Students with Deafblindness: Educational Implications

PowerPoint Slides
to be used in conjunction with the Facilitator’s Guide
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Session Agenda

- Introduction
- Session Goals and Objectives
- Deafblindness is Unique
- Basic Interaction Skills
- Environmental Considerations: Sensory Environment
- Environmental Considerations: Hearing Loss
Session Agenda, continued

- Environmental Considerations: Vision Impairments
- Assessment of Learners who Experience Deafblindness
- Routines as an Instructional Format for Learners who Experience Deafblindness
- Summary
- Evaluation
Terminology

• Throughout this module, we will use the term “deafblindness” as a single word.
• In 1991, the International Association for the Education of the Deafblind (now known as Deafblind International) resolved to adopt this spelling.
• It demonstrates that this is a unique disability and not the sum total of a vision and a hearing loss (Miles & Riggio, 1999).
You open your inbox...

Hi there,

Just wanted to let you know that you will be getting a new student next week. The family just moved to town. I think that he will be starting a week from Monday. Oh and BTW, he is deaf and blind. And don't forget the Student Improvement Team meeting at 7:30 am on Thursday. Didn't you volunteer to bring coffee and bagels?

Principal Johnson
ABC Elementary School
Greenville, North Carolina
Introduction

• Severe disabilities and deafblindness...wow! Surely this new student’s disabilities are going to present educational challenges for him.

• What about instruction?

• What should you as an instructor expect to have to learn or change?
This may be a new experience for you, but rest assured that you are not alone. While deafblindness is rare, our understanding of the challenges for this population is growing.
Introduction, continued

• More than 10,000 children now experience deafblindness and require services.

• Many children who experience severe and multiple disabilities also experience hearing and/or vision loss.

• Losses may be due to:
  – damage to the hearing and/or vision systems;
  – brain damage that prevents the learner’s brain from interpreting visual and/or auditory signals; or
  – both conditions could contribute to vision and hearing loss.
Introduction, continued

• The label “deafblindness” is not a defining term.
• Needs of children with this label can be vastly different.
• Deafblindness means the child experiences some form of vision loss AND hearing loss significant enough to impact learning.
Introduction, continued

• The child may experience:
  – other disabling conditions (e.g., cerebral palsy or intellectual deficits) and
  – other health conditions (e.g., seizure or metabolic disorder).
Introduction, continued

• There is no single definition that includes all causes of severe & multiple disabilities.

• However, learners who experience severe and multiple disabilities share common characteristics. They:
  – are affected by 2 or more disabilities simultaneously;
  – require significant support across the array of adaptive skills;
  – often experience impaired intellectual functioning, adaptive skills, motor development, and/or sensory impairment.
Consider these examples

**Deafblindness Ranges From...**

**Severely and Multiple Disabled**
- A two-year-old girl
  - born prematurely
  - lives in a pediatric nursing home
  - has no hearing
  - is totally blind
  - therapy when health allows
  - parents hope to move her home someday

**Highly Functional**
- A 17-year-old young man
  - full term baby
  - lives at home
  - born deaf
  - lost vision after birth
  - attends local high school
  - plans to attend college
Introduction, continued

• It is also important to note that learners who experience severe and multiple disabilities are difficult to assess:
  – Their vision and hearing assessments may be incomplete or inaccurate.
  – Because vision and/or hearing loss often occur with severe disabilities, an alert educational team will watch for behavioral signs of sensory loss even if such a loss is not specifically identified.

The educational considerations presented reference learners who experience deafblindness. They may also apply to learners with severe & multiple disabilities with or without identified sensory loss.
Session Goal

- Goal: This session is designed to explore the many considerations necessary when planning educational experiences for learners with deafblindness.
Session Objectives

Upon completion of the module, participants will be able to identify:

• some basic interaction skills necessary to respectfully interact with a learner who experiences deafblindness,

• environmental considerations necessary to support the education of learners who experience deafblindness,
Objectives, continued

Participants will be able to identify:

• critical considerations for the accurate assessment of a learner who experiences deafblindness, and

• the benefits of using routines in the education of learners who experience deafblindness.
Deafblindness is Unique

• Deafblindness is a unique disability, vastly different from experiencing only hearing loss or only the loss of vision.

• The reauthorization of the Individuals with Disabilities Education Act (IDEA) in 2004 defined deafblindness as follows.
  – Concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational needs that they cannot be accommodated in special education programs solely for children with deafness or children with blindness. [Pub. L. No. 108-446 § 300.8(c)(2)]
Deafblindness is Unique, continued

• Learners who experience deafblindness cannot be thought of as deaf with a vision loss or blind with a hearing loss as if the disability effect was simply added on.

• Rather the effect is compounding and significant enough that it requires unique and well thought out educational considerations.
Consider these examples

<table>
<thead>
<tr>
<th>Examples of Sensory Deficit on Information Gathering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Children who experience hearing loss may miss hearing…</strong></td>
</tr>
<tr>
<td>The sound of the bus coming as they step onto the street.</td>
</tr>
<tr>
<td>A friend calling their name on the playground.</td>
</tr>
<tr>
<td>Enough language to speak verbally.</td>
</tr>
<tr>
<td>The bell signaling the beginning of class.</td>
</tr>
<tr>
<td>The nearby sound of the rattle a sibling is shaking.</td>
</tr>
</tbody>
</table>

**Children who experience deafblindness may miss it all!**
Deafblindness is Unique, continued

After reading the examples above, an educator might ask the following questions:

• What cues are available to the child with deafblindness about what is coming or happening next?

• How does the child with deafblindness safely cross the street, know they are invited to play, get to class on time, or find a rattle?
Deafblindness is Unique, continued

On second thought however, better questions might be:

• How can I provide cues to a learner with deafblindness about what is happening next?
• How can I help a child with deafblindness to gather information from the environment?
• How can I help them to interact with others?
• How can I help them to interact with and explore the environment?
Deafblindness is Unique, continued

• These questions reframe the examination of the sensory deficits and put the responsibility for providing information to the child on the communication or interaction partner. We must bring the world to the learner with deafblindness.

• Let’s explore how to do this by examining some adaptations, modifications, and techniques that create a more complete educational experience for learners.
Basic Interaction Skills

Some basic interaction skills that will help individuals to more respectfully and thoughtfully interact with deafblind learners:

• Be **cautious** in your approach.
  – If the child has some vision, enter the visual field slowly and from a place of good vision. Gently lay your hand upon the shoulder or under the elbow or arm of a learner. Utilize touch cues, move slowly and allow time for the learner to process interactions. Always let the learner know when you are leaving or ending your interaction time.
Basic Interaction Skills, continued

• All instructors should have a name sign in the learner’s language.
  – If the language is sign language, use a sign. If the learner is using objects to communicate, a special watch, bracelet, or pin on an elastic band can become a name sign.
  – Place or slide the name object into the child’s palm and allow the child to touch and explore it.
  – Some instructors of learners with significant delays leave a name object with the child to indicate they are available for questions or comments. Taking the object away would mean you were leaving and no longer available.
Basic Interaction Skills, continued

• Consider **hand-under-hand** for shared interaction, instruction, and exploration.
  – This technique is the opposite of how adults naturally try to help. Adults who see a child reluctant to touch generally put their hands over the learner’s hands to “steer” or put the learner through the task.
  – This forces compliance by the child, but promotes a very passive style of interaction with objects.
  – Too much touch can actually distract the brain. Touching the back of a learner’s hand can misdirect the attention away from the information being gathered by the palm and fingertips.
Basic Interaction Skills, continued

• Instead, **hand-under-hand** requires the learner to be an active part of the interaction.

  – For learners with deafblindness, their hands become sensory organs. They can gather information in the same way the eyes and ears do for those of us with no sensory loss.
  – Hand-under-hand allows learners to participate in tasks they cannot perform alone and encourages curiosity
  – Encourage the use of the hands as soon as possible to take advantage of the plasticity of the developing brain.
Basic Interaction Skills, continued

– The hands of a learner with deafblindness should be treated with as much care as the eyes of a sighted person, never poked or prodded.

– Use a cautious approach in initiating hand-under-hand by slowly sliding your hands into position. If the child moves away, it is a way of communicating, “Not now.” If the child allows the contact, it is an acceptance of your invitation to share an experience.
Basic Interaction Skills, continued

Remember the following when using the hand-under-hand technique:

• Try not to be in the way of the child. Be careful not to prevent the child from exploring or from experiencing the important parts of the object.

• Do allow the child to be in control of the experience.

• Remember that one goal of hand-under-hand is letting the child know that this is a shared experience.
Things to Remember: Basic Interaction Skills

Thoughtful adults and peers interact with learners who experience deafblindness by:

- Interacting in respectful ways including the use of
  - touch cues,
  - slow movements,
  - pauses for processing time,
  - notice of the end of the interaction;
Things to Remember:
Basic Interaction Skills, cont.

• Creating a name sign by which the learner may identify you;
• Using hand-under-hand to
  – share experiences,
  – explore objects,
  – model and demonstrate concepts;
Things to Remember: Basic Interaction Skills, cont.

• Learning more by talking with
  – a special education teacher,
  – a teacher of the visually impaired,
  – a teacher of the hearing impaired,
  – an occupational therapist,
  – family members,
  – other team members.
Activity- Basic Interaction Skills

• Practice of hand-under-hand technique is important and a special education teacher or a teacher of the visually impaired can help you learn and practice this technique.

• These 2 video clips demonstrate hand-under-hand technique:
Environmental Considerations: Sensory Environment

- Careful preparation of any environment allows learners with deafblindness to learn to process sensory input.
- There’s growing recognition that competing sensory stimulation interferes with learning.
- In an environment full of sensory stimulation, the learner may be unable to process all input at the same time. He may quit looking to hear or quit processing touch to listen.
Sensory Environment, continued

• Imagine that you are at a noisy wedding reception with a live dance band and a light show. As an adult in this setting trying to listen to a conversation, you begin to shut down other senses automatically. You might turn an ear to the speaker, look downward, and perhaps even close your eyes to listen intently to hear and decode the language in the conversation.
Imagine a classroom full of art on the walls, mobiles made by children during this week’s art project spinning in the breeze from the ceiling while classical music is played in the background. The room is near the kitchen full of banging pots and pans and strong food odors.
Sensory Environment, continued

• This would be a highly complex sensory environment. Removing unnecessary sights, sounds, and smells decreases the complexity of the environment.

• Talking to a learner during play or wearing strong perfume or lots of bracelets could also produce competing sensory input.
Sensory Environment, continued

• Observation of the learner in differing environments may help determine if too much sensory input presents obstacles. For example:
  – if a child looks, listens, or attends best in a quiet, low light environment, competing sensory input may be a difficulty.
  – In this case, it may be better to provide sensory input in a sequence rather than all at the same time.
  – you might say the name of a toy when the child stops touching it, refrain from touching a learner who is listening, or stop shuffling papers when giving the assignment for the next day.
Sensory Environment, continued

- Think back to the video clip of Kailee and the touch on her leg that interrupted her activity. Had the adult waited to rub her leg until she stopped banging the wire whisk, competing sensory stimulation would have been avoided.
Sensory Environment, continued

• A learner’s ability to see and hear may fluctuate.
  – For example, ear infections, fluid behind the eardrum, or a buildup of wax could all negatively affect hearing.
  – Congenital glaucoma can cause frequent vision changes as pressure builds and recedes.
  – For learners who experience other complicating disabilities, their health, motivation, emotional state, and state of alertness may all negatively impact their ability to process auditory and visual input.
Things to Remember: Sensory Environment

Thoughtful adults and peers of learners who experience deafblindness remember...

- Competing sensory stimulation may interfere with learning;
- Learner’s ability to see and hear may fluctuate;
Things to Remember: Sensory Environment, continued

• Learning more by talking with
  – a special education teacher,
  – a teacher of the visually impaired,
  – a teacher of the hearing impaired,
  – an occupational therapist,
  – family members,
  – other team member.
Activity - Sensory Environment

• Simulation Exercise: Sorting buttons and doing an interlocking puzzle
  – In pairs, assign one person to role of Student and other to Teacher for Puzzle task. Teacher follows instruction card. Student wears blindfold and the activity is done silently to simulate deafblindness.
  – Switch roles for Button Sorting task.
Activity- Sensory Environment, continued

- When all pairs have completed the exercise, have a large groups discussion re: your experiences.
- What did you learn as a student?
- What did you learn as a teacher?
- If you were a student first, what did that teach you about being a teacher?
Environmental Considerations: Vision Impairments

• Careful preparation of any environment allows learners with deafblindness to learn to use their vision.

• All learners with deafblindness have vision loss. The type and extent of loss drives selection of the accommodations to help the learner to effectively use residual vision.

• A teacher of the visually impaired will be instrumental in selecting accommodations.
Vision Impairments, continued

- Generally, several environmental modifications that should always be considered for students with significant visual impairment.
- Instructors should always consider providing **optimum lighting, reducing glare, and increasing contrast** for any learner who experiences vision impairment.
Vision Impairments, continued

• **Lighting:**
  – Adding light may actually allow some learners to see otherwise undetectable details or color.
  – For other learners, added light might actually prevent them from seeing a visual target.
  – When adding light to a visual target, the position of the additional light is also critical.
Vision Impairments, continued

– Additional light should come from behind the learner and over the shoulder of the non-dominant hand to prevent the learner from creating shadows while working.

– Quick lighting shifts (e.g., moving from a brightly lit environment like a sunny playground to a dimly lit environment like a classroom) may temporarily affect the learner’s use of vision.
Vision Impairments, continued

• Reduction of **glare** for the visual targets of learners with vision impairments:
  – Glare can cause visual discomfort and interfere with looking.
  – Glare increases eyestrain and makes looking harder.

• Some easy ways to reduce glare include:
  – Using blinds at windows,
  – Seating the learner with her back to the window,
  – Providing a hat with a bill,
  – Using a slant board for reading,
  – Using a rug on a shiny floor.
Vision Impairments, continued

• Assessment of **contrast** in the materials or visual targets being used:
  – The use of increased contrast is a necessary and effective means to increase a child’s ability to see.
Examples of Different Contrast Levels

<table>
<thead>
<tr>
<th>Low Contrast</th>
<th>High Contrast</th>
</tr>
</thead>
<tbody>
<tr>
<td>White paper on a white or tan desk</td>
<td>White paper on black poster board.</td>
</tr>
<tr>
<td>A white toothbrush in a white cup</td>
<td>A red toothbrush in a white cup</td>
</tr>
<tr>
<td>A wooden puzzle on brown carpet</td>
<td>A wooden puzzle on a black towel</td>
</tr>
<tr>
<td>Gray letters on a blue bulletin board</td>
<td>Black letters on a yellow bulletin board</td>
</tr>
</tbody>
</table>
Examples of Different Contrast Levels, continued

• The visual targets (white paper, puzzle, red toothbrush, and letters) all stand out against backgrounds carefully selected for high contrast.

• This makes objects easier to discriminate from the background, helps learners to define their working space, and increases visual efficiency.
Creating Contrast: An example of increasing contrast by adding a black background.

*Photos by Pam Shanks, used with permission.*
Vision Impairments, continued

• Some learners also benefit from a reduction of **visual complexity**.
  – One object on a plain background is not complex.
  – Addition of extra objects or a busy background can make seeing the target object more difficult.
  – For example, a pencil on a desk by itself is easy to see. A pencil on a desk that also contains a ruler, three markers, two colored pencils, and an eraser is harder to locate.
Vision Impairments, continued

- Therefore, the standard presentation of material may be too visually complex for some learners who experience deafblindness.
- By limiting the quantity of items to look at, the array becomes less complex.
Complexity of the Visual Array: The Teen Boards of Seguin, a Montessori material for teaching teen numerals and quantity, presents a highly complex visual array when laid out in a standard format. A simple adaptation using the same beads and red numeral cards on a black background reduces the number of objects to view thereby simplifying the visual array. Photos by Pam Shanks, used with permission.
Complexity of the Background: An example of a pencil on a simple background and a complex background. A complex background would make it harder to see the pencil for many students with visual impairments. Photos by Pam Shanks, used with permission.
Vision Impairments, continued

• For some visual conditions, visual complexity makes it impossible to see the visual target.
  − This difficulty is similar to the children’s puzzle “hidden pictures” where common objects are “hidden” in an illustration.
  − When holding a visual target in the air, consider the complexity of the background. Holding a pencil in front of the busy clothing, a shelf full of materials, or the ever-changing classroom can create a complex background.
Visual Complexity of the Background: When holding an object, consider the background. Here, the black sweater provides the least complex background. Photos by Pam Shanks, used with permission.
Vision Impairments, continued

• Consider **visual field**, the area within which a child can see.
  – Some children experience significant field loss, for example a black spot in the center, on the periphery, or in random spots.
  – Understanding a child’s visual field is critical to positioning visual targets in areas where they can be seen.
Vision Impairments, continued

– Placing a worksheet in the center of a desk for a child with no central vision would mean the learner could only see the worksheet by turning his/her head. This would quickly create fatigue.

– The sheet should be positioned on the left or right side of the desk for optimal visual input.

– To create a field loss, try looking through a toilet paper tube. Imagine how much you would have to move your head to read a blackboard.
Reducing Visual Field: Notice how the stairs have completely disappeared from the view when the field of vision is limited. *Photos by Pam Shanks, used with permission.*
Vision Impairments, continued

• **Size** matters for some learners.
  – If the ability to see is poor, consider use of larger objects (like a brush instead of a pocket comb)
  – If learner has a very limited visual field, using smaller items will allow more to be seen at once. In this case, increasing font size would be a poor choice, but decreasing font size could increase reading speed.
Vision Impairments, continued

• Consider decreasing **proximity**, or the distance from the object being viewed.
  – Some learners benefit from sitting closer to the instructor or up front during group activities.
  – Some children with vision loss may pull visual targets very close to their faces, limiting the visual field to only the object they wish to see. This eases the processing of information.
  – This may be misinterpreted as aggression or misbehavior when a child grabs peers and pulls them closer for the same reason.
Vision Impairments, continued

• **Color** can also make a difference.
  – For children just beginning to learn to look or use vision, color may make the difference between using or averting gaze.
  – Ask family members and/or observe to find out if a child has a favorite color.
  – Providing toys and objects of daily life in this color may encourage use of vision. Later, this same color might be used to highlight text to help the learner with letter recognition and reading.
Color can make a difference: Using a child’s favorite color may encourage looking and enhance learning.

Photo by Pam Shanks, used with permission.
Vision Impairments, continued

- **Visual** novelty can be a problem for some learners with deaf-blindness.
  - For those without vision loss, visual novelty immediately draws our attention - like an Elvis impersonator in a crowded lecture hall.
  - That same novel stimulus would cause some learners with deafblindness to avert their gaze. If a child has difficulty with visual novelty, find toys or materials that share characteristics with preferred visual targets.
Vision Impairments, continued

• **Technology** may be used to enhance vision or input for some learners.
  – Magnifiers, closed caption TV, read aloud text, increasing font size or changing the color are all examples of using technology to benefit vision.
  – A teacher of the visually impaired or a special education teacher can help determine which accommodations work best.
Things to Remember: Vision Impairments

- Thoughtful adults and peers who work with learners who experience deafblindness should consider:
  - Lighting: Both intensity and position
    - Reducing glare
    - Increasing contrast
    - Limiting visual complexity
    - Visual field
    - Size: May require an increase or decrease
Things to Remember: Vision Impairments, continued

- Proximity to the learner
- Color
- Visual novelty
- The use of technology.

- Learning more by talking with:
  - a teacher of the visually impaired,
  - a special education teacher,
  - an occupational therapist,
  - family members of the student,
  - other team members.
Activity- Vision Impairments

• Making color a part of instruction-
  – A child with brain damage resulting in reduced visual field and poor visual memory as well as a moderate hearing loss.
  – Hearing aides and an amplification system optimize the learner’s ability to hear. However, he is still displaying problems with visual memory.
  – His teacher began presenting letters and numerals in red and noticed a change in data.
Activity- Vision Impairments, continued

- The child improved his ability to learn letters and numerals. Knowing this, the teacher wants to take advantage of the use of color. He is now learning to write numerals and letters.

- In small groups, identify adaptations or modifications the teacher could use to take advantage of the fact that red seems to make learning easier for this child.
Activity - Vision Impairments, continued

Examples include:

– Have the student write with a red pencil
– Use a red marker for tracing preprinted numerals/letters
– The student’s name could be in red on his belongings throughout the room.
– Student could trace numerals in a white plate with a thin layer of red craft sand in the bottom.
Environmental Considerations: Hearing Loss

• Careful preparation of any environment allows learners with deafblindness to learn to use their hearing.

• All learners with deafblindness experience a hearing loss significant enough to impede learning. The type and extent of loss drives the accommodations necessary to help the learner to effectively use residual, or remaining, hearing.
Environmental Considerations: Hearing Loss, continued

• Note if the loss is the same in each ear.
  – The learner may have better hearing in one ear and that may dictate where a conversation partner might want to sit or where an instructor should present auditory stimuli.
  – A teacher of the hearing impaired will be instrumental in selecting accommodations that match the learner
Environmental Considerations: Hearing Loss, continued

• There are several environmental modifications that should always be considered for students with hearing impairment:
  • reducing auditory clutter,
  • ensuring good acoustics, and
  • improving the clarity of sound.
Environmental Considerations: Hearing Loss, continued

• **Auditory clutter** occurs when background noise and other sounds overlap in an environment.
  – Imagine having the TV and the dryer both going while talking on the phone. If your child comes in and asks if he or she can have a snack unexpectedly, you may need your child to repeat the question.
Environmental Considerations: Hearing Loss, continued

– A child with a hearing impairment may be experiencing the same difficulty continually. In a classroom, consider:
  • adding rugs or carpeting,
  • closing the classroom door may help reduce auditory clutter.

– Constant chatter by a well-meaning adult or peer might provide unnecessary auditory clutter. Concise and simple statements are the best. Try to limit auditory clutter for learners who experience hearing loss.
Environmental Considerations: Hearing Loss, continued

• **Acoustics** is defined as how clearly a sound can be transmitted and/or heard is dependent upon the qualities of the environment, or its acoustics.
  
  – Specialized building techniques and materials can be used during construction to improve the acoustics of a room.
Environmental Considerations: Hearing Loss, continued

• Ensuring **clarity of sound** is critical.
  – Hearing aids, auditory trainers, and cochlear implants are all examples of ways to create, improve, or amplify sound.
  – Daily checks on these systems are necessary to make sure that they are performing as prescribed.
Environmental Considerations: Hearing Loss, continued

– Children who are just adapting to sound may learn to turn their systems off, so more frequent checks may be necessary.

– Specialized training may be needed to help learners new to such systems adapt to and use auditory input.
Things to Remember: Hearing Loss

• Thoughtful adults and peers of learners with deafblindness consider...
  – Auditory clutter;
  – Clarity of sound;
  – Acoustics;
  – Learning more by talking with
    • a teacher of the hearing impaired,
    • a special education teacher,
    • family members,
    • other team members.
Assessment of Learners who Experience Deafblindness

• Assessment is a difficult process and requires careful planning.
  – Few instruments are specifically designed for use with learners who experience deafblindness or even multiple disabilities
  – The learner’s ability to communicate or participate in testing may be hindered by complicating conditions like low cognitive function, limited motor function, and a lack of communicative or language skills.
Assessment of Learners, continued

Assessment of a student who experiences deafblindness should:

- involve an interdisciplinary team including family members,

- include the a review of records to gather a baseline of functioning:
  - gather new information within the context of familiar routines and supplement with traditional formal testing as appropriate,
Assessment of Learners, continued

– examine how the child performs in a wide variety of natural environments including the classroom and home, and

– gather information from a wide variety of sources including families.

– Data gathering, while important to planning a student’s individual program, is also critical to continued success.

– On-going performance data should be used to document progress and plan future outcomes.
Assessment of Learners, continued

• Families need to be active in the assessment process. They can:
  – provide information about dreams, goals, and needs;
  – give input about the assessment activities; and
  – may actually perform some assessment tasks.
Assessment of Learners, continued

• Evaluators who may be unfamiliar with the learner should:
  – have experience working with learners who experience deafblindness,
  – communicate directly with the student in their preferred form of communication be that spoken language, sign language, gestures, pictures, objects or any other system of communication.
Assessment of Learners, continued

– be familiar with adapting test items for use with learners who experience deafblindness;
– spend time getting to know the learner before beginning the testing process. Knowing the learner’s likes and dislikes will help to ensure a smooth assessment;
– be patient and realize that eliciting a response may take extra time. These learners need extra time to succeed and prove knowledge.
Things to Remember: Assessment of Learners

• Thoughtful adults involved in the assessment of learners who experience deafblindness should…
  – Review records to establish a baseline of information;
  – Create and use an interdisciplinary team to conduct testing that includes families;
  – Gather information from natural routines and natural contexts;
Things to Remember:
Assessment of Learners, continued

– Supplement this functional information with formal testing as appropriate;
– Act in a professional manner by getting to know the student, their mode of communication, their preferences and dislikes; and displaying patience during the testing process.
Routines as an Instructional Format

• Routines can provide powerful learning opportunities for learners with deafblindness.
  – All people derive security and learn from the routines of their daily lives.
  – Routines can be a very powerful format for instruction.
  – Appropriate for any type of skill including fine motor, gross motor, cognitive, social, academic, and language.
Routines as an Instructional Format, continued

– A good routine can:
  • benefit a learner with deafblindness by helping to build anticipation of coming events;
  • build cognitive understanding of events, objects, and people; and
  • provide consistency and order that is comforting and emotionally supportive.

– A scripted routine provides numerous opportunities for communication for each person involved the routine.
Routines as an Instructional Format, continued

Define the basics. For each learner and routine, identify:

• A reward system,
• The prompts to be used, and
• The wait time for each step.
Routines as an Instructional Format, continued

To develop a good routine:

– Develop a nurturing relationship. Increase opportunities for communication. The learner should be expected to communicate during the routine.

– Sequence experiences in a predictable order. Consistency supports learning.

– Utilize movement within natural routines. Movement ensures that the learner is active participant in the routine.
Routines as an Instructional Format, continued

• Every interaction with learners, including the implementation of a routine, should support communication by:
  – Considering and using student preferences and interests,
  – Responding to and expanding upon child-initiated behaviors, and
  – Responding to and expanding upon child-initiated communication whether it is symbolic or nonsymbolic.
<table>
<thead>
<tr>
<th>Nonsymbolic Communication</th>
<th>Symbolic Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication using words</td>
<td>Communication that does not use words</td>
</tr>
<tr>
<td>Verbal languages (i.e., English, French, and Spanish)</td>
<td>Body language Informal gestures Eye contact Facial expression</td>
</tr>
<tr>
<td>Sign language</td>
<td></td>
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<tr>
<td>Voice output devices</td>
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Routines as an Instructional Format, continued

• Following is a scripted bathroom routine developed by the team of a young learner.
  – This multidisciplinary team included all service providers, paraeducators, and family.
  – Was designed for implementation at school and at home.
  – Team created a flipbook for each major step of the routine. Each box represents a page.
  – Suggested script for adult is in red.
Routines as an Instructional Format, continued

– Note the prompt hierarchy referenced. Each action that the child is to perform is taken through the same three step prompt system.

– This team chose to use specific verbal praise for the reward system because:
  • the learner was attentive to interactions and responded well to praise & a happy tone in the past,
  • verbal praise/attention is a natural reinforcer and used in all environments throughout her day, and
  • specific verbal praise builds vocabulary and promotes cognitive growth.
Routines as an Instructional Format, continued

– Note that this team chose to incorporate the use of hand-under-hand to guide the learner through the routine when necessary.

– Also, this child uses a reverse walker. When using this style of walker, the child stands with the walker placed behind the body and pulls it forward while walking.
Scripted Routine for Trip to the Bathroom Basic Information

**Praise** always = Verbal descriptor, i.e., “Good sitting!” or “You moved your hand! Good job.”

**Wait time** for each step is 10 seconds.

**Respond appropriately** to all communicative attempts like eye contact, facial expressions, vocalizations, modified more sign, etc.

**Prompt hierarchy:**

**Step #1:** Verbal instruction
(Praise if correct response, if not go to step #2.)

**Step #2:** Verbal instruction + physical prompt
(Praise if correct response, if not go to step #3.)

**Step #3:** Verbal instruction + physically assist child to complete the action.
Any physical assistance of the hands will be hand-under-hand.
STEP #1 – Targeted response: Sarah turns around in walker

Present bathroom switch, & say, “Sarah, it’s time to go to the bathroom. Push the button please.” Wait.

Use prompt hierarchy as needed to get her to push the switch to say, “I need to go potty,” with the switch. Respond to the voice, with a kind, affirmative statement like, “Good talking. I’m glad you told me that you need to go potty! Let’s go to the bathroom and try.”

Sarah walks with walker into the bathroom and up to the toilet.
1. Adult braces walker so it won’t move. Turn will be counter clockwise. “Sarah, time to turn around. Please move this hand over.” Rub under wrist of R hand. Use prompt hierarchy. Physically assist her to move her right hand to the left side of the walker if necessary.

2. “Sarah, time to finish turning. Please move this hand over.” Rub under wrist of L hand. Use prompt hierarchy. Physically assist her to move her left hand to the right side of the walker if necessary.

Square her feet if she does not follow. She should now be standing backwards in the walker ready to sit on the toilet.
Routines as an Instructional Format, continued

- Prior to the development of this routine, at toileting time Sarah was scooped up and taken to the toilet with little or no warning.
- This routine can be easily implemented at home and at school.
Routines as an Instructional Format, continued

As seen in the first page of the team’s flipbook above, this step includes opportunities for Sarah to develop:

- Language skills by using a switch to talk.
- Social skills by practicing conversational format of turn taking while receiving feedback about her performance.
- Fine motor skills (grasp & release of the walker).
- Gross motor skills (turning around in the walker).
STEP #2 – Targeted response: Sarah sits on toilet

1. Pull her pants down and remove diaper.
2. “You are dry. Good for you,” or “Uh oh, you are wet,” as appropriate.
3. Make sure she is back far enough that her legs touch the toilet while saying, “Time to sit down Sarah. Please sit down.” (That touch, the feel of a toilet, chair, bench, etc. on the back of her legs will become the cue for sitting.)
4. If necessary, physically assist her to sit down by pushing down on her hips at an angle towards the toilet to get to the seated position on the seat. “You sat down! Nice sitting.”

Remove walker from the toilet.
Routines as an Instructional Format, continued

• This step in the routine provides the learner with an opportunity for the development of:
  – cognitive skills by teaching the difference between “wet” and “dry” and building the understanding of the touch cue;
  – social skills by practicing conversational format of turn taking while receiving feedback about her performance; and
  – gross motor skills (sitting down).
STEP #3- Sarah urinates.

1. “Sarah, go potty!”
2. Wait. Praise or repeat instruction.
3. Wipe.

If she goes, praise her “Great going potty, Sarah!” and have a happy celebration!
If she does not go,
- Wait 10 seconds, give her the cue again “Sarah, go potty please!”
- Still hasn’t gone wait 10 seconds, give her the cue again “Sarah, go potty please!”
- Still hasn’t gone wait 10 seconds, give her the cue again “Sarah, time to go potty please!”

If she still has not gone, thank her for trying and sitting nicely on the toilet and proceed to step four.
Routines as an Instructional Format, continued

• This step is very basic, as Sarah had already demonstrated the ability to hold urine for long periods of time and to release it when on a toilet or potty-chair. Even so, the step offers the opportunity for:
  – Motor skill development (release of urine “on demand”).
  – Language development (understanding of the phrase, “Go potty”).
  – Conversations and social skill development as she receives attention and participates in a happy exchange when she urinates.
STEP #4 – Targeted response: Sarah nods yes

Transfer to cot:

1. “Sarah I am going to pick you up now. Are you ready?……Say ‘yes’.”
2. Wait. Praise or repeat verbal + model. (Nod your head up and down to indicate “yes”).
3. Wait. Praise or add verbal + physical assistance (gentle pressure to get her to nod yes).
4. Say, “1, 2, 3 UP!!” Pick her up and carry to cot for diapering.
Routines as an Instructional Format, continued

This step is also a very basic step and was implemented in this routine and throughout the day to help Sarah to learn to answer questions.

- This step offered Sarah the opportunity to:
  
  - Develop social skills by building understanding of vocal inflection (rise in pitch) and facial cues (looking expectant) that accompany a question.
  - Develop symbolic language skills by saying yes with a head nod.
Routines as an Instructional Format, continued

– As a final “quality control” step, the team filmed the physical therapist performing the routine with Sarah so that anyone with questions could watch the sequence in action.

– This video was shared with Sarah’s family and used for training during summer school.
Routines as an Instructional Format, continued

• Watch this video featuring a young learner, Joel.

• [http://www.wsdsonline.org/deafblind/routines/video.html#video_3](http://www.wsdsonline.org/deafblind/routines/video.html#video_3)

• Note if you can see hand-under-hand used in the video of Joel’s diaper routine.
Routines as an Instructional Format, continued

• Joel’s routine required him to be an active participant:
  – His mother paired a touch cue (tapping his pants on the hip) with spoken words (“change your diaper”) to encourage cognitive growth and receptive language development.
Routines as an Instructional Format, continued

- Joel can make sense of this routine and begin to anticipate steps because the same routine, in the same order, and with the same pairing of words and touch cues is used.
- This helps Joel build visual and spatial memory. Through his repeated participation in the routine over time he can build a memory map of his room and the things in it.
- The same routine could be adapted to help Joel find his rocking horse, tractor, or other toys.
Routines as an Instructional Format, continued

• Watch this video featuring older learner Ashley as she goes to her job.

• http://www.wsdsonline.org/deafblind/routines/video.html#video_1
Routines as an Instructional Format, continued

• Ashley’s routine used of object cues (e.g., the apron signals the start of travel) to increase understanding, cognitive growth and independence.
  – The use of a routine allows her to know what to do next and complete each step with minimal assistance.
  – The use of picture symbols as cues further increases understanding and independence.
Things to Remember: Routines

• Thoughtful adults and peers use routines because…
  – Routines provide security and consistency;
  – Any kind of skill can be taught in a routine;
  – Consider basic information when developing a routine including
    • A reward system,
    • The prompts to be used,
    • The wait time for each step
Things to Remember: Routines, continued

• Create routines that…
  – Develop a nurturing relationship.
  – Increasing opportunities for communication. The learner should be expected to communicate during the routine.
  – Sequence experiences in a predictable order.
Things to Remember: Routines, continued

– Utilize movement within natural routines.
– Consider and use student preferences and interests.
– Expand upon child-initiated behaviors.
– Expand upon child-initiated communication whether it is symbolic or nonsymbolic.
Activity- Routines

• Write a scripted routine for functional reading activity:
  – A sixteen-year-old girl who hears nothing, has a visual impairment and severe cerebral palsy, meaning it is difficult to move and control her arms and legs.
  – She has no apparent ability to talk or understand the words of others. There is no estimate on intellectual abilities due to her lack of motor function and her inability to answer questions.
– Develop a calendar activity: Placing day of the week card on her calendar box. Student is shown a card with the name and a symbol for day of the week. When given a choice of two other cards, she must find the one that is the same.

– In small groups, create cards, detail the prompt system, wait time and cues necessary for the calendar activity.

– As a large group, brainstorm how the same system could be used for other functional reading activities throughout the day.
Summary

• Because of the unique nature of deafblindness, instructors of learners must consider many factors:
  – All persons who interact with learners who experience deafblindness must learn basic interaction skills (e.g., using a cautious approach, touch, object and/or picture cues, name signs in the learners language).
  – Hand-under-hand is an important for shared experiences, exploration of the objects, and to model and demonstrate concepts.
Always consider providing adequate time for processing information while also reducing competing sensory information.

Consider individual information about the learner’s hearing and vision loss and any other disabling conditions or factors complicating education.
Summary, continued

– Consider individual information about the learner’s hearing and vision loss and any other disabling conditions or factors complicating education.

– Environmental and instructional considerations as well for both hearing and vision loss may improve or allow the learner with deafblindness to gather information or learn from residual vision or hearing.
Summary, continued

– Assessment of the skills of these learners requires a multidisciplinary team approach.

– Assessment requires formal and informal tools and can be gathered during daily interactions and routines.

– These same routines can be a powerful tool in the building of skills for learners.
Summary, continued

– With careful thought and consideration, learners who experience deafblindness, can make progress in any educational setting.

– Further information about learners who experience severe multiple disabilities and/or deaf-blindness can be found in these modules:

  • Students with Deafblindness: Literacy Development for Learners
  • Students with Deafblindness: Interaction with Objects
  • Students with Deafblindness: Developmental Impact
Session Evaluation

- A form for participants to evaluate the session is available in the Facilitator’s Guide.
Focus and Reflection Questions

1. Have you ever gone on a “trust walk?” What were your feelings during the walk while blindfolded?
Focus and Reflection Questions, continued

2. Think back to a time when the electricity went off in your home during the night. How did you cope? Did you try closing your eyes to visualize your surroundings? What would it be like if you had no references to be able to visualize.
Application & Extension activities

1. Assess an environment for a person experiencing deafblindness:
   - Participants are assigned a public space on campus to assess such as a cafeteria or bookstore.
   - Consider both the visual and auditory environment.
   - List all possible environmental characteristics that might make using residual vision or hearing more difficult.
   - Examples include:
     - High level of auditory clutter;
     - Problematic lighting; and
     - Glare
Application & Extension activities, continued

Also identify possible solutions to some or all of the problems. Some examples include:

– Seating a person with deafblindness in a corner on far side of food court away from cash register, drink machines, kitchen;
– Teaching a path to that corner that avoids the light changes; and
– Seating a student with his back to windows, etc.
Application & Extension activities, continued

2. Teach touch cues for stacking cups.

– In pairs, Teacher and Student receive instruction cards for teaching touch cues.

– Use hand-under-hand technique.
Application & Extension activities, continued

3. Watch the 18-minute video “Actions Speak Louder than Words” at http://www.nationaldb.org/ISMModules.php

– Consider assessment of communication skills and what this video teaches.
– Note that if an evaluator did not know that Christopher used his modified WHAT more, it might be missed.
Self-Assessment

• A self-assessment with response feedback is available at http://mast.ecu.edu/modules/db_ei/quiz/
  Participants may take this assessment online to evaluate their learning about content presented in this module