

Hearing Tactics Speechreading (Lipreading) - Visual Cues

Many people are more familiar with the older term lipreading, which they interpret as the ability to recognise the different sounds of speech by observing movements of lips, tongues and jaw. We prefer to widen the concept and in doing so use the term speechreading, which we see as the ability to understand a person by watching the movements of the face and body, by using the information provided by the situation and the language.

Speechreading and Relationship to Hearing

Everyone uses visual information in speech recognition, so even people with essentially normal hearing utilise speechreading to some degree in communication. Some circumstances encourage it more than others, e.g. in noisy environments. However, the greater a hearing loss, the more a person tends to rely on vision for understanding speech (Tye-Murray, 2004).

People with mild or moderate hearing losses, wearing hearing aids, may be depending more on hearing than vision. However, many speech sounds may still not be heard clearly by some people no matter how loud they are made, e.g. 's', 'sh', 'f', 'th'. These sounds are relatively easy to see, so a combination of speechreading and aided hearing is the most effective method to follow speech.

A person with a severe to profound hearing loss may not be able to get sufficient help from a hearing aid to understand speech. This person must depend primarily on speechreading, sign language or both. Still, anything heard through a hearing aid can help communication even if hearing is not the main communication channel.

Why is Speechreading Difficult?

Problems relate to four main areas. These are:

1. The nature of speech
2. The speaker
3. The environment
4. The speechreader

The Nature of Speech

Speech sounds formed on the lips and/or the front of the mouth (e.g. 'p') are the easiest to speechread. In contrast, it is very difficult to speechread sounds formed at the middle of the mouth (e.g. 't') or the throat (e.g. 'k').

Under usual viewing conditions, an estimated 60% of speech sounds are obscure or invisible (Tye-Murray, 2004) - e.g. k, g, h - so that Kate, gate and hate would all look the same and all be difficult to identify.

In the sentence 'I got the car fixed', the speechreader could only hope to see 'I .ot th. .ar fi...' Taken out of context it would be very puzzling.

Many words also look alike. Alexander Graham Bell coined the term 'homophene' to describe words which look alike but do not sound alike. Try saying the following three words without voice to friends. Can they tell the difference?

"pat, mat, bat"

Because so many speech shapes and words look alike, misunderstandings can occur.

Mr. A: By the way, how is your brother?

Mr. B: My brother was buried last week.

Mr. A: How wonderful! You must be pleased about that. ('buried' and 'married' are homophenes)

Speech shapes can also alter when word emphasis changes or when combined with other sounds.

Lastly, normal speech is faster than most people are capable of consciously seeing. Lip and jaw movements become smaller when speech gets faster.

The Speaker

Some people's speaking habits or features make life very difficult for speechreaders, for example a moustache or beard, poor lip movement (either minimal or exaggerated) 'dead-pan' faces, hands covering mouths, and talking too quickly, to name just a few!

Speakers can enhance the visible cues for speech by doing the following:

- Increase the duration of the sound /m/ to distinguish it from /p, b/, and /n/ to distinguish it from /t, d/
- Place the tongue between the upper and lower teeth to clarify 'th'
- Spread the lips, clench the teeth firmly and grin to indicate /s, z/
- Bite the lower lip with the upper teeth to indicate /f, v/
- Move the jaw down briefly while producing /k, g/
- Shrug the shoulders briefly during the inhalation preceding /h/
- Increase or decrease height/width of the lip opening while producing vowels.

The Environment

Poor lighting that is shining into the speechreader's eyes rather than on the speaker's face is a problem. A speechreader should try to be positioned with his/her back to the light source.

A speechreader should be a comfortable distance from the speaker so that hearing and vision are maximised.

Distractions in the environment can make concentration difficult for the speechreader.

In group situations, a speechreader must try to be in touch with topic changes and who is speaking, otherwise he/she is 'left out' very quickly. Other speakers can aid group communication for the hard of hearing with good turn-taking skills and clearly indicating topic changes with the language they use.

The Speechreader

The innate ability to speechread varies from person to person. This can only be improved to a certain extent by training.

To help speechreading, any visual defects should be identified and corrected if possible. A speechreader must be attentive and watch the speaker closely - this becomes tiring. The speechreader needs to be prepared to guess, fill in the gaps and accept the fact that he/she is not going to be able to get every word. A speechreader should try not to be anxious in the listening situation. Relaxation is very important. (Refer to the 'Relax... Relax... Relax...' fact sheet for further details.)

Speechreaders should also be prepared to admit when they have not understood, rather than passively pretend they have.

What Makes a Good Speechreader?

Most authorities agree that successful speechreaders are able to take limited information seen on the face, fill the gaps using other information present in the situations, (e.g. body language, facial expression, context, etc.) and correctly identify the spoken message. The speechreader sees part of the message, puts it together and makes sense of it.

Speechreaders need to be visually alert and visually attentive, therefore it is important that the vision of the person be enhanced by effective glasses (if required) and there is good lighting in the room where the communication is taking place.

What Makes a Good Speechreader?

- Be visually aware of what is going on around you. Identify the topic being discussed.
- Ask questions; this can give you some control over what is being said.
- Be prepared to guess.
- Be prepared to admit when you have missed the message.
- Attend an educational course that can help improve your skills.

For more information speak to an expert at:



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