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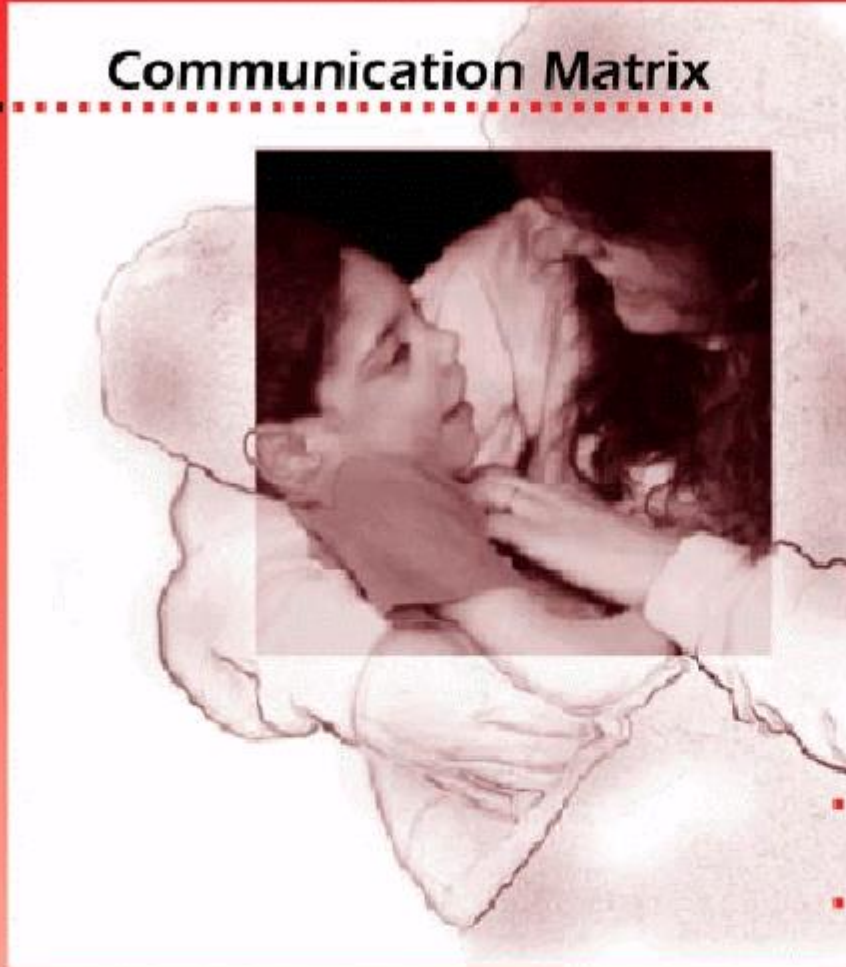
# WREIC Conference September 2019

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philip schweigert

## Background

Communication-in-Action is an outgrowth of our educational teams' realization that communication, perhaps more than any other domain is effected by and in turn effects all areas of our learners' development, self-determination and quality of life. We recognized that our learners with complex communication needs, require the support of all team members (families, teachers, motor therapists and speech language pathologists) in order to access, engage, and learn about their world. This instructional guide is a collaborative effort to bring together the expertise and goals of all disciplines in order to promote the growth and communicative competence of our learners.

## Communication Matrix



### **A communication skill assessment**

- ■ ■ for individuals at the earliest stages of communication development
- ■ ■ for individuals who use any form of communication, including presymbolic or alternative and augmentative forms

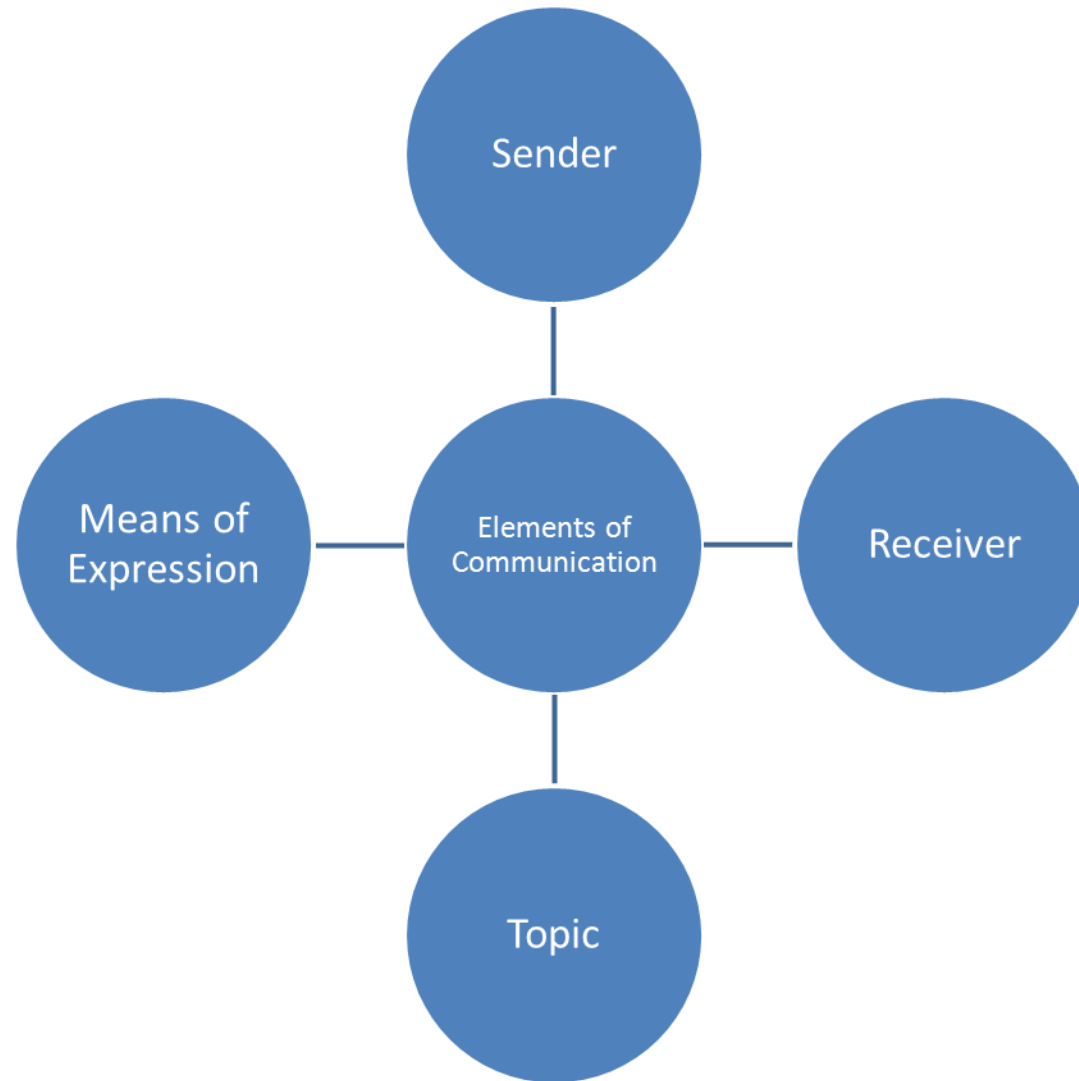
Charity Rowland, Ph.D.  
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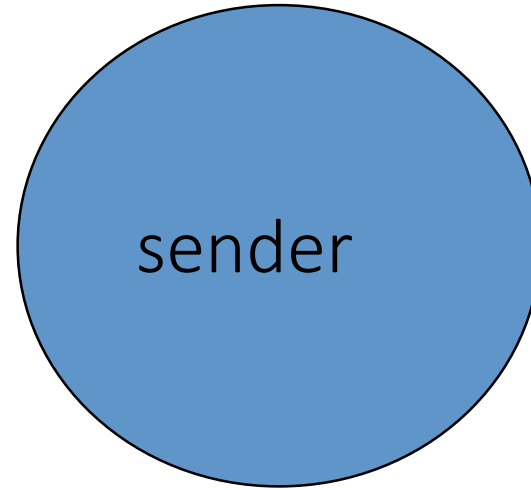
# Assessment of Communication

- ....is about learning what the child understands about the world
- .... is about how the child perceives his/her relationship to the world

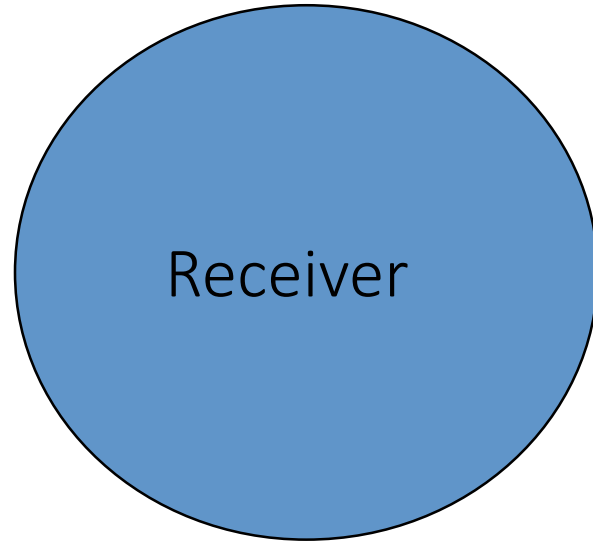
what does it take to  
communicate

- symbolic communication is an outgrowth of early relationships between infants, caregivers and the objects/events in their environment

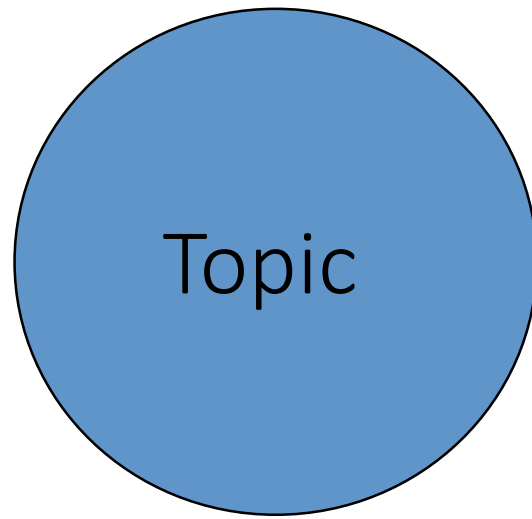




Awareness of self  
and  
the world around him



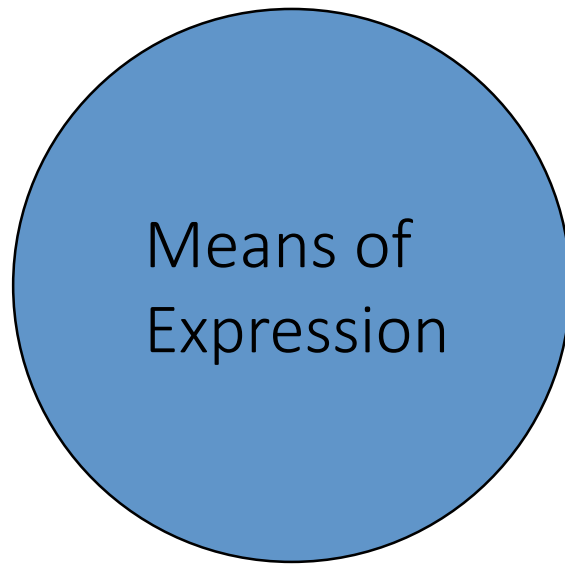
- Sensitivity
  - Contingency
  - Consistency



-Accessible

-Repeated experiences

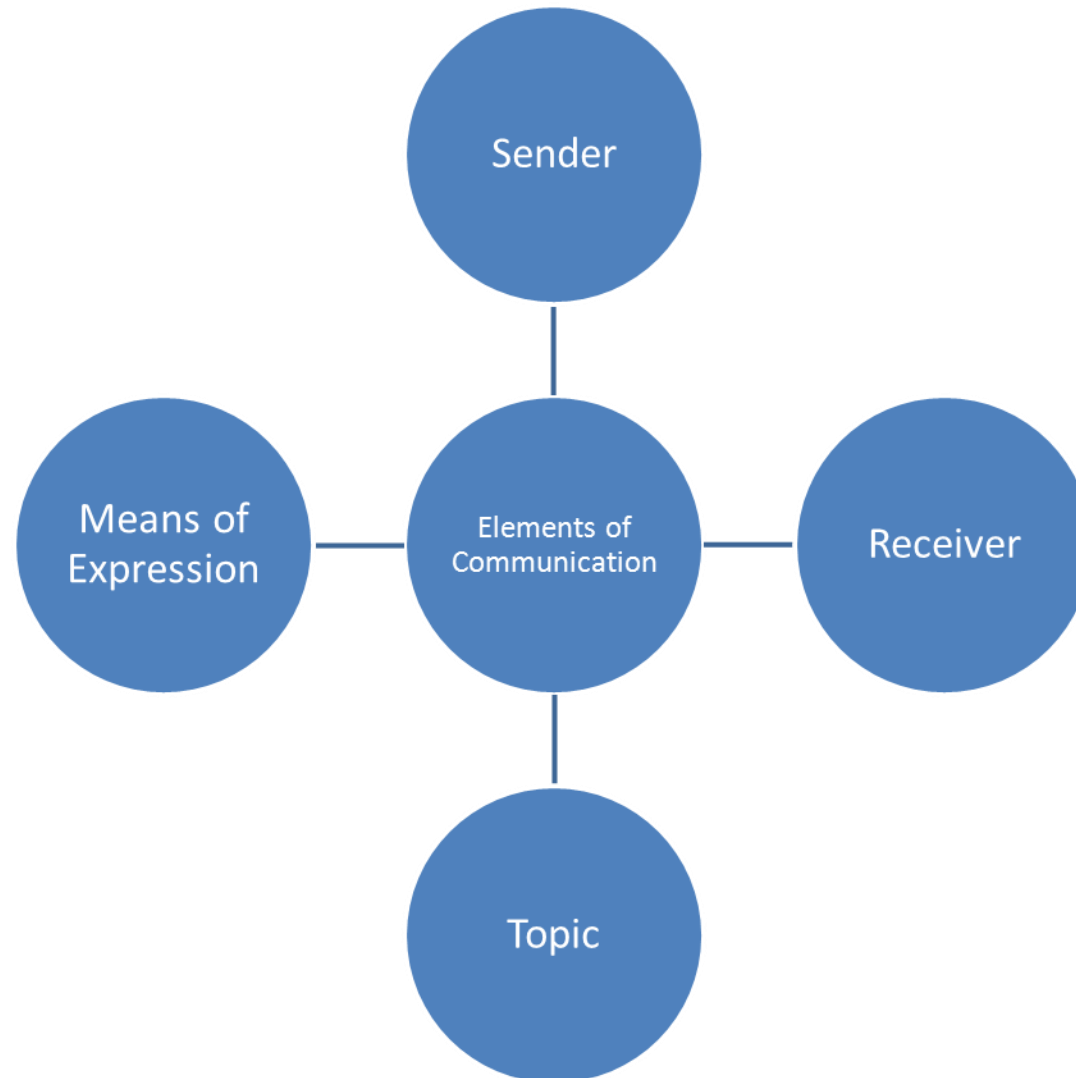
-Motivation



“when the focus is on successful communication, the form is reduced to its proper place of being a means toward an end, rather than the end itself” (De Thorne et al 2014)

# Four Elements of Communication

(see pages 3-4 First things First)



Progressive Distancing  
between elements

Progressive distancing across Matrix© levels	I	II	III-IV	V-VII
Sender-Receiver	Direct physical contact between sender and receiver	Proximal contact may be less but still present	Physically accessible (partner is within view or reach)	Contact is no longer required; partner is accessible to receive message
Sender-Topic	Internal state Immediate/internal experience (hunger wet, tired content)	External source physical need	Environmental present	Absent (conceptual, abstract topics e.g. time)
Topic (sender)-Means of Expression	Express comfort/discomfort Through affective and whole body reactions	Physical contact with real object Movement associated with action	Gestural (moving/looking in direction of, pointing at, pantomime vocal approximation,	Symbolic representation Concrete → Abstract

# I.

## Pre-intentional Behavior

- The child's behavior is not under his own control. It is in reaction to things (such as feeling hungry or wet or sleepy). Parents interpret the child's state from his general behaviors, such as body movements, facial expressions and sounds.

## II. Intentional Behavior

- The child's behavior is now intentional (under the child's control), but she does not understand that "If I do this, Mom or Dad will do that for me"—in other words she does not communicate **intentionally** yet. Parents continue to interpret the child's needs and desires from her behavior, such as body movements, facial expressions, vocalizations and eye gaze.

### III.

#### Un-conventional Communication

- The child uses pre-symbolic behaviors *intentionally* to express his needs and desires to other people. They are called “unconventional” because they are not socially acceptable for us to use as we grow older: they include body movements, vocalizations, facial expressions and simple gestures (such as tugging on people).

# Pivotal juncture of coordinated attention

- The transition from pre-intentional to intentional communication is a developmental milestone second to none
- It marks children's entry as full participants in the social milieu around them and triggers other transactional processes that in a short time lead to symbolic communication

( Warren & Yoder , 1999)

# Intentional Communication

- Implies
  - Intentional behavior
  - Purposefully directed toward another person with intended meaning
- Requires dual orientation to both the communication partner and the topic

# Characteristics of Intentional Communication

- **Persistence**

- Repetition

- Alternating Gaze (body orientation, leaning toward)

- **Changing the signal used**

- Awaiting a response

- Terminating the signal when responded to

- Indicating satisfaction or dissatisfaction to response (Wetherby & Prizant 1989)

## IV.

### Conventional Communication

- The child uses pre-symbolic behaviors intentionally to express her needs and desire to other people. “Conventional” gestures include behaviors such as pointing and nodding the head “yes”. We continue to use conventional gestures as adults to accompany our language.

## V.

### Concrete Symbols

Symbols physically resemble what they represent in a way that is obvious to the child—they look like, feel like, move like or sound like what they represent. Concrete symbols include picture symbols, objects used as symbols (such as a shoelace to represent “shoe”), certain “iconic” gestures (such as patting a chair to say “sit down”) and sounds (such as making a buzzing sound to refer to a bee).

## VI.

### Abstract Symbols

- The child uses abstract symbols such as speech, manual signs, or Braille or printed words. These symbols do not look, feel, or sound like what they represent. They are used one at a time.

## VII. Language

- The child combines symbols (any sort of symbols) into ordered two- or three-symbol combinations (“want juice”, “me want juice”), according to grammatical rules. The child understands that the meaning of word combinations may differ depending upon how the symbols are arranged.

Communication

Consists of Behaviors and Intentions

# Development of Communicative Intent

Level of Communication	Pragmatic Features
Level I Pre-intentional (Reactive) Behavior	STATES expressed by behaviors (as interpreted by caregivers) Discomfort Comfort Interest/Excitement
Level II Intentional (Pro-active) Behavior	FUNCTIONS that behaviors serve (as interpreted by caregivers) Protest/reject Continue pleasurable action Obtain more of something Attract attention
Level III Unconventional Pre-symbolic Communication	INTENTS for which behaviors are used by child Refuse/reject Request more of an action Request a new action Request more of an object Request a new object Request attention Show affection

## Development of Communicative Intent

Level of Communication	Pragmatic Features
<b>Level IV</b> <b>Conventional</b> <b>Pre-symbolic Communication</b>	<b>All of the previous intents +</b> <b>Greetings</b> <b>Offer/share</b> <b>Direct another person's attention to something</b> <b>Polite forms (please, thank you)</b> <b>Confirm/negate (yes/no)</b> <b>Ask questions</b>
<b>Level V</b> <b>Concrete Symbolic Communication</b>	<b>All of previous intents +</b> <b>Request absent object</b> <b>Label</b>
<b>Level VI</b> <b>Abstract Symbolic Communication</b>	<b>All of previous intents +</b> <b>Comment</b>
<b>Level VII</b>	<b>All of previous intents</b>

I Pre-Intentional Behavior 0-3 mo.	(1) Expresses Discomfort	(1) Expresses Comfort					(1) Expresses Interest in Other People									
	II Intentional Behavior 3-8 mo.	(2) Protests	(2) Continues Action		(3) Obtains More of Something			(2) Attracts Attention								
III Unconventional Communication 6-12 mo.		(3) Refuses, Rejects	(4) Requests More Action	(5) Requests New Action	(6) Requests More Object	(7) Makes Choices	(8) Requests New Object	(3) Requests Attention	(4) Shows Affection							
	IV Conventional Communication 12-18 mo.	(3) Refuses, Rejects	(4) Requests More Action	(5) Requests New Action	(6) Requests More Object	(7) Makes Choices	(8) Requests New Object	(3) Requests Attention	(4) Shows Affection	(5) Greets People	(6) Offers, Shares	(7) Directs Another's Attention	(8) Polite Social Forms	(1) Answers Yes/No Questions	(2) Asks Questions	
V Concrete Symbols 12-24 mo.										(9) Requests Absent Object	(3) Requests Attention	(4) Shows Affection	(5) Greets People	(6) Offers, Shares	(7) Directs Another's Attention	(8) Polite Social Forms
	VI Abstract Symbols 18-24 mo.	(3) Requests Attention	(4) Shows Affection	(5) Greets People	(6) Offers, Shares	(7) Directs Another's Attention	(8) Polite Social Forms	(1) Answers Yes/No Questions	(2) Asks Questions							
VII Language 24 mo. +										(3) Requests Attention	(4) Shows Affection	(5) Greets People	(6) Offers, Shares	(7) Directs Another's Attention	(8) Polite Social Forms	(1) Answers Yes/No Questions

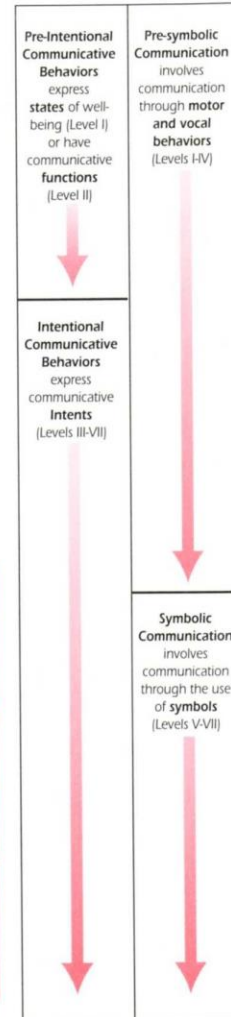
**Type of Symbol**  
For Levels V, VI or VII, specify types of symbols used (e.g., picture symbols, 3-dimensional symbols, manual signs, speech)

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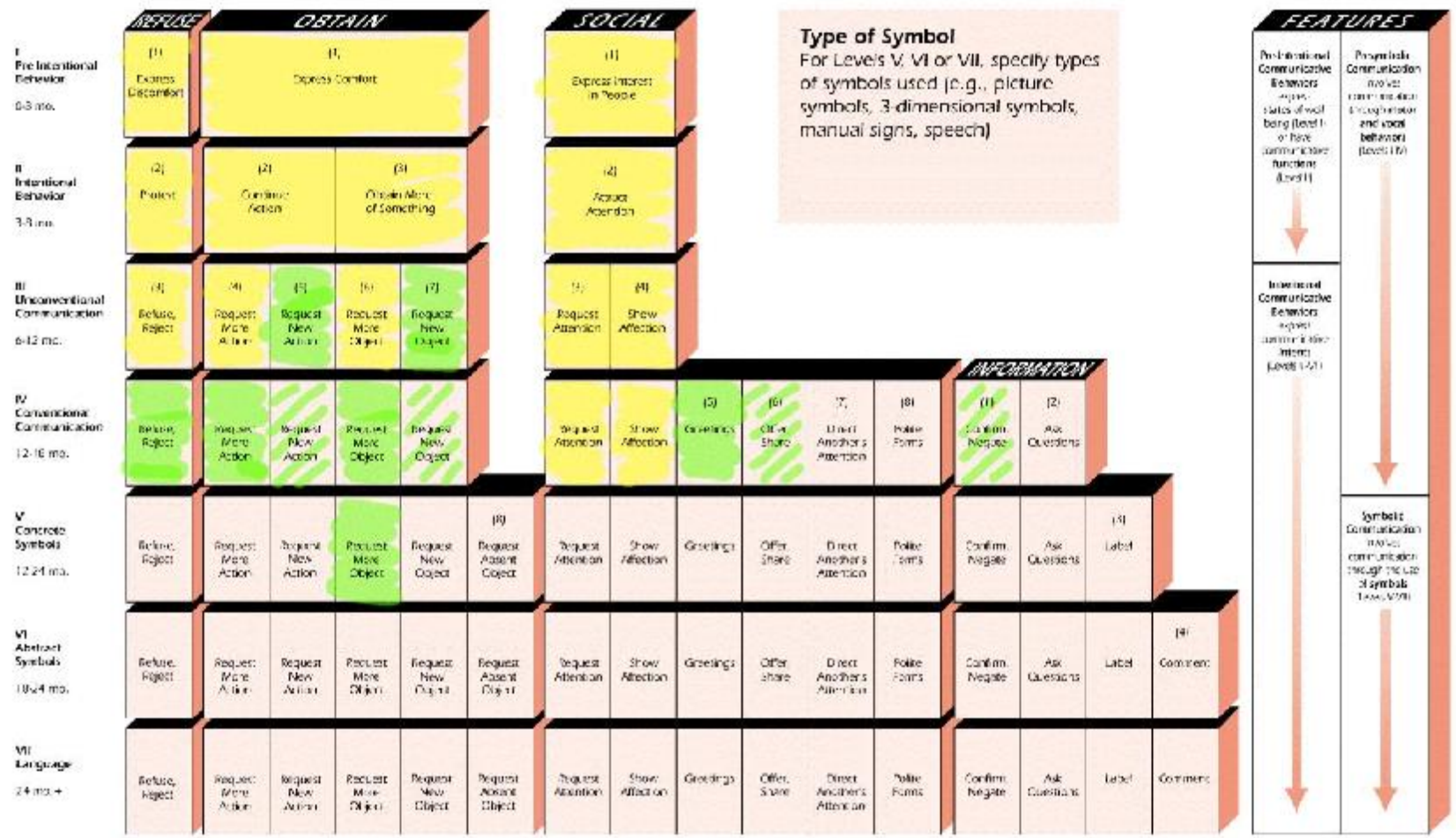
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**FEATURES**



**COMMUNICATION MATRIX PROFILE**

Name \_\_\_\_\_ Date \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Completed by \_\_\_\_\_



# COMMUNICATION MATRIX PROFILE

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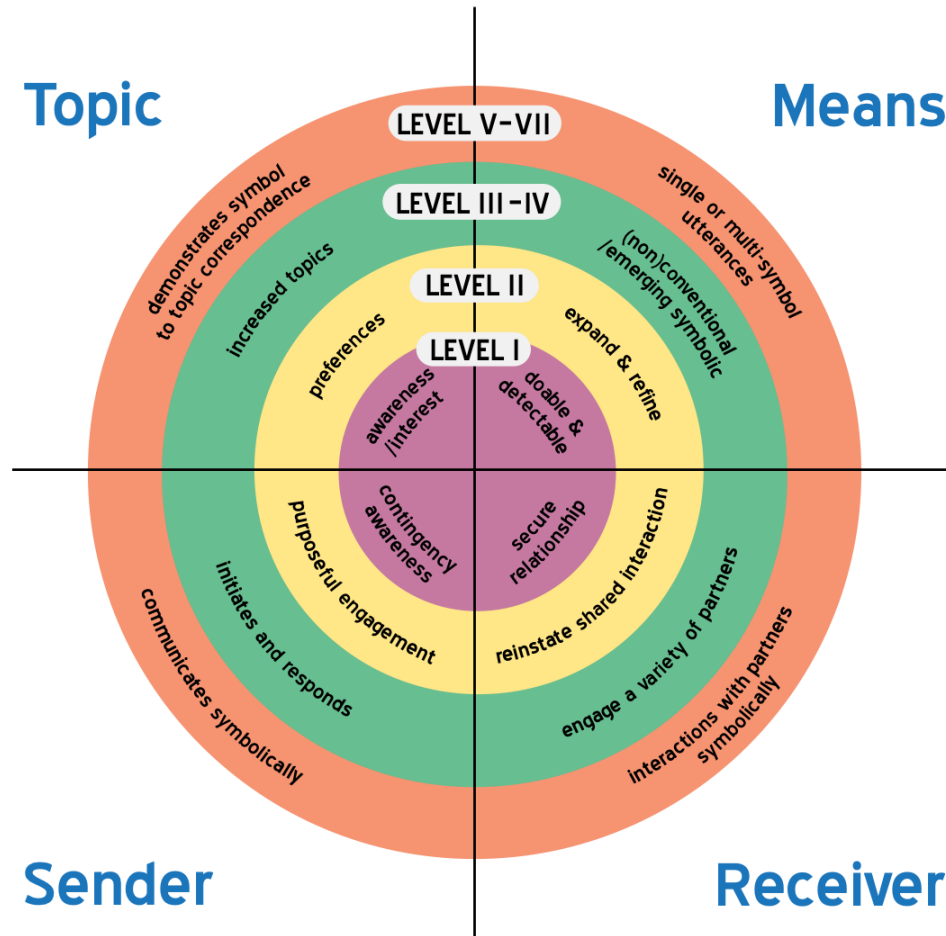
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# Assessment of Early Communication

- [www.communicationmatrix.org](http://www.communicationmatrix.org)
- Dr. Charity Rowland

The screenshot shows the homepage of the Communication Matrix website. At the top, there is a navigation bar with a language dropdown set to 'English', a 'Select' button, and links for 'Login' and 'Register'. Below this is a blue header with the title 'THE COMMUNICATION MATRIX' and a secondary navigation menu with links for 'About', 'Results', 'Custom Report', 'Support', 'Contact', and 'FAQ'. The main content area features a yellow background with the heading 'Communication Assessment for Parents & Professionals'. A sub-heading reads: 'An easy to use assessment instrument designed for individuals of all ages who function at the earliest stages of communication and who use any form of communication.' To the left of this text is a photo of a young child eating, with a red starburst graphic that says 'FREE'. Below the photo is a link to 'Download the entire handbook' and a note about Adobe Reader. At the bottom of the main content area are two buttons: 'Try It Now' and 'Create your account'. On the right side of the main content area is a preview of the assessment matrix, which is a grid with columns for 'Communication Skills' and rows for 'Communication Modes'. A key indicates four levels: Surpassed (dark blue), Not Used (white), Emerging (yellow), and Mastered (light blue). The bottom of the page has an orange footer with a grid of links: Home (Try it now), About (Video: Introduction), Results (Video: Understanding Results), Support (Video: Entering Data), Custom Report (About the Report (Beta version)), and FAQ (Change my email address or password?).

The 4 elements of expressive communication pictured below along with the Communication Matrix assessment, by Rowland (2004) provided us a framework for the construction of Communication-in- Action. Communication in Action is designed to apply the information from the Matrix to strategies for instruction including goals, video illustrated interventions, and resources. Service providers across disciplines (Educators, PT, OT, SLP) participated in its development. This reflects our belief that successful development of communication requires the unique skills and perspectives of all members of the team.



__A	My child doesn't seem to have real control over his body yet. The only way I know that he wants something is because he fusses or whines when he's unhappy or uncomfortable (he will usually calm down after I figure out what's wrong), and he smiles or makes noises when he's happy <b>(level I)</b>
__B	My child has control over his own behaviors, but she doesn't use them to try to communicate to me. She doesn't come to me to let me know what she wants but it's easy for me to figure out, because she tries to do things for herself. She knows what she wants, and her behavior shows me what she wants. If she runs out of something to eat, she will just try to get more, rather than trying to get me to give her more <b>(level II)</b>
__C	My child clearly tries to communicate his needs to me. He knows how to get me to do something for him. He uses various behaviors (like pointing, shaking his head, tugging at my arm or looking back and forth between me and what he wants) to communicate to me. For instance, when he wants more milk, he might hand his cup to me or point to the refrigerator. <b>(level III-IV)</b>
__D	My child lets me know what she wants by using some form of symbolic communication (such as speech, printed words Braille, picture symbols, 3-dimensional symbols or sign language). When he uses his symbols it's clear that he understands what they mean. <b>(level V-VII)</b>



Why focus on  
communication?

# NJC Communication Bill of Rights

"All people with a disability of any extent or severity have a basic right to affect, through communication, the conditions of their existence. Beyond this general right, a number of specific communication rights should be ensured in all daily interactions and interventions involving persons who have severe disabilities. "

<https://www.asha.org/uploadedfiles/njc-communication-bill-rights.pdf>

Communication  
is more than  
speech

- Facial expressions
- Body movements and posture
- Gestures
- Eye contact
- Touch
- Space
- Voice

# Role of Teachers of Students with Visual Impairments in Communication

For children with visual and motor impairments access to topics and people in their environment is impacted. With delays in motor skills as well combined visual impairment or blindness, systematic instruction is needed to develop an understanding of themselves and their world in order to develop the motivation and understanding of communication.

# Topic

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Motor and sensory experiences are often the first topic. Consistent practice and exposure are important to establish “vocabulary.”

- *Related ECC areas – recreation and leisure, social, technology*





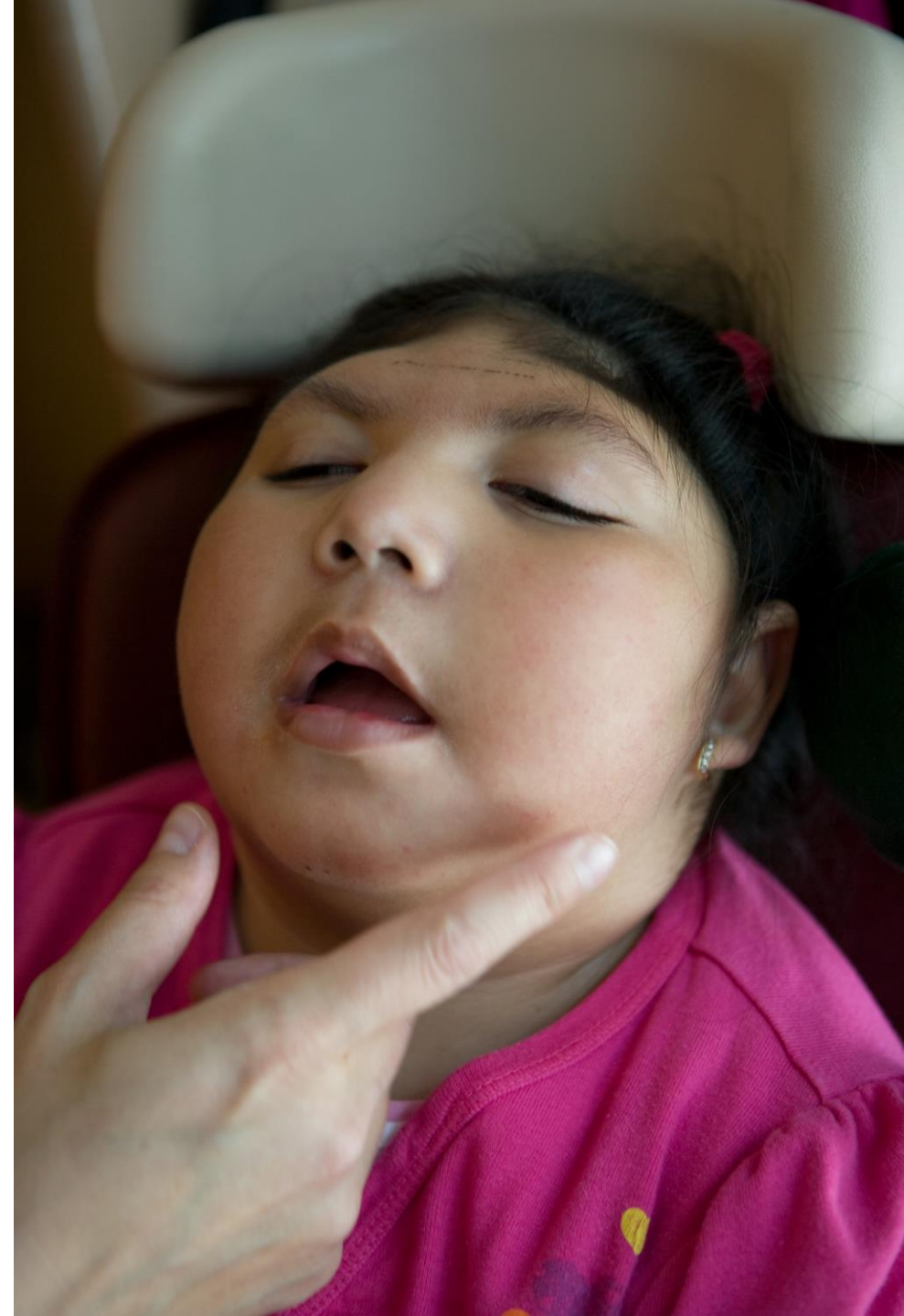
# Sender

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- **Sender** – students need body and self-awareness to differentiate themselves from their world and act upon it.
- *Related ECC areas – self determination*

# Receiver

- The receiver must be accessible to the sender. This may require modification in positioning, proximity and cueing.
- *Related ECC areas– social*





# Means

Accommodations are needed to maximize access topics and partners. This may include positioning, adaptation of materials, etc.

*Related ECC areas– sensory efficiency*

Share your  
case

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# Case Study

- 4 year with global delay
- Vision – CVI, nystagmus
- Hearing – moderate to severe bilateral hearing loss, uses amplification
- Motor impairment – non ambulatory, scoots on back to preferred items, emerging crawling, stands with support



## Level II on *Communication Matrix*

- Protests by swiping away or vocalizations such as yelling
- Requests more of something with vocalizations (yelling) and emerging reach
- Reinstates action with body movement, vocalizations
- Attracts attention with eye contact, smile or vocalization
- She is not yet coordinating gaining attention and communicating topic
- Choice making skills are emerging but inconsistent
- Behaviors can be difficult to interpret



**Communication**  
*in Action*

a communication-based guide  
to intervention for learners  
with complex communication needs

[www.Communication-in-action.net](http://www.Communication-in-action.net)

## Profile of Student at Level II

Senders now act with intent as demonstrated through purposeful behavior for a variety of topics (social/nonsocial). These reciprocal interactions, many of which are initiated by a partner, provide the sender an opportunity during pauses to indicate a desire to continue or repeat interactions. Communication to reinstate or end these interactions is still partner perceived (i.e., interpreting the intent behind the behavior). Such opportunities create; an expectation of our sender's active participation, their access to topics, and a context for shared experiences with their partner. Sender does not yet demonstrate coordinated behavior to both receiver and topic.

### Focus of Instruction

(from Rowland and Schweigert)

- Respond to potentially communicative behaviors so that the senders become aware of their communicative purposes as well as the importance of having a communication partner.

### Goals for Student (*Sender*)

**\*Goals are intended to assist the senders to achieve mastery of current level as well as prepare them for transition to the next level.**

**Student will demonstrate preference for increased # of partners and topics – Receiver/Topic**

**Student will refine or expand means of expression – Means**

**Student will direct attention to partner to reinstate. –Receiver/Topic**

**Student will demonstrate anticipation of a specific activity when presented with symbol etc.through a specific response. –Means/Topic**



## Ways to Obtain ♦ Social

### Why?

As our students (the senders) interact with an ever expanding world of people and things it's possible that their ability to recognize and differentiate between them also grows. Often this is demonstrated through specific movements associated with specific physical interactions (rocking or back and forth to indicate more row-row), producing a sucking motion to indicate a desire for more to drink, or perhaps grasping a towel to express a desire for more peek-a-boo). This is vocabulary for our early communicators long before they have symbols they are creating associations to express themselves ever more clearly (Bruce, S. 2005), (Bruce, S. et. al, 2007).

### Transdisciplinary IEP Goal Examples

Student will increase specific behaviors associated with interactions to reinstate the movement or object interactions by repeating the movement or acting on the object, for 3 new activities, as measured by PT, OT, teacher.

Student will improve ability to access communication switches and toys in order to indicate preferences by using a variety of motor movements such as pulling, squeezing or maintaining pressure to activate voice output or cause and effect toys, as measured by OT documentation.

While interacting with a partner, student will demonstrate improved hand strength and communication skills by actively grasping and releasing a graspable item with his left hand to explore/manipulate the item for up to 20 seconds, and then indicate he is done with it by releasing it 4 out of 5 opportunities as measured by OT documentation.

During a variety of classroom activities when not given an immediate response, student will repeat a behavior or change behavior to gain attention or reinstate interaction, in 80% of opportunities, as measured by teacher and SLP.

Demonstrate anticipation of an activity as demonstrated through decreased latency when activating switches for cause and effect activities and for gaining attention, 50% above baseline as measured by teacher and SLP.



## Video Examples



## Tools and Assessments

**Do It Again tracking-** Data collection form

**Reinstatement Activity Form** - tracking form to collect data on child's attempts to reinstate partner initiated activity.

Child: " Let's Do It Again" Interaction tracking

**Partner Initiates** Interaction w/ child.

- **Pause briefly** (10 sec/or/depending on child\*)
- **Observe** for child's attempt to start or get you to start activity again

**Child response** (ex; partner bounces child on ball and pauses...child moves up and down like she is trying to bounce herself)

- note: if this is a new interaction, it may be necessary to repeat it several times before the child develops an idea of what its about and is able to respond \* the time it takes for a child to respond may differ from child to child and may change as he/she becomes more familiar with the interaction)

<b>What did you do to interact with the child</b> (Date)	<b>What did the child do to tell you, "Lets do it again"</b>	<b>What did you do to interact with the child</b> (Date)	<b>What did the child do to tell you, "Lets do it again"</b>



## Ways to Obtain ♦ Ways to Engage Socially

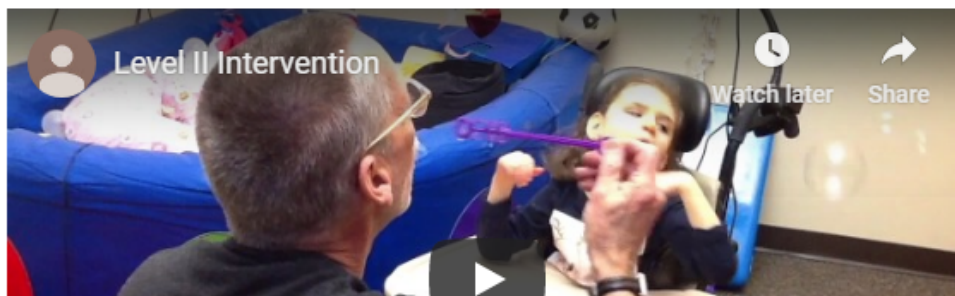
### Why?

Our learners access their world through interactions with their receivers. It is within this context of shared experiences that joint attention and the intent to communicate with someone takes shape. When that happens it's important that we allow for it and expect it.

### Transdisciplinary IEP Goal Examples

- *Student will gain a partner's attention to request more of an object or action by tactually searching tray for desired item or moving her body, as measured by OT, teacher.*
- *Using an assisted mobility using a device (Creepster Crawler, gait trainer, etc) student will travel 20 feet in order to engage a partner or access desired toy, as measured by PT.*
- *Student will demonstrate purposeful behavior (vocalization, body movement, voice-output switch activation) in order to attract a partner's attention 50% above baseline, as measured by SLP.*

### Video Examples





# Feedback and Suggestions

- Contact:
- [Communication-in-action.net](http://Communication-in-action.net)
- Jessica Mount Matney –  
[jessicamatney@nmsbvi.k12.nm.us](mailto:jessicamatney@nmsbvi.k12.nm.us)