

GOOD ACOUSTICS

ENABLE EFFECTIVE GROUP WORK IN CLASSROOMS



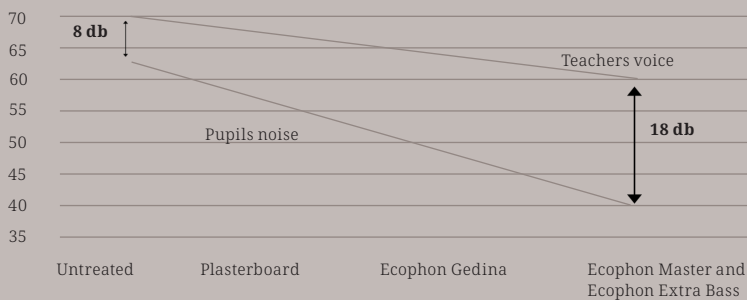
ENHANCED

TEACHING AND LEARNING

The Essex study was set up to investigate the effect of different degrees of acoustic treatments in classrooms. The first didn't have any treatment, the second had a plasterboard ceiling, the third had a class A ceiling and the fourth had a class A ceiling, extra low-frequency absorbers and wall absorbers. The results were striking. For every upgrade in the acoustic treatment, the teachers and students became quieter and calmer, pupils generated less noise and teachers did not have to speak as loudly. This meant:

- More classroom discussions and group work
- More effective teaching and fewer repetitions
- Reduced teacher stress levels'

Classroom sound levels, decibels (dB)



HOW IS THIS POSSIBLE?

If a classroom has poor acoustics the low-frequency background noise will distort speech, sound will be amplified as it bounces off the reflective ceiling and walls, and sound levels will escalate because students and teachers will have to raise their voices to be heard.

This is what happened in the control room and the room with a plasterboard ceiling. A sound-absorbing ceiling reduces the overall sound level in the classroom. Adding extra low-frequency absorbers reduces background noise and this improves speech clarity. Wall absorbers reduce unwanted reflections and thus improve speech clarity even further.

The activity noise of students generally drops more than teachers' voice levels. At Sweyne Park this led to a 10 dB increase in the difference between the teacher's voice and the background noise. So not only did the room become quieter, but it also became much easier for the pupils to hear what the teacher was saying.

ECOPHON SOLUTION

Ecophon products were used for the two best performing treatments. The solutions were wall-to-wall ceilings Ecophon Gedina™ and Ecophon Master™, the low-frequency absorber Ecophon Extra Bass and wall absorber Ecophon Akusto™.

THE STUDY

The Essex study took place in four classrooms at Sweyne Park School in Rayleigh, United Kingdom. The four classrooms were similar but acoustically different. Thirteen teachers and more than 400 children took part in 120 hours of recorded lessons.

Reference: Canning D, James A, The Essex Study - Optimised classroom acoustics for all (2012)





Ecophon is the leading supplier of indoor acoustic solutions that improve working performance and quality of life. We believe in the difference sound can make to our everyday lives, and are passionate advocates for the importance of room acoustics to people's wellbeing – whatever the space, activity or need.

Having a sound effect on people is the principle that guides all we do. We're proud of the Swedish heritage and human approach that promise is founded on. Our uncompromising commitment to transparent sustainable practice. And, as members of the Saint-Gobain Group, to be doing our part in making the world a better home.