

## Submission from Gordon N Dutton

Dear Committee Members,

Disability legislation is predicated upon accessibility. For mobility disorders, this necessitates provision of physical access.

For visual disorders, analogous concepts apply, particularly for children whose education is placed at risk when information is difficult or impossible to access through vision. Young children are not aware of what they do not see, and cannot inform those around them of what they are not learning.

Visual impairment in children has many causes, but wheresoever in the visual system the cause is identified, it is the brain that creates the image of the external world that we interpret and through which we move through visual guidance.

Visual impairment in children imposes limitations on perception and attention. This impairs a. access to information, b. social interaction and c. mobility. These limitations include:

*The visual functions served by the back of the brain, (the occipital lobes) comprising:*  
Central vision including visual acuity, contrast sensitivity and colour vision.  
Peripheral vision, or the visual fields  
The perception and interpretation of movement

*The visual functions served by the top of the brain at the back, the posterior parietal lobes:*  
Visual guidance of movement (through the virtual image in the mind, that represents and ideally coincides with the structure of the surroundings)  
The capacity to extract meaningful information from the overall scene  
The ability to give visual attention

*And the visual functions served by the parts of the brain beneath the temples, the temporal lobes:*  
The ability to recognise people and facial expressions  
The ability to recognise objects, shapes and (later) text  
The ability to route find

### With regard to access to information:

Each of these elements of vision needs to be accurately profiled in such a way that all information is rendered accessible at maximum speed of access, either by being made optimally visible to the child, or by being presented in alternative accessible formats, or both.

### With respect to social interaction:

The facial expression recognition distance needs to be known for each child and employed, so that the emotional content of language is supplemented where possible, through vision. Moreover, verbal communication needs to employ the type of language used on the radio, rather than the television (which necessitates visual interpretation of emotion). This approach needs to be adopted by all those who are

in the presence of the visually impaired child, when communicating both with the child and with others.

Concerning mobility:

The educational environment needs to be optimally illuminated and decorated to allow visual guidance of movement where possible, supplemented by tactile and auditory methods of navigation as required. When required, skilled training in mobility is required to empower the child to become independent.

Children need to be happy to learn

To this end, great skill is needed to truly integrate visually impaired children so that they can make lasting friendships and feel included.

Motivated learning is enhanced by rewarded target setting.

This is attainable when the targets are designed to bring out the child's strengths and abilities by being rendered accessible, attainable and attractive.

It is currently argued internationally that teachers of the visually impaired need to be able to be 'inside the mind of the child' to visualise what the child can see, so as to fully understand each child's visual profile, while always working within it (Lueck 2004). Arguably this can only be attained if the child's teachers assess all aspects functional vision themselves, and always work in such a way that they employ the child's profile of strengths and abilities, to maximum effect. This is brought about by presenting an accessible curriculum that has been rendered 'suprathreshold' for each of the child's measured functional visual limitations, and by presenting it by alternative means when this objective is unattainable.

In order to attain this objective it is being recognised internationally that all those who teach visually impaired children need to be fully trained and qualified in visual impairment in childhood, so that they are able to assess functional vision and present the curriculum completely in accessible formats.

The requirements for teachers of children with visual impairments in California are attached. These are similar to those of Germany, the Netherlands and the countries of Scandinavia.

It is the aspiration of this author that future teachers and head teachers serving children with visual impairment in Scotland will be trained to the same standards as teachers in these countries, and that they will be provided with resources to independently assess functional vision. This aspiration can be met by research to identify the highest standards of training internationally, national professional standard setting, adequate investment, progressive implementation of the requisite training & qualifications, long term planning, and remuneration that takes the expertise gained into account.

Optimal attainment levels in children with visual impairment will only be obtained if they and their parents are taught from the earliest stages of development, and throughout their years of schooling, by those who fully understand childhood visual impairment, whether it be due to ocular or cerebral causes. It is this author's contention that new systems of specialist teacher training and qualifications need to be in place if this objective is to be realised.

The cost to the community of long term dependency is considerable, while the benefits of independence for those children with visual impairment, their families and the community are immeasurable.

Visual impairment and blindness in children has a low prevalence. It is therefore a rare phenomenon in individual local councils, which commonly experience difficulties in identifying the requisite budget. A model of national planning and funding of education to meet the needs of visually impaired children warrants consideration.

At present children are registered as visually impaired by consultant paediatric ophthalmologists notifying social work departments. For a range of reasons this is not standardised, while children with temporary visual impairment are not catered for by this system. A formalised national system of educational notification / registration for children, perhaps enshrined in law, also merits consideration.

Your faithfully

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