



Context

Communication is fundamental for inclusion, especially during school lesson. Deaf students, students with hearing impairment or SEN due to cultural differences may find challenging following a speech or understanding oral instructions and would need visual reference to reinforce correct info acquisition.



Subtitles utility



Subtitles can be of great help for students that find difficulties in understanding oral language. For deaf students in particular it is very challenging to follow speech from lip-reading through a computer screen. For signing students, subtitles are of great help in absence of a sign language translator; for oral trained students it is instead a useful confirmation of their understanding.

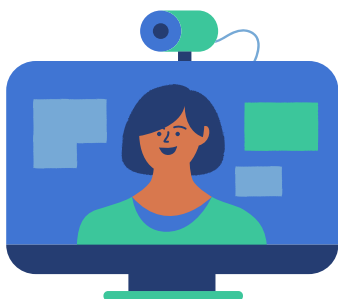
The alternative clue to subtitles, for understanding oral language is **lipreading**: practice that requires a long experience and training in speech therapy for connecting lip movements to oral language elements. This task is hard to perform during live speeches and even harder through a computer screen because of camera resolution and offcam body movements.

Understanding subtitles requires anyway linguistic skills, which deaf students may not have very developed. To ensure comprehension from hearing impaired students in particular some arrangements can be taken.



Functional tips

Automatic subtitles software can close-caption the speaker's voice and turn it to written words instantly. This kind of software works better if the speaker has an external microphone connected to the computer during online conferences or distance learning, it can be installed on teacher's or students' computer. It is suggestable to make sure the software is on and correctly working before beginning to speak.



During Distance Learning:

- use an external microphone if possible
- speak clear and not too fast
- to ease lipreading: try to stay still when speaking and keep from moving



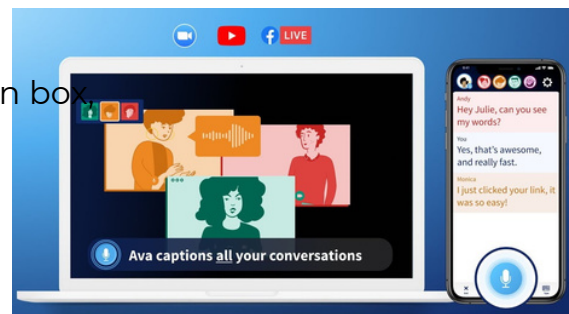
Software examples

Speech recognition software examples:

Ava

Live speech captioning reporting text in a bottomscreen box intended specifically for hearing impaired utility.

- Windows/Apple systems
- free to use (with time limitations)
- computer and mobile software



Windows Speech Recognition (WSR)

Included in Windows 365, turns any writing program into dictation software.

- Windows systems
- free to use
- personal dictionary for unique words

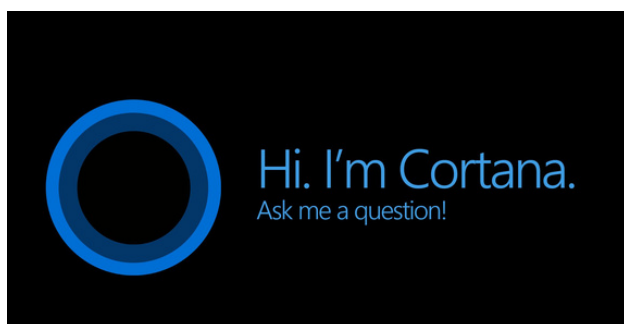
Siri

Apple's voice-controlled personal virtual assistant.

- Apple computer systems and mobile
- free
- can use device functions



Hey Siri



Cortana

Microsoft's personal virtual assistant. Works inside Microsoft365 and also as a Chrome extension.

- Windows computer systems and mobile
- free
- dictation function



Resources

If you wish to deepen your knowledge in this topic you can consult the book **Media for all: subtitling for the Deaf, audio description and sign language** by J. Diaz, P. Orero and A. Remael.

The book offers a survey of the present state of research and practice in the field of accessibility referred to technology, multimedia and deaf studies.