Creating good listening conditions for learning in education

Information for headteachers, property managers, academy trusts and local authority managers

ndcs
every deaf child

Summary

Research[1] has shown that improving the listening environment in education settings will:

- improve learning and retention of information for all children, especially those who have a hearing impairment or a temporary hearing loss (for example, because of glue ear) or other additional learning needs
- improve pupil behaviour
- reduce teacher absences
- ensure that any existing hearing technology is effective.

Suggested actions for improving school acoustics and listening environments include:

- seeking views from parents, pupils, teachers and specialist staff on any problem listening areas
- commissioning a more in-depth acoustic survey to check the listening environment is suitable and appropriate for the learning activities that take place within
- implementing low cost measures for improving listening conditions including ensuring teachers take steps to manage noise
- ensuring compliance with government minimum acoustic standards, as set out in government regulations and guidance, where new buildings are constructed or existing ones are being refurbished.

Taking these steps will help demonstrate to parents that reasonable adjustments under the Equality Act 2010[2] are being made and that the anticipatory duty to consider the needs of disabled pupils is being followed.

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1. For example see:
- Shield, B.M. and Dockrell, J.E. (2003) The effects of noise on children at school: a review. *J. Building Acoustics* 10(2), 97-106.
- Evans, G.W. and Lepore, S.J. (1993) Non-auditory effects of noise on children: A critical review. *Children's environments,* 10(1), 31-51.
- Shield, B.M. and Dockrell, J.E. (2008) The effects of environmental and classroom noise on the academic attainments of primary school children. *Journal of the Acoustical Society of America* 123(1), 133-144.
- Dockrell, J.E. and Shield, B.M. (2006) Acoustical barriers in classrooms: The impact of noise on performance in the classroom, *British Educational Research Journal* 32(3), 509-525.
- Wall, K. Dockrell. J.E. & Peacey, N. The built environment of the primary school; impacts on pupil learning and attainment and staff and pupil wellbeing. *Research Survey* 6/1.

2. Or the Disability Discrimination Act 1995 in Northern Ireland.

Introduction

This briefing is to help schools and other education settings to create a good listening environment to support effective teaching and learning and maximise educational outcomes for pupils. The briefing outlines:

1) Why creating a good listening environment is important
2) The challenges of listening in class for children
3) What schools can do to improve the listening environment
4) Relevant legislation, guidance and regulations
5) How you can demonstrate compliance through quality marks

"We would never teach reading in a classroom without lights. Why then would we teach in 'acoustic darkness'? Speaking to a class, especially of younger children, in a room with poor acoustics, is akin to turning out the light."

— Professor John Erdreich,
Scientific Counsel in Acoustics

Please note: In this document the term deaf is used to refer to all types of hearing loss from mild to profound. The term includes deafness in one ear or temporary deafness such as glue ear. It includes all pupils the school may identify as having a 'hearing impairment'.

Why creating a good listening environment is important

Pupils access an essential part of their learning by hearing and retaining what the teacher says and through conversations that take place in the class. It therefore follows that the poorer the listening environment, the less pupils are likely to learn and retain information.

Parents of deaf children consistently report their concerns about poor acoustics to the National Deaf Children's Society. In a survey on barriers to learning in 2008, over a third – 34% – said they had concerns about the acoustics in their child's school building.

The key benefits of improving the listening environment are:

a) Improved learning for all children

Recent research has demonstrated that there is a strong link between attainment and good acoustics for all pupils. Children can spend more than half the school day just listening, so good listening conditions are essential in ensuring everyone can access and be fully included in school life.

Research studies in a wide range of education settings have shown that tasks involving language, such as reading and word problems in mathematics, and tasks with high cognitive processing demands involving attention, problem solving and memory are particularly difficult to complete in noisy environments. For example, one study of 142 schools in England showed that there was a direct correlation between the level of classroom noise and pupils' Key Stage 2 Maths results.[3]

3. Shield, B.M. and Dockrell, J.E. (2008) The effects of environmental and classroom noise on the academic attainments of primary school children. *Journal of the Acoustical Society of America 123*(1), 133-144

It should also be noted that a large number of children experience temporary hearing loss, for example glue ear, at a younger age when listening to develop language is critical. It has been estimated that 80% of children will have had at least one episode of glue ear by the age of 10 years.[4]

b) Improved learning for pupils with additional learning needs

There is increasing evidence that poor classroom acoustics can create a negative learning environment for many students[5], especially those with hearing impairments[6], learning difficulties[7], or where English is an additional language.[8]

c) Improved behaviour

A report by Alan Steer, *Learning Behaviour*[9], noted that the surroundings in which children work and learn have a major impact on behaviour. He stated that:

> *"Architects and contractors should pay special attention to acoustics and lighting in classrooms to support pupil participation in lessons."*

d) Reduced teacher absence

Research shows that teachers have more throat problems than other professional groups. This is not helped by having to frequently project their voices over classroom noise in poor listening environments.[10] 80% of teachers reported vocal strain and throat problems, 86% reported that classroom noise caused them problems, 49% of teachers had to strain their voices to be heard, and teachers were 32% more likely to have voice problems compared with other professions, and more likely to be away from work.

4. Clinical Guideline, National Institute of Health and Clinical Excellence (2008) *Surgical management of otitis media with effusion in children*.
5. Shield, B.M. and Dockrell, J.E. (2003) The effects of noise on children at school: a review. J. Building Acoustics 10(2), 97-106.
6. Nelson, P. B., and Soli, S. (2000) Acoustical Barriers to Learning Children at Risk in Every Classroom. Language, Speech, and Hearing Services in Schools 31, 356-361.
7. Bradlow AR, Kraus N, Hayes E. (2003) Speaking clearly for learning-impaired children: sentence perception in noise. Journal of Speech, Language, and Hearing Research. 46:80–97.
8. Mayo LH, Florentine M, Buus S. (1997) Age of second-language acquisition and perception of speech in noise. Journal of Speech, Language, and Hearing Research. 40:686–93
9. www.educationengland.org.uk/documents/pdfs/2009-steer-report-lessons-learned.pdf
10. Gotaas, C. & Starr, C. D. (1993). Vocal fatigue among teachers. Folia Phoniatrica, 45, 120-129 and Åhlande, & Rydell R, (2011) Speaker's Comfort in Teaching Environments, Journal of Voice, 25, 4, 430–440

e) It ensures listening technology is effective

Poor acoustics in school classrooms can be very challenging for deaf children because hearing aids and cochlear implants cannot cut out background noise. They amplify all noises in a classroom, not just the teacher's voice, meaning that a deaf child may miss out on a lot of the words spoken by their teacher.

Many schools invest in Soundfield systems but this type of system does not make up for poor acoustics, and its effectiveness is highly dependent on the acoustic quality of the room in which it is located.

In a report on the acoustic environment of Essex schools, teachers and teaching assistants shared the following feedback after the acoustics were improved within their classrooms:

- "Overwhelming improvement in working conditions"
- "Quieter and calmer"
- "Less stress"
- "Improvement in behaviour of all children including deaf children"
- "Profound effect on the educational experience"

More information on this study can be found in Annex A.

The challenges of listening in class for children

"People can fill in the blanks of missed information only if they have that information already stored in their brain's 'data bank' from where they can retrieve it. Because they do not have those data banks, children need a sharper auditory signal than adults do. Thus, while a classroom might sound fine to an adult, it may be woefully inadequate for typical children who are neurologically undeveloped or have not had decades of language and life experience. All this means that children require a quieter environment and a louder signal than adults do in order to learn."

—Carol Flexer, Professor of Audiology[11]

As this quote suggests, the younger the child the greater the need for a good listening environment. Pupils with limited language ability will also require better listening conditions than others to be able to follow what the teacher is saying.[12]

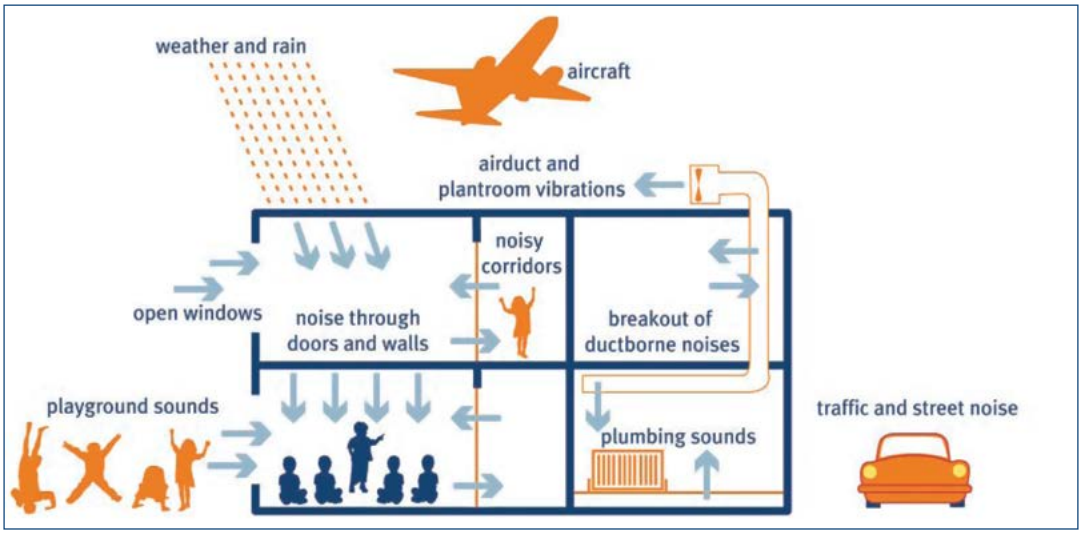
11. Flexer, K (2002,) *Hearing Journal:* Volume 55 - Issue 8 - p 10–18
12. Mulla I & McCracken W (2014) Frequency Modulation for Preschoolers with Hearing Loss, *Semin Hear*; 35(03): 206-216

The following sound clips demonstrate how a child with a high frequency loss might hear in a noisy classroom:

www.ndcs.org.uk/simulation

Coping with background noise

Children who are working hard in an exciting, interactive classroom will inevitably make noise, but there are other sources of background noise which do not make a positive contribution to the learning environment, such as noise transfer between rooms and from outside the school building.



Coping with a poor signal to noise ratio

For children to understand what is being spoken in class the teacher's voice needs to be louder than the background noise. If the level of sound in a classroom is high (or what is sometimes called a low signal to noise ratio) most teachers will have difficulty speaking loudly enough to achieve good understanding. However, if there is a high signal to noise ratio, the spoken message from the teacher will be more intelligible.

3ft/0.9m **6ft/1.8m** **12ft/3.7m** **18ft/5.5m**

A child's ability to hear the teacher's voice decreases dramatically towards the back of the room

Coping with poor reverberation times

Reverberation occurs when the sound from the source has stopped, but reflected sound continues in the room. If the surfaces have a low absorbency (i.e. they are reflective) then the sound may bounce around the room, arriving at the child's ear at different times, blurring the sound and making it difficult to listen to understand the message. The longer the reverberation time the more 'blurred' the message. A short reverberation time is of critical importance, given its huge effect on learning.[13]

13. Klatte M, Lachmann T, Meis M. (2010) Effects of noise and reverberation on speech perception and listening comprehension of children and adults in a classroom-like setting. *Noise Health.* Oct-Dec;12 (49):270-82.

What schools can do to improve the listening environment

Identifying problem areas

If a concern has been raised by parents, pupils, teachers, or local authority specialist staff, listen to what they report about different areas of the school.

The National Deaf Children's Society has developed a range of tools that can be used by staff to carry out basic preliminary surveys. These are available online at **www.ndcs.org.uk/acoustics.** Look at the results of these surveys and any other investigations. There may be simple measures that you can put into place to improve the listening conditions, where the reverberation time is too long.

Alternatively, you may decide the school needs to conduct more in-depth surveys for one or all the areas in order to improve the listening conditions. You may need to consult an educational audiologist or Teacher of the Deaf and take their advice about employing an acoustic consultant or acoustical engineer to look in to the problem areas and make recommendations for simple measures that can be carried out.

Examples of possible measures might include:

- changing the ceiling tiles as most standard ones are not great absorbers of sound. They ideally need to be classified as 'Class A' absorbers to bring the reverberation down to the right sort of level over at least half of the ceiling area.
- adding acoustically absorbent panels to walls, or suspended from wires from the ceiling (these can be sourced in interesting shapes like clouds)
- adding rubber compression seals to the doors, if noise coming into the classroom is the problem.

Effective day to day management of the listening environment by teaching staff

Below is a checklist that you can use to ensure that teachers in your school take appropriate steps to improve the listening environment for all pupils:

- ☐ Has the teacher taken steps to reduce noise from outside the school? (i.e. have windows been closed?)
- ☐ Has the teacher taken steps to reduce noise from elsewhere in the school? (i.e. closing the door)
- ☐ Have steps been taken to minimise noise from other pupils? (i.e. initiate rules so that classes/pupils move quietly through school corridors during lesson times, perhaps with a silent area rule)
- ☐ Has the teacher taken steps to minimise unnecessary noise within the classroom? (i.e. turning off noisy projectors, ensuring regular servicing of ventilation systems, etc.)
- ☐ Has the classroom been adjusted to improve the quality of sound within the classroom? (i.e. sticking soft pads on the bottom of chairs and table legs, using fabrics to reduce hard surfaces, improved ceiling tiles or acoustic clouds, etc.)

Teachers in your school should also use the following checklist to ensure that the right steps are taken to support deaf pupils:

- ☐ Is the child seated near to and with a good view of the teacher?
- ☐ Is the child seated as far as possible from any external noise source (not next to a playing field, road, building works, etc.)?
- ☐ Has the timetable been reviewed to ensure that noise can be managed effectively? (if possible, for example, not timetabling Design and Technology or Music lessons in the classroom next to where a deaf child is being taught literacy)
- ☐ Are lessons with high language content (such as literacy) delivered in rooms with the best acoustics, and are the rooms easily identifiable for staff?
- ☐ Is the teacher aware of the possible difficulties that a deaf child might face in the classroom and are they taking steps to mitigate this? (e.g. using radio aids and Soundfield systems properly and where available, using visual cues, and ensuring other pupils are deaf aware and not unduly noisy)

The National Deaf Children's Society's *Here to Learn* video has more information on the steps that teachers should be taking to improve acoustics. This is available on the National Deaf Children's Society website at **www.ndcs.org.uk/heretolearn.**

Maintenance programmes and refurbishments

Ongoing refurbishments are a chance to improve the acoustic conditions of your school and they can also be incorporated into the regular maintenance programme to improve standards over time. When making refurbishments, the following measures can be taken to improve listening conditions. An acoustic consultant or acoustical engineer[14] can provide advice on each of these steps.

a) Internal doors: Doors can reduce the transfer of sound between spaces, with solid doors being more effective than lighter doors with thin glazed panels. Adding acoustic seals can be the easiest way to get the most out of the doors for minimum cost. Lighter doors can be improved by adding plywood facings if the hinges are strong enough to support the weight.

b) External doors: It is difficult to provide high level sound insulation with a single door, and harder still with double doors. Two sets of doors with a lobby in between are most effective. If a single door is all that is between the teaching space and the outside environment then it should be at least 44mm thick with good sound insulation qualities, along with good sealing around the door and glazing over 6mm thickness typically.

c) Walls: Acoustically absorbent wall finishes can improve reverberation times, and creative use of decorative fabric wall hangings can also help.

d) Windows: The sound insulation of external windows is determined by the frame, the sealing and the thickness of the glazing.

e) Flooring: The vertical transfer of noise from footfall can be an issue in multi-storey schools particularly with hard floor finishes. Carpets are not always practical but there are other solutions such as acoustic vinyl flooring or vinyl flooring on acoustic resilient matting. Another possibility may be installing a floor on top of an existing floor which has this solution integrated within it.

f) Ceilings: Many classrooms often already have ceiling grids with standard sized tiles that can be practically or fully replaced with more acoustically absorptive tiles. This may be a cost-effective way of reducing the reverberation, in combination with hung acoustic clouds or materials if that solution is not an option.

g) Open plan classrooms: These can be challenging spaces to get to work, but a significant improvement can be made by creating local snug areas with all items of furniture such as bookcases and cupboards. This should help as long as a high level of acoustic absorption is provided to prevent noise build-up within the space. Carpeted floors and acoustically treated ceilings can also help. Full height double partitions with a significant cavity of air in between can also make a significant improvement.

14. At least a member of the Institute of Acoustics (IOA) (www.ioa.org.uk), or whose company is a member of the Association of Noise Consultants (www.association-of-noise-consultants.co.uk).

h) Stairs and circulation areas: Noise from corridors, stairs and other circulation areas can create problems in the surrounding areas. Carpets help but can be difficult to clean – other more resilient floor material can be used, such as cork and acoustic vinyl. The noise from corridors can be improved by acoustically treated ceilings and high level wall finishes.

i) Kitchens: Good quality, well insulated, roller shutters can help eliminate noise from the kitchens and minimise disruption to teaching activities in the hall. The fitting of doors in front of the shutter can also do much to improve sound insulation and create a buffer zone.

j) External noise: Traffic noise can be reduced for ground floor classes by using noise barriers on the boundary of the building. The barrier will need to be at least a continuous wooden fence with a mass of 10kg /sq m and high enough to break line of sight with the road. Landscaping mounds or bunds use spoil to create barriers to roads, or reduce heights of barriers, but if they are to have any effect they need to extend the full length of the site so that noise does not spill around the edges. Trees and hedges on their own will not stop noise.

New buildings

If your school is fortunate enough to receive capital funding for new buildings, it is important to ensure that they comply with the minimum relevant government regulations across the UK for suitable and appropriate acoustics.

It is also important to ensure that acoustic testing takes place before the school opens (pre-completion testing), as it needs to be done in an unoccupied state. It can be more expensive to remedy poor acoustics after a school has opened so, even if it is not required, getting acoustic testing done can be an effective way of identifying where the acoustic design has not been implemented and reducing costs of putting right any deficiencies.

In some cases testing will be a condition of government funding.

Temporary and adapted buildings

Acoustic standards will still apply to any temporary or adapted buildings. Check that this has been taken into account, in meeting the minimum standards.

Legislation, guidance and regulations

Equality Act 2010: Duty to make reasonable adjustments

The Equality Act 2010 applies to all education providers and local authorities in England, Scotland and Wales. The Act requires schools and local authorities to make reasonable adjustments to ensure disabled pupils are not put at a substantial (not minor or trivial) disadvantage in accessing the curriculum and teaching and learning. The Act also requires education providers to proactively consider and anticipate the needs of disabled pupils. For schools, some of the measures described in this briefing would constitute reasonable adjustments for deaf pupils.

Northern Ireland is not covered by the Equality Act but has its own anti-discrimination legislation: the Special Educational Needs and Disability Order 2005 and the Disability Discrimination Order 2006. Although the legislation is different, many of the principles are the same.

Planning duties on schools and local authorities[15]

In addition to the reasonable adjustment duties, local authorities in all four countries of the UK must produce strategies for increasing the accessibility of education provision for disabled pupils. These accessibility strategies and plans are aimed at:

- increasing the extent to which disabled pupils can participate in the curriculum
- improving the physical environment of schools so that pupils can take better advantage of education, benefits and facilities
- improving the availability of accessible information for disabled pupils.

They should set out what the local authority will contribute to the schools it maintains and what is expected from the schools.

15. Education and library boards in Northern Ireland

Legislation on special educational needs/additional support for learning[16]

In all four countries of the UK, disabled pupils with higher levels of need may receive a statutory needs assessment and have a legal statement of special educational needs, an Education, Health and Care Plan or a Co-ordinated Support Plan depending on which nation they live in. These statutory plans may set out what improvements are required to the listening environment to help the pupil achieve the best possible educational outcomes.

School premises and building regulations

England

The Department for Education's guide *Acoustic Design of Schools: Performance standards* (2014) sets out expectations on acoustic provisions and explains the steps that local authorities and schools need to take to ensure compliance with the School Premises Regulations (2012). This guidance replaces Sections 2 to 7 of Building Bulletin 93: *Acoustic Design of Schools in England*. Visit **www.gov.uk/government/publications/acoustics-lighting-and-ventilation-in-schools/acoustics-lighting-and-ventilation-in-schools**

More detailed guidance is available from the Association of Noise Consultants (ANC) and the Institute of Acoustics (IOA): *Acoustics of Schools: a design guide*. It provides some of the more technical information that was previously in Building Bulletin 93.

Visit **www.ioa.org.uk/news/design-guide-schools-acoustics-published**

Wales

Building regulations are devolved to Wales and the unrevised Building Bulletin 93 continues to be in use. Schools built and refurbished under the 21st Century Schools programme must undergo a pre-completion test to demonstrate compliance with acoustic standards in Building Bulletin 93. If the building fails to meet the acoustic standard, remedial action must be taken, with further testing to ensure compliance.

16. At the time of writing, governments in Wales and Northern Ireland were considering changes to their special educational needs framework. This is not expected to lead to a dilution of children's rights but may lead to some terminology changes.

Scotland

In Scotland, the School Premises (General Requirements and Standards) (Scotland) Regulations 1967 give statutory requirements for school environmental conditions. In addition, the Scottish Government's guidance, *School Design: Optimising the Internal Environment – Building our future, Scotland's school estate* (2007) is intended to assist local authorities in the development of design brief documents for a range of environmental conditions in schools, including acoustics. Both Building Bulletin 93 and Building Bulletin 101 are referred to in this document as "the starting point for design guidance". While there are no specific regulatory requirements, there are areas of effective practice where Building Bulletin 93 has been fully implemented in new school builds.

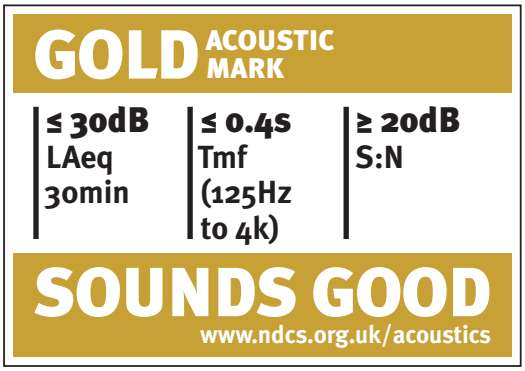
Northern Ireland

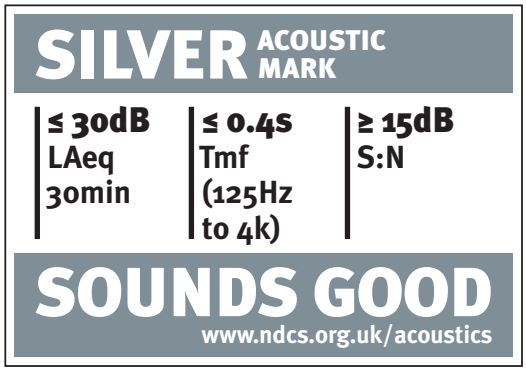
An amended version of Building Bulletin 93 was introduced in Northern Ireland in 2007. New build schools in Northern Ireland are required to be tested acoustically to ensure that the requirements in Building Bulletin 93 have been met. Should the requirements not be met, schools are required to pursue remedial measures. The Department of Education will not fund these measures so it is imperative the acoustics of school builds are got right at the beginning.

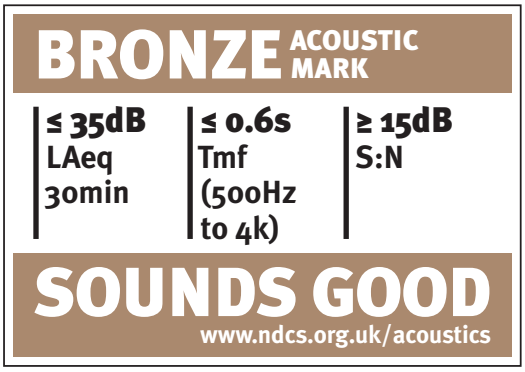
Quality marks

A number of quality marks have been developed for schools and other education settings to demonstrate to parents and others that the school provides a good listening environment. Parents, especially those of children who experience challenges in listening, will value information about the quality of acoustics and listening environments in your school and/or in individual classrooms.

More information about the quality marks and how they can be used is available from the National Deaf Children's Society website at **www.ndcs.org.uk/acoustics.**







Annex A: case study

The Essex study – optimised classroom acoustics for all

Essex has three mainstream secondary schools which include resource bases for students with a hearing impairment. In response to concerns from parents that the schools did not meet acoustic requirements, the local authority looked at ways of improving the acoustic quality so that pupils did not need to be placed in more expensive out-of-authority specialist schools.

Sweyne Park School, a secondary school with a large resource base for deaf students was selected for this study, which aimed to determine causality between changes to the acoustics and the impact on pupils and teachers. The research work was carried out by David Canning of Hear2Learn from March to July 2009.

Over a period of two school terms, identical mathematics classrooms had their acoustic properties changed to reflect each of the published standards for new-build secondary schools: the government standard for any child, the government standard for a child with special hearing requirements and the higher standard recommended by the British Association of Teachers of the Deaf. The acoustic changes were achieved by changing the acoustic materials without changing their appearance. Teachers and children were not told about the changes and would not have been able to tell visually that the rooms had been changed.

Findings demonstrated that increasing acoustic treatment had a direct impact on noise levels in working classrooms, without any specific changes in teaching styles or classroom practice. Alongside these changes were reports of sometimes dramatic improvements in classroom behaviour. Improvements in the classroom acoustic environment were associated with a significant and valuable increase in the signal to noise levels.

Not only did teachers report improvements but deaf children reported that they were better included within the classroom, and more able to participate on an equal level with their hearing peers.

Lessons learnt

Acoustic modification of typical classrooms is a low cost, high impact intervention. It has no reported negative effects and the positive effects go beyond inclusion of deaf children and other children with special hearing requirements, to include improvements in teaching and learning.

More information

The commissioner's report is available to download at **www.adrianjamesacoustics.co.uk/papers/The%20Essex%20Study.pdf.**

A summary is also available at **www.ndcs.org.uk/document.rm?id=4603**.

About the National Deaf Children's Society

The National Deaf Children's Society is the leading charity dedicated to creating a world without barriers for deaf children and young people across the UK. We support deaf children, their families and the professionals who work with them, and challenge governments and society to meet their needs.

The National Deaf Children's Society uses the term 'deaf' to mean **all types** of hearing loss/impairment, including deafness in one ear and temporary deafness such as glue ear. We support all deaf children and young people, regardless of their level of deafness, how they communicate or what technical aids they use.

Raising awareness

Deafness isn't a learning disability. **With the right support, most deaf children can achieve the same outcomes as other pupils.** We produce lots of resources to support professionals who work with deaf children and young people to promote best practice and raise expectations. Our guidance, written by expert Teachers of the Deaf, set out the interventions and reasonable adjustments that can be made in the classroom to improve deaf children and young people's outcomes.

All of our resources are free to download or order. They include:

- *Assessing and Monitoring the Progress of Deaf Children and Young People*
- *Supporting Achievement of Hearing Impaired Children in Early Years Settings*
- *Supporting the Achievement of Deaf Children in Primary Schools*
- *Supporting the Achievement of Deaf Children in Secondary Schools*
- *Supporting the Achievement of Deaf Children in Further Education*
- *Supporting the Achievement of Hearing Impaired Children in Special Schools*
- *The Secret of Words: A programme to develop deaf children's literacy*
- *Memory and Learning: A programme to support deaf children with their working memory*

- *Here to Learn* videos: **www.ndcs.org.uk/heretolearn**
- *Early Years Matters* DVD – for practitioners working with deaf children in playgroups, children's centres and nurseries
- *Phonics Guidance*
- *Look, Smile, Chat Deaf Awareness Pack*
- *Bullying and Deaf Children: A guide for primary and secondary schools*

To order any of our free resources, visit **www.ndcs.org.uk/publications** or contact the National Deaf Children's Society Freephone Helpline.

Tell families about our free support

The National Deaf Children's Society supports families from initial diagnosis to adulthood across education, health and social care in a range of ways including:

- **events** where families can meet one another and get support from professionals
- a **Freephone Helpline** offering clear, balanced information. We offer a free interpreting service for families who do not speak English as a first language
- **events** for deaf children and young people
- support for mainstream art, sport and leisure organisations to run their activities in a deaf-friendly way, with free resources at **www.ndcs.org.uk/me2**
- a safe space and support for deaf children and young people through our dedicated website, **www.buzz.org.uk**
- **free resources** for families in a range of formats. Education professionals may be particularly interested in our publications on learning and development:
    - *Communicating with your Deaf Child*
    - *Helping your Deaf Child to Develop Language, Read and Write (3 to 4 years)*
    - *Helping your Deaf Child to Read and Write (5 to 7 years and 8 to 11 years)*
    - *Helping your Deaf Child to Develop Early Maths Skills (3 to 4 years)*
    - *Helping your Deaf Child to Develop Maths Skills (5 to 11 years)*
    - *Using Phonics to Develop your Child's Reading and Writing Skills*
- Technology Test Drive – **an equipment loan service** that enables deaf children to try out equipment, including radio aids, at home or school.

Become a professional member

Join The National Deaf Children's Society for free today by calling our Freephone Helpline on **0808 800 8880** or go to **www.ndcs.org.uk/professional_support.**

Supporting decision-makers

We influence and support local decision-makers through our team of regional directors. They promote the interests of deaf children and their families in a range of ways, including sharing examples of best practice, providing advice on the development of Local Offers and working to protect specialist support services from spending cuts. To identify your closest regional director, visit **www.ndcs.org.uk/RDs.**

We also work in partnership with other organisations including BATOD, the Ear Foundation and the National Sensory Impairment Partnership (NatSIP) to influence policy and services for deaf children.

For more information about the National Deaf Children's Society visit our website **www.ndcs.org.uk**
Facebook: **www.facebook.com/NDCS.UK**
Twitter: **twitter.com/NDCS_UK**

Our vision is a world without barriers for every deaf child.

The National Deaf Children's Society is the leading charity dedicated to creating a world without barriers for deaf children and young people.

Freephone Helpline:
0808 800 8880 (voice and text)

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www.ndcs.org.uk/livechat

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