

Students with visual impairment

Over 40 million people in the world are blind, and over 120 million people have significant Low Vision conditions that cannot be corrected, cured or treated by conventional refraction, medicine or surgery.

This number is expected to double by the year 2020.

(World Health Organization, 2004)

Visual acuity impairment /WHO/:

- Normal vision: 5/5 , 5/7.5 and better
- **Low vision:**
 - Medium – 6/18 – 6/60
 - Severe – 6/60 – 3/60
 - Profound – 3/60 – 1/60, visual field narrowed to 20 °
- **Blindness:**
 - Practical – less than 1/60, visual field narrowed to 5-10°
 - Factual - incorrect / no light perception

Visual acuity 5/5:



Visual acuity 6/18:



Visual acuity 3/60:



Visual acuity 1/60:



Definition of visual impairment in the USA:

- **Legal:**

- a person who is **legally blind** has visual acuity of 20/200 or less in the better eye even with correction or has a field of vision so narrow that its widest diameter subtends an angular distance no greater than 20 degrees
- A person who is partially sighted has visual acuity falling between 20/70 and 20/200 in the better eye with correction

- **Educational:**

- Stresses the method of reading instruction
- Persons who are blind or severely impaired learn to read in Braille
- Persons with low vision can read print /with the help of magnifying devices or large print-books/

Glaucoma:



- A condition when there is excessive pressure in the eyeball, the blood supply to the optic nerve is cut off
- If untreated results in blindness

Cataracts:



Diabetic retinopathy:



Normal vision



Vision with
diabetic retinopathy

Implications for teaching

1. Academic achievement
2. Health implications
3. Methods of instruction

Educational considerations:

- Students with VI have to rely on other sensory modality to acquire information
- Modification of the teaching process necessary
 - Braille
 - Use of remaining sight
 - Listening skills
 - Mobility training

Teaching aids for the blind and partially sighted:



- 1.
- 3.
- 5.

- 2.
- 4.
- 6.

- Scanner with Optical Character Recognition /OCR/ software
- 2. Braille display
- 6. Braille embosser
- 3. Braille writing board
- 5. Braille machine
- 4. Tactile models

Low-vision aids:



Try to read with a magnifier.

Mobility training:

- The long cane
- Symbol cane (identification cane)
- White walking sticks (support cane)
- Guide dogs
- Human guides



When speaking with a person who is blind or has low vision, consider the following tips:

- Identify yourself - don't assume the person will recognise you by your voice.
- Speak naturally and clearly. Loss of eyesight does not mean loss of hearing.
- Continue to use body language. This will affect the tone of your voice and give a lot of extra information to the person who is vision impaired.
- Use everyday language. Don't avoid words like "see" or "look" or talking about everyday activities such as watching TV or videos.
- Name the person when introducing yourself or when directing conversation to them in a group situation.
- Never channel conversation through a third person.
- In a group situation, introduce the other people present.
- Never leave a conversation with a person without saying so.
- Use accurate and specific language when giving directions. For example, "the door is on your left", rather than "the door is over there".
- Avoid situations where there is competing noise.
- Always ask first to check if help is needed.
- Relax and be yourself.

Everyday life



- Offering help or information
- Guiding
- Sitting and getting on/off tram (car, etc.)

- [PE](#) for student with visual impairment
 - 6:48 – 15:41
- Blind football – [Avoy](#)
- 3:35
- [Skiing](#) with a guide

Students with hearing
impairment

Some figures concerning hearing impairment

5 %

360 million

32 million

10 years

Some figures concerning hearing impairment

5 % of the worlds population, it means approx. **360 million** people, has a disabling hearing loss,

and **32 million** of these are children. The numbers also show that on average, people with hearing loss wait as long as **10 years** before seeking help.

- A HI is a decrease in one's ability to hear (perceive auditory information)
- HI ranges in severity from mild to profound

- Deaf
- Hard-of-hearing

- Mild (26-54 dB)
- Moderate (55-69 dB)
- Severe (70-89 dB)
- Profound (90 dB and more)

Hearing Aids:

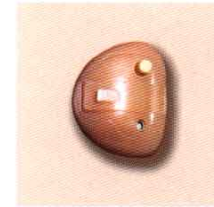
- Worn behind the ear
- Worn in the ear
- Worn in the canal of the ear

Hearing aids make sounds louder, not clearer.

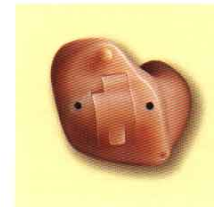
Hearing aid at school



CIC
(Completely-in-the-Canal)
The smallest of all hearing instruments, these are designed to hide more completely in the ear canal and are virtually invisible when worn.



ITC
(In-the-Canal) and HS
(Half-Shell)
Still small and discreet, these models are easy to handle and offer the user additional control functions.



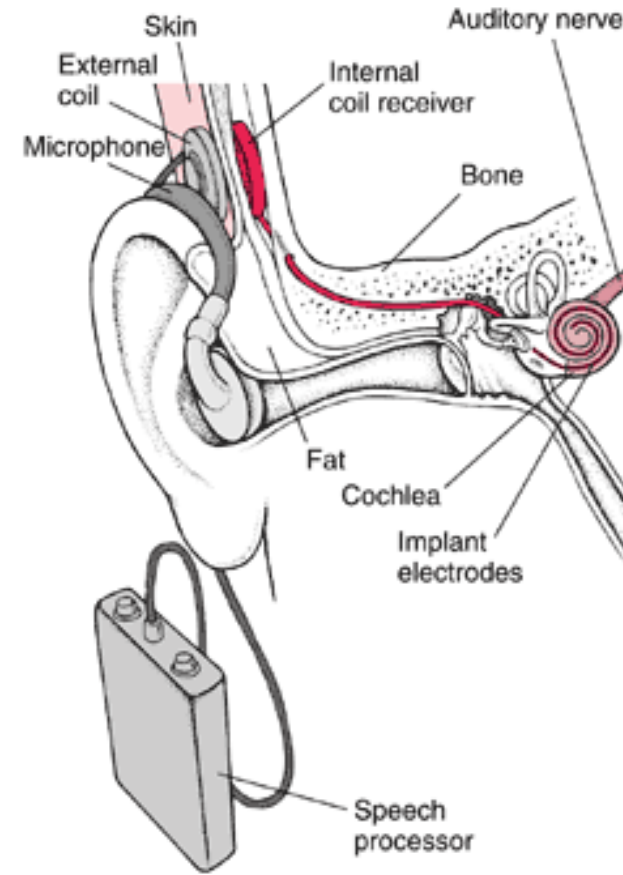
ITE
(In-the-Ear)
This size features the widest selection of user-controlled functions and comfort features.



BTE
(Behind-the-Ear)
These instruments fit snugly behind the ear and can be connected to external sound sources such as TV's or infrared listening systems.

Cochlear Implant:

- A small microphone worn behind the ear
- A small computerized speech processor worn by the person
- An implanted internal coil
- Electrodes implanted in the inner ear





- [Hearing](#) in everyday life
- 3:23 – 5:50

- Loss of hearing is not only about processing information but also about communication and sharing information...

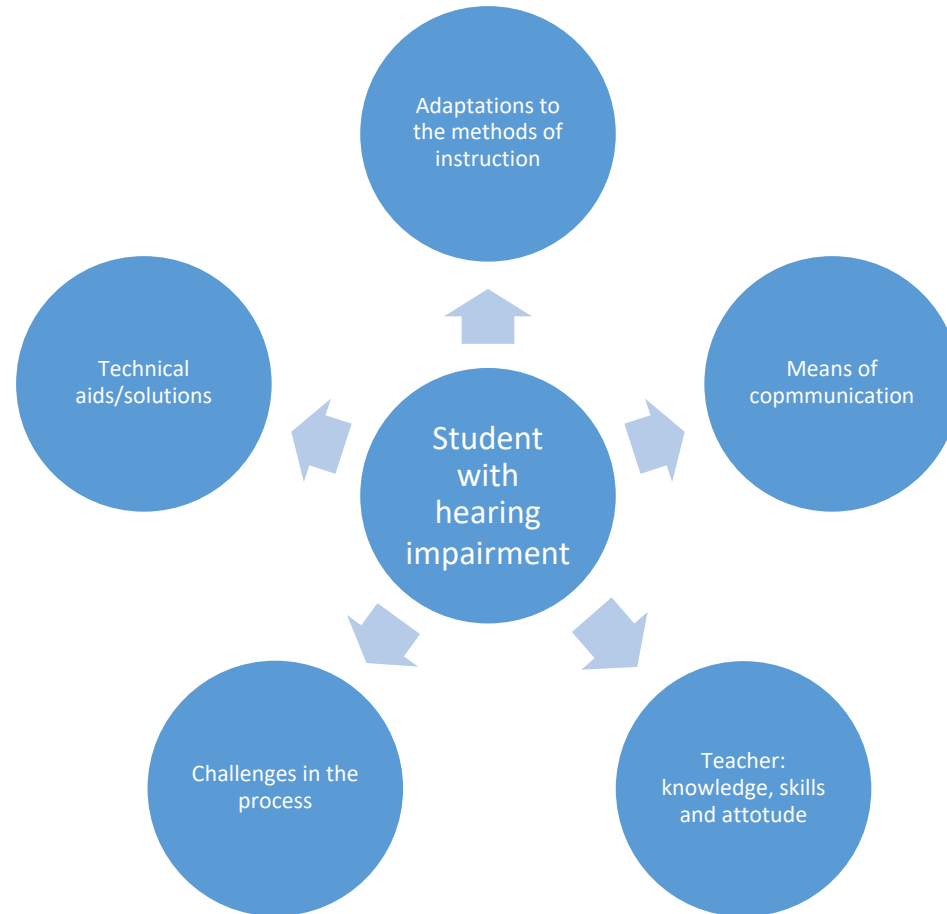
You are a deaf 30 year old man.
You have had very bad stomach
pains for the last 4 days. You
can only drink milk but no water.
You cannot eat food. You also get
a sharp pain in your side when you
take a deep breath. You need to
explain to the receptionist at hospital
what the problem is and you need a
doctor.

UPA
Mina
Eric
WAKONA
7

Approaches to teaching

- Oral approach
- Sign language
- Total communication

In the classroom



- Tips for [classroom management](#)
- Reading and comprehension
 - Complex sentences
 - Sarcasm, irony, metaphor
 - Distorted timeline

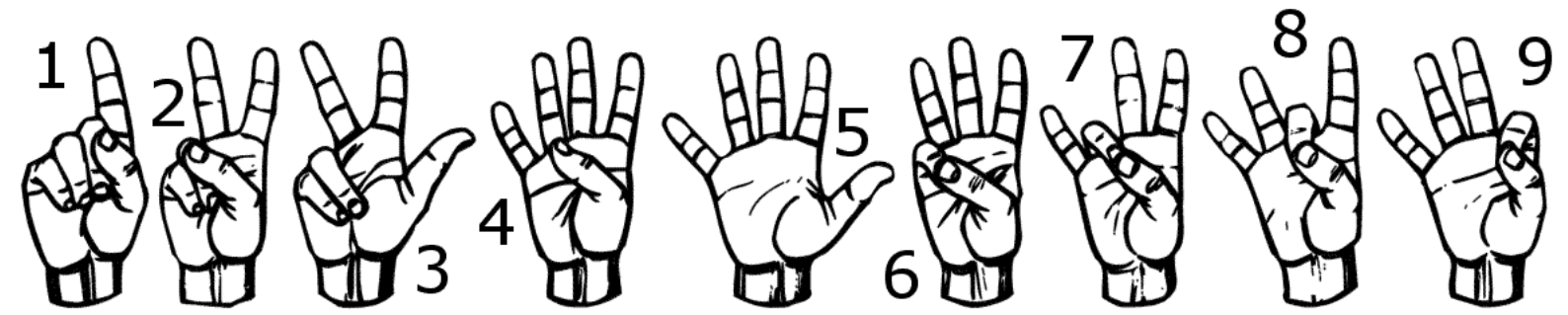
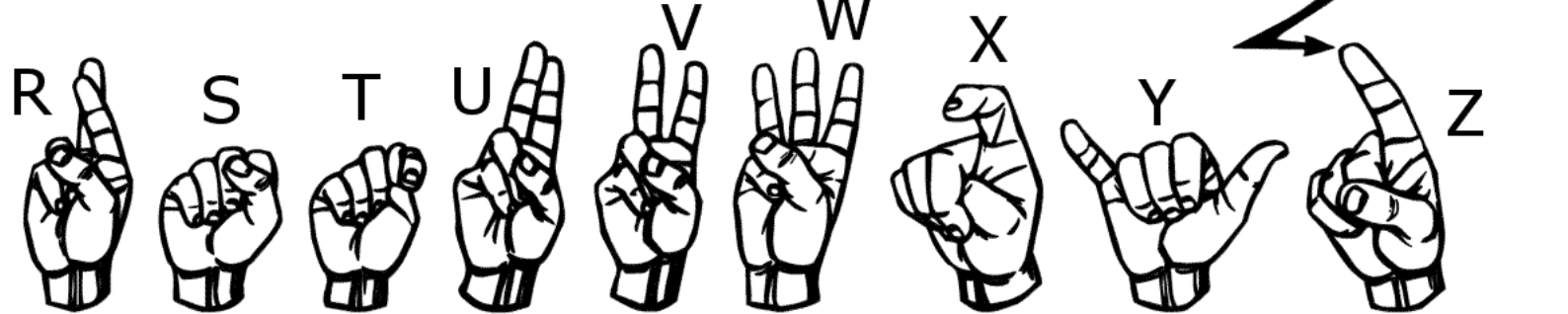
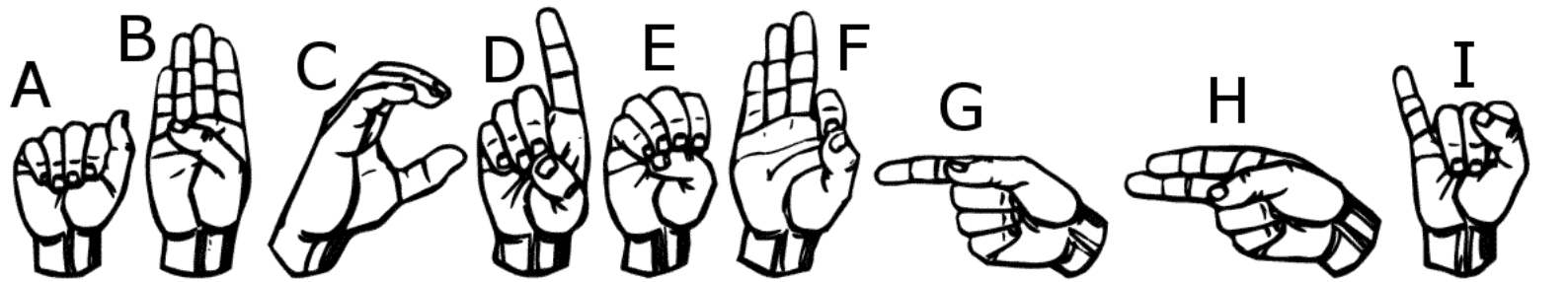
Reading

Communication with people with hearing impairment

- Face the hearing impaired person directly, on the same level and in good light whenever possible
- Do not talk from another room. .
- Speak clearly, slowly, distinctly, but naturally, without shouting or exaggerating mouth movements.
- Say the person's name before beginning a conversation.
- Avoid talking too rapidly or using sentences that are too complex.
- Keep your hands away from your face while talking.
- Try to minimize extraneous noise when talking.
- Avoid situations where there will be loud sounds when possible.
- If the hearing impaired person has difficulty understanding a particular phrase or word, try to find a different way of saying the same thing,
- Acquaint the listener with the general topic of the conversation.
- If you are giving specific information, have them repeat the specifics back to you.
- Whenever possible, provide pertinent information in writing, such as directions, schedules, work assignments, etc.
- Take turns speaking and avoid interrupting other speakers.

Interpreting

- [Lyrics and rhythm](#)
- ..when [lyrics](#) is less demanding



- [Starbucks](#)