of a speaker’s voice compared to the sound level of the competing background noise.

The +15 S/N criteria in ANSI S12.60-2002 describes a speech signal that is 15 dB greater than the background noise, while a -5 S/N describes a background noise level that is 5 dB greater than the speech signal. A 0 S/N tells you that the measurements of speech and background noise are equal. With a +15 S/N our daughter Nicole scores near 100% in speech recognition, but she falls dramatically to 64% with a +5 S/N. At 0 S/N, she scores a mere 10%.

Reverberation is measured in tenths of seconds. When speech sounds are not absorbed in a time frame of 0.6 seconds or better, then they continue to bounce around the room and interfere with speech intelligibility.

Amplification systems such as FM systems and sound field systems can generally do a pretty good job in providing access to the teacher’s speech as long as the underlying classroom acoustic conditions are not extreme. Many systems also offer the option to utilize a second microphone (mic) to be passed around for student use.

It is our experience with Nicole that widespread student use of either a second mic or sharing of the teacher’s mic is not very practical in the typical classroom

But You Said...

Let me share my own personal story as the oldest child of parents who were deaf. At home as a young kid, I naturally picked up the occasional word mispronunciations from my mother, who had learned spoken language without benefit of hearing technology. The outside world quickly straightened me out when I made those very noticeable pronunciation or other language errors in public. Forty-five years later, I still remember the depth of the embarrassment with my new fifth grade classmates who roared in laughter when I pronounced the word “phlegm” as “flame.” Take a moment to appreciate the mispronunciations and other errors that our children will pick up through the limits of their hearing aids and cochlear implants, and then pile on classroom listening conditions that are not even adequate for children without hearing loss. While picking up such errors through incidental learning, as I did, is amazing in itself, improving acoustics is all the more important for these children who are able to learn through overhearing.

Another area where poor classroom acoustics concerns us is the issue of possible

Learn More

Families are successfully using ANSI/ASA S12.60-2002 as an advocacy tool in the development of their child’s IEP or Section 504 plan. Some are also having a positive advocacy impact within their school districts. Please use the power of knowledge to help create an appropriate listening environment for your child and the other children in your schools.

Here are my top four recommendations for additional sources of information to begin this process: (sources follow article)

1) United States Access Board’s Classroom Acoustics Page
2) Acoustical Society of America’s Classroom Acoustics Booklet I
3) Students and Soundwaves: Five Strategies to Promote Good Classroom Acoustics

needed for a due process system that prefers to act only after there is failure.

Now we again have new opportunities. We have a new president, a new Congress, and a great sense of optimism in our nation. ASHA has stepped forward to take a further leadership role by making classroom acoustics a national priority of its public policy agenda. Neil Snyder, ASHA’s Director of Federal Advocacy, has created a Facebook group called “Classroom Acoustics Coalition,” so please come join us on Facebook www.facebook.com.

As the parents of a child who depends fully on a technologically aided, auditory modality of communication, my wife Shelley and I strive to remove the needless listening barriers that exclude Nicole from full participation in her school. Given what we have learned about classroom acoustics, we also advocate for the listening needs of the other children who are known to be at risk and adversely impacted by poor listening conditions. Missed opportunities for communication and language in the most critical time of neurological development of the young mind are quite simply lost forever. The window of opportunity closes with each and every precious day.

In closing, please let me share one line from the testimony of