

# Supporting sight impaired, and severely sight impaired older learners

## 1. Introduction

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This briefing sheet provides information for course organisers and teaching staff to aid older learners with sight impairment to maximise their learning experience. It includes some facts about sight impaired, and severely sight impaired people and addresses some of the barriers that they face. Then it looks at the impact on learning these barriers can have, and offers some suggestions for improving the learning environment. This is followed by some approaches to consider and information about reading and access to text, as well as a list of useful organisations that can provide advice or services.

## 2. People who are blind or partially sighted

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The QIA Excellence Gateway states that there are over a million sight impaired and severely sight impaired people in Britain and this number is growing as the population ages. The form required for registering sight impairment is the Certificate of Visual Impairment (CCVI) see the UK Vision Strategy [www.rnib.org.uk/ukvisionstrategy](http://www.rnib.org.uk/ukvisionstrategy)

Of the adult population registered as severely sight impaired in the UK:

- 4 per cent are unable to tell light from dark
- 35 per cent have a hearing loss
- 29 per cent read ordinary print
- 3 per cent use Braille
- 58 per cent have an additional physical disability
- 4 per cent use a guide dog.

Of all sight impaired people 88 per cent are aged 60 or over and 8 per cent are severely sight impaired from birth. The most common cause of sight impairment in people over 60 is macular degeneration which is the loss of central vision; it does not lead to total blindness.

<http://excellence.qia.org.uk/page.aspx?o=100738>

People are more likely to have sight problems as they get older.<sup>1</sup> In many cases, sight declines gradually and is perceived as “just part of getting older”, rather than as a disability. Many older adults are reluctant to disclose their sight impairment and, even if they do, are unlikely to have had a full assessment of their needs. The needs of this group should be recognised and those working with older people should be alert to signs which may indicate sight impairment.

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<sup>1</sup>Brennam. *Spirituality and psycho-social development of middle aged and older adults with vision loss – Journal of Adult Development.* Evans JR, Fletcher AE, Wormwold RP, *Depression and anxiety in visually impaired older people – Ophthalmology.*

In order to gain some understanding of the impacts of sight impairment visit the Sim-dis website which provides a collection of computer based artifacts that simulate aspects of impairment. Although no simulation can give the true feelings of what it is like to have an impairment, it is hoped the simulations will provide 'food' for thought and promote enlightened discussion, which will lead to a better understanding.

<http://www.techdis.ac.uk/resources/sites/2/simdis/index.htm>

### 3. Barriers

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People with sight impairment and severe sight impairment can face many challenges in their day-to-day lives. These can be specific tasks such as reading, writing, shopping, food labeling, medicine labeling, facial recognition, communication, mobility, and socialisation. Greater problems can exist in accessing services including health, social care, housing, learning, physical activities, leisure, transport and in being adequately assessed and receiving a suitable service.

Not surprisingly, many older people with sight impairment confront even more barriers, for example:

- age related health problems
- declining physical mobility
- being unaware of their rights
- lack of age specific information to make informed choices
- increased loneliness and isolation
- crime and fear of crime
- lack of confidence
- loss of independence
- lack of emotional support, which is linked to increased depression
- being under-valued
- low incomes and additional financial commitments - three out of four older people with sight impairment or severe sight impairment live in poverty or on its margins, living on less than half the mean national income<sup>2</sup>
- some public buildings such as theatres, cinemas, libraries, hospitals and surgeries, are not designed to be accessible, this can lead to social exclusion.

However, all older people can benefit from learning activities which offer the opportunity to maintain and develop listening, memory and concentration skills as well as offering a 'safe' point of social contact.

### 4. Impact on learning

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Fully-sighted people use sight in the process of learning, for instance by:

- i) Writing manually is virtually impossible for a severely sight impaired person, although those who lose their sight in later life may still be able write by hand, even if they can't read what they have written! This problem can be solved for some people by printing each character, using a thick black marker pen in order to make it clearer. Learners

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<sup>2</sup>RNIB. *Unseen. Neglect, isolation and household poverty amongst older people with sight loss.*

with good residual vision may also prefer to write manually. Individuals with poor residual vision may rely on keyboard access, a Braille note-taker or, increasingly, a personal computer (PC).

- ii) Observation may be easy or impossible, depending on the level of residual vision.
- iii) Certain practical activities may be unrealistic for a person with a severe sight impairment but being partially sighted alone does not prevent physical activity.
- iv) Reading as a process of accessing information may rely on any combination of standard print, large print, Braille, Moon or audio technology. (See page 5)

Obviously not all of these options are available to sight impaired or severely sight impaired people and it is particularly important to ask people what will help them most, as the support each individual requires may be very different.

#### a) **The learning environment**

- aim for clear signposting and lighting around and inside the site
- ensure that there is clear labelling of entrances, exits, direction to class rooms and other essential facilities
- remember to use contrasting colours
- adjust lighting and seating for individuals. Generally good lighting is helpful, but there may be a need for task lighting for some activities. For some learners too much light can be a hindrance, and glare from shiny surfaces can be very distracting. Many learners who are partially sighted cannot tolerate bright light.
- allow extra table space to accommodate large papers, extra equipment etc.
- when talking make sure you stand in a well-lit place, facing people, but not directly in front of a window, as your face will then be in shadow
- ask speakers to introduce themselves by name in group discussions
- eliminate background noises as much as possible and speak clearly
- take care where you place visual aids.

#### b) **Course information**

- include public transport routes and stopping points near to the learning location
- include car parking and dropping off arrangements for disabled people
- investigate the promotion of course information via local radio stations and talking newspapers
- explore the use of the internet, ipods/ mp3 players and podcasts.

#### c) **Approaches to consider**

- ensure that written materials are clear and simple
- produce materials in advance to allow time for them to be put into Braille or other forms
- prepare and distribute handouts in advance so that people with sight impairments can have them to hand
- reading aloud is an efficient method for conveying the content of short documents
- always remember to read out what is written when using a whiteboard, overhead transparency or PowerPoint presentations, and explain fully any diagrams, illustrations, acronyms or videos you use.
- in general use black or blue pens - not red or orange on a whiteboard. It is important to check colour preferences with your learner, also whether the screen is too bright as this could cause physical pain.

- closed circuit cameras or smaller miniaturised cameras (Webcams) could be used to display a clear close-up view of a demonstration on a large screen
- some people find it easier to use a tape recorder, as it may be the most efficient way for them to review materials and ideas
- some learners may need particular assessment or examination arrangements such as a separate room, extra time, readers or scribes for written tests. Break times are important, and will increase the total time required.

## 5. Ways of reading

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Sight impaired and severely sight impaired people have the same information needs as everyone else. Many feel that one of the most important routes to independence is to be able to read things for themselves. To help empower learners, ask them which option, or combination of the following options, they would prefer.

### a) Print

Nearly half of all people with sight impairment can read ordinary print and some are able to read newsprint, while others require magnification or large print of varying sizes. However, reading a long document can be laborious, slow, and exhausting. In collecting and preparing accessible materials the first thing to consider is the individual's level of sight. Ideally, print resources should be customised for each student. Computers make the production of customised materials infinitely easier and better, with large font sizes available on screen or in print.

### b) Handwriting

People who have some vision or have lost their sight in later life may still write by hand. Signing documents and filling in forms can be difficult, especially when the person can't see where on the form they are supposed to write. Writing aids such as signature guides, writing frames and thick pens can help. The latter can be solved by designing more legible forms.

### c) Clear print

Clear Print is an approach to designing and producing printed materials that take into account the needs of sight impaired readers. The solutions are straightforward and inexpensive, focusing on some basic design elements. Clear print makes reading more comfortable and less tiring for partially sighted readers, especially when it is combined with improved lighting. It also makes reading more attractive and less daunting. Clear Print differs from large print in the size of the type used (known as point size). Clear Print documents use a minimum type size of 12 point (although RNIB recommends 14 point to reach more customers with sight problems). Legibility depends on more than print size. The following are vital in designing accessible print materials:

#### Print quality

- fonts: a plain sans serif font, such as Arial, is ideal
- avoid printing in blocks of capital letters
- type weight: bold print is more legible because it gives better contrast; with bold print many learners can read a smaller font
- contrast: aim for a good contrast between type and the background (e.g. matt white or pale yellow)
- photocopies are not recommended, but where they are used ensure they maximise contrast

## Format

- format: an A4 format is easier to handle than oversized sheets
- spacing: legibility is improved by using double line spacing, as well as wide margins, individuals may have a preference for a weighted margin
- for handouts and similar materials, concise sentences and short paragraphs will be helpful
- avoid thin or glossy types of paper; thin paper can cause print to show through the page, white glossy paper reflects light, which may cause glare. Matt paper is recommended.
- print on one side of the paper only, to avoid a shadow
- avoid placing text over a background illustration or pattern
- reformatting: when rewriting in large print some reformatting may be required.

### d) Large print

For many people with sight impairment, larger print is essential. No single size is suitable for everyone but most people prefer their large print in the range of 16 to 22 point. However, the best print is not necessarily the largest. The larger the print the fewer letters or words can be viewed at one time, which can destroy word shape and inhibit reading speed and fluency. You can produce simple large print documents yourself in-house, but more complex jobs may need to be sent to a commercial printer. This will avoid photocopying which may cause distortion, and having large sheets which highlight individuals' difficulties.

### e) Braille

Although Braille is the major tactile code in use today, it does not offer universal access to reading by touch. 200,000 adults in the UK are unable to read print, but only an estimated 13,000 of these are active Braille readers. Some adults may have a low level of tactile sensitivity or may find its relatively complex code difficult to learn.

Braille uses patterns of raised dots to represent letters and numbers that can be read by touch. It is based on a system of six dots, like the design on a domino: it consists of 63 symbols made up of all the possible variations of these dots. 26 of these represent the letters of the alphabet and they can be used to produce a letter-by-letter copy of print. This is known as Grade 1 or uncontracted braille. It is seldom used, as it takes up a lot of space and is comparatively slow to read.

Grade 2 braille was developed to reduce the size of books and make reading quicker. Other symbols are used to represent common letter combinations, for example 'OW', 'ER', and words such as 'AND' and 'FOR'. There are also specific Braille codes for the specialist subjects of maths and music. RNIB have a Braille Service that can translate text, grids and diagrams into Braille. There are also some local associations that provide this service.

### f) Moon

Moon is a line-based tactile code that is based on the familiar shapes and signs of the print alphabet. It is a larger size so it has limitations. The alphabet consists of only nine characters, their meaning depending on which way they are used. This makes it particularly appropriate for those who lost their sight later in life and have been accustomed to reading print or have assimilated a sight vocabulary. It is also very useful for those older people who have lost the sensitivity in their fingertips as a result of a specific medical condition. Some people use Moon because they can't read Braille, others use it as a communication end in itself or as a means of building tactile skills prior to learning braille.

### g) Raised diagrams

Sight impaired and severely sight impaired learners are usually provided with text materials in braille, audio or large print, but the pictures, diagrams and maps (collectively "graphics") which accompany the text materials are often omitted or only very briefly described. Visual graphics can be converted into tactile graphics, even for the highly graphical information contained in scientific materials and maps, and can be a very valuable resource.

#### Tactile diagrams are useful when:

- the learner is print-impaired, and has some tactual ability
- it is a novel concept not easily described in words
- the actual object is unavailable for touching
- the shape / form / pattern is important
- illustrating scale and relationships: biology, maps, technology.

RNIB National Centre for Tactile Diagrams offer a service:

<http://www.nctd.org.uk/WhatareTGs.asp>

### h) Access technology

Technology is an important part of life today and without the ability to use emerging technologies sight impaired and severely sight impaired older people are excluded from the opportunities and experiences technology can offer them. Access technology, sometimes called assistive technology, covers a wide range of devices and software applications that enable people with disabilities to carry out tasks independently. This technology has had a huge impact on the capacity of these people to access information.

Visually impaired learners should be encouraged to learn to touch type as this allows easier access to computers. Then they should be introduced to adaptive technology such as JAWS or SuperNova etc. This software intelligently recognises the text and graphics that make up Windows and gives access to applications including the Internet and email.

### i) Screen magnification

This software can magnify text, menus and icons on a computer screen up to 32 times. As the amount of viewable area of the screen is restricted, a large monitor is usually used to effectively increase the viewable area on the screen. It can also provide high contrast colour schemes, replace problem colours on the screen and create high visibility mouse pointers.

### j) Speech

A screen reading program sends the text displayed on the screen to a speech synthesizer. The synthesizer is then able to speak the full screen, a line, a word, individual letters or the phonetic equivalent of a letter and punctuation. A screen reader allows menus, dialog boxes, tool tips and system messages to be read back.

- Talks as you type, by character, by word or both.
- Read word, line, web page, document or entire Window.
- Listen to Windows - spoken prompts allow navigation through menus, dialogs, file systems and other Windows controls.
- Reads or spells out any text on screen: documents, menus, web pages, emails.
- Reads icons and Internet graphics labels and announces font and style information.

### k) Braille Embossers

They print braille output from a computer by punching dots onto paper. They connect to the computer in the same way as text printers and can also be connected to notetakers and other devices with a serial or parallel port. Used in conjunction with the embosser is braille translation software that translates printed text into braille.

### l) Notetakers

Are portable devices that are used to take notes, record and organise information. They are useful for students to take notes. There are many different devices available from specialised notetakers, to digital memos and cassette recorders. Specialist notetakers will have a braille or a QWERTY keyboard and no screen. They feed back information by speech and/or braille output.

The RNIB provides factsheets on all types of access technology and can help with assessment of equipment needs. [http://www.rnib.org.uk/xpedio/groups/public/documents/PublicWebsite/public\\_rnib002927.hcsp](http://www.rnib.org.uk/xpedio/groups/public/documents/PublicWebsite/public_rnib002927.hcsp)

## 6. References

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JISC TechDis. ***Visual Impairment.***  
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## 7. Contacts

<p>The Association of Blind and Partially Sighted Teachers and Students  <a href="http://www.abapstas.org.uk/">http://www.abapstas.org.uk/</a></p>	<p>BM Box 6727          London, WC1N 3XX          Tel: 01484 690521 <a href="mailto:membership@abapstas.org.uk">member-ship@abapstas.org.uk</a></p>	<p><i>National organisation of visually impaired people which focuses on education and employment issues</i></p>
<p>Association of Blind Asians  <a href="http://www.aba-uk.org/">http://www.aba-uk.org/</a></p>	<p>RNIB building          Falcon Way, Neasdan Lane          Neasdan NW10 1RN          Tel: 020 84389130</p>	<p>Advice and signposting in Greater London.</p>
<p><u>British Computer Association of the Blind</u>  <a href="http://www.bcab.org.uk/">http://www.bcab.org.uk/</a></p>	<p>The Secretary          BCAB, C/O RNIB          58-72 John Bright Street          Birmingham B1 1BN  <a href="mailto:info@bcab.org.uk">info@bcab.org.uk</a></p>	<p>An organisation of visually impaired people who use (ICT) Information and Communications Technology</p>
<p><u>British Wireless for the Blind Fund</u>  <a href="http://www.blind.org.uk/">http://www.blind.org.uk/</a></p>	<p>10 Albion Place          Maidstone          Kent ME14 5DZ          Tel: 01622 754757  <a href="mailto:info@blind.org.uk">info@blind.org.uk</a></p>	<p>Supplying specially adapted radio and cassette recorders</p>
<p><u>Calibre</u> Audio Library  <a href="http://www.calibre.org.uk">http://www.calibre.org.uk</a></p>	<p>Aylesbury,          Bucks HP22 5XQ          Tel: 01296 432 339</p>	<p>This library has a free lending collection of audio books in the UK in open format</p>
<p><u>COTIS</u>          Confederation of Transcribed Information Services  <a href="http://www.cotis.org.uk/">http://www.cotis.org.uk/</a></p>	<p>Project Office          67 High Street          Tarporley          Cheshire, CW6 0DP          Tel: 01829 733351  <a href="mailto:administrator@cotis.org.uk">administrator@cotis.org.uk</a></p>	<p>Promoting the provision of information in alternative formats to print. Self-help grouping of tape recording services and cassette libraries.</p>
<p>Depression Alliance  <a href="http://www.depressionalliance.org/index.html">http://www.depressionalliance.org/index.html</a></p>	<p>212 Spitfire Studios          63 - 71 Collier Street          London N1 9BE  <a href="mailto:information@depressionalliance.org">infor-mation@depressionalliance.org</a></p>	<p>Working to relieve and to prevent this treatable condition by providing information and support services.</p>
<p>Infosound  <a href="http://www.infosound.org.uk">http://www.infosound.org.uk</a></p>	<p>PO Box 20          Brighton BN2 7XX          Tel: 01273 301222  <a href="mailto:info@infosound.org.uk">info@infosound.org.uk</a></p>	<p>Free, accessible, impartial and relevant information to vision-impaired people</p>

<p>Listening Books</p> <p><a href="http://www.listening-books.org.uk">http://www.listening-books.org.uk</a></p>	<p>12 Lant Street London SE1 1QH Tel: 020 74079417 <a href="mailto:info@listening-books.org.uk">info@listening-books.org.uk</a></p>	<p>Provides a postal and internet based audiobook library service to anyone who finds it difficult to access printed books.</p>
<p>Living Paintings Trust</p> <p><a href="http://www.livingpaintings.org">http://www.livingpaintings.org</a></p>	<p>Queen Isabelle House Unit 8, Kingsclere Park Kingsclere, Newbury Berkshire RG20 4SW Tel: 01635 299771 <a href="mailto:library@livingpaintings.org">library@livingpaintings.org</a></p>	<p>A national charity that helps blind and partially sighted adults and children by offering a free library service</p>
<p>The Organisation of Blind Africans &amp; Caribbeans (OBAC)</p> <p><a href="http://www.obac.org.uk">www.obac.org.uk</a></p>	<p>1<sup>st</sup> floor Gloucester House 8 Camberwell New Road London SE5 0RZ Tel: 020 7735 3400 <a href="mailto:info@obac.org.uk">info@obac.org.uk</a></p>	<p>Ensuring blind and partially sighted Africans and Caribbean people access relevant services, influence decision and policy makers.</p>
<p><u>Royal London Society for the Blind</u></p> <p><a href="http://www.rlsb.org.uk/">http://www.rlsb.org.uk/</a></p>	<p>Dorton House Wilderness Avenue SEAL, Nr. Sevenoaks Kent TN15 0EB Tel: 01732 592500 <a href="mailto:enquiries@rlsb.org.uk">enquiries@rlsb.org.uk</a></p>	<p>Providing a wide range of education, training and employment for blind and partially sighted people of all ages</p>
<p>Royal National Institute for the Blind. (RNIB).</p> <p><a href="http://www.rnib.org.uk/">http://www.rnib.org.uk/</a></p>	<p><i>105 Judd Street London, WC1H 9NE Tel: 020 7388 1266 <a href="mailto:helpline@rnib.org.uk">helpline@rnib.org.uk</a></i></p>	<p>Charity offering information, support and advice to over two million people with sight problems.</p>
<p>Royal National Institute for the Blind. (RNIB). <u>National Centre for Tactile Diagrams</u></p> <p><a href="http://www.nctd.org.uk">http://www.nctd.org.uk</a></p>	<p>RNIB Centre for Accessible Information 58-72 John Bright Street Birmingham, B1 1BN Tel: 0845 257 2587 <a href="mailto:info@nctd.org.uk">info@nctd.org.uk</a></p>	<p>Providing tactile diagrams, maps and pictures which allow access to visual graphical information.</p>
<p>Royal National Institute for the Blind. (RNIB). National Library Service</p> <p><a href="http://www.rnib.org.uk/">http://www.rnib.org.uk/</a></p>	<p>Tel: 0845 762 6843 or 01733 37 53 50 Minicom: 0845 758 5691 <a href="mailto:cservices@rnib.org.uk">cservices@rnib.org.uk</a></p>	<p>Free library service for blind and partially sighted readers</p>
<p>Talking Library for the Indian Blind</p> <p><a href="http://www.aba-uk.org">http://www.aba-uk.org</a></p>	<p><i>Association of Blind Asians Room 16, Zenith House 210 Church Road Leyton, London E10 7JQ Tel: 020 8558 6972 <a href="mailto:info@aba-uk.org">info@aba-uk.org</a></i></p>	<p>Talking Books in Punjabi, Hindi and Urdu, can be borrowed by blind and partially sighted people and elderly people who have difficulty in reading.</p>

<p><u>Talking Newspaper Association of the UK</u> T.N.A.U.K.  <a href="http://www.tnauk.org.uk/">http://www.tnauk.org.uk/</a></p>	<p>National Recording Centre Heathfield East Sussex TN21 8DB Tel: 01435 866102 <a href="mailto:info@tnauk.org.uk">info@tnauk.org.uk</a></p>	<p>Providing national newspapers and magazines in audio and by MP3 download, and in digital full-text format by, e-mail, download and CD-ROM.</p>
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**This series of briefing sheets aims to provide an introduction to a variety of lifelong learning issues for older people. Other titles are available.**

Requests for briefing sheets in other formats, such as large print are welcomed, we will be pleased to consider your request. Copies of this and other sheets are available from NIACE:

21 De Montfort Street  
Leicester, LE1 7GE  
Tel: 0116 204 4289  
Email: [information@niace.org.uk](mailto:information@niace.org.uk)

Briefing sheets are also available on the website at:  
<http://www.niace.org.uk/services/information-services/briefing-sheets>

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