

Recommendations

4.4. Accessibility for deaf and hard of hearing learners

In this section, you will find recommendations on how to make your OER accessible for deaf and hard of hearing students. Auditory content can be made accessible to them through **Subtitling or Sign language**.

4.4.2. Sign language

Sign language is a visual and spatial communication system used mainly by people who are deaf or hard of hearing, as well as an augmentative or alternative system of communication.

Each country or region usually has its own sign language, with grammatical structures and lexicons that may differ significantly, reflecting the cultural and linguistic diversity of deaf communities worldwide. Like spoken languages, sign languages are rich and complex, capable of expressing any idea or concept.

There are also other sign systems used to support oral communication for people with disabilities.

Please follow these recommendations if you want to provide the audio content of a video in sign language for your students.

LANGUAGE'S CHOICE	RECOMMENDATION	EXAMPLE
	<p>Choose the sign language of the main audience. If there are several audiences, consider using more than one or including international signs as well.</p> <p>Inform which sign language the content is offered in.</p>	<p>If your deaf students come from different countries, consider international signs to deliver the information.</p> <p>If your content is in British Sign Language, specify it.</p>

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	<p>Include captions according to your students' preferences, in the main language of the video or translated into their native language and synchronize them with the sign language translation.</p>	<p>For a lecture on Shakespeare's plays, provide English captions that appear at the bottom of the screen simultaneously with the sign language interpretation, reflecting the original spoken content.</p>
CONTENT & TRANSLATION	RECOMMENDATION	EXAMPLE
	<p>Provide a sign language version of the text/audio description to understand key information, ideas and processes.</p>	<p>For a documentary on climate change, include a detailed sign language interpretation of the script that explains key concepts and data visually through signing.</p>
ADAPTATION	<p>If the original text is not adapted for the target audience, provide an adapted signed version.</p>	<p>If the original text uses advanced vocabulary about neurological diseases, the signed version might use simpler language and more visual explanations to clarify complex concepts.</p>
TRANSLATION	<p>Consider hiring a deaf translator.</p> <hr/> <p>Collaboration with the deaf community in the co-creation of content.</p>	<p>Employ a deaf translator to oversee the translation of historical texts into sign language to ensure that cultural nuances and historical contexts are accurately conveyed.</p> <hr/> <p>Work with deaf educators and students to design a curriculum module in sign language, ensuring the content is culturally sensitive and pedagogically sound.</p>

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	<p>Conduct user testing with sign language students to evaluate the material.</p>	<p>Invite a group of sign language students to view new educational materials and provide feedback on the clarity of the sign language interpretation, the effectiveness of captions, and the overall accessibility of the content.</p>
TECHNICAL IMPLEMENTATION	RECOMMENDATION	EXAMPLE
<p>TIMING</p>	<p>Synchronise the sign language translation to the audio.</p>	<p>Ensure that the timing of the sign language translation precisely aligns with the corresponding audio segments to facilitate coherent comprehension.</p>
<p>SYNCHRONIZATION</p>	<p>When using fingerspelling, synchronise the subtitle of the spelt word with the sign language video on the screen.</p>	<p>When the interpreter fingerspells technical terms, such as "DNA," the corresponding subtitles should appear on the screen at exactly the same time to aid comprehension.</p>
<p>POSITION ON THE SCREEN</p>	<p>Video of sign language interpreters should be clearly displayed and available in full-screen format.</p> <hr/> <p>Providing a synchronized video of the sign language interpreter that can be displayed in a different viewport or overlaid on the image by the viewer.</p>	<p>Allow users the option to view the interpreter in full screen by clicking on the interpreter's video, making it easier for viewers to focus on the signing if needed.</p> <hr/> <p>Provide a picture-in-picture feature that shows the sign language interpreter in a small window overlaying the main educational video, which can be moved and resized as per the viewer's preference.</p>

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TECHNICAL IMPLEMENTATION	RECOMMENDATION	EXAMPLE
	<p>If visual elements such as titles, subtitles, etc., are included, consider the placement of the interpreter on screen.</p>	<p>Position the interpreter in the lower right corner of the screen during a PowerPoint presentation so that they do not block the textual content and graphical data being displayed.</p>
<p>BACKGROUND</p>	<p>If a chroma with a transparent background is used, consider background elements for an adequate contrast.</p>	<p>If using a green screen behind the interpreter, choose a background that contrasts well with the interpreter’s attire and the signing space, such as a muted blue or grey.</p>
<p>INTERPRETER CLOTHING</p>	<p>The clothing of the signing person should have a high contrast to their skin colour, uniform colour and texture, without any elements that stand out.</p>	<p>A caucasian interpreter should wear a dark uniform colour and texture, avoiding patterns that might distract the viewer.</p>
<p>SETTING</p>	<p>Good illumination of the face and body of the person signing should be ensured avoiding excessive light, and shadows on the person and the background.</p>	<p>Arrange the lighting to brightly illuminate the signer's face and hands without causing glare or shadows, ensuring clear visibility of each sign.</p>
<p>FRAMING OF THE INTERPRETER</p>	<p>Provide medium or medium-long framing.</p>	<p>Frame the interpreter from the waist up, allowing the viewer to see all hand movements, facial expressions, and upper body language that are part of the signing.</p>