

Active Learning and the Exploration of Real Objects

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Abstract: This article describes some of the techniques of Dr. Lilli Nielsen's Active Learning Theory.

Key Words: blind, deafblind, Active Learning, Lilli Nielsen, real objects, Little Room, resonance board, position board, play

Editors Note: In the last edition of See/Hear, we printed "An Introduction to Dr. Lilli Nielsen's Active Learning" and promised to provide additional information on active learning in each issue this year. In this issue, we'd like to examine some of Dr. Nielsen's learning strategies and the importance of using real objects. We would also like to hear from others who have used active learning, and encourage you to contact Stacy Shafer at <StacyShafer@tsbvi.edu> or Ann Adkins at <AnnAdkins@tsbvi.edu> to share your experiences.

Visually impaired children learn by exploring and manipulating the objects in their environment and by comparing new objects to familiar ones. They need as many experiences as possible with *real* objects and textures. Hands-on experiences with a variety of objects, made out of as many different materials as possible, allow students to work on a variety of skills and learn about their environment. Concrete experiences with real objects also facilitate concept development. It is important to give students ways to actively impact their environment and teach them to be active participants in their world instead of passive recipients of stimulation from adults. The active learning techniques developed by Dr. Lilli Nielsen provide excellent opportunities for visually impaired students to gather information through the exploration and manipulation of real objects. Dr. Nielsen's approach encourages children to be *active* learners, and helps them discover that they can control events in their lives.

Equipment

Some of the active learning equipment and materials that we have observed include:

The Little Room

The Little Room is described in detail in Dr. Nielsen's book, *Space and Self*, and in the [article in the last edition of See/Hear](#). It is a piece of equipment that provides students

with a safe environment for independent play and exploration. Many children are more willing to tactually explore objects when they are in control of an activity and can anticipate what might happen. The objects in the Little Room are attached with elastic and go back to their original positions when the child lets go of them, enabling him to find them again and repeat an action as quickly and as often as he wants. It gives students the opportunity to work on object exploration and manipulation, object comparison, object permanence, cause and effect, spatial concept development, problem solving, independent play, recognition, anticipation, sensory integration, and spatial memory. The Little Room also provides the opportunity to learn about the different materials from which objects are made (paper, leather, wood, metal, etc.) and the different attributes of objects (size, weight, temperature, etc.). As students experience these different objects and learn about their specific characteristics, they will discover that some objects are better for some activities than others. They will learn that some objects make better sounds when batted at than others, some are better for mouthing, some are more interesting to touch, etc. Although the Little Room is an independent activity, it MUST be supervised at all times.

The Position Board

This is a piece of pegboard to which objects are attached with pieces of elastic and is also described in *Space and Self*. It may be used as an independent activity if the position board is placed so it will remain stationary, or it may be used with an adult. It can be attached to a student's wheelchair tray, attached to a wall, or placed on the floor or table. Like the Little Room, objects should remain in the same position to encourage the development of object permanence, and the elastic attached to the objects needs to be long enough for students to be able to bring the objects to their mouths. Be sure to include objects with different weights and textures.

The Scratching Board

This is a piece of wood with different textures attached to it. These textured squares are approximately 3" X 3". Examples of textures to include are: leather, carpet, cork, shiny wrapping paper, packing "bubble" sheets (if there is not a danger of the student tearing off a piece and getting it in his mouth), corrugated paper from a box of chocolate candy, shiny ribbon, suede, etc. Fine screening, like tea strainers or cooking strainers, can also be used if the edges are covered to prevent injury. The scratching board can be attached to a student's tray or positioned so that it can be used while the student is lying on the floor, with either his hands or feet. The Scratching Board can be stabilized so it is an independent activity.

The Tipping Board

This is a board that is fixed in an upright position. Hang objects from the top of the board so that students can receive sensory feedback by batting at them. Again, it can be positioned so that a student can use both his hands and feet. Some objects to consider using include: shiny bead necklaces, strings of interestingly shaped beads,

chains (such as those used in the 70's as belts and necklaces), bells, a plastic or metal slinky, wooden spools strung on cord, etc. Inexpensive necklaces can be restrung with nylon fishing cord or dental floss to prevent breakage. The Tipping Board is an activity that students can do independently, with supervision, if the board is stabilized.

Vest with Objects

The Vest is like a cummerbund with Velcro. Objects and interesting textures are attached to it for students to explore independently. Headliner fabric may be used instead of Velcro to reduce the possibility of abrasions.

The Resonance Board

Playing on a resonance board can be a very rewarding activity for students, providing them with sensory input from the vibrations created by their play. Position the student on the resonance board with several interesting objects around him to encourage him to explore his immediate environment. Playing on the resonance board can be an independent activity, or it is an activity that could be shared with an adult or another student. The child should be on the Resonance Board when using a Little Room.

All of the activities described above encourage students to use their hands to explore their environments. Visually impaired students need repeated opportunities to tactually explore and examine real objects every day. They need a variety of experiences that require *active* responses. Additional information on active learning can be found in Dr. Nielsen's books, *Space and Self* and *Are You Blind?*. These books also include information on suggested objects to use with the activities. The student's educational team should work together to choose appropriate objects. Objects should be pleasurable, graspable, and have tactile, auditory, and visual qualities. Real objects from everyday experiences and daily activities are recommended because they can provide more meaningful and rewarding experiences than toys. Toys and commercially available objects are often made of plastic, and plastic provides little information that is tactually meaningful for visually impaired students. Objects should also be presented in such quantities that the child will have the opportunity to choose, compare, and play counting and sequencing games. They should also vary in weight and texture. Caution is advised because some objects are not appropriate for use with all students. Teams should ensure that all materials and boards used in active learning activities are splinter free, that rough edges are covered with heavy layers of masking or packing tape (especially pegboard), and that any paint, acrylic, or finishing agents used are nontoxic. Even though these are independent activities, they **MUST** be supervised at ALL times.

References

Nielsen, Lilli. *Space and Self*, SIKON, 1992.

Nielsen, Lilli. *Are You Blind?*, SIKON, 1990.

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