Nebraska Deaf-Blind Project

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ENVIRONMENTAL CONSIDERATIONS FOR CHILDREN WHO ARE DEAF-BLIND

By

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The environmental considerations listed below can guide educators in implementing effective practices for children and youth who are deaf-blind. 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 cutter 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).**

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