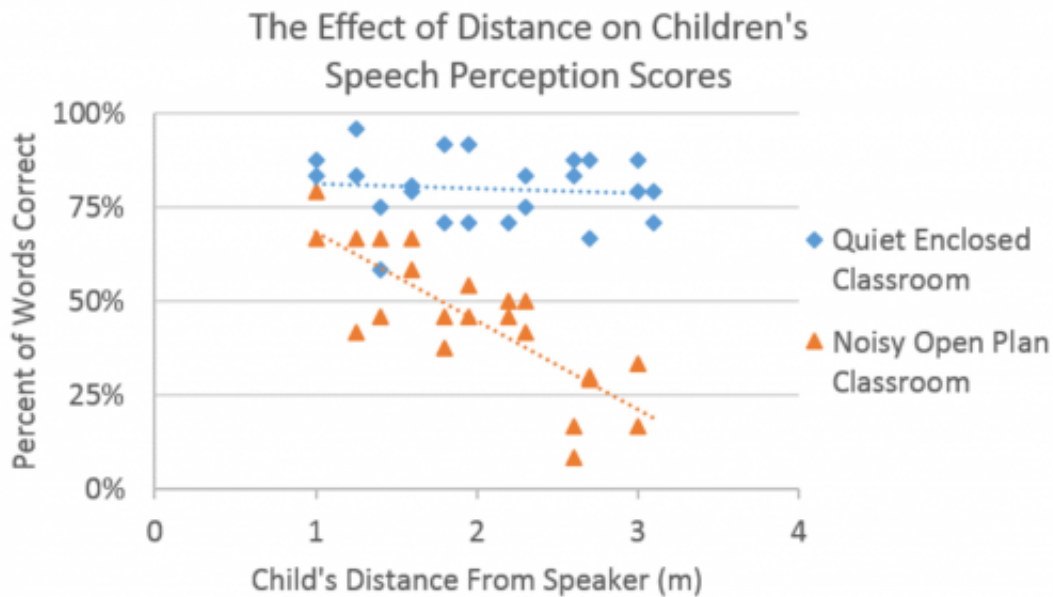


Students struggle to hear teacher in new fad open-plan classrooms

February 10 2015, by Kiri Mealings



Many of us would remember our days in primary school sitting in a classroom with four walls, among 20 to 30 other students, and a teacher instructing us from the front. Recently, some schools have been converting classrooms to more open-plan environments, where several classes share the same space. Classes are still divided into classes of 20-30 students with their own teacher, but all of these classes are in the same room with no walls separating them, which results in 50, 90 or even 200 children in the one area.

These learning environments are emerging because they are perceived to be less authoritarian and to facilitate group work and the children's [social development](#). Additionally, [they are seen to benefit the teachers](#) by promoting the sharing of skills, ideas and experiences and by allowing for team-teaching, which is believed to create a more cooperative and supportive atmosphere.

But that's a lot of children in one area, doesn't it get noisy?

Yes, [noise can be a big problem](#) with open-plan [classrooms](#), especially the high noise levels coming from the other classes sharing the same space. This is particularly problematic when a class is trying to engage in critical listening activities where it is essential that the children can hear the new concepts they are being taught.

Our recent study of four different-sized Sydney schools found that most children were annoyed by the noise, and 50-70% of children surveyed said they could not hear their teacher very well, or at all, when the other classes were doing noisy group work activities.

When objectively assessing kindergarten children's [speech perception](#) (ability to hear words in sentences) in these four classrooms, we found that children in the noisiest open-plan classrooms had significantly lower speech perception accuracy and slower response times than children in an enclosed classroom. Distance from their teacher was also a major factor.

In the quieter enclosed classroom, children's speech perception scores were consistently high (approximately 80%), irrespective of how far they were seated from the teacher. In the noisiest open-plan classroom, [children's scores dropped from 75%](#) at the front to less than 25% at the

back, which is very concerning and likely to severely impact the children's learning. Not only that, but it is exhausting for the child trying to concentrate amid the noise.

What about the teachers?

It's not only the students in open-plan classrooms who suffer. Teachers we visited reported being more distracted by noise, found speech communication significantly more difficult, and thought children had more difficulty hearing them, compared to the teachers of the enclosed classrooms.

These teachers also needed to elevate their voices and experienced vocal strain and voice problems more often than the teachers in the enclosed classrooms.

So what do these findings suggest for open-plan classrooms?

On average, [children spend 45-60% of their time at school listening](#) and comprehending, so it is important that the acoustic learning environment enables students to be able to discriminate their teacher's and classmates' speech from other irrelevant noises in the classroom environment.

Our findings suggest that open-plan classrooms that are unable to control the noise from adjacent classes are not appropriate [learning environments](#). Acoustically treated enclosed classrooms are much better listening environments.

If open-plan classrooms are still strongly desired, then they need to be purpose-built as flexible learning spaces with proper acoustic treatment and, most importantly, operable walls that can be closed when a class is

engaged in critical listening activities.

Quiet rooms are essential in these classrooms so children who have particular difficulty working in noisy conditions can quietly work away from the other students. Additionally, teachers need to be trained how to teach effectively in these environments.

We also need to better understand how [children](#) who have special educational needs, such as attention deficits, hearing impairments, language delays and English as a second language cope in these environments as they are likely to be [even more affected by the noise](#).

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