Expressive Communication For Young Children with Autism: The Bridge to participation

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“The single most important skill a person with autism can learn is functional spontaneous communication”


What is Communication?

A range of purposeful, intentional behavior, either verbal or nonverbal, evidenced by anticipation of an outcome, which is used to exchange information within a social context.

ASD: A wide range of communication behaviors; from non-verbal to extremely verbal with varying degrees of communicative intent.
**Common Expressive Communication Differences in ASD**

- Pre / Non verbal
- Echolalia (Unconventional Verbal Behaviors - Prizant)
- Verbal - but only in response
- Verbal - but struggle with social aspects of communication

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**Common Expressive Communication Forms (behaviors) in ASD**

- Motoric
- Gestural
- Vocalization
- Visual form
  - Objects
  - Photos
  - Line drawings
  - Written word
- Verbalization
  - Echolalia
  - Prompted speech
  - Generative language
  - Spontaneously initiate

And…….

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**Unusual or Challenging Behaviors!!!!**
Features/Characteristics of ASD

Function
Learning/thinking/processing differences
Social differences
Communication differences
Sensory Processing differences
Restricted/repetitive patterns of behaviors, actions or interests

ASD Iceberg

ASD Iceberg Planning Guide

ASD Glasses

Tip of the Iceberg Behaviors

Usual point of view

ASD point of view
Critical to consider...
What is the Communicative Function of the Behavior?

Form versus Function

- **Form**: what does the behavior look like?
- **Function**: what expressive communicative purpose does the behavior serve?

Core Communicative Functions

- Request
- Seek assistance / help
- Cessation (“all done”)
- Protest / reject

Considered as “essential life skills for communication” by Kate Silver from Autism Initiative (see resource)

Social Interaction / Social Language Differences in the Preschool Child

- Generally no delays in early language development (e.g., first words, 2-3 word utterances). If delays are present, a rapid “catch-up” occurs between the ages of three and five.
- May exhibit some pronoun errors, particularly with substituting 2nd or 3rd for 1st person forms (e.g., referring to self by name versus “I”).
- Difficulties are often not noted within the family setting, but are more apparent upon entering preschool.
Social Interaction / Social Language Differences in the Preschool Child

- Tendency to talk "at" versus "with" others.
  - Lengthy, non-reciprocal "dissertation" regarding their high interest(s), thoughts, or beliefs. Often not even directed to another person.
- Some repetition of favorite words or phrases - seemingly just for the fun of it.
- Difficulty reading / understanding other's facial expressions, vocal tone, and gestures - may misinterpret or even ignore.

- May show limited interest in making friends, or even sharing experiences / interests with peers, or see peers as "tools" for getting their wants and needs met (e.g., Trevor and ceiling fans).
- May seem unenthusiastic or uninterested in responding to others in a socially or emotionally reciprocal way (e.g., may ignore or seem not to notice when a person expresses emotion towards them).
- May appear to lack empathy.
- Peer interactions: "Directors and Correctors"

- May speak in a formal style, atypical of children their own age.
- May avoid eye contact or stare too intently at others.
- May have unusual facial expressions or postures.
- Difficulty regulating social/emotional responses - more so than NTD preschoolers (e.g., frequently get overly upset at seemingly trivial situations).
- Difficulty knowing the words to communicate for all social communicative situations despite being able to talk.
Social Interaction / Social Language Differences in the Preschool Child

- Appear to present with normal intelligence but can often appear precocious in cognitive functioning due to:
  - Intense, restricted interests / passions regarding particular topics or themes - which are sometimes not commensurate with chronological age (e.g., combustion engines; makes and models of ceiling fans).
  - Strengths in rote memorization of facts, early academic skills such as number / letter / word recognition.
  - Strengths in expressive and receptive vocabulary skills.

Expressive Communication Assessment Tools for Students with ASD

Standardized Tests to Assess Technical Knowledge and Processing of Language at the Word and Sentence Level

- To assess vocabulary, syntax, grammar, etc.), use of receptive and expressive standardized instruments such as the TOLD-3; CELF-4; ROWPVT; EOWPVT (and many others) can be administered, if warranted.
Pre / non-verbal Child with ASD

- "Communication Assessment Record" in Assessing and Developing Communication and Thinking Skills in People with Autism and Communication Difficulties, by Kate Silver, 2005.
- Informal assessment
  - Understand concept of cause and effect
  - Communicative intent - desire to communicate with another person (anticipating an outcome to their communicative behavior)? Prizant’s "communication temptations"
  - Language form - a means of communication
  - Language functions - something to communicate about

Pre / non-verbal Child with ASD

  - Identifies social play stages, and which processes or skills to work towards.
  - Provides an ongoing curriculum for social play.

Verbal Child with ASD: Standardized Assessment Tools

- Children's Communication Checklist - 2™ PsychCorp: Harcourt Assessment
  - Ages 4:0 - 16:11
  - Purpose: to identify children with a pragmatic language impairment; to assist in identifying children who may require further assessment for ASD.

- Comprehensive Assessment of Spoken Language (CASL): Pearson Publishing
  - Ages 3:0 - 21:11
  - Pragmatic language subtest
  - Supralinguistic subtest (abstract lang.)
Verbal Child with ASD:
Standardized Assessment Tools
• Test of Problem Solving: LinguiSystems
  - TOPS 3: Ages 6:0 - 11:11
  - TOPS 2 Adolescent: ages 12:0 - 17:11
• Test of Language Competence: Harcourt Assessment
  - Ages 5:0 - 18:11
  - Assesses the abstract elements of language (e.g., inferences, ambiguous sentences, figurative language, etc.)
• Test of Pragmatic Language-2: LinguiSystems
  - Ages 6:0 - 18:0
  - Limitations!! False negatives can occur!!

Verbal Child with ASD:
Standardized Assessment Tools
• Social Language Development Test: LinguiSystems
  - Ages 6.0 - 11.11 / 12.0 - 17.11 (NEW!)
  - Examines social language skills students need to take another's perspective, predict consequences, and use social grace to get along with peers.
  - 4 subtests elementary / 5 subtests - Adolescents
    - Making inferences
    - Interpersonal negotiations / Interpreting social language
    - Multiple interpretations / Problem solving
    - Support peers / Social interaction
    - Adolescents: Interpreting ironic statements

Verbal Child with ASD:
Standardized Assessment Tools
  - Ages 6.0 - 12.11
  - Criterion-referenced and norm-referenced assessment tool (z scores and percentile ranks).
  - Additional teacher / parent Questionnaire screening tool.
  - Identifies social and emotional language needs of students with ASD, LD, or ADD
Criterion Assessments

- CELF Preschool 2 - Descriptive Pragmatics Profile, PsychCorp: Harcourt Assessment
  - Ages 3-6 (Criterion score)
- CELF 4 - Pragmatic Profile
  - Ages 5-21 (Criterion score)

Additional Informal Assessment Tasks

- First Order False Belief Tasks (NTD age 4)
  - Sally-Anne Task (Change of location task)
  - Unexpected Contents Task

Conversational Analysis Assessment

from Jill Kuzma @ www.jillkuzma.wordpress.com

- Balance of turn-taking (should be fairly equal)
- Balance of turn-taking when topic is initiated by target student or others
- Topic maintenance when topic is initiated by target student or others
- Balance of comments versus questions (should be fairly equal)
- Percentage of conversation breakdowns
- Recognize conversation breakdowns
- Repair conversation breakdowns
Assessment: Important to Consider...

- Informal assessment in combination with standardized assessments should be used to assess pragmatic language skills.
- No single standardized test score should determine whether or not a child has a pragmatic language disorder.
- Information from selective subtests can also provide information for a comprehensive pragmatic evaluation.

Does the person with ASD need an AAC system(s)?

Important Questions to Consider...

Do they use a conventional or idiosyncratic way to communicate various language functions to others?

Can they pass the “stranger test” with their current form to expressively communicate all core communicative functions?
One other Critical Question to Consider...

Does the person with ASD spontaneously initiate with others to communicate a variety of functional communicative functions?

If the answer is “No” to any of these questions, then development of an appropriate AAC System is a must!!!!

But What if the Student with ASD Can Talk - Would They Need an AAC System?
Consider These Questions...
from PRC's LAMP 9/06

- Do challenging behaviors still serve as their primary method for communicating?
- Is their speech scripted / rote - but not generative?
- Do they seek out others to communicate with?
- Is their speech meeting their communication needs?

AAC Myths?????

Pre-requisite Skills for Use of AAC?

NONE!
**Common AAC Systems**

- Sign Language
- Picture Exchange Communication System (PECS)
- Picture Point Systems
- Voice Output Systems
  - Single message
  - Multi-message
  - Levels
  - Dynamic display
  - Spelling
  - LAMP (PRC's Language Acquisition through Motor Planning)

**Sign Language**

**CONs**
- Transient
- Not a universal language system
- Requires motor praxis
- Requires imitation skills / willingness to be touched
- Abstract
- Doesn’t teach to spontaneously initiate

**PROs**
- Visual
- Easy access
- Portable

**Picture Exchange Communication System (PECS)**

**PROs**
- Visual / non-transient
- Teaches the communicative act in a visual / physical format
- Teaches to spontaneously initiate
- Teaches communicative intent
- Rapidly acquired
- Can use various VRS - universal language
- Portable
- Requires minimal motor praxis

**CONs**
- Not an “end all”
- Prescribed / rigid methodology
- Vocabulary needs?
Picture Point System
Pros & Cons

**PROS**
- Visual / non-transient
- Can use various VRS - universal language
- Portable

**CONS**
- Requires understanding of social aspect of communication
- Vocabulary needs

Communication Bracelets

- Rubber bracelets for both receptive and expressive communication:
  - Basic needs
  - Feelings
  - Schedule
  - $4 each / $11 set

Communication Charm Bracelets

www.augresources.com
Voice Output Systems

**PROS**
- Visual / non-transient
- Can use various VRS (dependent upon system)- universal language
- Pairs auditory with visual output
- Sophisticated systems can meet vocabulary needs
- For activity participation

**CONS**
- Difficulty understanding device is a communication system versus cause/effect “toy”
- Expensive - can be easily damaged
- Some systems - too sophisticated
- Portability

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**iPhone / iPod Touch / iPad for AAC!**

“Proloquo2go” from AssistiveWare

- Dynamic display voice output system with icon/text-to-speech.
- Natural sounding voices
- SymbolStix vocabulary (News-2-You).
- 7000 symbols built into program.
- Personalize by importing photos / graphics.
- Easy to edit / customize.
- For all ages!

$189.99
Additional AAC Apps for the iPhone / iPod Touch / iPad

- SoundingBoard (Ablenet): $49.99
- MyTalk: $39.99
- Expressionist: $9.99
- Look2Learn: $24.99
- TapSpeak Button: $9.99
- Talking Tom: free

Additional AAC Apps for the iPhone / iPod Touch / iPad

- iConverse: $9.99
- Speak it!: $1.99
- Locabulary Lite: Free
- Tap to Talk: Free app but $99.95 annual subscription for individual customization. Available for Nintenendo for $99.95

AAC Feature Match for ASD

(Selection Process)
Cognitive Skills:

- Visual Representation System
  - Real objects (3-D)
  - Miniature objects (3-D)
  - True Object Based Icon: TOBIs - Barbara Bloomfield (2-D)
  - Photographs (2-D)
  - Real drawings (2-D)
  - Line drawings (2-D)
  - Written word (2-D)

- Categorization skills?
AAC Selection Process
Considerations for ASD

• Learning/Thinking/Processing differences
  - Visual processing - strength!
  - Auditory processing - weakness!
  - Preference for static rather than transient information.
  - Concrete / literal processing - difficulty with abstract / symbolic processing.
  - Sensory processing differences.
  - Prompt dependency.

AAC Selection Process
Considerations for ASD

• Social Relation Differences
  - Limitations in spontaneously initiating interactions with others.
  - Preference for object-referenced rather than people (social) referenced thought.
  - Limitations in understanding concept of “joint attention” (social comment / sharing).
  - Limitations in social awareness / social imitation.

AAC Selection Process
Considerations for ASD

• Motoric Skills
  - Apraxia: motor planning difficulties
  - Access - isolate index finger to point
  - Will need to establish motor patterns for use with AAC systems (LAMP by PRC)
  - Portability of systems
  - Severity of challenging behaviors (if present)
  - Durability of systems
  - User lifestyle
  - Contexts / environments
AAC Vocabulary??
Language Functions

- Vocabulary to *at least* meet the core communicative functions.
- Request function: what is motivating / interesting to the child?
- Will need to conduct frequent reinforcement / motivation checklists with parents.
- Avoid starting with vocabulary regarding functions that the child has not mastered (e.g., bathroom).
- Add vocabulary as your student’s interests, wants, and needs change.
- Include peer-level language and vocabulary.

Vocabulary: Consider your Child’s Language Age with NTD
Expressive Vocabulary Development

- 18 Months: 5 -20 words
- 24 Months: 150 - 300 words
- 3 Years: 900 - 1000 words
- 3 years: Categorization skills developed

From Child Development Institute

Don’t assume...

By simply giving a person with ASD an AAC system(s) that you will solve their communication problems.

Common mistake: *Not* teaching the basic principles of communication (e.g., intent, joint attention, turn-taking, etc.) along with instruction in the use of the AAC systems.

Aided Language Stimulation
“But I don't have time!”
Really?!?!?!?

Need to plan communicative opportunities throughout the day!

Consider Your Students’ AAC Needs?
• See handout: “AAC Selection Tool”
• See handout: “AAC Questions to Consider Worksheet”
• ROADBLOCKS!!!
• Group discussion
In Addition to an Appropriate AAC System: For Children who are Pre-verbal / Non-verbal...

• Consideration should also be given to development of oral-motor skills - for children diagnosed as having oral/verbal apraxia (motor-planning difficulties).
  - "Talk Tools"

Echolalia?

A.K.A. Movie Talk / TV Talk

• Normal part of language development.
• Problem - when child does not move beyond this stage of language development. When it persists.
• Functions of echolalia:
  - Communicative interactions with others (e.g., Request; protest; turn-taking; initiate; etc.)
  - Non-interactive / for personal use (e.g., self-stimulatory / personally satisfying; triggered by an object, person, situation, or event; self-directive; rehearsal; self-regulatory / calming; etc.)

Intervention for Echolalia

• Positive indicator for child becoming a spontaneous verbal communicator (~85%).
• Don't try to extinguish - but consider how child can use functionally.
  - Reciprocity (echoed phrases before / after)
• Can teach child echolalic utterances appropriate to numerous contexts through functional "fun" movement based activities.
  - "Programming" their language
• Sometimes adding a melody can assist the child with associating the verbalizations with a context / activity.
• Use of visual support strategies to assist with development of generative language.
Visual Instructional Strategies to Teach Expressive Communication Skills for Students with ASD

Teaching Expressive Communication Skills

- Limit verbal prompts so that the verbal prompt does NOT become part of how the student learns the skill.
- Verbal prompts are the most difficult prompts to fade!
- Use hand-over-hand, gestural, or physical prompts to direct students to the visual expressive communication strategies.

Requesting Objects and Actions

- Objects
  - Tempt the child by having items of high interest within their sight but out of reach
  - Leave out necessary items that are needed to complete a task
    - Give the child a worksheet but no pencil
    - Give the child a project to cut without scissors
  - Provide choices and make them ask for the item they want
Requesting Objects and Actions

- Actions
  - Avoid jumping in
  - Give the child an opportunity to request actions
- Examples
  - push on swings
  - warm food
  - open doors, containers. Etc.
  - social choice board
    - chase
    - tickle
    - dance

Requesting All done

- Make requesting all done a part of the routine at the end of activities such as snack and lunch.
- When children look bored, are exhibiting challenging behaviors, or are trying to get away from an activity, physically / gesturally prompt them to request all done.
- When trying to teach the concept of all done, if possible, always honor the request.
Opportunities to Request Help

- Getting a coat on/off
- Zipping coat
- Zipping/unzipping a backpack
- Putting shoes on/off
- Opening doors or entrance to designated areas
- Flushing the toilet
- Turning the water on/off
- During work and/or tasks
- Opening a lunchbox
- Opening milk container
- Buttoning shirts/pants
- Opening containers
- Opening straws
- Putting straws in juice boxes
- Opening refrigerator
- Fixing broken items

Requesting Help

![I need help sign]
Greetings

INTERVENTION STRATEGIES for Initiation

High 5

My Turn
“Break” Cards

Relating Past Events

From Linda Hodgson
Emotions

no hit

stomp feet

"The Incredible 5-Point Scale" for Appropriate Vocal Volume

Kari Dunn Buron
Visual Strategies for Teaching Conversation Skills

• Conversation Starters:
  - Photos: Use wallet photo holders or small photo album of pictures that are significant to the student (can be carried in a pocket or backpack). If needed, notes can be used as additional prompts for what to talk about.
  - Train a popular topic and relate to high interest if possible: For a "numbers" kiddo - stats on the Green Bay Packers.
  - Train "interview" questions with practice written questions or "topic cards".
  - Train general conversation starters written on a card.

Topic Cards

Conversation Cubes

www.augresources.com

$12.99
Video Modeling / Video Self-Modeling

- The student watches a video of others (adults / children) modeling target behaviors (e.g., joining in a 4-Sqaure game; greetings; recognizing a communication breakdown).
- Goal is for the student with ASD to model the behavior from repeated viewing of the video.
- Video Self-Modeling: Student watches self successfully exhibiting the target behavior.


“Video modeling is without a doubt the most effective social skills intervention strategy that I have used with children with ASD”

Scott Bellini, 2006

BENEFITS of Video Modeling

- Visual medium
- Motivating
- Repetitive
- Alleviates discomfort / anxiety of “live” social interactions
- Reduces speed and distractions of “real-life” social interactions (can replay / pause)
- Increases attention to relevant stimuli in the video - which is extremely difficult for them in “real-life” situations
- Increases self-awareness: allows student to monitor and evaluate their own behavior
RESOURCES: Video Modeling


RESOURCES: Video Modeling Websites

- www.ideasaboutautism.com/video.html
- www.alaskachd.org/video/
- http://computer.howstuffworks.com/video-editing.htm
- www.modelmekids.com
- www.skillbuildingbuddies.com (Free videos!)

Additional Uses of Videos for Social Interaction Skill Development

- Video-clips from TV shows / movies (e.g. Rugrats - Angelica; Seinfeld; Mean Girls movie; Pixars Short Films Collection DVD; Wallace and Gromit - Dreamworks 2005; Big Bang Theory; etc.).
- Commercially produced DVDs.
Commercially Produced DVDs for Social Communication Skills Intervention

- **Storymovies™** by Carol Gray & Mark Shelley.
- **Fitting In and Having Fun, Volumes 1-3**, by TD Social Skills. http://tdsocialskills.com (Elementary)
- **Model Me Kids** (preschool – elementary) www.modelmekids.com

**Flip Video Camera**

www.theflip.com

- 60 – 120 minutes of video recording time
- 4” x 2”
- Plugs directly into your computer via USB port
- Internal lithium rechargeable ion battery or AA batteries
iPhone / iPod Touch / iPad Apps for Video-Modeling

- Going Places Model Me Kids (free)
- Social Skills Sampler (free)
- Everyday Social Skills ($.99)
- Social Skills ($6.99)
- Stories2Learn ($13.99)

Computer-Assisted Instruction for Social Interaction Skills for Students with AS
Mind Reading

- 412 emotions explored through over 5000 video and audio expressions.
- Instructional format: exploratory; lessons / quizzes; games.
- Ages 4 (to learn basic emotions) through adult (to learn subtle differences between emotions).
- 6 levels according to age levels / degree of difficulty (e.g., level 1: 4-7 year olds; Level 2: 8-10 year olds, etc.)
- www.jkp.com/mindreading/demo/

Computer Programs for Social Communication Skills Intervention

- Preschool Play Time Volumes 1 & 2, by Social Skill Builder (ages 3-7)
  www.socialskillbuilder.com
- My Community, by Social Skill Builder (ages 5-15) www.socialskillbuilder.com
- School Rules Volumes 1 & 2, by Social Skill Builder (ages 8-18)
  www.socialskillbuilder.com
- My School Day, by Social Skill Builder (ages 6-12) www.socialskillbuilder.com
- Faceland, by Do2learn.com (ages pre-K through elementary)
A Social Interaction / Communication Curriculum Specific for Students with ASD

SuperFlex...A Superhero Social Thinking Curriculum, by Stephanie Madrigal & Michelle Garcia Winner, 2008 (grades K-5 / can be used with some MS / HS students) www.socialthinking.com
- Designed to increase student's knowledge of social expectations; increase self-awareness of their own behavior; learn how to modify their behaviors using Superflexible strategies.
- Hero: Superflex.
- Nemesis: Rock Brain - he gets into our brains and misguides us into thinking about what we want to do, and not be able to see things from someone else's perspective.
- Rock Brain has a team of "Unthinkables" working with him, against Superflex.
- Parents, educators, SLPs, psychologists, counselors, etc. can use this curriculum.
- 13 lessons: Visual handout and "funwork" (homework) for each lesson - on a CD.

Superflex Class!

- Mrs. Schultz (Special education teacher), Mayor of Resourceville!
- Students range in age (kdg - 5th grade) and abilities.
- Daily instruction.
- All-encompassing throughout special education and general education programs!
The Puzzle

The puzzle is incomplete, but I do not fit. My edges are rough, my curves don't match the indentations, my colors are muted (compared to the other pieces), and my "picture" is not quite right. The puzzle is incomplete. But how do I fit? I have searched for other pieces only to find them ill-fitting.

Until...

One day, the puzzle-solver found me and smoothed my edges, enhanced my colors, rounded my curves, and put my "picture" into focus. I still don't fit every piece, but each day more and more come together for me. I may never fit every puzzle, but thanks to you, I have found my place in many.

May we all be "puzzle-solvers"

Author: unknown ASA 2003

Resources
Resources

  - Increasing Expressive Communication skills for Verbal Children with Autism
  - Developing Expressive Communication Skills for Non-verbal Children with Autism

Resources

- LAMP: Language Acquisition Through Motor Planning by Prentke Romich Company: www.prentrom.com
- Augmentative Resources: www.augresources.com
- www.autism4teachers.com