



This is a summary of the hearing conditions and necessary accommodations for children with hearing loss. Their hearing is not as same as that of normal-hearing children, even if they can use auditory-verbal communication with hearing aids or cochlear implants. We want teachers, especially working in inclusive schools with children with hearing loss, to utilize the information. Please place ✓ in the appropriate boxes. <https://doi.org/10.18926/65475>

## Hearing Level and Listening Ability

Level	Listening Ability
<input type="checkbox"/> <b>Mild</b> 25-40dB	Difficulty in hearing conversation in low voices, fast-pace or with noises Feel more fatigue in listening
<input type="checkbox"/> <b>Moderate</b> 40-70dB	Often miss conversations at a normal volume It can be quite difficult to hear amidst background noise, such as on public transportation.
<input type="checkbox"/> <b>Severe</b> 70-90dB	Hardly audible unless loud voices or with hearing aids Difficulty even in face-to-face conversations without hearing aids
<input type="checkbox"/> <b>Profound</b> 90dB-	Can hardly hear everyday sounds or loud voices close to the ear Cochlear implantation may be adopted. Often uses or combines with visual information (lip reading, sign language)

## Commonly Used Hearing Devices

### Hearing Aid:

The sound picked up by the microphone is amplified and transmitted according to the hearing ability. Current hearing aids have developed the function to suppress noise and amplify the human voice.

### Cochlear Implant:

Converts sound into electrical signals and sends stimuli to electrodes inserted into the inner ear. Adapted when hearing aids have limitations.

### Digital Wireless System:

The system transmits the speaker's speech through a transmitter with a microphone directly to a receiver attached to the hearing aid/cochlear implant.

The speaker's voice is preferentially delivered even in noisy environments.

## Problems/Difficulties

### ◆ Listening Comprehension in General

- Can hear sounds but difficult to distinguish words correctly
- Difficult to hear speech under noises or from a distance
- Difficult to hear in off-campus learning, group discussion, or in-school announcements
- Need concentration/effort for listening
- Loud voice or noise is sometimes enhanced.
- Mask-wearing worsens both listening and lip reading.

### ◆ Classwork

- Difficult to listen to and understand the lecture completely
- Hard to keep up with the flow of the class
- Difficult to hear what the teacher is saying while he/she is writing on the board or asking a question out of the blue
- Inability to hear other students' presentations and easily drop out
- Unable to discriminate and understand the discussion in group study, and hard to presentate their opinion

### ◆ Subject Learning

- Listening skill is particularly disadvantageous in some subjects.
- Poor comprehension of learning can lead to poor academic performance.



#### Particular Difficulties

- **Foreign Languages:** Listening and speaking (difficult to distinguish subtle differences in pronunciation)
- **Music:** Matching scales, tones, pitches, or rhythms, especially in singing
- **P.E.:** General listening (at a long distance, without wearing hearing aids/cochlear implants)
- **Reading/Writing:** Vocabulary, grammar, and reading/writing comprehension, etc
- **Mathematics:** Grasping the story questions, abstract concepts, etc

### ◆ Friendships

- Hard to engage in conversations
- Unable to keep up with casual conversation and small talk
- Can be misunderstood as ignoring what they have misheard
- Easy to be misunderstood, such as not being in the mood or not being able to understand the situation or context
- Feeling alienated and lonely
- Not knowing how to inform friends about their hearing
- Lack of self-esteem and self-advocacy skill
- Lack of chance to get friends with hearing loss who can share their worries
- Can be excluded from social circles and potentially being bullied



## Accommodations and Support

### ◆ Listening Comprehension in General

- ① Speak only when the room is quiet
- ② Speak face to face
- ③ Show your mouth for their lip-reading
- ④ Speak slowly, clearly and without breaking the rhythm
- ⑤ Call attention before talking
- ⑥ Restate what others say, whether they are far away or nearby
- ⑦ Use visual information (boards, tablets, handouts, etc)

※ **Adopt "a way of speaking and environment that makes it easier to listen to a foreign language".**



### ◆ Classwork

- ⑧ Arrange seats to improve listening, taking into account the person's better ear.
- ⑨ Nominate a student, then tell his or her what the question is. (Do not ask the question first)
- ⑩ Utilize signs such as visual pointing, gestures, cues, etc, especially in remote locations
- ⑪ Finish writing on the board, turn your face to the front, and then speak
- ⑫ Ensure information is also shared visually during group discussions
- ⑬ Share information among teachers so that digital wireless systems can be used in any subject

### ◆ Subject Learning

- ⑭ Understand the limitations of listening
  - Discrimination of pronunciation, pitch, and rhythm is unavoidable, so please refrain from pointing out details.
- ⑮ Identify their weak subjects/areas and provide individualized assessments if necessary
  - Reasonably exempt individuals from certain tests, e.g. listening or singing tests, and provide individualized assessments
- ⑯ Consider providing individualized instruction in the case of learning delays
  - Take actions before delays become excessive
  - Intervene in collaboration with audiologists and deaf children's school teachers as well



### ◆ Friendships

- ⑰ Provide information to classmates(hearing aids/cochlear implants, hearing ability, necessary accommodations)
  - Especially in adolescence, they may be reluctant to receive special assistance. Please explain according to their intentions
- ⑱ Many people around them should understand their difficulties and necessary support.
  - Having people who understand and support their difficulties or listen to their worries is essential for their growth.
  - The existence of friends with hearing loss also helps to reduce psychological problems.
- ⑲ Consult with specialists as needed (otolaryngologists, audiologists, pediatricians, psychiatrists, clinical psychologists, etc.)
- ⑳ Educate self-advocacy skill, "to tell people around them about their inconveniences so that they can receive accommodation and support"

※ **The most important thing is to "praise and develop their strengths and build their confidence".**

### Points

1. Speaking style
2. Environmental adjustments
3. Combined use of visual information
4. Confirmation of their intentions
5. Multidisciplinary support