CLASSROOM ACOUSTICS:

PERCEPTION AND REALITY

A study of individual perceptions of listening conditions and objective acoustic measures of the environments in which three Year 9 profoundly deaf students learn.

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MAY 2002

This dissertation is submitted in partial fulfilment of the requirements governing the award of the Master of Science in Education Audiology

ABSTRACT

This dissertation examines the perceptions of three Year 9 mainstreamed profoundly deaf students of the acoustic environments in which they learn. These perceptions are contrasted with real acoustic measures of the classrooms (and other areas in the schools in which the students learn), as well as findings and recommendations reported in the research literature into school listening conditions and ways of improving them.

The three Year 9 students attend three different secondary schools, supported by the Hearing Impaired Service. Their perceptions were obtained via structured interviews, which were videoed and transcribed. The acoustic measures were obtained in all classrooms using standard techniques for assessing the 'listening climate' of rooms; that is: reverberation times and background noise levels. The mean measures for all the classrooms were: reverberation time, 1.1 seconds and background noise levels (instantaneous in occupied rooms), 65 dB(A). These compare with the international consensus on recommended minimum levels of reverberation times of <0.4 seconds, and background noise levels circa 40 dB(A). Therefore, the students were found to operate in potentially very hostile acoustic environments. This is likely to impact adversely on the students learning.

The analysis of the transcripts of the structured interviews into the student's perceptions of the acoustic environments in which they learn in school produced unexpected outcomes. No clear match emerged between acoustic measures and the student's perceptions of good and poor listening environments. Although the students were clear in stating that more steps could be taken to improve the acoustic environments in which they learn, they felt that more effective classroom management of student activity would, overall, help them most. This raises broad

issues as to classroom management and student control, its effect in generating unacceptable levels of classroom noise, and its negative effect on the learning of well motivated hearing impaired students.