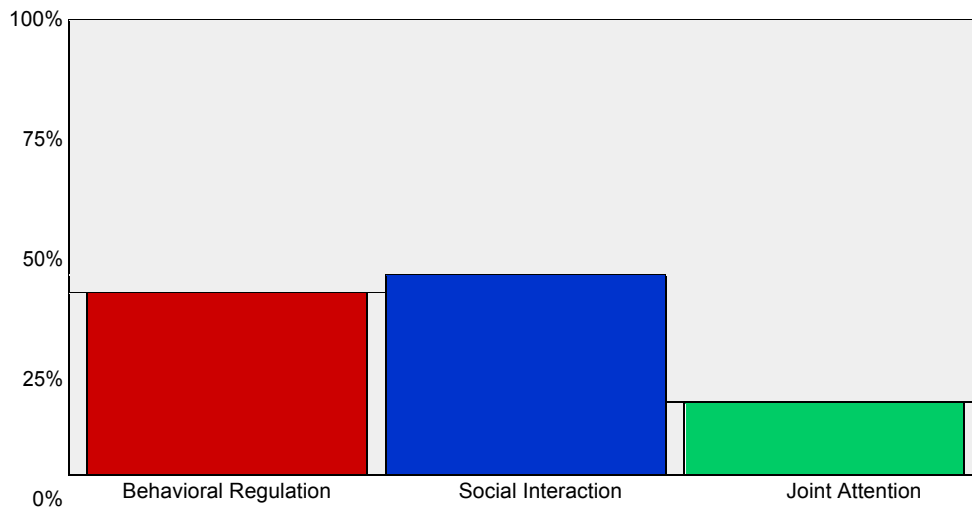
Communication Functions Graph



The child communicated primarily to request actions (36%), request a social routine (20%) and affirm (20%). In addition the child communicated to relay information, request objects, solicit attention, and comment.

A summary of the child's category of communication functions is illustrated on the next page.

Category of Communicative Functions Graph



The child is communicating to regulate behavior 40%, interact socially 44% and establish joint attention 16% as shown above in the figure.

It is clear from the profile that Joshua's language is emerging. He is beginning to communicate to establish joint attention but clearly needs Augmentative Communication. He is not able to communicate enough using gestures (sign) and speech.

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