

An evaluation of the effect of classroom noise on the speech perception ability of
hearing-impaired children in mainstream education:
a case study.

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ABSTRACT

The current, available literature suggests that poor classroom acoustics will compromise the speech perception ability of hearing-impaired children, more than that of normally-hearing children. As a Teacher of the Deaf, working in a resourced unit for hearing-impaired pupils in a mainstream secondary school, my key concern is how effectively the hearing-impaired pupils are able to use their aided hearing in a mainstream classroom environment. This small-scale case study investigates how well the acoustic environment, in a typical mainstream secondary school, meets the exacting listening requirements of hearing-impaired pupils who are aided with post-aural devices, or cochlear implants.

Twenty-eight pupils: fourteen hearing impaired and fourteen normally hearing, and fifteen of their teachers took part in the study. The staff and pupils filled in questionnaires and four of the pupils answered further questions in face-to-face interviews. The responses of those taking part in the study were examined in their own right and in the light of existing literature. The results of an independent acoustic survey of the school were used to add a further dimension to this study.

The results of the acoustic survey demonstrated that the required acoustic conditions for teaching hearing-impaired pupils were not being met in terms of reverberation times, levels of ambient noise and signal-to-noise ratios. The majority of the classrooms identified as noisy, by both the pupils and teaching staff, were those where core curriculum subjects were taught.

Rooms where hearing-impaired pupils are taught need to conform to the standards outlined in Building Bulletin 93 (2003). Deaf awareness training and monitoring should be ongoing in order to ensure that the needs of hearing-impaired pupils are both known and met.