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ABSTRACT

This document consists of three separately published fact sheets (for parents and teachers of children who are deaf-blind) combined here because of the close relationship of their subject matter: (1) "Communication Interactions: It Takes Two," by Kathleen Stremel; (2) "Expressive Communication: How Children Send Their Messages to You," by Kathleen Stremel; (3) "Receptive Communication: How Children Understand Your Messages to Them," by Rebecca M. Wilson. The first fact sheet defines communication; suggests ways to find opportunities for interactive communication; offers specific suggestions for improving interactions (such as interacting often, allowing the child to participate in as many activities as possible, and providing examples for others); and gives an example. The second fact sheet defines expressive communication, lists reasons to communicate, explains use of a communication map to assess the child's expressive communication, recognizes the progressive nature of communication development in planning and individualized program, and presents guidelines for developing an effective communication program. The third fact sheet defines receptive communication, offers tips for sending effective messages, and explains use of a communication map to evaluate the child's current receptive language abilities and design a program for the child based on his/her hearing and vision, motor abilities, and cognitive abilities. Each fact sheet also includes an annotated list of suggested resources. (DB)

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The National Information Clearinghouse on Children Who Are Deaf-Blind

August 1995

COMMUNICATION INTERACTIONS: IT TAKES TWO

Acknowledgments

This fact sheet was adapted from one originally written by Kathleen Stremel and published and distributed within the state of Mississippi by the Mississippi Statewide Project for Individuals who are Deaf and Blind.

What is Communication?

Communication is the exchange of a message between two or more people. Everyone communicates in many different ways and for many different reasons.

Communication can be **expressive** or **receptive**. Children who are deaf-blind may never learn to talk. However, they can **express** themselves to you. They can **receive** the messages you send them.

Through communication, children can make changes in their world. They can express their wants and needs. They can make choices.

Through communication, you can teach your child to play, to learn about the world, to interact with you, to do daily tasks, and to work.

Opportunities for Interactive Communication

Let's take a look at the functional activities that occur at home or at school. For the younger child, these may be eating, bathing, changing clothes, and playing with a sister or brother. For an older child, these may include swimming, cooking, and working. They all provide opportunities to communicate.

1. **Ask the following questions:**

- How many different people interact with your child or your student in a day?
- How many interactions occur in teaching an activity?
- What are the daily activities in which you interact with your child or student?
- How many opportunities to communicate with you does the child have in different activities? None? One? Five? Ten?

2. **Notice your child's actions during functional activities. For example —**

Functional Activity	Ways Child May Communicate
Eating ➡ ➡	Opens mouth for "more."
Swimming ➡ ➡	Raises hand for "out."
Dressing ➡ ➡	Touches yellow shirt.

- In what ways is your child communicating with you?

4. **Make sure every person who interacts with the child knows how he or she receives and sends messages.**

Each child will do this in unique ways. It is necessary to stop, watch the child, and read the message.

- Does each person take time to watch and listen to the child?
- Are good records being kept so each caregiver knows what to expect?

Parents and teachers need to work together to do the following:

- Increase the opportunities the child has to communic .
- Increase the different ways in which the child communicates.
- Increase the different reasons a child has to communicate.
- Increase the number of people, things, and activities the child communicates about.

What Can You Do?

In the following material, we will use the name "Lee" to represent an infant, child, or young adult who is deaf-blind. Think of Lee as your child, or as the student in your classroom.

What can you do for Lee to increase his interactive communication?

1. Interact often with him. Give Lee a chance to understand what you are going to do before you do it. Give Lee a chance to make a choice, or to request "more."

2. Allow Lee to participate in activities as much as possible.

3. Make sure Lee has a name sign. This may be the first initial of Lee's name to be worn on Lee's chest.

4. Make sure that you have a way to identify yourself to him.
   - For Sister, her long braids.
   - For Dad, his beard.
   - For Mom, her rings.
   - For teacher, her short hair.
5. Give Lee an opportunity to communicate with you.

6. Always communicate to Lee what will happen next or where Lee is being taken *before* the activity or movement takes place.

7. Post an actual example of an interaction in your classroom; so that, everyone (peers, buddies, and all service providers) can follow this.

An Example of Communication Interaction for Lee:

- Approach Lee slowly; let Lee smell or sense your presence.
- Use Lee's name sign.
- Let Lee know your identification cue, as in Mom's ring.
- Let Lee know you are going to the car by letting Lee take or feel a set of keys.
- Have Lee open or close the car door.
- Let Lee buy something at the store.
- Help Lee hand the money to the clerk if Lee can't do this by himself.
- Let Lee know the activity is finished by putting the keys in a box or on a hook.

Communication is Worth the Effort

- Learn the most effective ways to express your messages.
- Listen and watch in order to receive messages from your child.
- Give your child practice in receiving and expressing messages.
- Make sure your child's Individual Education Plan contains both receptive and expressive communication objectives.
- Help your child WANT to communicate. Let your child see that communication gives power.



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Additional Resources

Atwood, A., Clarkson, J., & Laba, C. (1994). Being in touch. Communication and other issues in the lives of people who are deaf-blind. Washington, D.C., Gallaudet University.

This book is aimed at interpreters, teachers, and other professionals who work with deaf-blind people. It provides basic information about deaf-blindness and devotes a large section to interpreting. The appendices cover organizations, agencies, and schools serving deaf-blind people; training for teachers and interpreters; manual and braille alphabets; and characteristics of vision loss; recommendations for those looking for more information.

Costello, M., Harlin, D., O'Donnell, N., & Ruzenski, S. (1992). Communication issues for individuals with dual sensory impairments. literature review. New York, Helen Keller National Center.

The purpose of this literature review is to determine the state of the art of tactile methods of sign communication for individuals with the combined handicapping conditions of deafness and blindness. Early intervention, interactive communication, non-symbolic communication, functional environments, cheremes, and iconicity are among the many terms defined and explained in this general overview of communication as it pertains to deaf-blind persons. Piece also includes an historical perspective of service delivery, an etiological overview of deaf-blindness and an evaluative commentary on the current status of instructional services. Includes suggestions for the use of videotapes as a teaching tool and has a 10-page list of sources at the end.

California Deaf-Blind Services (1992). Creating a need to communicate. Fact Sheet. California Deaf-Blind Services.

Describes how to create a need to communicate in a deaf-blind person and thus increasing his/her skills at communicating. Available in Spanish. Fact Sheet #019.

Meyers, L., & Lansky, P. (1992). Dancing cheek to cheek Nurturing beginning social, play and language interactions. Los Angeles, Blind Children's Center.

This booklet is based on the research findings of a four-year study of ten babies with severe visual impairment. They had differing diagnoses, resulting in varying degrees of cognitive and motor disabilities. The goal of the research was to find techniques that parents and babies can use to successfully bypass some of the obstacles to the development of social, play, and language skills that are the result of lack of vision. Includes listings of activities that did work and those that did not.

McInnes, J., & Treffry, J. (1982). Deaf-blind infants and children: A developmental guide. Toronto, Buffalo: University of Toronto Press.

A reference guide for teachers, parents, and paraprofessionals working or living with children who are both deaf and blind. Provides day-to-day guidance and suggestions about techniques for assessing and for devising programs. Good overviews on communication, motor development, perceptual development, and on orientation and mobility. Available in Spanish.

Oregon Research Institute (1987). Getting in touch: communicating with a child who is deaf-blind. Champagne, IL, Research Press.

Introduces teacher, staff, and parents to basic guidelines for communicating with children who have vision and/or hearing impairments using touch cues and object cues. The program stresses the importance of considering the degree of each child's sensory impairments and arranging an individualized communication system based on the child's abilities and needs.

Anthony, T., Greeley, J., & Gleason, D. (1994). Guiding principles for interaction with young children who are deafblind. Revised.

Eight suggestions for successfully interacting with young deafblind children. Suggestions for using toys and types of toys to use are included.

Cushman, C., et al. (1992). Perkins activity and resource guide. A Handbook for Teachers and Parents of Students with Visual and Multiple Disabilities, Volumes I and II. Watertown, MA, Perkins School for the Blind.

This is a two-volume handbook in loose-leaf format that is intended to be used as a resource for professionals in many disciplines, parents, and other caregivers who are working with children with visual and multiple disabilities. It offers general guidelines and resources to be used as a springboard for teaching and addressing the wide range of educational needs of this student population. It includes a cassette tape of developmental music and songs.

Additional Resources

Hand in Hand Series
American Foundation for the Blind, Deaf-Blind Project

Mulholland, M., Welch, T. (1994) Hand in Hand: It can be done! AFB Deaf-Blind Project National Consortium. New York: AFB Press.

This video provides a visual introduction to the concepts discussed throughout the project materials as well as a demonstration of its guiding principles. The ideas are presented through the voices of parents, teachers, and service providers of students who are deaf-blind. Based on the development of communication and independence the video includes information on calendar boxes, touch cues, object cues, sighted guides, cane use, and the importance of play. A guide for use of the tape is included.

Prickett, J., Joffee, E., Welch, T., Huebner, K. (1995). Hand in Hand: Essentials of communication and orientation and mobility for your students who are deaf-blind: trainer's manual. New York: AFB Press.

This component of the Hand in Hand materials is intended to provide guidance for trainers who are conducting workshops based on the information provided in all the project components. Part 1 provides an overview of the project, its materials, and the principles on which it was based. It also includes special training considerations and some tips for working with adult learners. Part 2 offers suggestions for planning training sessions and for using other Hand in Hand components. Part 3 provides specific training suggestions for each module. Appendices contain sample forms.

Huebner, K., Prickett, J., Welch, T., Joffee, E., (Eds.) (1995) Selected reprints and annotated bibliography on working with students who are deaf-blind. New York: AFB Press, 1995.

This is a collection of reprints and annotated listings. The articles included here were selected because of their particular value to classroom teachers working on their own. Articles were chosen because they are relevant to the project's focus on the topics of communication and orientation and mobility; because they contain useful information, regardless of prevailing educational trends, about effective practices in many settings and circumstances with students who are deaf-blind; and because they support other information in the project materials. The articles are presented in two sections: print materials and audiovisual materials.

Huebner, K., Prickett, J., Welch, T., Joffee, E. (Eds.) (1995) Hand in Hand : Essentials of communication and orientation and mobility for your students who are deaf-blind: Volume I. New York: AFB Press.

This book is intended primarily for self-study and in-service training. It is divided into three segments: Key Concepts, Communication, and Orientation and Mobility. Each of these segments is, in turn, divided into 20 self-contained modules which present essential information about deaf-blindness, how deaf-blindness affects learning, and how students who are deaf-blind can develop critical communication and O&M skills.

Huebner, K., Prickett, J. Welch, T., Joffee, E. (Eds.) (1995). Hand in Hand : Essentials of communication and orientation and mobility for your students who are deaf-blind: Volume II. New York: AFB Press.

Volume II is a follow-up to Volume I and contains four appendices as well as resource listings. Appendix A contains detailed medical and related information on vision and hearing. Appendix B discusses amplification systems including hearing aids, tactile aids, and cochlear implants. Appendix C focuses on assessment instruments in the areas of communication and O&M. Appendix D discusses federal funding for services to children who are deaf-blind. A glossary of terms follows the appendices. The resource section includes organizations, agencies, books and periodicals, equipment and materials and their distributors and manufacturers.

The *Hand in Hand* series may be ordered from the American Foundation for the Blind, c/o American Book Center, Dept. J, Brooklyn Navy Yard, Building No. 3, Brooklyn, NY 11205 or by calling (718) 852-9873.

The entire package of video and written materials is available for $170.00 plus $7.50 for shipping. Call for pricing of individual components.

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The National Information Clearinghouse on Children Who Are Deaf-Blind

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EXPRESSIVE COMMUNICATION

How Children Send Their Messages to You

Acknowledgements

This fact sheet was adapted from one originally written by Kathleen Stremel and published and distributed within the state of Mississippi by the Mississippi Statewide Project for Individuals who are Deaf and Blind.

Purpose Of This Flyer

- Encourage parents and service providers to be more responsive to their child's current forms of communication.
- Discuss the reasons for and uses of expressive communication.
- Encourage parents and service providers to develop a "map" of their child's current and future expressive communication needs.
- Discuss the many forms that may be used for expressive communication.
- Discuss the progressive nature of communication development.

Present guidelines for designing an effective communication program.

What Is Expressive Communication?

Expressive communication involves sending a message to another person(s) to (a) make something happen or (b) stop something that is already happening.

Children and youth who are deaf-blind are able to express themselves in many different ways. Parents, siblings, and service providers must be responsive to their varied forms of communication. In addition, they must notice and encourage opportunities for expressive communication.

Reasons To Communicate – At An Early Age

Register Protest or Rejection
"Don't touch me!"
"I don't like that!"
"I don't want another bite!"
"Stop doing that!"
"Gain Attention"
"Mama"
"Hey, here I am...look at me!"
"Come over here!"

Request Continuation
"I want another bite."
"More bouncing, please."
"I need more work."
"I want to play ball some more."

Make a Choice
"I want chocolate milk." (not more food)
"I'd like a hamburger." (not a drink)
"I need a break from my work."

Reasons To Communicate – At A Later Age

Greet Someone; Make Social Comments
"Hi."
"Bye."
"Thank you."

Make Offers
"Would you like some?"
"Here, have some of mine."

Provide Comments
"Mine."
"This is good."
"The table is dirty."

Reply to a Previous Statement
"Okay."
"Later."

Get More Information
"What are we going to do?"
"Where are we going?"
"Where are we?"
"How do I do this?"

All of us express ourselves in hundreds of ways. The above examples used speech; children who are deaf-blind may also use facial expressions, gestures, sign, communication boards, etc.

Communication Milestones

Put Your Child on the Map

We will use the name "Lee" to represent an infant, child, or young adult who is deaf-blind. Think of Lee as your child, or as the student in your classroom.

Initially, just like all moms and dads, Lee's parents perceived Lee's cries and movements as having meaning even though Lee was not purposefully communicate needs to anyone. People began to respond to Lee's movements and facial gestures as if they were communication. Then, Lee began to understand that certain movements made certain things happen; Lee was beginning to have some control over the world. Later, Lee's mom, dad, and teacher got together to figure out how Lee could communicate with more people and in new ways.

Communication Map

The Expressive Communication Map presented below can be used as a guide to:

1. determine the ways in which your child is able to communicate with you right now. (Current)
2. determine the way or ways in which your child can be taught to communicate during the next year. (IEP Objectives)
3. determine the ways your child might be able to communicate in the future. (Visionary Planning)

As you look at the map in Figure 1, you will notice that, initially, the communication techniques are simple and concrete. As you move across the map you will see that the ways to communicate become more complex. Lee is able to use a number of different ways to communicate the same message. When Lee does this, Lee is showing "purposeful" communication behavior.

Parents and service providers should discuss the following:

- In how many different ways is the student currently communicating?
- What new ways could be taught during the year?
- What possible ways may be taught in the next five years?

You may fill in the areas with the color-coding that is shown, or you may make up your own. Parents

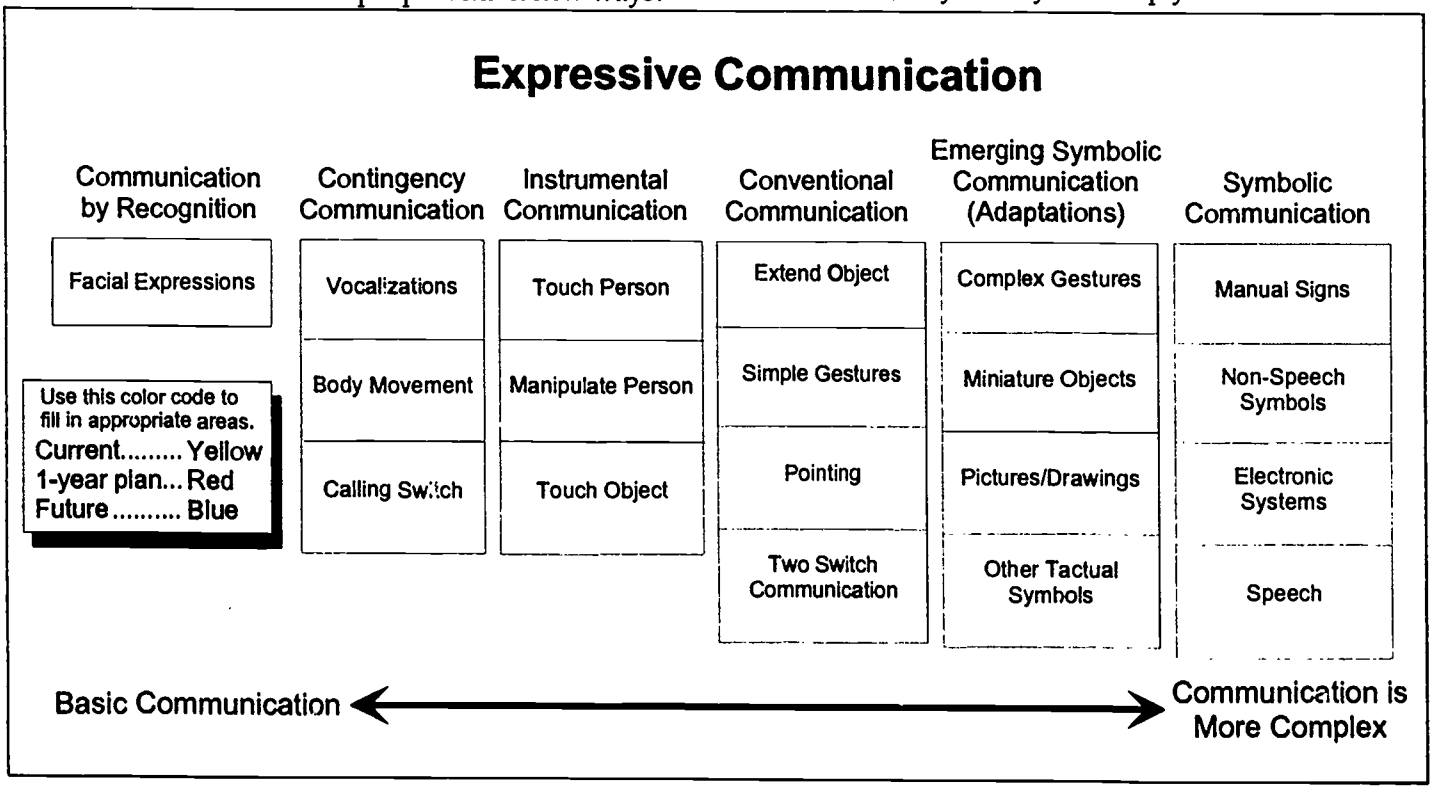

Figure 1 Communication Map

should be given a copy and a copy should be placed with the child's records. Too often, during periods of transition, the child's communication system is not planned or maintained. When that occurs, valuable time may be wasted by (a) changing the child's program when the current one is working, (b) trying to teach communication techniques that didn't work in the past, or (c) teaching techniques the child already knows.

Communication by Recognition

Behaviors indicate an awareness that anther person is present.

Facial Expressions - These early forms may not be purposeful communication, but simple reactions that indicate pleasure or displeasure.

Examples
- Opens mouth for more.
- Turns head away.
- Smiles or grimaces.

Vocalizations - Early vocalizations may indicate pleasure or discomfort/distress. Parents may notice that when Lee is uncomfortable or not pleased, Lee's vocalizations are louder, longer, and have different inflections than when Lee is happy.

Examples
- Cries to indicate discomfort.
- Makes soft "u" sound when rocked.
- Makes loud "a" sound when music goes off.
- Makes gentle "wee" sound when swinging.

Contingency Communication

These behaviors are purposeful but not used for intentional communication. However, they may be interpreted by others as being communicative. Lee learns that by can acting on the environment, Lee can cause an effect

Body Movements - Lee may use large body movements or more specific body movements to express Lee's wants. Initially, these may be used to protest or to request more. At this point, Lee is demonstrating anticipation that an activity will continue. Purposeful communication will continue only if other people respond to it.

Examples
- Moves body when person starts rocking Lee, then stops.
- Moves body back when person starts giving a back rub, then stops.
- Turns head away from disliked food.

Switch Activation (physical control) - Early assistive technology may include a switch that is connected to a tape recorder (for music), a fan, a vibration pillow, or lights. This is not a communication response, but this may help teach Lee cause and effect. Lee may learn that if he makes a certain movement, activating a switch, Lee can have some control over the physical environment.

Examples
- Touches big yellow plate switch to turn on fan.
- Touches vibration pillow.
- Pulls strings on switch to turn on bright lights.

Switch Activation (social control) - If Lee is not able to get other people's attention by vocalizations, physical touch, or going to them, Lee should be taught other ways of calling or getting people's attention. A switch may be hooked up to a tape recorder that has a loop tape with a recorded message, "Come here, please." A simple buzzer may also serve as a calling device to get people's attention.

Examples
- Activates a buzzing device in the workplace to indicate, "Need help" or "Need more work."
- Presses a switch with a red satin heart that is connected to a tape recorder that says, "Give me a hug."

Instrumental Communication

These behaviors are simple, non-symbolic behaviors that are directed towards another person, with the *intent* of causing the other person to act. Behaviors can be directed at person or object, but not both.

Touch Person - Lee will need to learn that things in Lee's environment don't just happen. Other people can control outcomes if Lee communicates with them. If Lee has the motor ability to touch another person to communicate, it is important to teach Lee to do so. In order to show that Lee has purposeful communication, Lee must look, turn to, or touch another person to purposefully communicate to that person. This can be done by eye gaze (if Lee has enough vision to do this). It can be done by moving Lee's body toward the other person or it can be done by touching the other person. Initially, Lee may only touch you if you place your hand 1/2 to 1 inch from Lee's hand. Then, you can begin to move your hand away so Lee has to extend his hand farther in order to touch you.

Examples
- Touches Mom's hand to get another bite.
- Touches Dad's arm to get more tickling.
- Pushes brother's face away to indicate, "Leave me alone."

Manipulate Person - Once Lee can touch a person, Lee may begin to take the person's hand and move it toward Lee or toward an object that Lee wants. We can help make this happen if we don't move our hands immediately when Lee touches us. In this

way, Lee will have to work a little bit harder to make something happen (outcome).

Examples

Pulls Mom's hand (with the spoon) to Lee's mouth.

Pulls Dad's arm to Lee's tummy for more tickling.

Pushes peer's hand to open locker in the high school.

Touch Object - We also want Lee to touch one (out of two or more) objects to request a choice. At first, we do not provide Lee with two "good" choices. We use an object Lee dislikes (a cool washcloth) and one Lee likes (oatmeal with cinnamon). This gives Lee a reason to touch one object and not the other. Later, you can use two items, which Lee likes, to allow Lee to make choices. Lee may turn his cheek to touch the object if Lee does not have use of his arms or hands. Lee may move his hand only an inch to touch the chosen object. A physical or occupational therapist may help determine the best motor movement.

Examples

Touches warm applesauce.

Touches keys (to go riding) versus paper towel.

Touches waistband to indicate "Go to bathroom."

Conventional Communication

The behaviors at this level are still non-symbolic. At this level Lee begins to coordinate the use of objects and people.

Extend Objects - Lee will be able to extend objects only if Lee has the motor ability to do so. All children will not have this ability, and some objects cannot be extended. At first, Lee may extend the object only a short distance. Gradually, Lee will learn to extend it farther. Lee may also extend objects to get something else in return.

Examples

Extends cup to get more milk.

Extends money holder for you to put in Lee's "wages."

Extends bowl for more popcorn.

Extends lunch ticket to manager in cafeteria.

Simple Gestures - Simple gestures should be taught before manual signs (if Lee has enough motor ability). You and I use gestures to communicate every day. Lee will continue to use simple gestures even though Lee may learn other complex ways to communicate.

Examples

Waves "Hi"/"Bye."

Gestures "Mine."

Gestures "Eat."

Gestures "Finished."

Pointing - Children without disabilities point to people and objects before they learn to say their first words. Often, their first words may be paired with pointing. We all point on occasion to communicate something to somebody (especially in quiet places, like church). Of course, Lee's ability to point will depend on how well Lee is able to see and how well Lee can use his fine motor skills. Many children who are deaf-blind will not be able to use pointing as a way to communicate. However, if Lee has enough vision to see large objects or large pictures and has good motor skills, we want to teach Lee to point as a way to communicate.

Examples

Points to Daddy when he gets home from work.

Points to a door to go outside.

Points to a clock/watch with large numbers to indicate, "Time to go to work."

Two/Three Choice Communication Systems - Once Lee is able to make a choice from two objects, we want to increase the number of choices. As an example, Lee may do this by pushing a switch on a three-choice-light/buzzer device to express Lee's choice of the three items or Lee may push one of several switches that activate different messages on a tape recorder. If Lee is not able to make simple choices with objects, a more expensive communication system will probably not work either. No system can do magic.

Examples

Uses eye gaze to look at one of four objects velcroed to a plexiglass form.

Touches one of three switches to get desired item at lunch.

Activates one of two switches to communicate where Lee wants to go (miniature objects may be velcroed to the switches; once Lee learns that these represent real objects or activities).

Emerging Symbolic Communication

At this level, the behaviors that are used to communicate become gradually more abstract.

Complex Gestures - Once Lee is able to use a few simple gestures, then more gestures may be taught. Think of gestures that we all use occasionally.

Examples

Gestures, "Want."

Gestures, "Put in here."

Shrugs shoulders to indicate, "I don't know."

Gestures, "Come."

Shakes head, "No" or "Yes."

Miniature Objects - Once Lee has learned to associate object cues with people and activities in Lee's receptive communication program (see fact sheet *Receptive Communication*), Lee will be able to use

small objects that are associated with an activity as a way to express Lee's wants and needs.

Examples

Hands handle bar grip to P.E. teacher to request exercise bike.

Presses button on a touch activated talking device that has small objects glued to each of the buttons.

Extends one of five small objects (velcroed on a wheelchair tray) to the teacher to indicate where Lee wants to go.

Pictures and Line Drawings - Lee may have enough vision (when Lee wears his glasses) to see picture symbols (black drawings/Mayer-Johnson) even though Lee can't identify photographs. Line drawings are less expensive than miniature objects and take less time to find. If Lee can see and understand these, we can use them as we increase Lee's vocabulary.

Examples

Selects picture of swing to indicate, "I want to swing."

Presses a 3-Choice Switch with a picture of a bucket indicating, "Need bucket to clean table in cafeteria."

Points to a line drawing of a red square to indicate, "Put me on the red mat."

Symbolic Communication

Manual signs, written words, systems with braille, and speech words are true symbols. Lee must understand that there is a 1-to-1 relationship between the symbol and the object/person/activity; the symbol "stands for" or "refers to" the real thing. This is very difficult for some children. If Lee has enough cognitive abilities, Lee may be able to use an electronic system with speech output. Lee's symbol system may be large keyboard letters or a brailled keyboard, depending on Lee's vision, motor and cognitive skills.

Some children may be taught multiple communication methods concurrently. While one method is being mastered, the next method can be introduced.

Communication Development Is Progressive

Parents and service providers need to consider the child's vision, hearing, motor, and cognitive skills. They must also consider the child's age and with whom the child will be communicating. It is important to remember that communication development is progressive. It may progress (a) from easy to hard, (b) from few ways to many, (c) from few wants and needs to many, (d) from a few reasons to many, and (e) with few people to many. How do we determine the most effective and efficient expressive communication system for Lee?

Hearing and Vision Abilities

- When was the onset of the vision or hearing loss?
- Does Lee have the ability to hear (with hearing aids) and imitate some sounds?
- Can Lee see shadows or color?
- Does Lee see objects well enough to reach out for them?

Motor Abilities

- Is Lee ambulatory?
- Does Lee have full range of motion of his arms and hands, or is movement limited?
- If Lee can't move his arms and legs, can Lee move his face from side to side?
- Can Lee grasp objects?
- Does Lee have the ability to extend his arm or to point?
- Does Lee have a tray on his wheelchair for attaching objects, switches, or electronic devices?

Cognitive Abilities

- Does Lee seem to learn things quickly?
- Does Lee indicate that he knows where he is going and what is about to happen?
- Is Lee motivated to do things?
- Does Lee try things again and again when Lee is learning new things?
- Does Lee smile when he has accomplished a task?
- Lee will not have to learn every form or way that is presented above. You will need to consider Lee's vision, hearing, motor, and cognitive abilities and disabilities in order to (a) strengthen current communication, (b) develop new ways to communicate, and (c) plan for more efficient ways for Lee to communicate in the future.

REMEMBER . . The best communication results come from **active teaching**. Everyone in Lee's environment must be responsive, consistent, and provide many different opportunities for communication.

Suggested Reading

Rowland, C., & Schweigert, P. (1989). Tangible symbol systems for individuals with multisensory impairments. Tucson: Communication Skill Builders.

Rowland, C., & Stremel-Campbell, K. (1987). Share and share alike: Conventional gestures through emergent language. In D. Guess, L. Goetz & K. Stremel-Campbell (Eds.), Innovative program design for individuals with dual sensory impairments (pp. 45–75). Baltimore: Paul H. Brookes.

Stremel, K., & Schutz, R. (in press). Functional communication in integrated settings for students who are deaf-blind. In N. G. Haring & L. T. Romer (Eds.), Including students with deaf-blindness in typical educational settings. Baltimore: Paul H. Brookes.

Resources

AbleNet, Inc. 1081 Tenth Avenue, S.E., Minneapolis, MN 55414-1312; 800-322-0956.

Hope Catalog (1994). Hope Inc. 809 North 800 East, Logan, UT 84321: 801-757-9533.

Mayer-Johnson Company Non-Speech Communication Products (1993). P. O. Box 1579, Solana Beach, CA 92075; 619-481-2489.

Prentke Romich, 1022 Heyl Road, Wooster Heights, OH 44691.

Toys for Special Children, Steve Kanor, 385 Warburton Avenue, Hastings-on-Hudson, NY 10706; 914-478-9060.

Additional Resources

California Deaf-Blind Services, 1992. Communication : what is he trying to tell me? Fact Sheets from California Deaf-Blind Services

A brief summary of the ways a deaf-blind child may try to communicate is followed by a suggested continuum of steps for responding to this communication behavior. Available in Spanish.

Fielding, G., & Bullis, M., (ed). (1988). Communication development in young children with deaf-blindness: literature review. Monmouth, OR, Teaching Research Publications.

Published as part of the Communication Skills Center for Young Children with Deaf-Blindness. Each chapter includes a 15–20 page overview of a certain aspect of communication and then a review of the literature.

Hagood, L. (1994). Conversations without language: building quality interactions with children who are deaf-blind. P.S. NEWS !!!, vol. vi, no. 3, July 1994, 5–13.

This article describes ways to involve the deaf-blind child, whose language skills are limited, in conversations. Has discussions on the importance of developing conversation skills, then addresses four specific problems/solutions in teaching these skill. Methods would work with parents, teachers, and other care givers. Article was inspired by Dr. Jan van Dijk's presentation in San Antonio, TX.

McFarland, S., Miles, B., Silberman, R., Riggio, M., Smithdas, R., & Smithdas, M. (1994). Communication with learners who are deaf-blind. Summer Institute. Sands Point: Hunter College.

This program was offered through the Perkins Deaf-Blind Training Project, a major goal of which is to provide summer training to improve services for learners who are deaf-blind. The course provides a comprehensive analysis of the communication needs of learners who are deaf-blind. The impact of dual sensory loss on communication development, assessment procedures, and strategies to develop nonsymbolic and symbolic communication are addressed. Specific communication methodologies and a variety of communication modes, including augmentative systems, are presented.

Reyes, D. (1993). Access to context : a basic need for deafblind people Deafblind education, July-December 1993, 5–9.

This article explains what the author considers to be the most serious difficulties faced by the deaf-blind within an environment which "hears and sees." The piece also analyzes some of the resources available and some which need to be developed with the aim of attaining an independent and integrated lifestyle. While developing the maximum use of the senses, mental ability and communication skills is deemed important, clarity of thought is seen by this author as the key to successful independent living.

Stremel, K., Molden, V., Leister, C., Matthews, J., Wilson, R., Goodall, deV., & Holston, J. (1990). Communication systems and routines: : a decision-making process. University of Southern Mississippi

This manual was produced under grant GOO8730414 from OSER. The ultimate goal for children with any type of disability in the area of communication development is to assist the child, through social interactions and environmental arrangements, to be able to communicate in the most effective way possible, to a variety of people, and in a wide variety of social situations and environments. The job of the interventionist is to move the child and major interactor in that direction with the least amount of "stalling." Knowing where to begin, the direction to take, anticipating some detours along the way, and knowing when we are there will be based on a decision-making process. This manual covers the teaching of communicative behaviors, receptive communication and expressive communication, for children with vision, hearing and motor impairments via this decision-making process. Includes diagrams, charts, examples, and an IFSP.



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RECEPTIVE COMMUNICATION

How Children Understand Your Messages to Them

Acknowledgements

This fact sheet was adapted from one originally written by Rebecca M. Wilson and published and distributed within the state of Mississippi by the Mississippi Statewide Project for Individuals who are Deaf and Blind.

Purpose Of This Flyer

- Describe the special problems of communicating with a child who is deaf-blind.
- Give tips for sending messages that will produce responses.
- Encourage parents and service providers to develop a "map" of the child's current and future receptive communication abilities.
- Present specific cues that may "get through" to the child.
- Present questions to ask before designing an effective communication program.

What Is Receptive Communication?

Receptive communication is the process of receiving and understanding a message. It is often difficult to determine how a child who is deaf-blind receives a message. Think about living in a world where you cannot see or hear what is going on around you. If we pay close attention to the way we send our messages, we increase their chances of being received.

Tips For Sending Effective Messages

We will use the name Lee to represent an infant, child, or young adult who is deaf-blind. Think of Lee as your child, or as the student in your classroom.

Overall Guidelines

- Let Lee know you are present. You might touch Lee's hand or shoulder.
- Identify yourself to Lee, perhaps using your ring, watch, perfume, or hair.
- Always let Lee know what is about to happen. For example, touch Lee's lip before giving a bite of food.
- Let Lee know he will be going somewhere. For instance, give Lee a set of keys to indicate "going for a ride."
- Let Lee know when an activity is over. Use a gesture or sign for "all gone" or "finished" or let Lee help put the objects away.

Give Cues About the Expected Response

It is very difficult for individuals who are deaf-blind to understand how they should respond to your communication. This is especially true when the child has limited understanding of speech cues. For example, when Lee is given a gesture or sign, "eat," Lee does not know if it is a command or a question. Possibly, Lee's teacher is teaching a new vocabulary word and wants Lee to imitate the sign. The following may help Lee understand what the response should be:

- If you want Lee to answer, keep your hands in contact with Lee and wait.
- If you are giving Lee a command, tap twice on his shoulder.

- If you are giving a comment or reinforcer, rub Lee's shoulder.
- If you want Lee to imitate you, tap twice on the Lee's hand.

It is up to you to find a way for Lee to receive your message. After that, you can expand Lee's understanding to higher forms.

Communication Milestones

Put your child on the map

The communication map below may assist you in determining the current ways Lee receives messages. The map will also guide you as you focus on future ways to send your messages. Cues in the first segment are simple and concrete. They are usually given to the child through touch or in close proximity to the child's body. As you move across the map, the cues become more complex. As noted by the arrows, **all cues are given with speech.** This simultaneous use of multiple communication modes enhances Lee's ability to receive additional information through sound and facial expressions. Brief explanations with examples of each type of cue follow the map.

Natural Context Cues - These occurrences happen frequently during an activity or routine.

Examples:

An alarm clock ringing.
Running water in a tub.
Putting a bib on a young child.
Undoing a strap on a wheelchair.

Think about everyday routines. Look closely to see if Lee is showing signs of anticipation of the natural context cues. For example, Lee may open his mouth when sensing the bottle. Lee may wiggle when the water is running.

Movement Cues or Tactile Gestures - These motions actually move the child through a pattern that is related to an activity.

Examples:

Moving Lee's hand to mouth to eat.
Moving Lee's arm up and down to play the drum.
Swinging Lee's leg to kick the ball.

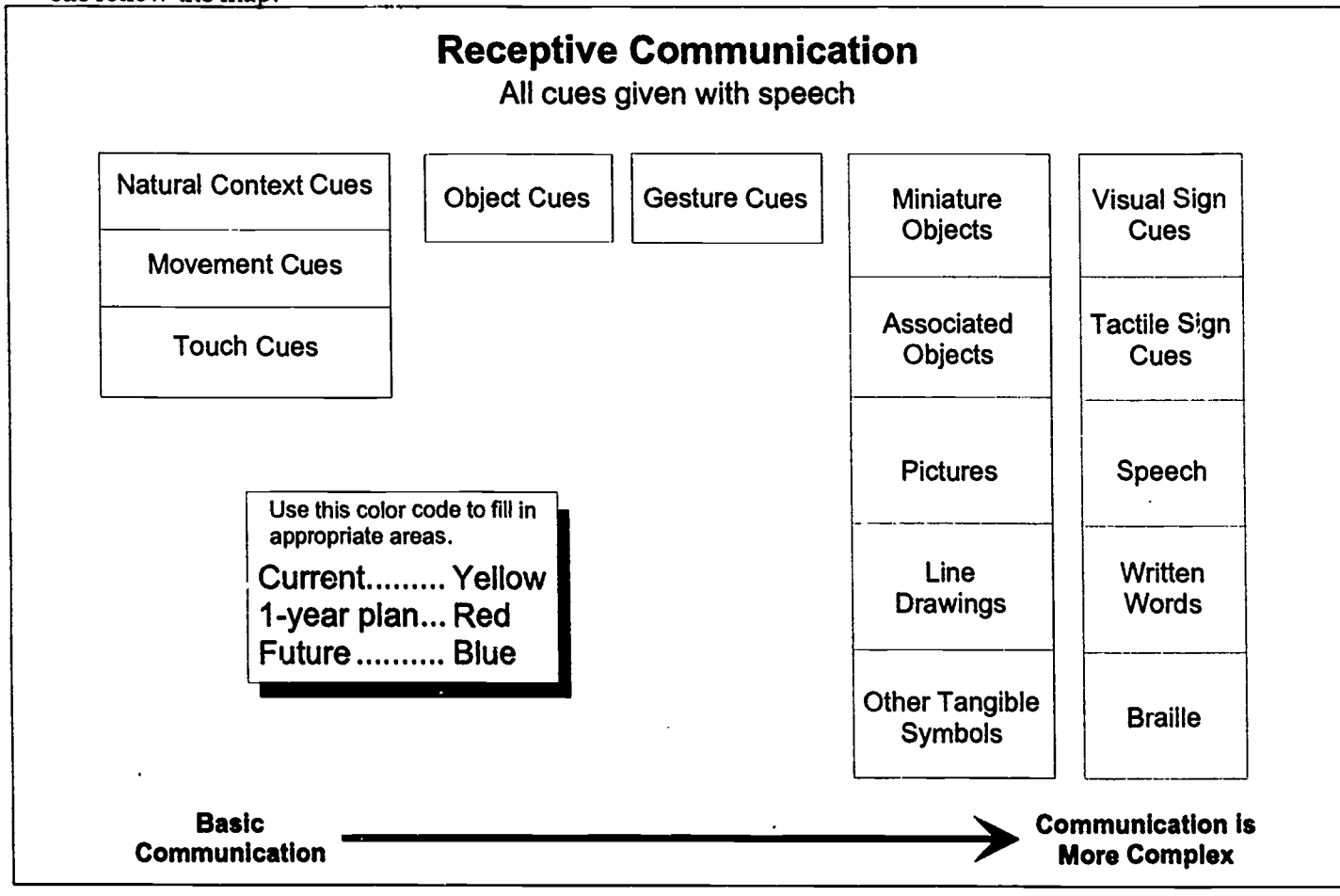


Figure 1 Communication Map

Touch Cues - These signals get a simple message across to Lee. The cue is given by touching Lee's body in the area that is related to the message.

Examples:

Touching Lee's lip to indicate, "Open your mouth for food/drink."

Touching Lee's shoulder to let Lee know someone is there.

Pulling on Lee's waistband to indicate time to change diaper.

Object Cues - These real objects (miniature objects or associated objects) allow Lee to gain more information.

Examples:

Spoon = time to eat.

Lifevest = time to swim.

Keys = times to go.

Real objects are easy to recognize because they are actually used in an activity (diaper, coke can, keys etc.). Miniature objects or doll-sized representations of a real object also may be used; however, vision abilities must be taken into account. The most difficult to understand may be the associated objects or objects that stand for something else (clock for time, wheel for play truck, etc.).

Start by using just a few object cues that represent activities that occur very frequently or that Lee really enjoys. Before the activity occurs give Lee the object cue. **Be consistent!** After many times, notice if Lee is anticipating the activity by getting excited, smiling, or smacking lips, indicating an understanding of the activity. Then you may begin to add more cues. Be sure that the school and home are using the same cues and that everyone is presenting them in the same way. Always consider vision when deciding what object cues to use. The size, texture and color may make a difference, as well as where the object is visually presented.

Gesture Cues - These body expressions are commonly used to communicate. A child must have some vision to see gesture cues.

Example:

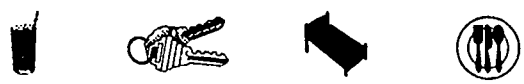
Waving good-bye.

Holding out a cup for more drink.

Shaking head for yes/no.

Picture Cues/Line Drawings/Other Tangible Symbols - These can be used to receive messages if the child has adequate vision.

Example:



Drink Go Nap time Eat

Lee must understand that a picture stands for an object, person, or activity. Also, Lee's visual skills must be considered when determining the size of a picture or the need to use line drawings. There are many other tangible symbol systems that can be used (Picsyms, Blissymbols, textured symbols, raised thermofax, photos, etc.)

Visual and Tactile Signs - These symbols, expressed through manual signs, are based upon movement, placement, configuration, and directionality.

Due to the type and extent of the vision impairment, signing may need to be close to the child's face, directly in the center of Lee's visual field, or to one side. Gestures and signs must actually contact the body of a child who has limited or no vision. Tactile modality may be used for a child who is totally blind, but who is cognitively able to understand the symbolic nature of sign language and/or finger spelling. Signing and/or finger spelling is received by having the receiver place Lee's hands over the hands of the person sending the message in order to feel the sign.

Speech - This mode should accompany all other forms of communication. Even if Lee does not hear the spoken word, Lee may receive information from your facial gestures and expressions when you are speaking. Consult with a speech pathologist when developing a speech/language/communication program.

Written Words/Braille - These are used by individuals who have the skills to understand symbolic written/brailled language. There are many types of electronic equipment that provide braille output. Consult with the vision specialists or other resources used by individuals who are blind.

Design a Program for Your Child

Parents and service providers must work together to consider the child's vision, hearing, motor, and cognitive skills. They must ask the following questions to design and plan the most effective program for the child.

Hearing & Vision

A communication system will not be effective if it is developed without use of prescribed adaptations. If Lee can benefit from glasses, hearing aids, or other adaptive equipment, Lee should use them at all times.

Q Is Lee totally deaf or does Lee have some usable hearing?

↘ If Lee has an impairment, alternative forms of receptive communication may include touch, object, sign, or other cues. These alternative forms also depend on Lee's vision, motor, and cognitive abilities.

Q Is Lee totally blind or Does Lee have some usable vision?

↘ Vision is the major source of information for any individual. Look for alternative ways to provide information, such as touch and object cues, large print/pictures/line drawing, braille and speech. Perhaps the pictures need to be black and white line drawings (without color or background) and/or held closer to the eyes than usual.

Motor Abilities

Q What is the best position for Lee to use his vision, hearing and/or touch efficiently?

↘ Parents and various professionals must work together to answer this question. The child with motor disabilities must be able to receive information; therefore, parents and professionals must think of the best way to provide this information. If touch cues are used, remember to find the parts of the body that will receive the messages most effectively (touching the child's back may set off a reflex. Try touching Lee's shoulder). Let us suppose Lee is blind in his right eye, and the physical therapist is working on grasping with the right hand. The speech pathologist has also recommended the use of object cues for receptive communication, and Lee's mom would like a way to let Lee know he is going for a ride in the car.

PROBLEM: Since the vision is reduced on the right side, Lee may lose information when he grasps the keys with his right hand.

SOLUTION: The physical therapist recommends placing Lee in a good seating position (with appropriate support) and train Lee to turn his head to the right to increase his vision capacity by using his left eye.

Cognitive Abilities

Q Does Lee show interest in and recognize people, objects or activities?

↘ Notice if Lee is paying attention to what is going on around him. For example, Lee may be looking at or reaching for toys, smiling at people and/or fussing when hungry. Also, notice how Lee reacts to certain people, objects, and activities. For example, Lee smiles when Dad comes home from work, gets excited when it is time to eat and/or cries when taken into the bathroom for bathtime. This information will be helpful in planning routines to increase the child's communication.

Q Does Lee understand that a picture, line drawing, word, or sign represents a person, object or activity?

↘ To use cues that are "symbolic" such as pictures, line drawings, word, and/or signs, Lee must be able to associate a meaning with the symbol. Remember, symbolic cues (picture of a tub, etc.) are much more difficult than environmental cues such as running water in tub to indicate bathtime.

Resources

Cooley, E. (1987). Getting in touch with a child who is deaf-blind. [Videotape]. Research Press.

Musselwhite, C. R., & St. Louis, K. L. (1982). Communication programming for the severely handicapped: Vocal and non-vocal strategies. San Diego: College-Hill Press.

Reichle, J., York, J., & Sigafoos, J. (1991). Implementing augmentative and alternative communication strategies for learners with sever disabilities. Baltimore: Paul H. Brooks.

Stremel, K., & Wilson, R. (1988) Providing services for learners with severe handicaps:

Module for developing communication. Hattiesburg: The University of Southern Mississippi.



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Additional Resources

Rowland, C., & Schweigert, P. (1993). Analyzing the communication environment to increase functional communication. JASH, vol. 18, no. 3, 161-176.

Many students with severe and multiple disablilities demonstrate severe communication impairments. Efforts to improve communication in these students often embrace a "natural environment" or "milieu" approach, embedding opportunities to communicate within natural, functional activities across the entire schedule of daily activities. In reality, functional activities differ greatly in the degree to which they foster communication. This article describes an environmental inventory designed to allow a teacher or speech-language pathologist to analyze the extent to which a specific activity encourages functional communication for a particular student. The inventory may be used to compare different activities across the student's day or to track the improvement of specific activities that initially may show little communicative value for the student. Reliability and validity data for the inventory are presented along with a case study of its use to monitor and guide improvements in a functional activity to increase communication by a young child with multiple disabilities.

Cress, C. (1989). Augmentative communication for children with deaf-blindness. Guidelines for decision-making. Monmouth, OR. Oregon State System of Higher Education. Teaching Research Publications.

Published as part of the Communication Skills Center for young Children with Deaf-Blindness. Intended as a tool for rehabilitation personnel, teachers, therapists, caretakers, and clients to assist in developing agumentative communication systems.

Downing, J. (1992). Communication intervention for individuals with dual sensory and intellectual impairments. McLean, VA. Interstate Research Associates, Inc.

A summary of best practices for communication intervention is presented with specific recommendations provided for the person who has difficulty receiving and processing auditory and visual information. Recommendations for future intervention research and strategies are offered.

Rowland, C., & Schweigert, P. (1990). Construction and use of tangible symbols. Tucson, AZ. Communication Skill Builders.

This chapter demonstrates the construction and use of tangible symbols. The program is for teachers, speech-language pathologists, other support staff, and parents who work with individuals who have severe multiple sensory disabilities. Based on Jan van Dijk's work in the Netherlands with children who are deaf-blind, these techniques are also suitable for individuals of all ages who have cognitive and/or other severe communication deficits due to other disabilities.

Bailey, B. (1994). Developing textured communication symbols for communication use Living and learning together, vol. 1, no. 2, October 1994, 6-9.

The author explains what a textured symbol is and how the system works. Suggestions for creating textured symbols are followed by twelve guidelines for implementing a textured symbol system for communication with deaf-blind individuals.

Stremel-Campbell, K., & Wilson, R. (no date). Providing services for learners with severe handicaps. A module for developing communication. Hattiesburg, MS. Mississippi-University Affiliated Program; University of Southern Mississippi.

In looseleaf format, this volume is a series of inservice training modules for developing communication, systematic instruction, data-based decision making, functional curricular content, and social integration. The content of the module emphasizes the early receptive and expressive communication skills that may be appropriate for learners with dual vision and hearing impairments. It contains a Trainer's Guide and a Trainee Workbook.

Kiefer-O'Donnell, R. (1994). Supporting communication within regular routines: conversing about life. Living and learning together, vol. 1, no. 2, October 1994, 1-4.

This article describes the communication needs of deaf-blind children and then continues on to list the advantages of meeting those needs in an inclusive setting where the child's communication has true meaning. Acknowledging that such communication takes time to develop, Kiefer-O'Donnell makes the case that the quality of both the communicative effort and the relationships between conversing partners will greatly exceed the initial effort of learning to communicate in a new and perhaps unique way.