

**Nebraska Deaf-Blind Project
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Teaching Strategies Specific to Children Who Are Deaf-Blind

By

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When addressing the needs of children and youth with deaf-blindness, it is important to understand the population we will be teaching. The low incidence of deaf-blindness includes a very diverse group of children ranging from having a vision and hearing loss only to having multiple disabilities and functioning as if they have considerable problems with seeing and hearing. In Nebraska, a large percent of students on the deaf-blind census include those with multiple disabilities who also have dual sensory losses.

In this section, quality program indicators that have proven to be successful for working with children and youth who are deaf-blind will be addressed. Also, effective teaching strategies for working with this population will be provided.

The quality program indicators include the following:

1) Opportunities for Peer Interaction:

With the move to more inclusive environments and access to general education curriculum, children and youth with deaf-blindness should have many opportunities for peer interactions. Peers can also assist in including students with deaf-blindness into the school and classroom environments. Students have been used as peer tutors, cross-age tutors, peer advocates, peer buddies or helpers, and simply friends who enjoy being with someone who is deaf-blind (the ultimate goal). It is also important to realize that students with a variety of abilities working in the same school and classroom encourage all students to build supportive relationships. It goes beyond the basic needs all children have for the give and take, the support, and the sense of belonging that comes from

having friends. Having relationships assists children in forming strong values, attitudes, and social skills necessary for becoming successful, contributing members of tomorrow's society.

2) Collaborative Team Planning:

Collaboration has become a key concept used in fostering effective schools for all children and success for including students with deaf-blindness into their schools and classrooms. By collaborating, each individual is able to contribute what he or she knows best. It is the key for providing support and developing effective teaching strategies for this population. The collaborative team offers a framework through which the skills of each member can be used. The team can vary in size and in composition, involving any possible combination of the following key members:

- ▶ the student and the student's parents
- ▶ classroom teacher
- ▶ special education personnel (teachers, therapists, counselors, etc.)
- ▶ the student's classmates/friends
- ▶ school administrators
- ▶ paraprofessionals/teacher assistants

Planning together to make schools more responsive to the individual students' needs may take extra time, effort, and coordination of schedules. District-wide administrators can play a key role by promoting practices which encourage collaboration. Some school administrators have developed a master school schedule that allows time for teams to meet, made resources available (such as a substitute teacher to fill in when team members are planning), and providing in-service training on collaborative teaming for staff. Some examples of collaborative teaming which have been used both in Nebraska and across the nation include:

- ▶ Collaborative consultation (a regular educator, a special educator, and others meeting on a regular basis to develop strategies for supporting a

particular student)

- ▶ **Team and/or Co-Teaching** (a regular education and a special education teacher planning and teaching lessons together in the general education classroom)
- ▶ **Peer Coaching and/or Mentoring** (teachers modeling and providing feedback about effective teaching techniques for each other).
- ▶ **The special education teacher planning and teaching a lesson to the whole class on a regular basis - (e.g. special education teacher facilitating effective learning lessons where students explore and practice how to accept and get along with each other).**

3) Cooperative Learning:

Cooperative learning has been implemented in schools throughout the nation when working with heterogeneous groups of students. It may be defined as working cooperatively in pairs or small groups to help one another master assigned material. It allows students to be actively involved in their own learning. For the child who is deaf-blind, this approach can provide the stimulation needed to maintain interest and attention to a task. It also will allow the hands-on involvement of students in the learning process which is valuable to the student with dual sensory losses. These students learn more when given the opportunity to interact, explore, touch, and perform skills.

Johnson & Johnson (1984), describe four components of cooperative learning: positive interdependence, individual accountability, interpersonal and small group skill development and group processing, and face-to-face interaction.

Positive interdependence refers to the cooperative goal structure build into each lesson. Students work together and share common materials working toward a common goal.

Individual accountability means each student must contribute to the final product or outcome. Students usually are assigned roles within the cooperative groups

(e.g., praiser, checker, encourager, materials manager).

Interpersonal and small group skill development refers to a social skill objective being taught during a period of time within each lesson. Feedback is given to each group regarding how they did with the social skill objective.

Face-to-face interactions give students in cooperative groups numerous opportunities to work together. Teachers should ensure that cooperative groups are formed heterogeneously, with students mixed by culture, ethnicity, gender, and ability. Groups usually stay intact for approximately 4-6 weeks so that the desired interaction skills can be acquired.

4) Functional Age-Appropriate Activities: Functional skills are those that, if not performed by the student, would have to be performed by someone else. A skill selected for instruction will have a naturally-occurring purpose (i.e., walking up steps to enter the library versus walking up portable wooden steps that end at a wall) and will be performed in natural settings. The age appropriate skills selected to be taught are similar to skills acquired, performed, and valued by nondisabled individuals of approximately the same age.

Activities can be meaningful based on the relevance or the value ascribed to them by the student and the family (Smith & Levack, 1996). An 7-year-old student who is deaf-blind and has multiple disabilities is practicing social skills in an art activity in a general education art class and engaged in a meaningful activity even though the activity itself may have no direct functional application in that student's life after school age. However, at age 7, it is an important part of being a part of his school community. This activity is providing him exposure and expectation of learning about art which can lead to a preferred leisure activity in the future.

5) Community-Based Experiences:

Opportunities to learn skills in the community are very important at every age. For the younger student, the school may be the primary community environment. For secondary-age students, opportunities to work and socialize with nondisabled adults becomes increasingly important. Usually, the emphasis on community-based instruction as part of the school-day curriculum increases as the student gets older (Smith & Levack, 1996). According to (Downing, 2000), community-based instruction is based on some key concepts:

- ▶ Individualized instruction to teach specific skills within the most natural environment;
- ▶ Instruction occurs on an individual basis or in very small groups;
- ▶ Instruction relates to specific IEP objectives as determined by the educational team;
- ▶ The goal of community-based instruction is to increase competent functioning individuals in normalized environments, now and in the future;
- ▶ Community-based instruction is NOT a field trip.

6) Access to meaningful Communication:

Communication for the student who is deaf-blind is one of the most critical skills for this population. Communication is more than the use of words. It is the way we reach out to other people in our environment. It is the way we connect to each other both verbally and nonverbally. It is the way we express our feelings, share information, tease, joke, and convey needs (Downing, 1999). For the student who is deaf-blind, it is so important that each child is given access to communication and allowed to be heard for what they have to say with language, with gestures, with movements, with voice, with hands, with eyes, with silence (Miles & Riggio 1999). Educators must help all students communicate by providing appropriate motivation, keeping expectations high, and letting those with disabilities realize that what they have to say is valued (Downing, 1999).

There are many modes of communication for children and youth who have dual

sensory impairments. It is important to understand and recognize each of these modes and to respond to all modes as being communication. Most all children who are deaf-blind use nonverbal communication modes (body language and signals, natural gestures, vocalizations, object cues, touch cues, pictures). According to Miles and Riggio (1999), “good nonverbal conversation forms the basis for language.” Verbal communication is the communication of ideas through the use of words, spoken or not spoken, using a standard vocabulary and structure. This includes sign language (visual and tactile), manual alphabet, oral language and speech, written language such as print and Braille, print on the palm, and augmentative and alternative communication systems (object/picture/electronic communication systems) (Miles & Riggio, 1999).

There are several important factors to consider when designing communication systems for this population:

► **Assessment of communication:**

There are many methods to assess the communication needs of a child who is deaf-blind. They can be direct or indirect methods of assessments. Direct assessments include observing and testing the person while interacting, playing, conversing, or exploring with the student. Indirect assessments include reading reports and talking with people who know the student well, interviewing the parents for additional input, and/or conducting a home-based assessment which can provide valuable information. Some methods of assessment are formal, such as standardized tests and checklists. When using standardized test or more formal assessment methods, vision and hearing abilities must be considered.

► **Residual vision and hearing available for input of language and ability to interpret visual and auditory information:**

The team must know the functional use of vision and hearing, and how well the child interprets what he/she sees and hears. Some students may use their vision very well with adaptations (glare reduction, good contrast, lighting, etc.); however, others with the same visual concerns cannot functionally use his/her

vision to access visual information. The same is true with hearing. Some students will have sufficient hearing when provided hearing aids, FM system, and/or other assistive listening devices; however, others having hearing losses that prevent access to speech sounds even when the best devices are available and in use.

▶ **Cognitive ability:**

The complexity of the communication system to be used must be related to the student's ability to learn. However, it should never be "an excuse" for not having a communication system in place for ALL children who have dual sensory impairments. It may be a system which uses touch and object cues only, but it still is the system the child is using to receive and express communication. Value all types of communication. It is important for each team member to know the communication system and to use the method with the child.

▶ **Motor and muscular abilities, both oral motor, fine motor, and gross motor:**

It is imperative to consult with therapy services for appropriate assessments in each of the areas. Teamwork will be essential for children who have physical needs including dual sensory losses to develop the most appropriate communication system. However, don't let the physical barriers deny access to communication systems.

▶ **Atypical behavior or behavior that indicates an attention deficit disorder and/or hyperactivity:**

Any difficulty in attention and concentration will affect the modes of communication that can be used effectively. Autistic-like behavior must be evaluated very carefully to distinguish it from behaviors associated with sensory loss.

▶ **Personal learning style and preference of the student:**

The team should and must take into consideration the learning style and preference of each student who is deaf-blind. They should consider the child's social skills and interactions, the patience of the child with difficult tasks, the

child's perseverance, the topics of interest of each child, the personal preference for the communication modes, and the past experiences of success and failure.

► **Personal preferences of other people closely involved in the student's life:**

It is vital that the family shares their hopes and dreams regarding the communication system/mode with the team. Educators should ensure that the family is well informed about all the possibilities available for their child. The high expectation of family members in regard to modes of communication is so important for the success of the communication system used.

► **The skills of those who will teach the child:**

The language fluency and the possibility of acquiring more skills for team members are very important. For example, if a child is truly going to be a sign language user, it does not mean each person has to know sign language, but it does mean each person being willing to learn and adjust to the student's needs. It also means for those children using touch and object cues, for the team members to develop, implement, and be consistent in their use across the entire school day. (Miles & Riggo, 1999).

7) Person Centered Futures Planning–

This is sometimes referred to as life-style planning and is a philosophy and process that recognized the need for informal types of support in a child's life, for families and students with dual sensory impairments to develop a positive future for themselves and the student, and to focus on a child's strengths as opposed to his/her deficits. The initial focus for using Person-Centered Futures Planning was to assist in the transition of children with disabilities to post-school environments (e.g. Mount, 1987). There have been additional Person-Centered Futures Planning processes such as the *McGill Action Planning System (MAPS)* which focuses on identifying strategies to use to include students with disabilities into classrooms and communities, and generating IEP goals and

objectives based on the student's dreams, strengths, and needs (Vandercook, York, and Forest, 1989). In 1999, Grisham-Brown and Haynes, developed *Reach for the Stars: A Transition Process for Families of Young Children*. This process reflects a person-centered philosophy that can be used with infants, toddlers and preschoolers for the specific purpose of facilitating transitions to preschool and kindergarten programs.

Some key components of Person-Centered Futures Planning include:

▶ Pulling the team together which includes the student, family and family members, IEP team members, adult agency members, and any additional community members. The process encourages them to share all they know about and wish for the person who is deaf-blind.

▶ The next step involves the development of a variety of "Maps" that explore a child's past history, current abilities, likes and dislikes, communication, choices, future dreams, and other areas that are decided on by the group. This "Map" which is a graphic representation serves as a blueprint to the future. It provides a positive snapshot of the child and his/her hopes, dreams for the future as well as the hopes, dreams, and fears of the family and team members.

▶ Finally, the mapping information can be used in a variety of ways. It is important to take the "Future Map" and develop goals and objectives specific to the child's needs, preferences, hopes and dreams. Many teams use the "Maps" at IEP meetings when discussing and planning transition to adult services and/or transition to new environments. It is an important process for supporting the child in a positive manner and assisting the team including the family in reaching the goals.

8) Transdisciplinary Model:

In this team approach, the educational process is a shared responsibility of all team members. Therapists and other specialist may work directly with a student when assessing, when diagnostic teaching, and when assisting with

implementing of specific instruction; however, teachers, and paraprofessionals are usually the primary direct implementers of instruction. Transdisciplinary teaming has emerged as a best educational practice (Smith and Levack, 1996). This model minimizes the numbers of people who will work with a child on a daily basis and provides opportunities for cross-training of staff. It reduces the likelihood of the child being continually “pulled out” for special related services (Miles & Riggio, 1999).

Some teams in Nebraska are also using a coaching model for the delivery of related services. This has been more specific to early intervention and early childhood, but can also be considered for all age groups.

9) Access to Deaf-Blind Adults

Children and young adults who are deaf-blind should be given many opportunities to interact and form friendships with the adults in the community who are deaf-blind. In many states, there are organizations or support groups where deaf-blind adults are available to provide support to each other and to also suggest any changes in the community in which they live, work, and play. As educators, we should be focusing on encouraging family members and the child who is deaf-blind to connect with those adults who are deaf-blind.

At the local level, the Nebraska Commission for the Blind and Visually Impaired has a social support group for adults who are deaf-blind called Hand-In-Hand. This group has a variety of social events which encourages all adult consumers who are deaf-blind to be a part of and support. Transition-age youth are also encouraged to attend and meet adult role models who are deaf-blind.

At the national level, there are also many additional organizations which either support adults or families of children who are deaf-blind. Some of these organizations include the American Association of the Deaf-Blind (AADB), the National Family Association for the Deaf-Blind (NFADB), Helen Keller National

Center (HKNC), and Deafblind International (DbI). It is critical for each team member to think “life-long” for the children they serve. Each child will need to connect to an adult role model especially during those early years of transition. It is important for family members to see other deaf-blind adults living normal lives and enjoying life. It is also critical for team members to meet deaf-blind adults so they can see the potential for each of their students.

Environmental Considerations:

The quality program indicators will guide educators in setting and establishing effective best practices programs for children and youth who are deaf-blind. Some additional considerations also must be addressed when working with this low incidence population. The environmental considerations must also be considered when working with these children. It is important to realize the diversity of this population and make any adaptations and/or accommodations depending on each child’s unique needs.

Some environmental strategies to consider are listed below:

1) Background Noise:

- ▶ Reduce the amount of background noise in the environment.

Background sounds are often overlooked. Radios, televisions, children playing, general classroom noise, lawnmowers and traffic all add to the list of sounds that may be distracting to a child. While it is not possible to remove all background noise, be aware of the effect they may have on the child’s level of attention.

- ▶ Making simple modifications to the classroom (installing carpet, putting rubber tips or tennis balls on desk/table/chair legs, installing curtains, maintaining ventilation systems, doors, lighting, and windows).

- ▶ Some districts have installed a sound-field FM system which allows for the control of the acoustic environment and can help all students in the classroom (Lace, 2000).

2) Lighting, glare, and illumination in the environment:

- ▶ If students are positioned on the floor for some activities, educators should position themselves in the same place to experience what the lighting situation is and determine whether it is conducive to the students' visual performance.
- ▶ Most frequently, evenly-distributed softly-diffused indirect lighting is recommended.
- ▶ Illumination can be used to draw attention to an object or figure by shining a light on it. Students should avoid directly looking at a light source. Not only is it uncomfortable, but it also reduces the amount of detail seen. Looking into a strong light source can cause retinal damage especially to students who have Aphakia (Levack, 1991).
- ▶ Surfaces within the normal viewing area of the students should be glare-free (e.g. blackboards, windows, cabinet doors, wall surfaces). Colored paper or paper with a matte finish can be used to cover the surface.

3) Using color and contrast:

- ▶ The contrast of an object against its background is a significant factor in improving visibility (e.g. light objects on dark mats, dark objects on light counters or cutting boards, using a dark toothbrush in a white toothbrush holder, etc.).
- ▶ When choosing toys or tools for students, consider the color and contrast of the object itself (e.g. a bright yellow ball with one wide black stripe draws a child's attention better than a solid blue ball).
- ▶ High contrast of letters on a page may improve visual functioning. However, sometimes, white letters on a black background are easier for students to see and reduce glare ▶ Bolder and well spaced letters are often easier to see than larger letters. Dark pens, markers, and soft leaded pencils may be helpful. The width and color of the line on writing paper should be selected according to the student's needs and preferences (Levack, 1991).

4) Magnification:

- ▶ Visual efficiency can be improved by increasing or decreasing the size

of the objects being viewed. This can be accomplished by using devices for magnification.

- ▶ The optimal position or location of students must be considered. Some examples include students who may need to use a low vision device or walk up to view something more closely and students with vision in the left eye who may need to sit on the right side of the classroom.

- ▶ Since being close to an object can result in automatic magnification, students may lean closer to an object or bring an object near their eyes.

- ▶ Reading materials can be enlarged and large print books can be used. However, adapting all reading materials into large print is not recommended unless it is for a temporary period until the student can be evaluated for potential use of low vision devices (Levack, 1991).

5) Use of hearing aids/assistive listening devices:

- ▶ Hearing aids don't amplify just speech, they amplify everything. This includes all the background noise in a classroom (children moving in the class, teachers talking to paraprofessionals, air conditioner running, rustling papers) (Durkel, 2003).

- ▶ Assistive listening devices (ALD) were designed to help a person with a hearing impairment better cope with the problem of noise and distance from the speaker. An ALD works by having the speaker wear a microphone connected to a receiver, worn by the listener. The speaker's voice is then sent directly to the listener's ear. Background noise is not picked up by the microphone and so its effects are decreased (Durkel, 2003)

- ▶ As Durkel (2003) stated, "children with central auditory processing disorders and children with hearing loss only in one ear may have more troubles with noise and distance than listeners with no impairments. These people may not wear hearing aids or need amplification but may benefit from the use of an ALD." Also, when you add a visual impairment to this student, the access to all information has decreased.

6) Space and Arrangement:

▶ When it is important for a student to focus on an object or person visually, the background visual clutter should be considered. Busy environmental clutter makes it difficult to pick out the object or person. It is recommended to wear darker colors when possible (black, brown, dark navy), or to have a black smock available for educators to use in the classroom.

▶ Limiting the visual clutter of the object may help (e.g. simplifying patterns, using solid colors with high contrast) (Brennan, Peck, & Lolli, 1992).

Tips For Working With Children Who Are Deaf-Blind:

▶ Provide plenty of wait/response time because of distorted information in both distance senses. It may require some children extra time to process the information through other senses. This is also true if the child has some usable vision and hearing. The information is still distorted and may take a child longer to process visual and auditory information. Practice wait, wait, wait for responses from children.

▶ Use a hand-under-hand approach for providing information to children with dual sensory losses. Many educators and family members use the hand-over-hand prompts for teaching skills and routines. Sometimes, this may be effective in the beginning for teaching a skill, but should be faded as the skill is learned. However, presenting objects using a shared topic of conversation is preferred. This allows the child additional control over the situation. It also gives a child the opportunity to reject, explore, ask for more, attend, request, etc. (Miles, 1999).

▶ Alert the child/student through consistent and respectful cues (touch cues like touching the child gently on the shoulder) to inform the child you are going to communicate. This means that a child may not recognize you or may not perceive that someone is approaching them until you make contact (touch). The team should agree upon consistent and respectful cues to interact with the student. It will also be important to share with other family members, team

members, and friends.

► Identify yourself to the child/student, perhaps using a name sing, an object (ring, watch, hair, etc.). This will depend on each individual child, but some children will need this additional information to associate the object with the person. This can create, when used consistently, some anticipation skills and also awareness of objects being connected to individuals, but still separate from them.

► Get Close, (if needed), to the child who is deaf-blind. Touch cues, tactile signing, or talking very closely into the better ear are examples of how conventional expectations about personal space may not be allowed. The child will also need to get close to you (Gee 1994).

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