



1.

GENERAL

INTRODUCTION



“...develop pride and strong identity to reach their full potential in the hearing world.”
Patricia Pritchard, Norway

HEARING IMPAIRMENT

People with hearing deficiency, deaf people, people gone deaf, or people with cochlear implant fall into a group of the hearing-impaired defined by limited hearing ability. Rarely, they lack hearing ability completely. The fact that someone is hearing-deficient or deaf can be interpreted from medical, psychological and educational view, and these views can be different. From medical view, the hearing disorder is a change of quality of acoustic perception which does not occur at normal instances, as well as decrease of sharpness of hearing.

Uninvolved people often consider the hearing-impaired to be completely deaf, to hear absolutely nothing. Regarding the hearing-deficient ones, people think that they have to talk to them loud and clear. We also meet opinion that a person with hearing impairment does not need “any special treatment“, if they have listening apparatus. If they have it – they hear and perceive normally. It is a wrong opinion. Apparatus really improves the quality and quantity of hearing perception, but it does not remove damage of hearing as such. Self-realisation of a hearing-impaired person may be completely different from scientific definitions. Their own organisations (e.g. Slovak Union of the Hearing-impaired) lead them towards realizing difference from majority society, up to the right to use their own language – sign language – and to their own culture of the deaf / hearing-impaired.

Deafness is one of the most severe sensory disorders. WHO ranks deafness in the second place, right after mental disorders (and before blindness). None of the damages of organism influences mental condition of a person as much as deafness. It disables the main function of the hearing organs – alongside the spatial orientation – language communication between people.

Late discovering of hearing disorder of a child can result in delayed language development, and also delayed mental development and recognition abilities of a child. The period of first three years of life is the most important time for speech development and communication skills.

TYPES AND DEGREES OF HEARING DISORDERS

According to type, hearing disorders are divided into:

- *Qualitative* hearing disorders; they are caused by changes in hearing lanes or by disorders of central areas of hearing analyser.
- *Quantitative* hearing disorders; such as *hearing deficiency (hypacusis)*, partial loss of hearing clarity, *practical deafness* – when a disabled one can hear a voice right next to the ear, but communication by means of hearing is practically impossible, and *total deafness (surditas)* – when a disabled one does not recognize a voice right next to the ear, not even their own voice.

Specialists differentiate:

- *Transitional (conductive) hearing disorders:* These are the most frequent types of hearing disorders with children. They are caused by illnesses or anomalies in outer ear and/or middle ear, when there is an interruption in transition of sound through outer ear or transmission of vibrations through the membrane of eardrum, auditory ossicle into oval window.



- *Perception (sensorineural) hearing disorder*: It is caused by illnesses or anomalies of inner ear and/or cochlear nerve. It can be:
 - ✓ *cochlear (sensory)*, caused by illnesses or anomalies of inner ear.
 - ✓ *retro-cochlear* hearing disorder, comprising damage of neural transmission; in: cochlear nerve, lane of cerebral stem, or both. Cochlea function is intact.
 - ✓ *central* hearing disorder: middle ear, cochlea and cochlear nerve are within normal; damage appears in the transition of auditory signal into the brain (due to an illness or trauma).
- *Combined hearing disorder*: It means that both transmission and receptor parts of hearing apparatus are affected.

From an educational point of view, it is easier to correct transmission disorders by means of compensatory technique. Total deafness is very rare, approximately 98% of hearing-impaired persons have some residual hearing.

Hearing-disorder degrees are measured in decibels (dB); it defines how big the strength of auditory stimulus must be in order to activate perception of sounds, including speech. For understanding degrees of hearing disorders, some terms need to be explained:

- *threshold of hearing*, or *auditory threshold* is used as well; it is the lowest intensity of sound that we can perceive with normal hearing ability; with healthy adults it is above 0 dB;
- *threshold of pain* is activated by very intensive noises, it is expressed as pain in examined ear, noises stimulate also ends of sensitive nerves, usually above 130 dB;
- *hearing range* is outlined by threshold of hearing and threshold of pain.

Hearing-disorder degrees:

Table 1: degrees of hearing disorder:

Degree of hearing disorder	Respective audiometric ISO values: (frequencies average: 500, 1000, 2000, 4000 Hz)	Displays:
0 – no disorder	up to 25 dB (a better ear)	<i>None or only very mild problems with hearing. Ability to hear whispers.</i>
1 – mild disorder	26 – 40 dB (a better ear)	<i>Ability to hear and repeat words spoken in normal voice from 1 metre.</i>
2 – moderate disorder	41 – 60 dB (a better ear)	<i>Ability to hear and repeat words spoken in loud voice from 1 metre.</i>
3 – severe disorder	61 – 80 dB (a better ear)	<i>Ability to hear some words, when shouted into the better ear.</i>
4 – profound disorder, including deafness	81 dB a viac (a better ear)	<i>Inability to hear and understand neither voice, nor shouting.</i>
(Disabling hearing impairment)		<i>Adults: 41 dB and more (better ear)</i>
		<i>Children up to 15 years including: 31 dB and more (better ear)</i>

Table 2: Intensity of some noises in decibels (dB)



DECIBEL	NOISE STIMULUS
0 dB	<i>threshold of hearing of a healthy person</i>
30 dB	<i>rustle of trees</i>
40 dB	<i>dimmed talking</i>
60 dB	<i>sound of a Hoover, music from a radio</i>
80 dB	<i>loud street noise</i>
100 dB	<i>very loud noise of an alarm horn</i>
120 dB	<i>noise of aircraft engine from 3 m</i>
130 dB	<i>noise causing pain</i>

DEAF CULTURE

Deaf culture is strongly related to **IDENTITY**.

When a person is deaf or hard of hearing, he or she belongs to a common group which is the hearing impaired one whatever the degree of hearing loss.

Deaf culture is strongly related to **COMMUNICATION**

When a person is deaf or hard of hearing, he or she has a more difficult access to oral communication.

Deaf culture is strongly related to **LANGUAGES**.

When a person is deaf or hard of hearing, he or she has a more difficult access to the oral languages whatever the situation.

Deaf culture is strongly related to **SIGN LANGUAGES**.

When a person is deaf or hard of hearing, he or she can develop a genuine competence in Sign Languages. And for some of hearing impaired people, Sign Language is their first language.

Deaf culture is strongly related to **SIGN CULTURES**.

Sign languages are numerous throughout the world and as a consequence a national and international signed culture does exist.

Still, many people do not think about deaf people in cultural terms. Meanwhile, deaf, like other cultural groups, have their own language, traditions, customs, institutions and sense of distinctiveness, which is a base for that specific sense of identity. The term "deaf culture" refers to the community of Deaf sign language users and reflects the sense of identity and belonging to that particular community.

Deaf culture consists of several elements: self-determination as Deaf, a sense of community with other Deaf, norms of behaviour, values, knowledge, customs, social structure, language, art, history and finally the bonds of kinship.

Not all people with hearing impairments feel part of the group. The word "Deaf", capitalized, refers to cultural issues as opposed to the word "deaf", written in lowercase, having the medical nature.



Thus, the medical level of hearing loss is not a determinant of the Deaf Culture membership. One of the greatest values of Deaf Culture, even its basis, is sign language.

This model of communication fully meet all the criteria of speech: a grammar and syntax and allows to create an unlimited number of terms. The distinguishing feature is sign language grammar functioning in space. Sign language is not only based on the use of hands. Facial expressions also fulfil specific language functions here.

Most of deaf people are born in hearing families. Their access to sign language and Deaf Culture depends on the perspective that parents adopted. The more medical it is the greater are chances that a child will be given surgical treatment (cochlear implant), will be taught speech and will be sent to a mainstream school. That is why the majority of the deaf only at a later age decide to join the Deaf Culture community. It also involves the choice of sign language as their primary mode of communication.

The process of inclusion in Deaf Culture community takes place in schools for the deaf (usually boarding schools), or in later age through engagement and contacts with the deaf peers. Being among other Deaf, conversations in sign language, organizing various events for the Deaf is a characteristic of this culture. The external manifestations of these needs are Deaf clubs, sports clubs for the Deaf, church-community meetings and events of an artistic nature.

Belonging to the Deaf background is not synonymous with being a member of the Deaf Culture community. Deaf background is a broader concept and it may include e.g. hearing family members, hard of hearing or late deafened people. Belonging to the Deaf background does not mean the necessity of everyday sign language communication only, but one must remember that the sense of Cultural Deafness assumes just such a communication strategy.

The dynamic development of Deaf Culture is also connected with the development of communication technologies like the internet or mobile phones. Thanks to them conversation in sign language no longer requires physical nearness and Deaf Culture is spreading increasingly thanks to films or blogs on the internet.

There are several centres of Deaf Studies dealing with the study of Deaf Culture in the world, including Centre for Deaf Studies at the University of Bristol in the UK, the Centre for Sign Linguistics and Deaf Studies, The Chinese University of Hong Kong or Gallaudet University in Washington, DC, which is the first and only university in the world of sign language as a language of lectures.

WHAT WE WANT THE STUDENTS TO ACHIEVE IN ENGLISH?

- be able to learn foreign languages
- reach similar level as hearing students
- pass A-levels
- understand written English & vocabulary (both active and passive)
- be familiar with English/American culture
- be confident English users (e.g. travelling abroad)
- be involved in real life communication
- become autonomous English learners
- speak English (if possible)



CONSEQUENCES OF HEARING IMPAIRMENT ON LEARNING AND TEACHING ENGLISH

- general lower competence in oral language (concerning all skills, not only spoken ones)
- linguistic development challenged (Chomsky, Language Acquisition Device theory)
- natural acquiring is not possible, just learning
- no passive learning
- language competence among students varies depending on hearing loss, family background, language project chosen (in France)
- visual or kinaesthetic learners, not auditory
- lip-reading cannot replace listening:
 - ✓ tiring
 - ✓ not the same accuracy as listening
 - ✓ unknown word cannot be lip-read
- Sign Language use different modalities (eyesight and movement) while English and any spoken language are built around listening and speaking
- limited attention span to any oral language stimulus
- lower hearing memory – need to analyse hearing input, which is difficult and tiring
- students' and teachers' oral vocabulary is limited
- spoken communication may not be that important to HI learners
- students value Sign Language over spoken one

SPECIFIC CONSEQUENCES OF HEARING IMPAIRMENT ON LANGUAGE SKILLS

LISTENING:

- limited or no passive learning
- shorter auditory attention span
- lower auditory memory leads to lower understanding

READING:

- not autonomic readers
- need for structure
- limited extrapolation of the meaning from the context
- lower general knowledge leading to lower understanding
- limited vocabulary

SPEAKING:

- spoken interaction:
 - ✓ various factors need to be considered: number of people – they cannot follow group discussion, background noises make understanding impossible, without eye contact and good visibility of speakers is no communication possible;
 - ✓ mutual intelligibility needed



- speech production:
 - ✓ limited self-correction (lack of feedback)
 - ✓ limited articulation (though limited intelligibility)

WRITING:

- spelling difficulties
- lack of interest in a written language
- limited experience in writing
- problems with the concept of punctuation (there is none in Sign Language)
- problem to understand and use correctly the structure of oral language (because it is too different from Sign Language)

REMEDIES FOR GIVEN LANGUAGE SKILLS

- more repetition and exposure to oral language needed for all skills
- to visualize the oral language and use of visual supportive methods (Sign Language, Finger Alphabet, Cued Speech, Auxiliary Articulation Signs,)
- a lot of visual aids needed (pictures, picture dictionaries, videos, drama, role play)
- generally more support needed to overcome inhibitions

LISTENING:

- arrange listening/auditory situations
- add visual support (cued speech, lip reading, eye contact, British Sign Language, ASL)
- process listening:
 - ✓ pre-teach vocabulary/phrases
 - ✓ listening + visual support
 - ✓ listening + written text provided
- introduce auditory English training
- technical support (good quality listening materials, good speakers, microphone)
- adequate (if any) assessment
- don't give up, try to adapt listening to your students' abilities
- include songs in teaching (e.g. signed versions of popular songs on You tube)
- use short and simple sentences
- provide structure (e.g. slips of paper to be organized in a logical way)

READING:

- use visual aids (pictures, photos)
- check the students understanding of an idea/reality behind the text (pre-reading stage)
- use picture dictionary, google + picture
- IWBoards (sign the text for your students)
- teach reading strategy and general reading skills
- individual lessons



TEACHING ENGLISH DEAF STUDENTS

GENERAL INTRODUCTION



- account for the zone of proximal development – it might differ among the students
- aim at no more than 10% new vocabulary

SPEECH INTERACTION AND PRODUCTION:

- one to one interaction
- keep it short, basic and clear
- start with the topics related to the immediate surrounding
- use Sign Language to support your message
- use Cued Speech
- speak slowly and clearly
- eliminate background noises
- speak clearly
- give lots of positive feedback
- pre-teach speaking (vocabulary, phrases, function language)

WRITING:

- start with the model
- provide the students with the structure
- brainstorm ideas
- provide visual support
- teach process writing
- start small, build up the students writing skills gradually
- make a list of most useful phrases
- provide models of different sorts of writing
- in time, build up a writing bank
- make a list of most confusing words

HEARING AIDS

- Numerical prosthesis one side or two sides for the hearing impaired pupil



- Cochlear implant for the hearing impaired pupil



- High frequencies microphone for the teacher



- Black jack wire connected to the audio source (computer, television for example)



- Blue tooth connection



Do not forget that it is the brain that hears. Any aid cannot provide enough stimulates and experience to learn the brain the same as hearing.