

IEP

Attention:

Noisy Classroom May Affect Your Child's Learning

The Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA) would like to alert parents, teachers and school officials to the effects of a noisy classroom on a child's ability to learn.

One in six words are not understood by the average Grade 1 student due to excessive background noise and poor acoustics in Canadian classrooms. Children, who primarily learn through listening, do not have the language skills or knowledge to fill in the blanks when they do not hear every word, making noisy classrooms a significant barrier to learning. It is critical for parents to be aware of the effects of noisy classrooms to help ensure that their child's learning is not at risk.

No legislation regarding classroom acoustics currently exists in Canada.

The Acoustical Society of America has developed a classroom acoustics standard which has been approved by the American National Standards Institute (ANSI) as the Acoustical Performance Criteria, Design Requirements and Guidelines for Schools. (insert PDF URL here) Consistent with long-standing recommendations for good practice in educational settings, the standard sets specific criteria for maximum background noise and reverberation time for unoccupied classrooms. This is a standard that the Canadian school system must adopt.

Background noise levels and poor room acoustics in classrooms significantly compromise academic performance, concentration and behaviour in children. Even moderate levels of noise and poor room acoustics can negatively affect a child's ability to understand clearly spoken words, even if the child has normal hearing. CASLPA would like to stress that many children who don't hear well, due to ear infections for example, are at greater risk of becoming academically deficient in at least one subject by the 6th grade. It is imperative to ensure that your child's classroom strives to meet the recommended acoustics standards.

New schools should be built with consideration of classroom acoustics.

Existing schools should be assessed and improvements made to address poor acoustics.

Sources of Noise in the Classroom:

Inside sources:

- Student activity
- Equipment: computers, projectors, fish tanks
- Reverberation (echo) of sound within the room
- Neighbouring classrooms, hallways, gyms, music rooms
- Ventilation and heating systems
- Classroom lighting systems (i.e. fluorescent lights)

Outside noise sources:

- Vehicles, airplanes
- Voices (playground)

Noise in the classroom has a detrimental effect on:

- All children
- Children learning in a non-native language, ESL, immersion
- Children with learning disabilities
- Children with behavioural, attention difficulties
- Hard-of-hearing children (permanent or temporary, i.e. ear infections)

- Vocal health of teachers

Effects of poor Speech-to-Noise Ratio (poor acoustics)

- Poor understanding, decreased attention
- Decreased performance: reading deficiencies, reduced motivation, delayed language acquisition
- Fewer verbal interactions between teachers and students
- More time spent repeating instructions causing vocal strain for the teacher
- Less information and material covered

Helpful tips to improve classroom acoustics:

- Make x-slits in tennis balls and place on the legs of chairs and tables in the classroom if no carpeting
- Add hypo-allergenic carpeting and curtains
- When appropriate, soundfield amplification systems in the classroom can benefit all students and the teacher's vocal health
- Replace ballasts from noisy fluorescent light fixtures
- Fix loose or vibrating parts to reduce noise from heating and ventilation systems
- Move free-standing furnishings to break up sound reflections and isolate areas in large rooms
- Use suspended acoustic ceiling tiles, sound-absorbent panels on upper walls
- Add cork boards to walls

If you have any concerns about your child's hearing, contact an audiologist! Audiologists are essential members of the healthcare and education team who are trained to evaluate and treat a full range of hearing and balance disorders.

If teacher's have a concern about their vocal health, contact a speech-language pathologist. Speech-language pathologists are essential members of the healthcare and education team who are trained to evaluate and treat a full range of speech, language and voice disorders.

For more information, please contact Angie D'Aoust, CASLPA manager of communications at 1-800-259-8519, ext. 241, or by email at angie@caslpa.ca.

Being able to hear and understand the teacher is an essential first step toward understanding the message!