

Public Page

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The Communication Matrix

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Center for Disabilities

Dedicated to *Life* Without Limits

The importance of communication skill development



The importance of communication skill development

- *Communication is the foundation for all learning.*
- *50% of children with severe developmental disabilities leave school without a communication system available to them.*
- *Primary reasons are:*
 - *Switching programs when the child does not make progress*
 - *Lack of consistency*

Communication Bill of Rights



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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.
- All people have the following specific communication rights in their daily interactions.
- These rights are summarized from the Communication Bill of Rights put forth in 1992 by the National Joint Committee for the Communication Needs of Persons with Severe Disabilities.

Communication Bill of Rights



Communication Bill of Rights

Each person has the right to:

- request desired objects, actions, events and people
- refuse undesired objects, actions, or events
- express personal preferences and feelings
- be offered choices and alternatives
- reject offered choices
- request and receive another person's attention and interaction
- ask for and receive information about changes in routine and environment
- receive intervention to improve communication skills
- be spoken to with respect and courtesy

Communication Bill of Rights



Communication Bill of Rights

Each person has the right to:

- receive a response to any communication, whether or not the responder can fulfill the request
- have access to AAC (augmentative and alternative communication) and other AT (assistive technology) services and devices at all times
- have AAC and other AT devices that function properly at all times
- be in environments that promote one's communication as a full partner with other people, including peers
- be spoken to directly and not be spoken for or talked about in the third person while present
- have clear, meaningful and culturally and linguistically appropriate communications

Communication Systems ways to understand (receptive) and be understood (expressive)



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Communication Systems

ways to understand (receptive) and be understood (expressive)

- Body Language and Facial Expressions
- Vocalizations
- Gestures
- Touch Cues
- Object Cues
- Two and Three Dimensional Tangible Symbols (photo, line drawing or object/part of object or texture that bears a meaningful relationship).
- Written Word
- Sign Language
- Spoken Language

Helpful tools:



Helpful tools:

- Communication Matrix
- Likes and Dislikes
- Child's temperament (easy, slow to warm, difficult)
- Sensory Channel Assessment (visual, auditory, tactile)
- What works and what does not work
- Refer to forms sent out earlier

The Communication Matrix An assessment tool:



The Communication Matrix

An assessment tool:

- For children with severe and/or multiple disabilities
- Documents expressive communication (can also be used to provide direction for receptive skills)
- Provides framework for goals
- Developed by Charity Rowland
 - Design to Learn Products: www.designtolearn.com
 - » Communication
 - » Concept Development
 - » Learning Environments

On-line Communication Matrix: www.communicationmatrix.org

The Communication Matrix Includes:



The Communication Matrix Includes:

- 4 reasons to communicate
- 9 categories of communication behavior
- 7 levels of communication

Map to profile results

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Name _____ Date _____ Completed by _____

Level	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
I Prefunctional Symbols 0-3 yrs.	Requires Assistance		Requires Assistance		Requires Assistance or Other People		Requires Assistance or Other People		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance			
II Intentional Behavior 3-6 yrs.	Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance	
III Environmental Communication 6-12 yrs.	Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance	
IV Conventional Communication 12-18 yrs.	Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance	
V Concrete Symbols 18-24 yrs.	Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance	
VI Abstract Symbols 18-24 yrs.	Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance	
VII Language 20 yrs. +	Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance		Requires Assistance	

Type of Symbol
 For Levels V, VI or VII, specify types of symbols used (e.g., picture symbols, 2-dimensional symbols, manual signs, speech)

FEATURES

Professional Preparation: Requires professional training (Level I-III)
 Requires professional training (Level I-III)

Individual Communication: Requires individual communication (Level I-III)

Symbolic Communication: Requires symbolic communication (Level I-III)

The Communication Matrix 4 reasons to communicate:



The Communication Matrix

4 reasons to communicate:

- Refuse
- Obtain
- Social interactions
- Provide or seek information-begins with:
 - “Yes” “No” questions
 - Asking simple questions
 - Labeling things
 - Making comments



Communication Matrix 9 Categories of Communicative Behavior



Communication Matrix

9 Categories of Communicative Behavior

- Body Movements
- Early sounds
- Facial expressions
- Visual responses
- Simple gestures
- Conventional gestures and vocalizations
- Concrete symbols
- Abstract symbols
- Language

The Communication Matrix Seven levels of communication:



The Communication Matrix

Seven levels of communication:

- **Level I:** Pre-intentional Behavior
- **Level II:** Intentional Behavior
- **Level III:** Unconventional Communication
- **Level IV:** Conventional Communication
- **Level V:** Concrete Symbols
- **Level VI:** Abstract Symbols
- **Level VII:** Language

Communication Matrix Level I: Pre-intentional



Communication Matrix

Level I: Pre-intentional

Pre-intentional Level or reflexive behavior that:

- Expresses state of child (i.e. hungry, wet,)
- That is interpreted by caregiver

Matrix – does the child use pre-intentional behavior to:

- Refuse-express discomfort (cry)
- Obtain-express comfort (co)
- Social- express interest in others (i.e. smiles)
- Seek/Provide information-NA

Level I: Pre-intentional



Level I: Pre-intentional

Child's behavior may include:

- Body movements
- Facial expressions
- Early sounds

The art of observation!

Goal-to establish purposeful behavior by
creating highly responsive environments

Communication Matrix Level II Intentional Behavior



Communication Matrix

Level II Intentional Behavior

Intentional Behavior-behavior that:

- Is intentional but not intentionally communicative
- Affects caregiver behavior since intent is inferred
- Child does not display eye contact prior to behavior, nor do they wait for response from adult

Matrix – does the child use intentional behavior to:

- Refuse-Protest
- Obtain- Continue action, More of something
- Social- attracts attention
- Seek/Provide information-NA

Level II: Intentional Behavior



Level II: Intentional Behavior

Child's behavior may include:

- Body movements
- Facial expressions
- Vocalizations
- Looks at desired object/person
- Takes desired object

Goal – is to respond to potentially communicative behaviors so that the child becomes aware of their communicative purpose

Establish Intentional Communicative Behavior



Establish Intentional Communicative Behavior

Primarily skills of awareness and/or anticipation

Sample social goals:

Through the use of auditory, visual, tactile/touch cues,
smell,

___ will indicate an awareness of the presence
of another person/peer by _____

___ will establish eye contact

___ will display social behaviors of smiling and
touching

Establishing Intentional Communicative Behavior....



Establishing Intentional Communicative Behavior....

The Importance of Routines for learning

Sample goal:

Through the use of consistent structured routines/activities) and cues, _____ will indicate through body movements/vocalizations, anticipation of the upcoming activity.

Procedure: Set up consistent routines and cues.

Eventually, incorporate use of pause/wait time.

Monitor behaviors for any indication of anticipation – moving toward next level.

Communication Matrix Level III Unconventional Communication



Communication Matrix

Level III Unconventional Communication

Unconventional Communication- is considered actual communication and involves:

- Unconventional gestures used by child
- With the intent of affecting caregiver
- Behaviors typically seen as not appropriate in adults

Child's behavior may include:

- Whole body movements, facial expressions, vocalizations (whining)
- Pushes away object/person, turns head
- Looks at/takes desired object, tugs/takes/guides your hand or taps object/person,

Level III Unconventional



Level III Unconventional

Matrix – child intentionally uses unconventional gestures to indicate:

- Refuse-intentionally refuses/rejects
- Obtain-request more action, new action, more object, make choices, new object
- Social- request attention, shows affection (vocalizes, moves toward, looks/touches another person)
- Seek/Provide information-NA

Goal – to shape unconventional gestures into conventional gestures and/or target symbol use

Communication Matrix Level IV Conventional Communication



Communication Matrix

Level IV Conventional Communication

Involves:

- Use of conventional gestures
- Used with the intent of affecting caregiver
- Child shows “dual orientation”
- Are considered socially acceptable and life long
- Disadvantage-does not enable the child to communicate about something not there

Level IV Conventional Communication



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Level IV Conventional Communication

Matrix: does the child intentionally use conventional gestures to:

- Refuse-refuses or rejects
- Obtain-request more action, new action, more object, make choices, new object
- Social –request attention, shows affection, greet people, offers, shares, directs another's attention, polite social forms (please, excuse me, thank you)
- Seek/Provide Information – answers yes/no questions, ask questions not necessarily using words, names things/people, makes comments spontaneously

Level IV Conventional Communication...



Level IV Conventional Communication...

Child's behavior may include:

- Gives unwanted item to you
- Specific Vocalization (uh, uh)

- Pointing
- Gazes back/forth between you and desired object
- Beckons you to come
- Holds out hand with open palm
- Waves for attention

Level IV Conventional Communication....



Level IV Conventional Communication....

Child's behavior may include:

- Raises or waves hand for attention
- Waves hi or bye
- Hugs/kisses/pats someone
- Holds hands up or out to you (for up)
- Specific questioning vocalizations to indicate “want this”
- Points at desired object/person/place
- Shakes head yes or no
- Nods head yes/no

Level IV Conventional communication....



Level IV Conventional communication....

Goal: Teach 1:1 correspondence between symbols (concrete and abstract) and referents.

Advantage: Makes it possible to communicate about things, places, people, and concepts that are physically absent.

Communication Matrix Level V Concrete Symbols



Communication Matrix

Level V Concrete Symbols

Concrete Symbols involve:

- Limited use of concrete symbols to represent entities
 - Includes natural or depictive gestures, pantomiming actions or objects, or use of tangible symbols (pictures or objects used as symbols)
 - They relate to environmental entities in 2 ways:
 - Bear a 1:1 correspondence between symbols and referents
 - Bear a clear perceptual relationship to the referent (resemble it in appearance, sound, touch or motion)
-

Assessing readiness for symbols



Assessing readiness for symbols

Once a child starts to use pre-symbolic communication skills spontaneously and with clear communicative intent across a variety of settings, then consider use of tangible symbols as a way to communicate.

They must understand they can control the behavior of another person

Can be through pointing, extending objects, tugging, hand guiding, facial expressions or vocalizations.

Tangible Symbol Systems



Tangible Symbol Systems

“Tangible Symbol Systems” by Charity Rowland
and Philip Schweigert

Are objects or pictures that bear a concrete relationship to the visual or tactile properties of the entities that they represents-they look or fee like these entities. They are three-dimensional symbols (objects) and two dimensional symbols (photographs and line drawings).

They may serve as a bridge to other symbol systems, including abstract symbols systems (such as speech or sign language)

Tangible symbols



Tangible symbols

Can be used for receptive and expressive communication to indicate:

- Activities
- Finished
- People
- Change in calendar (wild card)

Tangible symbols

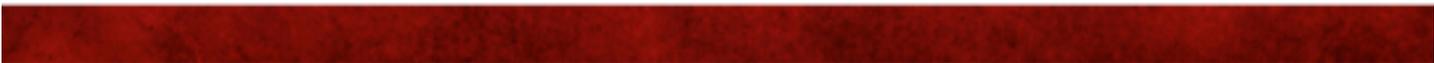


Tangible symbols

Include three dimensional objects such as:

- Identical objects
- Partial or associated
- One or two shared features
- Thermoform symbol
- Associations by pairing (i.e. shopping bag)

Miniature items make poor symbols!



Tangible symbols



Tangible symbols

Include two dimensional objects such as:

- Photographs
- Specific Line drawings
- Generic line drawings

Communication Matrix Level V Concrete Symbols.....



Communication Matrix Level V Concrete Symbols.....

Matrix: does the child intentionally use concrete symbols to:

- Refuse-refuses or rejects
- Obtain-request more action, new action, more object, make choices, new object, request absent object
- Social – request attention, shows affection, greets people, offers, shares, directs another's attention, polite social forms
- Seek/Provide Information – answer yes/no questions, ask questions, names things/people, makes comments (that's pretty, hot, etc.)

Level V Concrete Symbols.....



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Level V Concrete Symbols.....

Child Behavior may include use of concrete symbols in this manner:

- Rejection of a photo/line drawing/object symbol of unwanted item
- Indicates desire for something from use of photo/line drawing/object symbol
- Pantomimes actions or objects
- Mimics sound of desired action/object
- Use of photo/drawing of social concept (i.e. someone waving)
- Uses photo drawing or object symbol to indicate yes/no for an item/person/place/activity

Level V Concrete Symbols.....



Level V Concrete Symbols.....

Goal: Teach 1:1 correspondence between
abstract symbols and referents

Communication Matrix Level VI Abstract Symbols



Communication Matrix Level VI Abstract Symbols

Abstract Symbols

- Represent specific referents
- Such as speech, manual signs, brailled or written words, abstract textures or graphic symbols or three dimensional symbols
- Used one at a time (not full sentences)

Level VI Abstract Symbols.....



Level VI Abstract Symbols.....

Matrix – Does the child use abstract symbols to represent entities for the following manner:

- Refuse – refuses or rejects
- Obtain – request more action, request new action, request more object, make choices, request new object, request absent object
- Social – request attention, shows affection, greets people, offers, shares, directs another's attention, polite social forms (i.e. Please, look, hi,)
- Seek information – answer yes/no questions, ask questions, names things/people, makes comments (i.e. why, name item)

Level VI Abstract Symbols....



Level VI Abstract Symbols....

Child Behavior-may use the following:

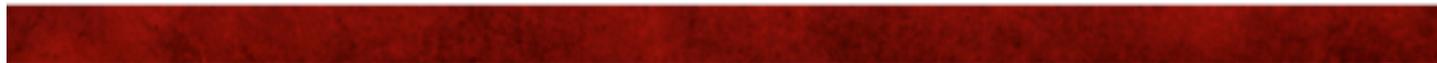
- Spoken word (i.e. no, yes, more, ball)
- Manual sign (i.e. Sign for finish or more)
- Written word
- Brailled word
- Abstract 3 dimensional symbols (i.e. represents no/yes)
- Abstract 2 dimensional symbol (i.e. represents no/yes)

Level VI Abstract Symbols



Level VI Abstract Symbols

Goal – To teach the combination of symbols into two and three – symbol utterances!



Level VII Language



Level VII Language

Language:

- Is a rule bound use of symbol system
- Ordered combinations of two or three symbols according to syntactic conventions

Level VII Language.....



Level VII Language.....

Matrix- Does the child use formal language to:

- Refuse – refuse or reject (i.e. stop it, no want, no go out)
- Obtain – request more action, request new action, request more objects, make choices, request new object, request absent object (more juice, want ball)
- Social- request attention, show affection, greet people, offers, shares, directs another's attention, polite social greeting (i.e. love you, out please, over there, bye, Mommy, see you later)
- Seek Information – answers yes/no, ask questions, names things/people, makes comments (i.e. no thanks, that car, why go, who go home)

Level VII Language.....



Level VII Language.....

Goal – Expand upon semantics and syntactic abilities



Communication Matrix Profile and Use!



Communication Matrix Profile and Use!

Competence is indicated if the child uses at least one behavior independently and consistently at a given level to express a given message.

Child should be allowed to perform at his/her current level of competence while being steadily pushed toward the next level of competence.

Expanding the Communicative Repertoire



Expanding the Communicative Repertoire

There are 3 Major intents that are absolutely crucial in terms of early pre-symbolic communication

- Reinstatement (desire to repeat or more of something)
- Gaining attention
- Making choices

Reinstatement (??I want more??) 2 major forms



Reinstatement (“I want more”) 2 major forms

Repeating of action-often a physical one

- Such as clapping or bouncing
- Adult’s use of pauses
- Look for subtle cues from the child

Requesting more of an item-i.e. food or toy

- Provide small portion of food or few items at a time
- More item should be made visible/known to the child
- Creates need to ask for more (reach, vocalize, etc.)

Reinstatement (??I want more??) two general teaching strategies



Reinstatement (“I want more”) two general teaching strategies

First, teacher conveys the expectation of a response, i.e.:

- A look
- A change in posture
- Physical contact

Second, teacher provides adequate wait time

Reinstatement (??I want more??)



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Reinstatement (“I want more”)

Sample intervention:

When engaged in a pleasurable activity/game,
____, will indicate a desire for more.

Procedure: Develop consistent routine/game.

- Begin the activity
- Use of wait time/Pause (5-10 second)
- Indicate you are waiting for a responses
- Respond to child’s behavior indicating “more”
- Resume activity

Gaining attention (??listen to me??)



Gaining attention (“listen to me”)

- Gaining attention is the most important reason to communicate as it lets the child know they have some control
- May include:
 - Natural behaviors-i.e. vocalizations
 - Use of switches

Gaining attention (??listen to me??)... Using Natural Behaviors



Gaining attention (“listen to me”)... Using Natural Behaviors

Sample goal: (natural behavior):

Provided a responsive environment, _____ will increase her attempts to gain attention.

Procedure:

- Baseline to determine what they do now
- Identify how you will briefly attend to this behavior-
 - Stroke hair
 - Talk
 - Other

Gaining attention ??listen to me??....



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Gaining attention “listen to me”....

Sample goal (touch):

Provided a responsive environment and a preferred toy,
_____ will increase her attempts to gain attention
through the use of touch.

Steps:

- Identify favorite toy
- Hold toy so that child accidentally touches you to get
- Reduce contact between the partner and desired object, but partner maintains control by hand in front of it, then in front but off to side, then in lap

Gaining attention (??listen to me??).... Using switches



Gaining attention (“listen to me”).... Using switches

Used only when natural behavior is not present
(due to severe orthopedic concerns/lack of
interest)

When the child does not wish to gain attention -
then what?

Teach child that access to a reinforcing item is
dependent upon another person

Gaining attention ??listen to me??...



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Gaining attention “listen to me”...

Pair attention with getting a reinforcing item!

Sample goal (switch use):

Provided a voice output device/switch, _____ will
activate the device to gain attention.

Background-child already has learned how to activate a
toy switch

Steps: 1st Incorporate social with the toy/switch

2nd Provide brief social and then give toy/switch

3rd Gradually extend amount of social time prior to
toy/switch- child learns partner controls access

4th Transfer skill to voice output device

Communicating choices ??That??s what I want??



Communicating choices

“That’s what I want”

To express a choice the child must have enough exposure to the items and sensory information to make the choice

Present two, one preferred and one not/or a nothing choice-i.e. piece of cardboard

Can present visually or on knee (if vision is limited)

Communicating choices.... ??That??s what I want??



Communicating choices.... “That’s what I want”

Sample Intervention:

Provided a choice between two toys (one preferred and another not), Jane will make a choice by _____ for desired toy.

Steps:

- Identify favorite toy and non preferred item
- Present both items in child’s line of sight and/or reach
- Provide instructions and wait time
- Upon targeted response, provide toy selected

How to develop communication skills.



How to develop communication skills.

- Recognize what they are doing as communication and shape it into something more meaningful.
- Use their sensory channels as it will be:
 - Motivating
 - One they understand
 - Feeds their system.
- Use likes/preferences

Trouble shooting-considerations



Trouble shooting- considerations

- Materials-are they reinforcing
 - Instructions -duration or type of engagement
 - Instructional cues-i.e. stop activity more abruptly to give stronger cue, exaggerate tone of your voice
 - Targeted behaviors-expectation too difficult or want child to make a stronger response
 - Time/Latency (more/less time)
 - Level of Assistance
 - Protest/Reject how does a child tell you this
 - Environment –location/time of day/positioning of child, positioning/size of material, distracters, etc.
-

Assessment



Assessment

- Do it with 3 people-parent if possible.
- Use in 3 different settings
- How do you know the answer to the questions-
what does the child do to show it
- Scoring
 - Mastered-they do it
 - Emerging-they are beginning to show skill

Program activities and objectives



Program activities and objectives

- Routines
- Where are you going to establish some objectives. Ability to:
 - Refuse
 - Obtain
 - Social-i.e.. Greetings high five and saying goodbye movement back and forth
 - Seek/provide information

The importance of Conversations!



The importance of Conversations!

- The difference between communication and conversation.
- What is communication?
- What is a conversation?

Additional Resources:



Additional Resources:

- Promoting Learning Through Active Interaction by Diane Klein, Deborah Chen and Michele Haney, Brooks Publishing
- Remarkable Conversations by Barbara Miles and Marianne Riggio, Perkins School for the Blind
- Calendars for Students with Multiple Impairments including Deaf-Blindness by Robbie Blah, Texas School for the Blind
- First Things First, Early communication for the Pre-Symbolic Child with Severe Disabilities, Design to learn Products
- Dimensions of Communication, Developing a Communication profile and Designing an Intervention Plan, Harvey Mar and Nancy Sal.