The Path to Symbolism

Language involves the use of symbols in the form of words or signs that allow us to communicate our thoughts, ideas, and needs. Even without formal language, many children who are deaf-blind learn to communicate with gestures and object or picture symbols. Symbolic expression makes it possible to express thoughts and feelings about the future and about experiences that have already happened. It frees children from having to communicate only about things that are happening in the here and now. Although children communicate a great deal through actions and gestures even before they know the meaning of symbols, understanding that symbols have meaning and can be used to represent other things is essential for language development.

Because children who are deaf-blind from birth typically lack sufficient vision and hearing to watch and listen to others' communications, their opportunities to learn through observation, imitation, and interaction are often limited. As a result, they often struggle with the transition from pre-symbolic communication (not involving the use of symbols) to symbolic communication.

Dr. Susan Bruce, a professor at Boston College, has a particular interest in how children who are deaf-blind develop symbolic communication. In recent years she has studied the use of

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gestures and the rate of intentional communication (the number of times a child communicates with purpose over a set period of time) by children with severe disabilities, including those with deaf-blindness. Earlier writings and research suggest that the ways children use gestures and intentional communication highlight important steps in the development of symbolic communication. In order for adults to encourage symbolic communication in children who are deaf-blind it is important for them to understand the meaning of gestures and the situations in which children are most likely to communicate.

Dr. Bruce and other experts have identified a number of factors that positively influence children's understanding that symbols have meanings. One of the most important is the involvement of adults who are knowledgeable about the ways in which a child communicates and are responsive to the child's messages. "Learning the meaning of symbols," says Dr. Bruce, "is not enough to ensure quality interactions. A rich history of early communication opportunities prepares children to successfully use symbols to communicate, express thoughts, and gain access to the thoughts of others."

Influences on the development of symbolic communication:

- Highly responsive adults
- Experiences that involve action and movement
- The emotional impact of experiences and objects
- Activities and objects that are interesting and meaningful to a child
- Interactions that occur with objects or during play
- Regular routines
- Exploration using all the senses, including touch
- Maximizing the use of hearing and vision
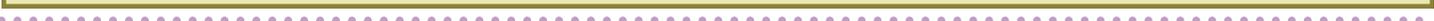
Dr. Bruce and her colleagues conducted two studies, one on the use of gestures and one on intentional communication. They videotaped children and their teachers as they went about their everyday lessons and activities and then analyzed the videotapes to look closely at these specific elements of communication.

Gestures Study

We all use gestures—expressed by the hands, head, or body—to communicate. Gestures have specific purposes, such as getting someone's attention, making a request, or pointing out something to another person.

The gestures study included 7 children with deaf-blindness from ages 4 to 8. They used a wide variety of gestures (44 overall), which included:

- pushing or pulling a person's hand or an object,
- touching or tapping a person or object,
- reaching with one or two hands,
- leaning toward a person or object, and
- clapping.

The meaning of the gestures depended on the situation in which they were used. Tyler used the gesture of "pushing a person" to protest an activity, while Mason used the same gesture to direct his teacher to where he wanted her to go. Gestures often had unique meanings, and children sometimes used the same gestures with slight modifications to communicate different things. For example, Sierra used a self-gesture (patting herself) to request a turn, but she also used it more times and at a faster rate when she felt successful.

Intentional Communication Acts Study

When children communicate intentionally, they are doing it with the purpose of sending a message and being understood. Intentional communication does not always have a conventional form, but it is something that can be understood by another person.

This study included the 7 children from the gestures study plus 10 children with other types of severe challenges. The researchers looked for key characteristics of intentional communication in the children and counted the number of times each child communicated in different situations. They discovered that the children were more likely to communicate intentionally during the following situations:

- when participating in activities that they really liked,
- during familiar activities that were part of a regular routine,
- when interacting one-to-one with an adult or having adult support during group activities, and
- when they had voice output communication aids (VOCAs).

The more a child communicates intentionally, the more opportunities adults have to respond and to encourage communication development.

Seven Levels of Communication

This scale was used to assess the children's current communication levels:

1. Preintentional behavior, such as a spontaneous movement that reflects a child's general state (e.g., hungry, wet,

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  sleepy).

2. Intentional behavior, but with no intent to communicate (e.g., pushing away an empty cup).

3. Unconventional communication used intentionally to express needs, often in a way unique to the child, but not symbolic (e.g., vocalizations, facial expressions).

4. Conventional communication used intentionally, but still not symbolic (e.g., waving).

5. Use of concrete symbols—symbols that physically resemble what they represent in a way that is obvious to the child (e.g., a shoelace to represent a shoe).

6. Use of single, abstract symbols (e.g., a sign, a Braille word).

7. Language—combining at least two abstract symbols of any type according to grammatical rules.

Adapted from C. Rowland., 2004, *Communication matrix: Especially for parents* (Portland, OR: Design to Learn Projects).

Here is an example of one child who participated in the studies:

Eight-year-old Colby is a bright, inquisitive child who loves to learn. Although he now speaks in phrases and sentences and is learning to read and write using Braille, his path to language and literacy was not easy. Colby, who was born prematurely, is blind and has hearing loss.

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Colby took part in the studies when he was 4 years old. At that time, gestures were an important means of communication for him, and because he is totally blind, mostly involved contact. They included pushing his teacher's hand, pushing toys and other objects, and pointing to things he wanted by touching them with a flat "O" hand shape. Unlike the other children—who communicated most often during activities they enjoyed—Colby communicated most often during mealtimes, which were very stressful for him. He would object by vocalizing or pushing the food away.

Colby's family and teachers paid attention to the ways he gestured and the situations during which he was most likely to communicate. They used this knowledge to develop strategies to help him progress along the path to symbolic communication. They provided consistent routines at home and at school to help him learn to anticipate the future. They made the most of his hearing by incorporating into his learning experiences toys that made noises that were interesting to him. To learn more about the strategies that Colby's family and teachers used, see the following online articles that include video clips of him.

Articles about Colby

Bruce, S., & Conlon, K. (2005). Colby's daily journal: A school-home effort to promote communication development. *Teaching Exceptional Children Plus, 2*(1). Available online at http://escholarship.bc.edu/education/tecplus/vol2/iss1/art3

Bruce, S. M., Randall, A., & Birge, B. (in press). Colby's growth to literacy: The achievements of a child who is congenitally deafblind. *Teaching Exceptional Children Plus*.

Distancing

Distancing is a process that all children go through. Through distancing, children learn that they are separate from other people and things, and that things (objects) can be represented abstractly with symbols, words, or signs. Distancing is essential to symbolic thought and communication development, but is often a challenge for children with deaf-blindness because limited vision and hearing prevent full access to their surroundings.

Key Points

- Children who are deaf-blind are able to communicate their thoughts and feelings intentionally even before they understand how to use symbols.
- Early communication efforts are often unconventional and unique to each child.
- The development of symbolic understanding is often a challenge for children who are deaf-blind.
- Highly responsive adults who understand a child's communication efforts are essential for symbolic communication development.
- Understanding the meaning of symbols is essential to language development.

Other Resources

Rowland, C. (2004). *Communication matrix: Especially for parents*. Portland, OR: Design to Learn Projects. This tool is designed to help parents identify their child's current level of communication. It is available online at www.designtolearn.com/pages/matrix2.html

Rowland, C., & Schweigert, P. (2004). *First things first: Early communication for the pre-symbolic child with severe disabilities*. Portland, OR: Design to Learn Products (www.designtolearn.com).

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Bruce, S. (2005). The application of Werner and Kaplan's "distancing" to children who are deaf-blind. *Journal of Visual Impairment & Blindness, 99(*8), 464–477.

Bruce, S. M., Mann, A., Jones, C., & Gavin, M. (2007). Gestures expressed by children who are congenitally deaf-blind: Topography, rate, and function. *Journal of Visual Impairment & Blindness, 101*(10), 637–652.

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Bruce, S., Fasy, C., Gulick, J., Jones, J., & Pike, E. (2006). Making morning circle meaningful. *Teaching Exceptional Children Plus, 2*(4). Available online at http://escholarship.bc.edu/education/tecplus/vol2/iss4/art1

Werner, H., & Kaplan, B. (1963). *Symbol formation: An organismic-developmental approach to language and the expression of thought*. New York: Wiley.

For more information about the development of symbolic communication, go to http://nationaldb.org/ISSelectedTopics.php (select Communication, Symbolic).

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