

**A Survey of School Administrators
conducted by the GAO found...**

Poor acoustics is the most significant problem affecting learning.

Studies made around the United States indicate that classrooms and day care facilities are not being designed to provide adequate speech intelligibility, even for children without hearing impairments.

Legal Action against School Districts

At least two legal cases have been reported in which decisions have directed that the room acoustics in existing classrooms be improved to accommodate children with hearing loss. Requirements that students with disabilities be educated in the least restrictive environment mean that every classroom is likely to have students with auditory disabilities.

11 Million Students are Affected

The problems caused by classrooms having poor acoustics are not limited to those students with diagnosed hearing impairments. Increasing numbers of young children experience mild temporary and recurring hearing loss caused by otitis media, an inflammation

Of children ages 6 through 19...

- ◆ 13% have HF hearing loss
- ◆ 7% have LF hearing loss
- ◆ loss is greater than 15 dB
- ◆ perception of words is affected

- Centers for Disease Control

of the middle ear. Also, most mild hearing losses in children are not diagnosed.

One study showed that in some classrooms, students without hearing loss could understand only 30% of what their teacher said. A 1994 survey of school facility conditions conducted by the General Accounting Office reported that poor acoustics were ranked by administrators as the most significant problem affecting the learning environment. Twenty-eight percent of responding schools identified acoustics for noise control as being unsatisfactory

Excessive classroom noise impairs students' speech perception, reading and spelling ability, behavior, attention, and overall academic performance.

**- Classroom Acoustics Subcommittee
Acoustical Society of America**

or very unsatisfactory. Eleven million children were estimated to be affected.

ADA will make Compliance the Law

The US government's Architectural and Transportation Barriers Compliance Board has amended the Americans with Disabilities Act Accessibility Guidelines

Excessive classroom noise impedes the acquisition of language and cognitive skills by all children.

- Cornell University study

to include provisions and technical specifications for acoustical accessibility.

How to Meet the Requirements

High-performing acoustical environments are achieved at some premium in construction cost; however, the cost of building the environment correctly the first time is only half that needed to fix an incorrect design. These realities make it necessary to get the design right the first time.

The new standard for schools is ANSI S12.60-2002 "Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools." KJWW's

Acoustics Group can help you design your new or renovated school facility and perform the tests necessary to determine compliance with this standard.

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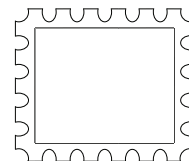
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School and Classroom Acoustics

*How much
do students
really hear?*