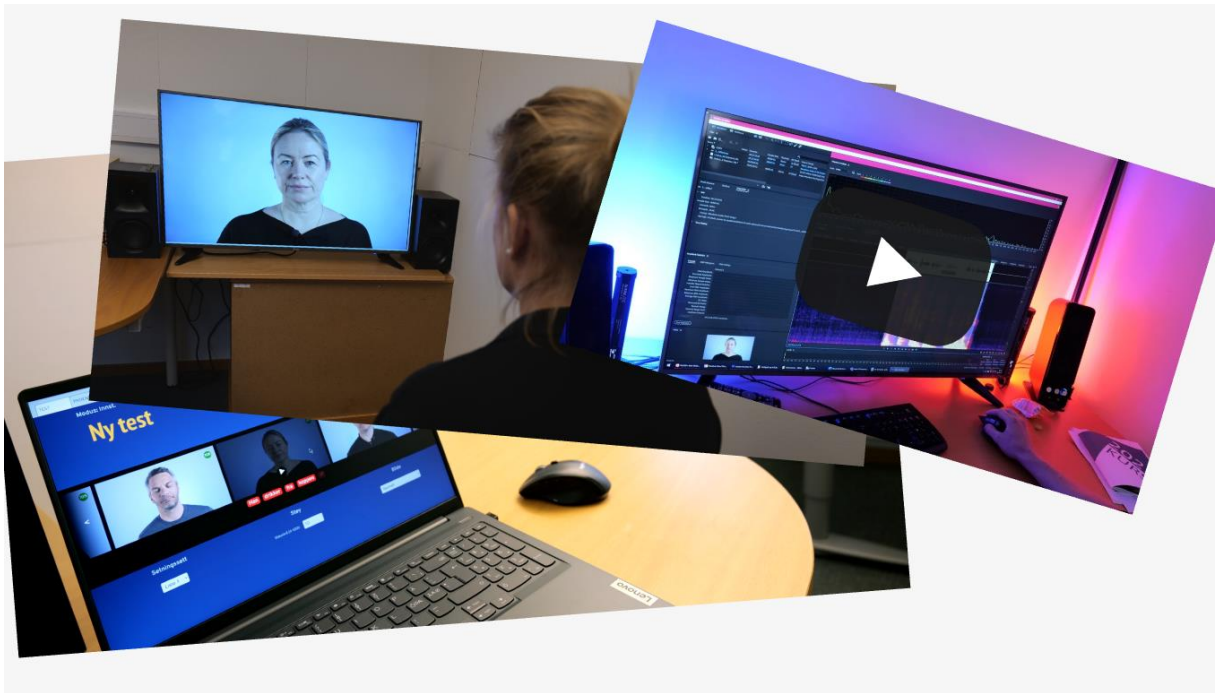


The development of a new audio-visual test of speech perception



Speech understanding is an audio-visual process. What this means is that the brain uses visual information to supplement and enhance the auditory information from the ears, combining the two streams of information into something more than the sum of its parts. When observing a person talking, the visual information will greatly affect how much you understand as well as just what you actually understand.

Many current tests of speech perception employ closed-set sentences and synthetic noise, and is administered without hearing aids. These tests have faced criticism for lacking relevancy to the challenging listening situations that people face daily.

One of the most serious consequences of hearing loss is social withdrawal, which can happen when social situations in noisy environments become too stressful. We know that having access to visual information (watching the face of the speaker) in noisy social situations improves speech perception by a minimum of 25% (and sometimes much more). Everyone makes use of audio visual speech in social situations, and people with sensory loss may have an even greater reliance on visual information.

We need good, functional tests of speech perception that is relevant to the daily life of people with combined vision- and hearing impairment.

Eikholt national center for the deaf-blind has developed a new test of audio-visual speech perception. It's a modern test that is administered through a user-friendly computer interface and has ~600 unique sentences that is delivered by two men and two women. The footage is filmed in 4k quality with good visual and sound quality. My talk will describe the planning and development of the test as well as the experiences that we've had using the test. I will talk about future plans and will discuss the possibility of developing such a test for other languages, including sign-languages.