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Support for children and young people with multi-sensory impairment in educational settings

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Audience

Parents/carers and practitioners supporting children and young people with multi-sensory impairment (MSI) in educational settings.

Overview

This guide provides an overview of the extent to which interventions delivered in educational settings are effective in realising positive outcomes for children and young people with MSI. It was produced by the University of Birmingham. The views expressed in this guide are those of the authors and not necessarily those of the Welsh Government.

Action required

This document may be of interest to practitioners and parents/carers when planning provision to support children and young people with MSI.

Further information

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Additional copies

This document can be accessed from the Welsh Government's website at gov.wales/additional-learning-needs

Related documents

A Rapid Evidence Assessment of the effectiveness of educational interventions to support children and young people with multi-sensory impairment (Welsh Government, 2019)

Mae'r ddogfen yma hefyd ar gael yn Gymraeg.
This document is also available in Welsh.

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Contents

Purpose and aim of the guide

This guide provides a summary of evidence about the effectiveness of educational approaches for supporting children and young people with multi-sensory impairment (MSI) / deafblindness[1] from a commissioned rapid evidence assessment (REA). The aim of the guide is to support practitioners when planning and delivering timely and effective support for children and young people with deafblindness. The report focuses on learners aged 0–25 years, but some of the findings may be transferrable to older learners.

The guide may be of interest to:

- parents/carers
- teachers, classroom-based support staff, early years workers and staff in further/higher education
- special educational needs coordinators (SENCos)/additional learning needs co-ordinators (ALNCos)
- head teachers, principals and senior leaders in education settings
- local authority education services including specialist services such as educational psychologists
- social workers
- health professionals
- third sector organisations and
- advocacy services, dispute resolution services and the Special Educational Needs Tribunal for Wales (SENTW).

The guide does not set out what approaches must, or must not, be provided for children and young people with deafblindness. The very nature of deafblindness with multiple variations means that universal recommendations can never be appropriate. Even in areas where there is evidence, it will not apply to all learners with deafblindness, and will need further adaptation to apply to others. Practitioners should use individual assessments and evaluations to decide on appropriate support, ideally in combination with specialist teachers. Solutions should be found for individuals, in relation to their individual educational environment, bearing in mind their age, cognitive development, communication methods, degree of vision impairment, degree of hearing impairment, use of senses together, additional disabilities and educational setting. Therefore, educators will find it useful to monitor how well their selected approaches are working for their learners, so they know whether they are having the desired effects or need to be altered.

[1] This guide uses predominantly the terminology ‘deafblind/deafblindness’ rather than multi-sensory impairment or MSI. While MSI is used in education, it is rarely if ever used in the literature in this area. The term ‘multi-sensory impaired’ is also frequently interpreted as meaning ‘having multiple disabilities including learning disability’ or confused with having a sensory processing disorder.

Background

This guide is based on an assessment of research studies that have considered the effectiveness of intervention approaches to support children and young people with deafblindness[2] as well as a wider range of literature in the specialist field. The assessment was a commissioned REA undertaken by the University of Birmingham.

The REA summarised the findings of the most reliable research studies on this topic published between 1981 and 2017. It reviewed approaches that had been studied in settings where children and young people receive education, such as preschools, schools and further education institutions. The literature was presented within 12 core educational strategy areas: communication, literacy, mathematics and numeracy, access to examinations, mobility and independence, cognitive skills, social and emotional functioning, use of technology, vision and auditory training, teaching support, teaching strategies, and inclusion. The literature searches were carried out in four databases, using a range of search terms and inclusion/exclusion criteria.

Twenty nine studies met the criteria and these were then rated for 'quality' using standard criteria commonly used for rapid evidence assessments: 8 of the 29 sources (28 per cent) were judged to be of 'moderate' to 'strong' quality, while 21 of the 29 sources (72 per cent) were judged to be of 'impressionistic' to 'moderate' quality.

The evidence was not found to be comprehensive; there were gaps in the evidence base and in some cases the evidence on effectiveness was considered to be inconclusive or only indicative. In 6 of the 12 educational strategy areas there was no evidence at all. All the studies were small and usually single case studies (with the exception of a literature review). Eight studies were written by the same editorial team about the same intervention in the field of communication. All of the technology articles (4) were written before 1996, thus reducing their direct relevance. Two articles used interventions which would not be considered appropriate currently due to the use of strong negative reinforcers. The number of articles remaining which could be considered to provide relevant evidence was therefore reduced to 16.

This guide is therefore based on the articles from the REA, but also on the articles found as part of the search which did not meet the inclusion criteria but which represented good practice. It also draws on the practice and writing of students training as specialist teachers.

[2] The full rapid evidence assessment is available from https://gov.wales/sites/default/files/statistics-and-research/2019-11/effectiveness-educational-interventions-support-children-young-people-multi-sensory-impairment.pdf

What is MSI / deafblindness?

Definitions and descriptions of deafblindness/multisensory impairment differ between counties, services and provision. This guide broadly uses the Department of Education and Science definition from 1989[3] that deafblind children are “a heterogeneous group of children who may suffer from varying degrees of visual and hearing impairment.”

The National Assembly for Wales, (2005)[4] definition is that:

> “Multi-sensory impairment or deafblindness is not defined in clinical terms but is regarded as any degree of dual-sensory impairment which has a significant adverse effect on the child or young person’s ability to access education.”

The effects of deafblindness on development are usually grouped under three headings:

- problems with communication
- problems with mobility and orientation
- problems with access to information.

MSI in children and young people can be, and frequently is, part of a wider spectrum of disabling conditions, including physical and medical disabilities, intellectual disability, and social and emotional difficulties. However, it can also present as the sole primary disability (although it will often, of itself, cause difficulties with other areas of development). In addition, MSI can be congenital, acquired, or part of degenerative conditions. These each cause different effects and difficulties for the individual. Combinations of different degrees of vision and hearing impairment can have quite different effects which lead to quite different outcomes, e.g. for a young person who is severely sight impaired but has a moderate hearing loss, to a child who is severely hearing impaired but has a moderate vision loss. The majority of deafblind people will have some remaining (sometimes called residual) hearing, or vision, or both.

Deafblindness is an exceptional disability and of very low incidence. Figures are difficult to obtain because of the difference in definitions, and because of widespread misunderstanding of the terms, especially of ‘MSI’ (which is often taken to mean ‘sensory issues’ – usually sensory processing issues associated with autism). Estimates of 1 in a 1,000 are probably over counting, and 1 in 4,000 may be an underestimate.

[3] DES (Department of Education and Science) (1989). Educational Provision for Deaf-Blind Children. London: DES.
[4] National Assembly for Wales (2005). Quality standards in educational services for children and young people with sensory impairment. Cardiff: National Assembly for Wales.

Support for children and young people with MSI / deafblindness (approaches and interventions)

Deafblindness in the UK is recognised as the effects of combined visual and hearing impairments on three essential elements of development and education. These relate to difficulties with:

- communication
- access to information
- mobility and orientation.

This functional definition demonstrates that typical educational environments will always present deafblind children and young people with difficulties in the learning process. Such typical environments are driven by communication, information and movement, all of which are more difficult for deafblind learners. Vision and hearing are basic to the education delivered. While adaptations can be made for one sensory impairment (e.g. replacing auditory information and communication with visual information or vice versa), providing compensation for both impairments is much more complex and less effective. Many deafblind children and young people are achieving much less than other pupils of their age because of learning difficulties (either additional to, or caused by and related to, their dual sensory impairments).

Approaches to the educational provision for deafblind learners therefore needs to include their ability to:

- learn to communicate, and then learn through communication
- learn to mobilise, and to use that movement to learn
- learn to access information, and then use this information to learn.

Ideally this would create a spiral of development in which independence is fostered and learning is supported to enable progress. In many cases the overall educational approach for a given learner will require finding possibly unique combinations of teaching strategies and drawing on remaining hearing and vision and using tactile methods to support individual needs. Therefore, another key feature of educational approaches for deafblind learners is that they are centred around their individual needs.

Who can put the interventions into practice?

A wide range of people can effectively put these interventions into practice. Specialist teachers and professionals are important because they have specialist training to carry out assessments of need, and the technical knowledge to design and/or undertake some teaching approaches. As outlined above, no single intervention, approach or strategy will meet the needs of all deafblind children and young people, and many will need to be adapted and tailored to meet the specific needs of individuals. Understanding how well they work requires a skilled professional who has an in depth understanding of the needs of deafblind learners. These specialists are primarily qualified teachers of children with MSI (QTMSI), but also intervenors and related professionals such as qualified teachers of children with vision

impairment (QTVI), qualified teachers of children with hearing impairment (QToD), and habilitation specialists.

In many settings however, interventions will be put into practice by teachers, teaching assistants (TAs), parents and carers, and others. This is because many approaches will be embedded in the daily routines of education as well as home life, where they can be delivered consistently in practice.

What the literature says about the effectiveness of the interventions

The guidance presented is taken from three sets of sources. The first source was literature found through the REA on interventions which presented evidence of the effect of educational approaches upon targeted educational outcomes. A small number of studies met the inclusion criteria. The second source was literature found through the REA which did not meet the inclusion criteria but which was considered to describe good practice. The third source was a wider range of literature including recent research in the field, text books and reputable internet sources, as well as high quality student contributions to the field (including PhDs). This literature was drawn upon to gain a wider picture of what is considered to be effective practice for deafblind learners.

This guide includes a wider range of literature than that identified through the REA. A careful evaluation and adaptation will be needed in order to apply the approaches and strategies to any deafblind individual. In the same way, the field of deafblindness can draw significantly on the fields of vision impairment and hearing impairment and through adaptation and evaluation use strategies in relation to these to support deafblind learners.

In this section we present the 12 educational strategy areas, each with an introduction, a brief discussion of the relevant intervention literature, where possible, and a summary of relevant strategies and approaches from literature.

Communication

Description of educational area

Deafblindness causes difficulty with communication and communication is therefore a key educational priority for deafblind learners. The development of communication can also help to develop other areas such as access to information and mobility and orientation. There are a wide range of issues of interest to the educator, including: the importance of assessment, the development of symbolicity[5], the use of appropriate modes and forms of communication, the development of vocabulary and function, the development of interaction and friendship, approaches to communication through shared construction and structured activities, and the use of amplification.

Key findings and implications

Learners who are deafblind need support to develop communication in meaningful ways. Communication, mobility and access to information are interdependent and development in one of these areas supports all three. For

[5] Symbolicity is the ability to refer to items and events which are not directly present by using another means to stand for and represent the items, events or thoughts. For example, this could be by using a picture of someone swimming to represent the activity of swimming (either a photograph, a line drawing or a picture as part of an organised picture set), or the use of an object (such as a swimming towel), or a gesture of swimming to represent it. Signed, spoken or printed words which are much more abstract can represent the activity at more advanced levels.

some, an alternative access to communication through amplified speech or the use of sign language will be enough. Many others however will need a responsive environment, with lots of opportunities for using and developing their communication and partners (those they share communication with) who are skilled in responding.

The literature provides some of the following points.

- As a starting point, assessment allows educators to provide appropriate communication at the right level and in the right mode. This assessment is likely to require skilled delivery and skilled interpretation, as well as adaptation to the individual.
- Approaches such as using 'pause times', 'opportunities' and 'functions', will help educators to adapt teaching and the environment to maximise communication.
- Examining the use of particular strategies within the environment, such as providing only some parts of required materials initially, ensuring that learners must therefore request more (and that educators can see the value of these strategies).

Developing symbolic understanding is central to the development of communication. Ways of doing this from the literature include the following.

- Using carefully chosen communication cues:
  - using cues but linking them gradually to symbolic communication at a slightly higher level. This might support the development of symbolic understanding and it makes their meaning more obvious to those in the wider community
  - developing from cues into concrete symbols, and using these to develop literacy through adapted recording using pictures, objects, videos (especially for British Sign Language) and written words (braille or text)
  - moving from using objects as cues within a routine, gradually to a standalone referent and then reducing the object to a tactile symbol.
- Developing symbolic play to increase symbolic language.

Appropriate methods of communication can be chosen in relation to the following important points.

- Taking into account visual, auditory/oral and tactile abilities and impairments.
- Initially choosing methods matched to an individual rather than standardised across a school. Cues initially need to be part of a routine, not abstract and unlinked to the event.
- Shaping learners' natural responses for example from gestures gradually into signs or vocalisations into words.
- Adapting signs for vision impairment, including non-manual features[6] to be represented on the hands instead so they remain in view.
- Using signs in such a way that they can be understood by touch.

[6] Non-manual features are aspects of BSL which are not represented, usually, on the hands, e.g. shaking the head to signify a negative, or a mouth shape.

- Amplifying speech.
- Making picture based materials (symbols, photographs) easier to see, e.g. bigger, with anti-glare materials and less cluttered.
- Changing communication methods when needed because the learner's hearing or vision has changed, or when the learner develops new skills (e.g. moving from pictures to text).
- Making sure that methods of communication are suited to the individual by using learning media assessments (and are not just chosen by staff or policy).
- Effective staff training to ensure that communication is natural and enjoyable.

Assumptions (whether conscious or not) about learner's understanding can also mean that pupils do not receive appropriate communication. It needs to be within their symbolic level of understanding. For example, highly abstract concepts should not be represented by concrete methods. For example, there is no point in using a concrete symbol for 'history' because this is an abstract concept. If the learner cannot understand abstract concepts they will not be able to just because a concrete symbol is used. For learners who need concrete representations to process and develop communication, these can only be linked to concrete events/activities. Most deafblind learners will have either little access to speech sounds, or will hear distorted sounds. For them, it is important that other methods of communication are used alongside speech. Communication partners need to use the right methods for the learner, and not assume that the learner has understood them. Communication partners need to talk (sign/communicate) at a pace which is understood and to use appropriate strategies which do not only include directive actions.

Expanding vocabulary is important for cognitive development and mental wellbeing. This should include:

- opportunities to share memories, tell jokes, and greet new friends, even with limited vocabulary and language – communication and language needs to be shared rather than educators being overly directive
- a vocabulary which includes comments, descriptions and emotions in their communication mode – not only a vocabulary of being told what to do
- appropriate choices of vocabulary, based on the individuals' needs, especially where using concrete or technological systems
- an understanding of the way in which a deafblind person might perceive the world
- opportunities to experience and explore new vocabulary to build conceptual understanding
- widening the horizons of deafblind learners who cannot experience concepts through touch, e.g. such things as 'sky', 'volcano', 'burning'
- using words (spoken, signed, symbols, text) to describe emotions (for learners with some abstract understanding). Emotions are very real to learners and describing how they feel is very important in terms of mental health and managing behaviour

- developing consistency in communication methods with school staff, parents and others.

Skilled communication partners are key to the successful development of communication. Being a good communication partner includes the following.

- Enabling lots of opportunities for substantive communicative engagements with pupils.
- Appropriately trained staff who recognise communication attempts from learners and respond in ways that they understand.
- Not only using speech. Natural speech may help make a communication interaction flow smoothly but it should not be expected that learners can hear or understand it.
- Ensuring that deafblind learners have the opportunity to interact with their peers, despite using different methods of communication.

Successful interactions with learners at early stages will require attunement, which is the process of understanding the communication attempts of the partner and responding to them. An attuned partner will ensure that there is:

- a good relationship with the learner
- appropriate physical proximity between them and the learner
- a natural narrative which includes moments of excitement or surprise (something to talk about)
- a shared exploration or use of objects which they both communicate about (crucial here is enabling shared attention – i.e. the deafblind learner and partner are attending to the same thing).

These strategies can be used in all activities, particularly naturally occurring events, and can be used to motivate the sharing of activities.

Intensive interaction is an approach frequently used in practice and mentioned as a key strategy for developing interactional understanding for deafblind people. However, its emphasis on eye contact and imitation of vocal and physical sequence does mean that it needs to be applied with care for learners with deafblindness.

The value of calendars is emphasised by several authors. Calendar systems can:

- develop security through an understanding of predictable events. From this an understanding of sequence can be built
- help to develop intentional communication from cues to understanding weekly events and record keeping. Alongside this symbolic understanding from now and next (two referents) into long term diaries and into the beginnings of more conventional literacy can be developed.

The use of calendars can then develop into a conversation or into a diary which can be shared and can develop the scope of language into nouns, adjectives and verbs. The use of symbols and text will support the

development of literacy, and can also support community involvement such as when individuals are in shops and cafes.

Choice making is a valuable approach, which can support the development of both symbolic language and intentional communication. It can motivate learning and reinforce a sense of being able to act and a sense of self-esteem. The use of more abstract symbols can be developed by linking them with choices of preferred and motivating items (e.g. using symbols to request their favourite things). It needs to be considered that it is also hard work.

Pauses are crucial in communication. A burst-pause approach is one way of supporting a child to develop communication through intentional communication. This can be applied in many situations, in which an activity is deliberately presented for a short time and then stopped (paused) to encourage and allow for a response. This enables the learner to realise that the activity has stopped, while providing within itself a cue or prompt for picking it up again or requesting that it is picked up. This is a natural pattern which is within many activities appropriate for early development. Pauses thus support the development of intentionality (the learner taking the initiative to signal that something has stopped) and decrease passivity, by building in an opportunity for the learner to respond. When used well, pauses can decrease anxiety and demand on the learner, and dependence of staff involvement.

Amplification or assisted hearing (where appropriate) can lead to successful communication. This depends on accurate assessment by clinical audiology colleagues with accurate prescriptions for hearing aids or cochlear implants. Such accurate assessment and prescription can be difficult for people with multiple disabilities. Some learners may need programmes to support their tolerance of using hearing aids.

Literacy

Description of educational area

Traditional reading is generally very difficult for deafblind learners as they may not be able to see a printed word properly, nor hear it when pronounced (and may not know it). Many deafblind people never achieve any functional literacy. However, some do through either print or tactile means. There is much debate about what literacy actually implies. A variety of approaches for literacy include the use of storytelling and making literary classics accessible through the format of rhyme, rhythm and through vibration and multi-sensory stimulation. Access to ‘literature’ (stories and rhymes) through the means of ‘sensory stories’ is also a regular part of the education of many deafblind pupils, as is the use of morning circle or meetings which may include calendar work, the days of the week and the names of others in the class.

Key findings and implications

Literacy can lead to further development of knowledge and understanding, and a literate education. It can also serve a range of practical purposes such as keeping shopping lists and diary schedules. It helps deafblind people keep in touch with others for example through letters, text messages or cards, and

can help them understand their own history and memory. Literacy formats need to be chosen carefully to make the most use of skills.

The following implications are drawn from literature and experience.

- Literacy education should begin early for deafblind learners, whether or not they are ‘ready to read’. This can include the use of sensory stories, calendars, and being ‘read’ to in voice, or sign (for rhythm, motivation, and experience of books). Targets that encourage the development of these skills should be set for deafblind learners.
- Stories can be told using books, objects, musical instruments, songs and voice output communication aids, supporting literacy, communication and concept development.
- Labelling (of objects, books, pictures) in classrooms and opportunities to scribble either in print (visual) or braille (tactile) will support literacy.
- Personalised and individual books using photograph or audio recording of experiences, labelled with text or symbols can be more useful than typical story books in developing understanding of reading. Earlier readers will first need to develop the concepts before they can read any materials.
- Calendar work (which includes text or symbols) supports literacy and can be developed by writing home school books and other recording skills.
- Learning media assessments will support staff in finding the best routes; print, braille, or auditory/oral means for accessing text.
- Text reading may be in large print, by using video magnification, or braille. Braille is especially important for some deafblind readers who are unable to access text through screen reading software. Deafblind learners will need to understand their own needs and how to use assistive technology.
- Readers should be encouraged to choose their preferred means of accessing text, which may include braille, scanning and screen reading, large print, video magnification and sign language interpretation.
- More able readers will need access to meta-skills, such as skimming, using indexes, recognising titles and subtitles. These are skills which other readers often acquire without help.

There is no one route for learning to read for deafblind learners. Each learner has different levels and combinations of vision and hearing, different experiences, with or without other disabilities, different communication modes (speech, sign or others) as well as age. Each learner will be on a particular and individual journey, which will need to be carefully tailored to them, accounting for their particular access needs. A good programme will depend on good assessment and working out the right route for each individual. Literacy can be a route to developing a vocabulary and a language. While not every deafblind learner will learn to read, the potential should be investigated.

An individual route may begin with using photographs, and then develop to using pictures labelled with words, pictograms and onto text for shopping lists. As fingerspelling is an alphabetic system, increased use of fingerspelling may

lead to links with braille. Strategies for learners with vision impairment and hearing impairment may be appropriately adapted for the use of dual sensory impaired learners. Nevertheless, some strategies used with hearing impaired individuals will depend on the use of visual strategies which may not be suitable for deafblind learners, and the same will apply for auditory strategies used for vision impaired learners.

The route to literacy is not straightforward but, individually and skilfully supported, it can be accessed for deafblind pupils.

Mathematics and numeracy

Description of educational area

Deafblind learners may find mathematical learning particularly difficult because they lack incidental learning. For example, they may not frequently hear the language of maths such as counting, time, shape, money and measurement or see numbers in practice, for example, room and bus numbers, coins, clocks, tape measures and scales. Deafblind learners have limited access to these concepts unless they are deliberately directed to them. Early mathematical learning is embedded in daily living skills (such as weighing, money and time), but also at earlier levels in sorting, categorising and awareness of shape when washing up, laying a table and sorting clothes from a dryer for example.

Key findings and implications

Mathematical concepts, which others learn incidentally from vision and hearing, may need to be deliberately taught to deafblind learners. In many cases, adaptations to make it easier to see or hear will be needed, e.g. louder talking scales, yellow and black rulers, or microwave dials with brighter coloured numbers.

Mathematical experiences could include the following.

- Counting to two, and understanding ‘more than two’ through using two hands.
- Using counting routines such as counting steps to stretch counting beyond two.
- Using natural tactile measures such as handfuls of flour or a hand’s length of string.
- Matching fingers to items to five, or using a pound coin holder for five coins.
- Concrete supports such as ice cube trays, cuisenaire rods[7] and linking blocks will build concepts and support mathematical learning.
- Measuring using cupfuls and spoonfuls and using marked timers, rulers and scales.

[7] Cuisenaire rods are a concrete support to mathematics development, comprising a set of rods in different lengths to facilitate concepts of addition, subtraction, multiplication and division.

- Early mathematical concepts such as developing one to one correspondence and categorisation in natural situations (for example coats and hooks, and clothes in drawers).
- Language and skills – understanding of mathematical language such as time and shape can be built into practical situations. Giving out biscuits or working out what time lunch is can build understanding of numbers, addition and time.
- Shape – using objects which fit and don't fit into others e.g. biscuits into plastic tubs can help to understand shape.

Some learners may need tactile learning methods such as braille maths, or additional help to develop mathematical concepts and mathematical terminology. The fact that some higher maths skills do not require social understanding or reading and language use may help some deafblind learners to succeed.

Access to assessments and examinations

Description of educational area
Deafblind learners have to manage a range of issues in relation to assessments and examinations beyond those usual for all learners. For example, additional time may be absolutely necessary but makes assessments and examinations longer which can be stressful in itself. Deafblind learners may have to manage staff support and because of the nature of an exam or assessment, those staff may have to behave in different ways to usual.

A challenge for educators will be finding the most accessible formats to learning for each individual deafblind learner. While examinations may be related to a particular subject (e.g. History or English Language), the exam papers may unconsciously require a level of general knowledge and understanding about the world which is much harder for a deafblind person to acquire. This is because a deafblind person may need all learning brought to their attention and not have access to the incidental learning from conversation, TV and other media.

Key findings and implications
There are clear guidelines in place on access arrangements for assessments and examinations[8],[9]. Deafblind pupils will likely need individualised and sometimes unique packages of support, e.g. braille and hands on BSL. Adjustments may include:

- print materials in different sized fonts, in braille or with adapted diagrams

[8] https://hwb.gov.wales/draft-curriculum-for-wales-2022/reading-and-numeracy-assessments/personalised-assessments/national-reading-and-numeracy-tests-test-administration-handbook-191010/
[9] https://www.jcq.org.uk/exams-office/access-arrangements-and-special-consideration/regulations-and-guidance/access-arrangements-and-reasonable-adjustments-2019-20

- use of modified language or BSL, or using a reader and/or scribe (including a live reader to allow for listening examinations to be lip read)
- having rest breaks and having extra time
- use of assistive technology, including laptops
- access to a practical assistant.

Specialist teachers must ensure that requirements for the combination of sensory impairments are understood and appropriate support is put in place (i.e. not just for a 'main' sensory impairment). Learners need to be taught to be clear about what their support needs are for assessments and exams, including what they do not want to use. As they get older, they may be able to take more responsibility for articulating their needs.

Mobility and independence

Description of educational area
Difficulty in relation to mobility and orientation is one of the key areas identified in the definition of deafblindness. Given the differing levels of vision and hearing impairment, deafblind learners are likely to have a range of paths to developing skills in this area. Their needs differ from learners with solely vision impairment because of the lack of auditory clues and the difficulties in communication with people in the community and those teaching mobility skills.

In terms of independence skills, some learners will need to be taught basic self-care such as feeding themselves and getting dressed. For others, key issues might be advocating for themselves and organisational skills in getting their educational needs met (e.g. using a radio system asking for sighted guide support).

Key findings and implications
Mobility and orientation is often underestimated as an issue of importance, particularly for learners who are not going to become independent walkers. The focus has sometimes been on the use of particular techniques such as using long canes. Learners with deafblindness who are wheelchair users, including those who will not be able to use any travel skills themselves, also need to learn about their position in space, the layout of the world and the properties of their own bodies and movement.

The following are key areas which should be considered.

- Mobility should be considered as a key goal for deafblind learners. It is distinct from motor skills and requires special consideration because of deafblindness. Practitioners report that learners (especially those at early levels) are unlikely to have goals in mobility and orientation, and this should be challenged.
- Mobility needs to begin early – for example, teaching a learner about their body, about space, and exploring and then learning where objects are and reaching for them. This needs to include laterality, direction

and position. Other activities, such as massage or swimming can support goals in orientation and mobility.

- Environments should support learning by having consistent place names in schools for example. Having one speech/sign/symbol/ agreed name for places can be helpful as opposed to inconsistently using ‘cookery’, ‘food tech’, or ‘kitchen’. In addition, having consistent, clear and safe routes identified by environmental audits and there being key places with distinguishing characteristics (e.g. the smell of the swimming pool or the echo from the hall) can be beneficial.
- Formal mobility techniques such as cane use can be taught even to young learners and wheelchair users. Wheelchair ‘buffers’ can support trailing. Teaching must meet individual communication needs, but formal language is not necessarily a pre-requisite. Some specific skills such as long cane use will need to be taught by Qualified Habilitation Specialists (QHS). Such training will need to begin with teaching relevant and naturally occurring routes for the learner.
- Particular approaches may be needed for deafblind learners, for example, using adapted canes and adjusting communication. They may need communication before a route rather than during it and they may need to be taught to use skills such as directional sounds.
- Control should be given to and shared with the learner for any guiding as soon as is possible (including pushing wheelchairs), for example, indicating when they want to begin and pointing in the correct direction at corners.

In terms of developing independence, the following will be supportive.

- Deafblind learners can be given responsibility as soon as possible for putting away materials when they are finished (even if only into a ‘finished’ basket) and in so far as possible, to collect and then put away their own materials.
- More able and older learners will need to learn to manage their own equipment (e.g. hearing aids and assistive devices) and can learn to request help when needed.
- Learners who cannot manage these things for themselves can request them by pointing or gesture (‘Can you get…?’, ‘Could you fix…?’). Autonomy is possible with limited physical skills; it is planning, initiating, implementing and completing, which is needed.
- In order to develop agency and independence, learners need to be able to review what is working for them in terms of support, environment and curriculum. This can help them to advocate for themselves and perhaps to eventually give direction to their own support staff.

Cognitive skills

Description of educational area

Lack of access to information for deafblind learners creates particular issues with: experiential learning and concept development; development of a sense of agency (an ability to act on the world); the link between language and

learning; attention, perception and memory; tactile cognition; and executive function difficulties.

Deafblind children may not learn about patterns and predictability, cause and effect, or agency. This is because they are not able to perceive the effects of their actions, to see the repetition in the environment, or to see that it is them who are affecting the environment. Given they do not see these behaviours modelled in others they may be less able to learn persistence, self-initiation, taking control, and therefore they may become more passive.

Without language, cognitive skills are delayed. This is linked to a lack of experience of concepts through difficulty in accessing the environment. Development of reading speed, formation of memory, and perceptual skills may all be reduced because of deafblindness. Perceptual access through touch for a deafblind learner might take longer and limit both the range and number of things to which they have access. Executive function difficulties are reported in learners with particular syndromes associated with deafblindness, such as Alström and CHARGE syndromes[10].

Key findings and implications
For deafblind people, the key initiators of thinking, vision and hearing are limited or absent. Deafblind learners therefore frequently have cognitive difficulties. Particular approaches can help to lessen these difficulties but deafblind individuals will not be able to completely overcome them.

There is little research evidence directly about building cognitive skills, but the following areas are likely to be relevant.

- Building a secure understanding of the world through routines, structures and predictability, rather than a random experience of events.
- Repetitions to encourage targeted learning within naturally occuring opportunities (this is sometimes called infused targets).
- Opportunities for concrete experience, backed up by pre and post teaching sessions (see Teaching Strategies). They may also need support for concept learning which other learners acquire incidentally through language. Learners with CHARGE syndrome in particular may need concrete reminders of sequences and rules, e.g. through symbols.
- Ability to take control of learning (agency) as a key goal for learners (e.g. using switch technology or planning and implementing getting food from the canteen).
- High expectations should support learners who struggle with access, rather than assuming these are related to an additional learning need.
- Using hand under hand strategies (see Teaching Strategies) to ensure pupils who need tactile methods can learn in the most effective way.

[10] Alström syndrome, CHARGE syndrome and Usher syndrome are conditions commonly associated with deafblindness. Links to other common conditions can be found at: https://www.nhsdirect.wales.nhs.uk/encyclopaedia/d/article/deafblindness/

- Delivering learning in accessible formats matched to sensory needs, and often at a very close distance.
- Symbolic play, cause and effect, categorisation and imitation may have to be taught rather than being acquired incidentally. All are key to cognitive development.
- As soon as the learner's language development allows, teaching metacognitive skills to enable deafblind learners to take more control of their own learning. Metacognitive skills are related to learner's understanding of their own learning processes such as recognising difficulties. Such skills might be as simple as the deafblind learner reviewing whether they did well, or whether their amplification is working.
- Managing fatigue by reducing output (e.g. the number of examples worked through), reducing input (e.g. the number of pages read) and by providing breaks. Using diminished vision and hearing requires concentration and if accompanied by balance difficulties (as for learners with Usher syndrome and CHARGE syndrome) this may be overwhelming.

Social and emotional functioning

Description of educational area
Two main strands were examined: social relationships (e.g. with peers) and behaviour.

Evidence shows that isolation and difficulty in building friendships are frequent and problematic for deafblind learners. This can be exacerbated by poor understanding of deafblind learners' needs, previous unsuccessful social experiences and unsupportive environments. Some learners challenge the systems around them through aggression, self-injury, and repetitive behaviours. This poses difficulties for individuals and for their families and communities. Progressive conditions (losing vision for deaf people and hearing for vision impaired people) are very significant for the field of deafblindness.

Key findings and implications

Social Relationships

Social relationships are very important in relation to quality of life and happiness. Some strategies which may support the development of social relationships include:

- training for peers such as use of different communication methods and modelling of interactions
- buddy arrangements, including working towards reducing 'helping' behaviours and increasing 'friendship' behaviours
- helping peers to take the lead by sharing what young people actually want to talk about and passing on previous experiences
- providing supportive activities such as friendship tables and structured games at play times

- managing the physical environment (e.g. lighting, labelling and transport) to enhance inclusion
- helping TAs and intervenors to facilitate rather than limit interaction with peers, including considering the impact of academic support on social relationships
- encouraging staff attitudes to recognise the importance of friendships.

Most of the published material about social relationships is linked to including deafblind people with learning disability in mainstream schools, and it is focussed upon teaching typically developing students how best to include their deafblind peers in friendship groups. However, in the UK there are many deafblind pupils in special schools for people with learning disabilities and they are therefore part of a different kind of peer group. There appears to be nothing published about these important peer relationships. Developing shared play between peers in which the learners take control may be important.

Managing Behaviour

Strategies recommended in the literature to manage behaviour were mostly based on behavioural techniques such as accurate description and recording of the behaviour, teaching alternatives, providing motivations, and working together. These are much the same as those which might be recommended for other people with learning disability. However eliminating 'problem' behaviours can cause substantial further difficulties, such as leaving a deafblind person with no way to communicate (for example pain), or having no stimulation or means to regulate their emotional/physical state.

However, strategies particularly linked to deafblindness include:

- understanding the learner's perspective, for example deafblind learners are frequently fatigued and unreasonable demands should not be made of them
- investigating reasons for behaviours which may have a function for the learner, rather than simply aiming to eliminate them
- supporting understanding of emotional skills and regulation and providing language models to help individuals discuss this
- managing the environment in terms of secure places, structures and routines, to build social relationships and understanding.

Little is known about the implications of progressive conditions in terms of the well-being of young people with deafblindness, but the following strategies are identified in the literature:

- truth is important – there should be an openness to discussion with clear information given in the individual's preferred communication formats
- adaptations for changes are likely to be effective only when the learner is ready, for example, learning braille or using a cane.

Use of technology

Description of educational area
Technology can be a powerful assistance in increasing independence, providing accessibility and assisting inclusion for some deafblind people. Technology designed for people with vision or hearing impairment may however not be suitable for deafblind people because of reliance on the other senses to compensate.

Key findings and implications
While technology is undoubtedly often supportive, it is not an answer to all problems. The use of technology should be thought of as a means to an end and not a goal in itself. Such technology must meet the following criteria.

- It must be individualised, matched to hearing and vision levels, and matched to learners' competence and familiarity with it.
- The deafblind learner must be involved in choosing and choosing to use equipment, understanding how to use it, and having control of its use.
- Individuals' own ways of adapting and using equipment should be respected. It should be inclusive and not isolating of the user.
- Technology should be included within teaching and how learning aims are constructed, e.g. an aim to 'compose' rather than 'write' a story to minimise the need for differentiation. Technology use should be infused into many activities, allowing access through assistive technology and learning to manage it.
- Well defined aims support both teachers and learners.
- At early stages of development, technology can provide highly variable and motivating rewards tailored to individual needs. This can teach agency and control for those who do not usually have a directly accessible response from the environment. Careful use of voice output and similar technological communication aids can support communication development if used flexibly and based on individual need.

Vision and auditory training

Description of educational area
The development of perception is a particularly important part of learning for deafblind learners. With no easy sense to rely on given their combination of vision and hearing impairment, deafblind learners need the best possible chance to learn from sensory information. Most deafblind learners have remaining vision and hearing and use these as primary or important senses though some will use touch.

Key findings and implications
Although sensory rooms are widely used, there is little research into their benefits. In terms of use and enhancement of visual and auditory learning, the following points are noted.

- Using vision and hearing together (or multi-sensory learning) which is often assumed to be best practice for more general teaching, may in fact not be the best approach.
- Individual preferences should be respected. For example, even if vision is considered to be poor, if the learner prefers to use visual means then this should be supported.
- Specialist aids to vision such as ultra violet light, video magnifiers, magnification software and additional lenses will enhance access to text, picture and objects for many learners (including those with multiple disabilities). Importantly, deafblind learners need to be taught to use them effectively.
- Learners will also need support to learn to listen, including using and tolerating hearing aids, cochlear implants and radio systems. Radio systems in particular can support perceptual development and access to learning.
- Learning to listen must be promoted and supported also as a social tool, for example ensuring listening in groups and at break times.

Deafblind learners will be likely to need support to develop effective use of their vision and hearing. Not being able to use vision to alert them to something involving sound and vice versa, means that they are frequently unable to use one sense to promote the other.

Teaching support

Description of educational area
Deafblind learners will almost inevitably need support, because teaching is mostly delivered through the senses of sight and hearing. Fundamentally learners will need support for the three key difficulties they will have: communication, access to information and mobility and orientation. Working one to one with a deafblind person, the educational intervenor enables communication, makes information accessible, and facilitates mobility. Intervenors can allow deafblind learners to be included in educational environments which were not designed for them.

Key findings and implications
Support in the classroom will need to include:

- provision of additional or alternative communication (e.g. sign interpreting, use of symbols or objects of reference)
- adapting or recreating materials to be accessible in other formats (e.g. large print, tactile, braille)
- reading/scribing or otherwise to support text access
- adapting the environment for vision and hearing and for mobility
- providing support/alternatives for hearing (including ensuring resources are available, clean and working, facilitating group working, checking hearing aids)
- providing support/alternatives for vision (turning on lights, providing auditory/signed description, ensuring equipment such as video magnifiers are available and working)

- supporting the development of vision through specialist programmes (such as visual perception development through light stimulation to imitating and copying)
- supporting the development of hearing through specialist programmes (such as teaching responses to sound and vibrotactile understanding)
- supporting/supplementing teaching by preview and review sessions (e.g. a chance to feel the ingredients before making modelling dough or going through the vocabulary about volcanoes)
- providing a sighted guide when required (giving appropriate cues when moving a wheelchair, direct guiding on a trip out of school)
- supporting additional curriculum work which may not be required by other learners in their setting (such as touch typing, learning to use a cane, tactile development sessions).

In more general terms, the following are important for good support.

- The provision of access: modifying and adapting delivery, including for example accessible materials or repeating words out of range of the microphone. For a deafblind learner, TAs or intervenors need to provide access at least as much as support.
- An appropriate environment, where best use is made of lighting, contrast, use of space, and noise and echo reduction. Deafblind learners will also need access to: classroom display, concrete and tactile learning materials, appropriate and appropriately placed technological support for both hearing and vision, and a seating position in classrooms which is best for their remaining vision and hearing.
- The importance of providing access to social situations. This careful facilitation may include teaching and providing opportunities to practise and consolidate life skills such as: travel, buying lunch, carrying messages and washing hands.
- Providing a learning framework in which the learner can become as independent as possible.
- A clear understanding of job roles and responsibilities by all – e.g. intervenors should work with teachers, and not be viewed as working instead of teachers.
- The importance of training for all who provide support such as specialist teachers, intervenors and classroom staff.
- A consistent role for MSI specialists from pre-school to the transition to adult services.

Teaching strategies

Description of educational area
Conventionally, education is delivered primarily through visual and auditory means. Spoken words, pictures and demonstrations form the key parts of teaching, including in special schools. Learning in ways which do not require vision and hearing necessitates different and adapted means to enable and reinforce learning.

Key findings and implications

- Learners need to feel secure and this can be supported by secure relationships in the education setting.
- The use of appropriate sensory channels is important. For some learners this will be visual, for others auditory, or tactile, or even vibration and airflow. A learning media assessment may help identify which sensory channels are most appropriate for the individual learner. Using multiple senses together may not always be effective.
- Use of additional tactile input may be needed to back up vision or learning from listening. In any case, the use of concrete media frequently supports learning.
- Use 'hand under hand'[11] methods which respect individual dignity and allow the pupil to develop independence. It is important to avoid assumptions that this intervention is required.
- Learning should be embedded into real tasks and natural situations. For example learning motor skills in a cookery session such as taking lids off jars and stirring, or learning to read to understand a postcard from a friend or relative.
- Find and use activities (especially ones which can be shared with peers without sensory impairments) which do not require vision or hearing such as cooking, carrying messages and skating.
- Learners may need opportunities to experience language, explore objects, repeat audio visual materials, and ask questions, outside the main 'teaching activity' in pre and post-teaching. In mainstream subject-based classes, knowledge can be assumed which deafblind learners have not acquired incidentally, and in schools for children with complex needs, they may need more experience of an activity or of materials than is available in the session.
- Pace is important, both pausing to allow the pupil to respond but also allowing them to work at a pace which is likely to be slower than other learners.
- Fatigue is a recognised problem for deafblind learners, and everything takes more time. Unstructured play/break time makes demands even greater than in learning activities. Consequently, rest/break times including before 'playtime' may be very important.

Finally, it is essential that teachers and others supporting learners in educational settings use and respond to pupils' communication methods, even if they are different from the ones that they wish the pupil to learn. Deafblind people use a wide range of means to communicate, from gaze and body movement, to speech, sign, print and braille. Without rapid responses to their communication attempts, pupils may learn that their communication is ineffective and cease making the effort. The environment needs to be responsive to their efforts.

[11] 'hand under hand' methods are a way of respecting individuals by using support rather than direction as they learn to touch things. There is more about this approach within the REA and at: Mile, B. (1999). *Talking the language of the hands to the hands*. Retrieved from https://nationaldb.org/library/page/1930

Given the highly individual nature and exceptionality of deafblind learners, there are no strategies which can be recommended for all learners. Instead it is important to be guided by the individual learner, to follow the learner's lead and respond to their initiatives.

Inclusion

Description of educational area

Inclusion can only be effective if the learner's sensory access is ensured. This may involve changes to the environment, resourcing and the provision of support. However, it is important to ensure that adapted environments do not make the learner dependent on adaptations and so unable to cope in the community or wider world.

Deafblind learners will need additional explanation and experience of concepts, flexible support for communication, adaptations and equipment for sensory access. They will need additional time for learning because of the demands of using equipment and adaptations. Additional time is needed because of the fatigue caused by relying on impaired senses and the time needed to learn specialist skills such as access technology and mobility. Inclusion in shared class activities may only be possible up to a point; deafblind learners may be in the same class as pupils with other needs but they may need to be taught in different ways or taught different things. For example, deafblind learners are often taught one to one with a single staff member.

Key findings and implications

Deafblind learners will present significant challenges to educational systems. In mainstream schools they require access to learning through adaptation. Social relationships are difficult and sometimes require adult facilitation. In special schools for individuals with learning difficulties there is often a significant reliance on visual alternatives (in particular for communication, e.g. signs, symbols, and schedules). Therefore deafblind learners will need specialist accommodations in such settings. In special schools for vision impaired or hearing impaired pupils, deafblind learners will be less effective at using the sense on which most of their peers rely. Once again this may present barriers to learning and social interaction.

Recommendations for inclusive practice from the literature include the following.

- The importance of appropriate support for an individual, and the availability of resources in appropriate formats. Ideally these should be arranged so that they do not single out the deafblind learner as being different.
- Enabling participation through Universal Design for Learning by using: multiple means of access (visual, auditory, tactile), multiple ways of engaging with materials, and multiple routes of output (e.g. text, photograph or video). This can help keep individuals motivated and engaged.

- An appropriate environment, which includes: lighting, labelling, hearing technology such as loop systems, and safety in terms of independent mobility. However, it is important that children and young people do not become so dependent on these that they cannot function in the wider community.
- An environment where staff and peers frequently use the same communication methods as the deafblind learner, e.g. sign, symbol or speech. If the learner is at pre-symbolic levels, there needs to be available communication partners who can respond to early communication.
- A recognition of the learner as they see themselves while ensuring that their needs are met. For example, some individuals with acquired deafblindness may consider themselves to be ‘deaf’ and not consider that they have a vision impairment.
- The importance of pace and time. Deafblind learners are generally slower at reading and processing. They may need additional time for handling items and for travel. They may need decreased demands for example, being asked to complete fewer exercises in a maths lesson or there being less of a requirement for them to take part in an assembly to ensure participation.
- Facilitation of social relationships. This may be through peer training, using buddies or through facilitation, e.g. group work in class.
- Professionals must work together. Liaison can be facilitated by a key worker.
- Family, and where possible the pupil, should be included in decision making.
- Training for all staff in the educational setting is beneficial to the learner.
- Preparation is essential to include deafblind learners in education. This is true whether moving into a school, in respect of special events (such as trips) and for every activity and session in terms of adaptation. This should focus on preparing the learner to be independent, to socialise, and to learn.

Considering the evidence and designing support

There is little formal research in relation to deafblindness, in particular in relation to intervention studies. The very nature of deafblindness is that each individual deafblind person has a significantly different profile. For this reason, all research studies and expert author literature must be applied and evaluated on an individual basis. Ideas from any approach or strategy will need to be adapted to match an individual learner. Some broad strategies and ideas will apply, with adaptation, to a number of learners, but most will not apply to all.

Educational practice, as outlined in good practice and intervention based literature suggests that deafblind learners can and do succeed but these successes are likely to be individual and may be atypical. Some deafblind learners will:

- learn to use speech, signs or symbols to communicate about a range of topics, getting their needs met and engaging in social relationships
- gain at least functional academic skills (literacy and numeracy) through adapted materials and delivery
- learn to travel independently in their own environment and to use support to travel in a wider environment
- make friends or establish relationships with others.

In general, such achievements require specialist support because this level of development does not happen without it. The educational strategies outlined in the literature provide ideas of structures which may support learners and ideas which can be adapted, interpreted and delivered in appropriate formats for individuals. There is no precision in the literature as to what works, when and with whom. Since there is no such direct evidence, it is very hard for those in educational settings to design interventions for these exceptional young people in diverse learning environments.

The possibility of seeing progress depends upon: good assessment, good curriculum design, professionals working together, and appropriate aims.

Assessment

In order to see progress, it is important that capabilities can be seen, and that appropriate strategies are put in place. Both of these depend on good assessment. While the REA did not seek to identify assessment procedures, the following are important examples.

- For early years general progress, the Developmental Journals for Vision Impairment,[12] Hearing Impairment[13] and Multiple Needs[14].

[12] Dale, N. J., et al. (2019). Home-based early intervention in infants and young children with visual impairment using the Developmental Journal: longitudinal cohort study. Developmental Medicine and Child Neurology, 61(6), 697-709. doi:10.1111/dmcn.14081

[13] Council for disabled children (2013). Deaf Babies and Children Development Journal – Early

- The Communication Matrix[15] is helpful in relation to communication methods, levels and functions.
- Assessments of functional vision and use of hearing.
- Dynamic assessments identifying the support needed by a learner to succeed.
- Learning media assessments.
- Environmental audits, and systems assessments to ensure opportunities are available for learning.

It is important to recognise that the availability of Welsh versions of these assessments, and educational resources more generally, is often limited. All would need to be supported by a specially qualified MSI teacher (QTMSI) to ensure that the impact of dual sensory impairment is taken into account (see below).

Curriculum Design

In the field of deafblindness, because of the huge variability of abilities and needs (in particular the range of cognitive delay and difficulty which some experience), improvements in assessment scores for one learner cannot be used to design a curriculum suitable for all. In relation to curriculum design however, there are some areas in which there is, from the literature, some common themes which provide a framework for learning. These include:

- flexibility of communication: the use of appropriate methods and means by staff and pupils with built-in progression for some pupils and in relation to student need (including changing needs) for others
- explanation and experience of concepts outside the sensory experience of the pupil: including the development of concepts of number in the environment, the use of pre- and post-teaching, tactile exploration and graduated demands
- equipment and adaptations to allow sensory access: for example, the use of braille, tactile signing, low vision aids, extra time, and technology
- time for specialist activities which other learners may not require: such as mobility and orientation teaching, sensory development, or management of assistive technology.

The Victoria School MSI curriculum[16] provides an important example of a worked through curriculum model for pre-National curriculum level progress for deafblind children.

Support. Retrieved from: https://councilfordisabledchildren.org.uk/help-resources/resources/deaf-babies-and-children-development-journal-early-support

[14] Council for disabled children (2013). Development Journal for Children with Multiple Needs. Retrieved from: https://councilfordisabledchildren.org.uk/help-resources/resources/development-journal-children-multiple-needs

[15] Rowland, C. (2004). *The Communication Matrix*. Retrieved from: https://communicationmatrix.org/

[16] Murdoch, H. McMinn, R. Gopsill, S., McLinden, N. & Smith, G. (2009). *A curriculum for multisensory impaired children.* Birmingham: Victoria School and Sense.

The design and implementation of the educational interventions often requires professionals with specialist training. This is because of the individual nature of deafblind individuals and therefore the individual nature of the interpretation and application of guidelines. In addition, it is because of the need for specialist skills, for example in in relation to: vision training, the use of hearing technology, and alternatives and augmentatives to communication and literacy, such as signing and braille. It requires professionals who can take a researcher-practitioner role. They must be able to assess individual children and modify interventions appropriately based upon evidence of progress. They must also design interventions that increasingly seek to promote young people's independence and agency over time.

Professional roles

Deafblind children and young people present with many different abilities, needs and wishes and each person has different combinations of requirements and aspirations. Because of the unusual and highly specialist nature of these complex needs, specialist staff qualified in deafblindness are needed to navigate the pathways required. Educators (using the term in a general sense to refer to an appropriate adult) must be able to appropriately make use of information from assessments and then make decisions about interventions that may be beneficial to the given child or young person's learning and development. This may draw on a number of different professionals including; QTVIs, QToDs, educational audiologists, habilitation specialists (QHS) and colleagues from professions allied to medicine, such as speech and language therapy and physiotherapy. Other team members will include school and classroom staff (class teachers, SENCos/ALNCos and intervenors for example) and to some extent ophthalmology and audiology professionals.

The complexity of navigating the range of interventions requires multi-agency and collaborative working with the families of learners with deafblindness. The specialist MSI teacher (QTMSI) is the one who has the skills to co-ordinate all the professionals to help to assess, design interventions, and then monitor the deafblind learner. The challenge for the educators involved is deciding upon the appropriate combination of interventions and having the appropriate skills to implement them. QTMSI teachers may be employed in special schools or by a Local Authority service to support education which targets the educational outcomes highlighted in this report, and help schools, parents and children in their educational planning and delivery.

The QTMSI is uniquely placed to provide support for other professionals in terms of bridging the gaps between professionals and bringing together different strands of expertise within a framework which acknowledges the unique nature of deafblindness. As such they help to promote inclusion by also providing individual and specialist advice and support which young people with deafblindness need, as such services are rarely provided for by more generic services. This includes ensuring that services are providing support in accordance with recognised outcomes for young people and that they are monitoring progress with high expectations. While there is no clear single framework for this, local groups, including those in Wales, are working

towards moderating the achievements of deafblind children to ensure that they maintain good service standards.

Appropriate aims

It is important to aim high and expect achievement for deafblind pupils. However, such expectations must take in the range of ability within the deafblind population and begin where they are, not at for example their chronological age. Deafblind people (who by the definition have difficulties with communication, mobility and access to information) miss developmental steps because of their sensory impairments. A child who is just beginning to recognise the existence of other people and social relationships needs more than simply an environment in which objects of reference or signs are used. Before they can learn these, they need to develop intentionality in communication and an understanding of referents. Learners cannot learn to read effectively if they do not have the concepts about which they are reading.

Secondly, for many pupils with and without disabilities, the most important aspects of school from their perspective are about social relationships and friendships. It is difficult for deafblind learners to initiate and maintain social relationships, in regard to shared communication, shared activities and mutually satisfying friendships. This should be a key aim for all deafblind pupils as it is likely to have considerable and enduring effects, including on good mental health.

Thirdly, appropriate aims should be supported by appropriate environments and appropriate support. This will include well trained staff who understand the needs of deafblind people, and the least restrictive physical and social environments in which they can make progress.

Information sources

- National Sensory Impairment Partnership (NATSIP)
  https://www.natsip.org.uk/
- Sense
  https://www.sense.org.uk/get-support/information-and-advice/support-for-children/
- Perkins School (Boston, USA) webinars in deafblindness
  http://www.perkinselearning.org/videos/webinar/deafblindness

Contacts

Further information about this document is available from the following.

- Dr Liz Hodges

https://www.birmingham.ac.uk/staff/profiles/education/hodges-elizabeth.aspx

- Welsh Government

Welsh Government: additionallearningneedsbranch@gov.wales

Glossary

braille	the most commonly used tactile reading and writing system by people with vision impairment who cannot access print materials
BSL	British sign language
educational strategy	umbrella term used to describe an area of intervention (e.g. literacy, communication)
habilitation specialist	specialist professional providing mobility and daily living skills training for people with vision impairment
intervenor	specialist support worker with a one to one role with the deafblind individual
JCQ	joint council for qualifications
MSI	multi-sensory impairment
QHS	qualified habilitation specialist
QTMSI	qualified specialist teacher of pupils with multi-sensory impairment (deafblindness)
QToD	qualified teacher of the deaf (of hearing impairment)
QTVI	qualified teacher of children and young people with vision impairment
REA	rapid evidence assessment
TA	teaching assistant