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Strategies - Managing the environment

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Minimising clutter

Clutter can be defined as anything that occurs in the environment that is not necessary for the core functions of a given space at a given time. It can be visual, auditory, tactile or olfactory. Tactile clutter includes items that obstruct routes.

Many sighted autistic young people have significant sensory difficulties and sensory experiences that differ from those of their typically developing peers. These sensory difficulties include not knowing which sensory information in the environment is important, and becoming easily overloaded with sensory information. Thus, minimising clutter is important for sighted autistic young people, and many practitioners provide a low arousal environment for them.

For young people with visual impairment and autism who have some functional vision, minimising visual clutter may be very important. There are many ways in which this can be achieved.

For example, it is helpful to store school bags and coats in a separate area outside the classroom. If they are left in the classroom they provide an unnecessary visual distraction.

Thought should be given to wall displays and notice boards which may be potentially distracting or over-stimulating for young people with visual impairment and autism.

Book shelves and other open shelving may also be distracting or over-stimulating. Storing equipment and books out of sight reduces visual distractions for young people who have some vision and removes items the young person might otherwise fiddle with.

Minimising all sensory clutter (not just visual clutter) may be essential for young people with visual impairment and autism, whether they have some useful vision or not.

With regard to sound, see providing a good auditory environment.

Tactile displays are best kept free of any non-essential items that are likely to distract young people. It is important that an individual who is feeling items in a display should not be distracted by inappropriate or irrelevant items.

Clutter on the young person's own desk top can be minimised by providing ample storage space for work items. As well as reducing visual distractions for the young person who has some vision, this supports the individual to locate items. It also reduces opportunities for the young person to fiddle with items, which would be distracting.
Minimising clutter is a feature of managing the environment which contributes to:

- the promotion of learning
- the promotion of mobility and independence
- supporting receptive communication.

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The people in the environment

It is essential to remember that managing the environment is not just concerned with the physical environment. A central feature of the environment is the people the young person encounters. Young people with visual impairment and autism do not readily understand other people and can find them very unpredictable. This can significantly raise the level of anxiety in the individual and make it difficult for him / her to focus on educational activities. Young people with visual impairment also have some difficulties understanding other people; this is because of their restricted, or absent, visual access to what other people are doing and to their body language, facial expressions and gestures. For the young person with visual impairment and autism, it is vital that people behave empathically. Strategies that enable practitioners to behave empathically are described throughout this guidance material.

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The classroom environment

Young people with visual impairment benefit from familiar environments. When furniture and educational materials remain in the same place they feel more secure and confident. They can also more easily navigate around the room and find the items they need to participate fully in lessons.

Sighted young people with autism also benefit from familiar environments. They need predictability and consistency. An autistic young person may become very confused and anxious if furniture is rearranged: the room may appear totally different even if only a minor change is made.

Young people with both visual impairment and autism, then, require a familiar classroom environment. Some strategies for managing

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The classroom environment

are discussed in the section on Promoting learning. They are:

- providing zoning
- providing a constant classroom layout / designated seat
- providing a work station
- providing a carpet tile to indicate to the young person where to sit.

Other strategies for managing the classroom environment are discussed in the section on Promoting mobility and independence. They are:

- minimising clutter
- using zoning to support navigation around the classroom
- providing a classroom layout that remains constant and providing a designated seat
- labelling items in the classroom and cloakroom.

See also the following strategies in this section on Managing the environment

- minimising clutter
- providing a good visual environment: effective lighting
- providing a good visual environment: using colour and contrast effectively
- providing a good auditory environment

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The general school environment

Young people with visual impairment and autism require a familiar environment throughout the school. Strategies for managing the general school environment are discussed in the section on Promoting mobility and independence. They are:

- minimising clutter
- providing trails and landmarks
- labelling rooms

See also the following strategies in this section on Managing the environment

- minimising clutter
- providing a good visual environment: effective lighting
- providing a good visual environment: using colour and contrast effectively
- providing a good auditory environment

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Providing a good visual environment: effective lighting

Many young people with visual impairment have very specific needs in relation to lighting. The nature of the lighting that they require depends on their vision. Good natural and artificial lighting is important for all young people. Some who have poor vision also need task lighting in addition to general lighting. Task lighting can be used to illuminate their close work. A few individuals require a low level of lighting that does not cast shadows or cause glare. Glare that is caused by the reflection of light on shiny surfaces or direct sunlight is a problem.

Young people with visual impairment are likely to have similar needs in relation to lighting. In some cases, sensory sensitivities may make the reduction of glare and the provision of good lighting even more important.

The use of lighting zones within a room can provide the flexibility that is required to meet the lighting needs of different individuals. Lighting zones enable different areas of the room to be controlled by separate switches. For example, there can be several different lighting zones in the main body of the classroom. It may be necessary to provide less illumination immediately in front of the white board. A system such as this can benefit all young people, not just those with visual impairment and autism. Dimmer controls can help to individualise lighting levels even further.

It is important to bear in mind that fluorescent tubes can present problems. This is because they sometimes flicker and may also be the source of sounds. The flickering may be so slight that it is not visible to the majority of staff and young people. However, a young person with visual impairment and autism may find it very aversive. Bob is a case in point; he copes better in a room with only natural light, even if the staff regard it as badly lit. Fluorescent tubes can also hum or crackle, particularly when about to fail. The sound may be so slight that it is not audible to the majority of staff and young people. However, an individual with visual impairment and autism may find it very aversive.

Anti-glare glass coating and blinds can help to control direct sunlight. However, vertical and horizontal blinds need to be used with great care. This is because it is important to avoid the very marked contrasts they can cause when they are partially open. The alternating areas of shadow and bright light, with very sharp boundaries, can cause serious difficulties for young people who have a little sight. If these areas of shadow and bright light fall over an individual's work surface, they may make it very difficult for the young person to see his / her work. They may be particularly distracting or worrying for a young person with autism as well as poor sight. If these areas of shadow and bright light fall on the floor, they can cause difficulties with mobility, especially as the location of the shadows will change with the position of the sun. Some young people with poor vision are unable to differentiate between changes of floor level and the shadows cast onto the floor.

It is impossible to eliminate all potential distractions from the environment. However, an awareness of what may cause problems is important. Staff should constantly monitor the behaviour and moods of young people with visual impairment and autism for indications that they are experiencing difficulties. They should also constantly monitor the environment in order to judge whether it is becoming difficult for young people to manage. If a practitioner becomes aware that a young person is becoming stressed / anxious / overloaded, he / she should take steps to reduce the stress / anxiety / arousal level and promote the young person's emotional wellbeing.

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Providing a good visual environment: using colour and contrast effectively

For those young people with visual impairment and autism who have no useful vision, colour and contrast are not relevant. However, for those who have some useful vision, it may be important to give careful consideration to colour and contrast, using them to highlight critical features of buildings and furniture.

Contrast and colour should be used to distinguish important features such as door handles, edges of rooms, edges of steps, edges of doors etc. However, whilst contrast has to be clear, colours need to be carefully chosen to avoid a palette that may be over stimulating or aversive.

Vibrant oranges and reds are often considered inappropriate for those who have autism.

Similarly, patterns in carpets and on furniture will need to be avoided – both from the perspective of providing clear background and contrast to address young people's visual needs, but also to avoid visual over-stimulation.

A young person with visual impairment and autism may fiddle a great deal with electrical sockets and door handles. Drawing attention to such critical features through colour and contrast may be helpful for young people whose only special need relates to poor vision. However, for those who have autism as well as visual impairment, this might not be so helpful. Consideration has to be given to the needs of all. In some cases, there has to be compromise.

For more information on using colour and contrast effectively, see John (2007).

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Providing a good auditory environment

There are many background sounds in the environment that should be considered in relation to young people with visual impairment and autism. These include sounds from

- lights
- heating systems, especially those with a fan
- air conditioning systems, which can be very noisy
- computers, including laptops
- data projectors
- other young people, whether from within the same room or adjacent rooms
- staff
- outside, which may include young people, staff, lawnmowers, traffic, aircraft, etc.

All of these sounds have the potential to distract young people. Typically developing young people are able to filter out such sounds as unimportant. However, those with visual impairment and autism are less able to do this, and such sounds may be a major barrier to effective learning. Background sounds also contribute to some young people becoming overloaded with sensory stimulation. This is so for Bob, who reports that he has difficulties with humming computers and laptops. Some young people find some sounds aversive. For example, Winnie has difficulty with the sounds other people make.

It is always important to consider the possibility of distracting background sounds ("auditory clutter") being a significant factor in the environment for young people with visual impairment and autism. Such sounds are easily overlooked and considered as "normal" by those without any particular sensitivity.

Acoustic ceilings can help to reduce auditory clutter. These can be fitted in classrooms to reduce sound reverberation and echo. Other ways of reducing auditory clutter include providing curtains and soft furnishings, which help to deaden sounds. Doors should be kept closed when teaching is in progress to minimise distracting and irrelevant noise from outside the classroom. For some young people, it may be important to keep windows closed, though clearly this may be difficult in hot weather. It is important to bear in mind that raised temperatures can make it more difficult for some young people to behave positively.

It is impossible to eliminate all potentially distracting sounds from the environment. However, an awareness that sounds may cause a problem is important.

Staff should constantly monitor the behaviour and moods of young people with visual impairment and autism for indications that they are experiencing difficulties. They should also constantly monitor the environment in order to judge whether it is becoming difficult for young people to manage. If a practitioner becomes aware that a young person is becoming stressed / anxious / overloaded, he / she should take steps to reduce the stress / anxiety / arousal level and and promote the young person's emotional wellbeing.

In some cases it may be possible to prepare young people for an intrusive sound. For example, they could be warned when it is known that maintenance staff will be mowing playing fields or carrying out work involving drilling, hammering or other noisy activities.

The sounds of fire alarms can be problematic for young people with visual impairment and autism. Of necessity such sounds are sudden, loud and unexpected. If a young person has a strong reaction to the fire alarm, it may be advisable to undertake a specific risk management assessment followed by a carefully thought-out procedure to aid evacuation and avoid a potentially dangerous situation in the event of a fire.

A teacher of the hearing impaired or multi-sensory impaired can advise on the provision of a good auditory environment.

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Auditing the environment

It is good practice to audit the environment periodically to ensure that it is meeting young people's needs. Both the classroom environment and the general school environment should be included. An audit tool of potential value is that by Naish et al. (2003).

Some aspects of regularly Auditing the environment are very simple. For example, it involves ensuring that

- lights are working properly, without flickering, humming or crackling
- heating and air conditioning is making no more than the minimum sound
- blinds are intact and functional
- doors and windows close fully, to minimise sounds coming from beyond the classrooms.

Good maintenance of facilities can make an important contribution to young people with visual impairment and autism.

An audit of the environment may reveal that modifications to the building would be in the interests of young people with visual impairment and autism. These may involve relatively minor changes, such as a change of paint colour. Others may be of a more fundamental nature that can only be considered in relation to a new-build or to major re-modelling of an existing building.

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