MEDIA RELEASE

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Classrooms fail noise test

Groundbreaking research funded by the Oticon Foundation in New Zealand reveals that our classrooms are noisy places. Modern teaching practices contribute to the number of children unable to hear the teacher's voice and many teachers are suffering from voice strain. For hearing impaired children who make up 8-9 percent of students entering school, the situation is even worse.

The research was prompted by complaints from teachers that some of the newly-designed buildings seem to be noisier than the older-style classrooms.

Co-ordinator of the multi-disciplinary research team Ms Oriole Wilson, an audiologist with the National Audiology Centre, presented the preliminary findings at the NZ Speech-Language Therapists Assn Conference in Napier on Friday.

"Many people do not realise that teaching methods have changed dramatically. Our research reports that primary teachers are spending over 50% of their day walking around the classroom. This leaves only about a third of their time at the front of the room", says Ms Wilson.

The traditional lecture-style has been replaced by group work and working on the mat by more than two-thirds of teachers. This has all contributed to an ever-increasing noise level in average classrooms.

"Educationalists today place great importance on what children learn from each other, they call it incidental learning. We are not going to turn back the clock and have all the children sitting in rows listening to the teacher at the front of the class. It is therefore vital that classrooms are built to a standard that enables them to be comfortable places using today's teaching methods with their higher noise levels", says Ms Wilson.

According to Ms Wilson one of the project's aims is to come up with some practical and affordable design recommendations for making classrooms acoustically-friendly.

"It is not only the children who suffer from poor acoustics, it is the teachers too!" she says. The study has revealed that 35 percent of teachers claim that they level at which they needed to speak strained their voices. Vocal strain is recognised as one of the leading occupational hazards of being a teacher, with some teachers ending up with vocal nodules.

Of special concern to the team are the hearing impaired students who require excellent listening conditions to learn in. "I think when all the results of the study become available we will be shocked that none of our rooms will come up to specifications for the hearing impaired. Luckily we have technology available for these children which can help to overcome high noise levels, like FM radio aids and classroom amplification systems. However none of this technology works well in rooms that have poor acoustical characteristics", says Ms Wilson.

"Even for children with normal hearing, the minimum standard is often not reached," says Ms Wilson, "so children are in an environment where their ability to comprehend speech is drastically reduced."

A unique aspect to the project has been daylong recording of noise levels, rather than recording noise levels at a single point in time. "We have 71 percent of teachers reporting that noise inside the classroom is a problem," says Ms Wilson. "With these recordings and our detailed measures of acoustics and reverberation, we are able to draw an accurate picture of today's classroom environment," she says.

The team that includes acousticians Miklin Halstead and Dr George Dodd from the Acoustics Research Centre at the University of Auckland, Joanne Valentine from Marshall Day Acoustics, and Building Consultant Ken Mc Gunnigle from Prendos, have come up with recommendations to acoustically treat six of the classrooms. These rooms were identified in the study as having very poor listening conditions.

New Zealand classrooms face very different acoustical problems from European and North American schools where they all have large heating and air conditioning systems. "Here we just open the windows in the summer and one of the early results so far has been the revelation that 86 percent of teachers have problems with noise generated outside the classroom."

Ms Wilson cautions that, "When new schools are being designed and classrooms placed on existing sites, care needs to be taken to assess what activities could go on outside that room during the school day, as in the summer those windows will be open".

The study will be completed later this year and will include specific recommendations to assist in improving the listening environment for all children.

The Oticon Foundation in New Zealand is a charitable trust funded by Oticon NZ Ltd, a socially-responsible business. Each year the Oticon Foundation provides $100,000 in grants to projects that increase awareness and knowledge about hearing loss, improve the quality of life for those with it, break down the stigma attached, or help remedy hearing loss among adults and children.

The New Zealand Speech-Language Therapists Association's Biennial Conference 2 "Meeting the Millennium, Best Practice in Speech Language Therapy" is in Napier 5-7 April 2000 www.nzsta-speech.org.nz/conferences.htm.

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Media inquiries:

Oriole Wilson
Acting Clinical Director, National Audiology Centre
0-9-520 4009
email: OrioleW@ahsl.co.nz

Karen Pullar (Secretary)
Oticon Foundation in New Zealand
04 473 3330
021 647 330
email: info@oticon.co.nz