The Complexity of Communication

On the surface, communication seems simple. Infants learn to understand their parent’s words through playful interactions. They learn to talk with very little direct or planned instruction. They seem easily able to learn to use words and gestures to get their wants and needs met and to get and maintain the attention of the people around them. Within about 36 months they develop a vocabulary of 300 – 500 words and combine these words in novel ways to express themselves. They learn to follow simple one and two step directions.

Patterns of Difficulty

The complexity of communication becomes evident when we begin to examine disordered communication development and when we analyze the communication of children compared to that of adults. When teaching children with communication difficulties we need to understand that there can be a variety of patterns of breakdown in one or more of the components of communication.

Comprehension and Expression

First we need to understand the difference between comprehension and expression. Typical children learn to understand (comprehension) spoken words before they learn to speak (expression). For instance, babies will turn their heads towards a speaker who says their name long before they can actually say their own name. If Mom always says “hungry?” just before feeding the baby, the typical baby will soon respond with excitement when he hears the word “hungry”, knowing that word means he will be fed. Yet, at this stage, he is unable to use words to express the desire to be fed. Even non-verbally, children usually learn to understand gestures such as Mom pointing at something (I should look there) or Mom shaking her head (No) before they learn to use these gestures themselves.

Components of Communication

Early infant communication is non-verbal (i.e. no words) although certainly not non-vocal! Infants learn to understand the words their caregiver’s use through consistency and repeated interactions. By paying attention to what their caregiver’s are looking at or doing (joint attention) they learn to “map” what is being said onto the things and activities to which the caregiver refers. Imitation is the primary tool infants use in learning to express themselves with gestures and words. Caregivers shape the infants early imitation attempts by rewarding them with attention and praise or by providing the item or activity the infant is trying to acquire. They model the correct form of the language the child is trying to use. As the child’s language grows, there are individual
differences in how quickly and accurately children develop the vocabulary (words); articulation (pronunciation of the words), syntax (combining words in specific ways e.g. doggy eat vs. eat doggy), and grammar (rules for denoting verb tense, pluralization, etc.) of the language(s) to which they are exposed. In addition to language, children also eventually learn controlled use of non-verbal signals (body language, facial expression, eye gaze) and para-verbal signals (loudness, tone of voice, stress or emphasis) to enhance or change their messages.

Functions of Communication
Researchers have created a number of different frameworks to help identify the different reasons that motivate communication development. Amy Wetherby (1995) in her Communicative Functions Checklist, identified 3 areas of communicative functions: Behaviour Regulation (Requesting an Object, Requesting an Action, and Protest), Social Interaction (Request Social Routine, Request Comfort, Greet, Call, Request Permission, Show Off), and Joint Attention (Comment, Request Information, Provide Information). Janice Light (1988) suggests that the bulk of communication messages in children under the age of 6 address the functions of wants and needs, or social closeness while after the age of 6, when children enter more formal environments (e.g. school), communicative functions increasingly address information sharing and social etiquette.

Communication Competence
Communication is effective and satisfying when an individual clearly understands the messages others are sending and when that same individual is able to clearly express himself so that others understand his wants, needs, ideas, motives and intentions. Competent communicators understand the language used by others, and also understand the non-verbal and para-verbal signals others use. They recognize that others may have a different perspective (knowledge base, ideas, opinions, motivations, intentions) than their own. They use their understanding to alter their own communication to express themselves more effectively. Effective communicators have good pragmatic language skills (knowing how and when to say what to whom). For instance, they learn to recognize signals that indicate that it is their turn to speak, and they learn that there are different ways in which they are expected to communicate to different people in different contexts (e.g. children vs. adults). Communication competence encompasses both understanding and expression.

Communication Deficits in ASD
Individuals with ASD exhibit an enormous range of communication difficulties ranging from those who never develop speech and show little understanding of spoken words, to those who display large vocabularies, can speak at length
in complex sentences, but also struggle to initiate or sustain social conversation. Between these two extremes, individuals with ASD can display any number of different patterns, although weaknesses in the understanding and use of non-verbal signals, para-verbal signals, and pragmatic language are thought to be present to some degree in every individual with ASD. Speech/language pathologists are professionals trained to evaluate communication deficits in children and adults. It is recommended that a speech/language pathologist be consulted to evaluate a specific individual’s communication profile and to identify appropriate goals.

**Augmentative and Alternative Communication (AAC)**

AAC systems are often used with individuals, including those with ASD, who show difficulty learning to communicate with speech. The goal of an AAC system is to allow the individual to communicate basic needs quickly and easily. AAC systems are used when it is evident that speech, even if it is developing, will not be adequate to meet the individual’s communication needs currently or in the immediate future. Individuals are taught to point to or give symbols, pictures or objects to let a communication partner know what they want or need. Sometimes these pictures or symbols are embedded in electronic devices that “speak” a message when the individual touches a symbol. AAC may be **low-tech** (objects, photographs, picture symbols, writing, sign language) or **high-tech** (switches, recording devices, voice output communication aids, computers). AAC systems are typically implemented with the assistance of a speech/language pathologist who will help a team choose the system that best meets the needs of the individual.

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