

Teaching English to Visually Impaired Learners

Session 1. Understanding Learners

What exactly is Visual Impairment?

1. Functional anatomy of the eye

Functionally, the eyeball consists of two parts:

Anterior pole: focuses images on the retina.

Schematically, the visual pathway is: 1: retina- 2: optic nerves- 3: visual cortex. The visual system.

<https://www.youtube.com/watch?v=TY1qiZgddAs>

1.1. Visual functions Hyvärinen (1988)

- Visual acuity: Ability of the eye to define details. Both distance visual acuity (AVL) and near vision (CVA) are important, but it is distance acuity what really determines the degree of vision.
- Visual field: Portion of space that is perceived simultaneously without making movements.
- Contrast sensitivity: This allows you to distinguish the shape from the background.
- Colour vision.
- Oculomotor functions: Difficulties in voluntary control of the eyes are reflected in difficulties in performing all types of tracking. Nystagmus is a disorder characterized by rhythmic and involuntary oscillatory movements of the eyes, in one direction of gaze or in all of them.
- Accommodation: This is the ability to focus on different distances.
- Binocular vision: This is simultaneous vision through both eyes, important for depth perception, hand-eye coordination, and manipulation.
- Ocular adaptation: This refers to being able to function with very different lighting levels.

- Selective visual attention: This is the ability to focus on important visual information, discarding irrelevant stimuli.

1.2. Definition of visual disability

“A person with low vision is someone who, with optical correction, has a visual acuity (VA) in the better eye equal to or less than 0.3 or a visual field (VF) equal to or less than 10°” (WHO 1992).

To be affiliated with ONCE, in addition to having Spanish nationality, the person must have, with their optical correction, a VA in the best eye equal to or less than 0.1 or a VF equal to or less than 10°.

1.3. Degrees of visual disability

Moderate visual impairment:

- VA: Between 0.125 and 0.25.
- CV: Between 11° and 30° or hemianopsia.
- Functionality: Visual reading with low-power aids, at shorter distances, almost normalized speed. Mobility: Close to normal.

Severe loss:

- VA: between 0.05 and 0.1.
- CV: between 8° and 10°
- Functionality: With optical aids (magnifying glasses, microscopes etc) slower than normal. Mobility: Slower than normal, with the aid of a cane in some situations.

Deep loss:

- VA: Between 0.02 and 0.04.
- CV: between 4° and 7°
- Functionality: Shared reading between visual systems (with optical aids and electronic magnifiers) and non-visual systems (Braille, screen reader etc). Mobility: limited. With the aid of a cane in all situations.

Almost total loss:

- VA: Perceives light and knows where it comes from.
- CV: Equal or less than 3°

- Functionality: Cannot read visual characters. Braille and audio. Mobility: through non-visual techniques. Mobility: limited. With the aid of a cane in all situations.

Total loss:

- VA: Absence of light perception
- CV: none
- Reading functionality: Braille and audio
- Mobility: Cane and non-visual techniques.

To learn more about the functionality of different pathologies, consult the document “Student Needs Associated with each Type of Visual Impairment BC_ONCE”.