



Special Connections

A newsletter connecting our Special Kids, Families and Schools

Listening in the Classroom-Can your child hear in the educational environment?

By Gretchen Syfert & Darlene Murrell

Many factors affect your child's performance in the classroom but an often overlooked factor may be the ability to hear the teacher and process what is being said. The noise level in the classroom, the acoustics of the classroom and more importantly, the hearing of the child, all combine to make the auditory (sound) learning mode very helpful or extremely difficult to use. That is, some children cannot learn well by listening, they require more visual presentation to process information. However all students in the educational environment should be provided with an optimal listening environment.

If a child is having any difficulties attending to the teacher's voice, the first step is to have a hearing screening and ear examination by the school nurse. If a hearing problem is detected, an evaluation by an audiologist should be done to determine the type or severity of the hearing loss. If your child has frequent ear infections which many preschool or early elementary students are prone to have due to colds or allergies, the parent or guardian should consult their pediatrician, family doctor, or ear nose and throat doctor for medical treatment. If an ear infection or otitis media is left untreated, it may lead to more severe medical problems and/or language learning disabilities. When a child has an active middle ear infection, his/her hearing may be reduced resulting in the loss of an optimal educational and/or a language-learning environment.

When this student has a temporary reduction in hearing due to chronic middle ear infections, an amplification system may be helpful to assure that lessons are not missed. This can be a personal amplification system or a classroom system.

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Students with permanent hearing losses should be provided with amplification to ensure that an appropriate educational environment is provided. In most cases the student has been fitted with a personal hearing aid by a private audiologist or the school audiologist. The school will adapt the classroom setting to fit the acoustic needs of the student as well as make modifications and accommodations based on his/her special education individual educational plan or 504 accommodation plan.

Some children may have normal hearing by standard testing but have much difficulty processing speech signals in the presence of noise. The brain cannot separate out the correct message when either noise is present or if there is a competing message such as other children talking in the classroom. Individual or classroom listening systems are available that provide a reduction in noise and allow the student to "focus" on the speech signals and ignore classroom noise. These accommodations have greatly improved educational performance and reduced stress for children.

In addition, sound or acoustical treatment for the classroom, including carpeting, room dividers, paneling and other methods can reduce sound reflection and echo. Also, seating the student in a position closer to the teacher or listening source can assist the student. In summary, adjustments to classroom acoustics can make a dramatic difference in the listening environment for both students and teachers.

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Research suggests that noisy listening environments can pose a serious threat to children's hearing, learning and behavior. It is suggested that quiet environments foster learning as well as the opportunity for parents and children to enjoy each other's company. Parents need to analyze their homes and recreational activities and make every effort to include quiet time with their children. This time could include reading, talking and listening to their children.

Making the listening environment pleasant and varied is important. Total quiet is not the goal; managing noise and auditory information is. Parents and teachers need to recognize the effects that noise has on children's ability to learn. It is important to provide children with quiet environments to read, study, learn or just relax.

Resources

Anderson, Karen "The Sound of Learning" (Oct. 1997) article reprinted from an issue of The American School Board Journal.

Moss, Kate "Are You Listening? Auditory Issues for Children with Visual Impairments" article from SEE/HEAR archives.

"Noise and its Effects on Children's Learning" League for the Hard of Hearing (2001), <http://www.lhh.org/noise/children/learning.htm>

Upcoming Features

Importance of Early Intervention on future success in school.

Reach, Stretch, Achieve in 2004

By Ginger Sewell

If we want our children to achieve their highest potential they must learn how to reach beyond themselves, stretch beyond their limitations and achieve new levels of accomplishments. What is it that what we are modeling for them as their parents? Are we showing them that we are willing to reach beyond ourselves and seek assistance from others and from new sources? Are we modeling how to stretch beyond our perceived limits and find the time to join support groups, do specific research, or make new contacts that would serve us, and them, better? Are we stretching out beyond our perceived limitations and setting a direction for our lives rather than surviving each day as it comes along? How can we teach our children to acknowledge the infinite possibilities that life has to offer unless we are willing to model on a daily basis that we, as their parents and teachers, are willing and able to reach out and risk, stretch and grow, and to accept achievement in 2004?

The Effects of a Listening Environment on Language and Learning

The foundation for all learning is laid out during the first 5 years of life. At birth a child's hearing is not fully developed. Their brains, however, continue to develop neural pathways that allow them to use information coming in through their senses to comprehend themselves and the world around them. Beginning at birth hearing plays a critical role in the overall development of a child's ability to learn. It is now known that the auditory paths of the brain need time to mature. This means that children under 15 years of age have a harder time understanding speech under less-than-perfect listening conditions. Children with more severe problems such as hearing loss because of colds, ear infections, or allergies or children with learning disabilities have even more difficulty understanding the spoken word. In addition to these children are the non-native English speakers and children with hearing loss in one ear. These children can hear but do not understand speech when there is competing noise. All of this being said, how does the listening environment specifically affect a child's ability to learn?

Reducing noise in a child's environment goes hand-in-hand with improving the child's sound signal quality. The difference between the loudness of a sound (such as a parent's voice) and the loudness of other noises in a listening situation (background or environmental sounds) is called the signal-to-noise ratio. The signal-to-noise ratio in most schools and homes is poor. This signal-to-noise ratio affects what and how children learn and acquire language. Some suggestions to improve the signal-to-noise ratio in homes or classrooms may be by carpeting rooms, adding acoustical ceilings, or adding bookshelves to absorb sound. Closing doors to noisy hallways and using study carrels may also help. Many homes and some classrooms may constantly have a radio, c.d.-player or television playing. Simply turning off these "noise makers" can greatly improve a child's ability to hear and learn.

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