

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**.

### 4.4.1. Subtitling

Subtitling is the process of **displaying written text on a screen to convey spoken dialogue, sound effects, and other relevant audio information in a video**.

For an example, click [HERE](#).

The recommendations below will help you create subtitles that are as tailored as possible to the needs of your students. Try to implement as many of them as possible in your work.

SOFTWARE	RECOMMENDATION	EXAMPLE
Level 1	Use an automatic closed captioning (CC) tool.	YouTube Studio: <a href="https://studio.youtube.com">https://studio.youtube.com</a>
Level 2	Use free software to create subtitles. These tools allow you to manually adjust timing and add important details, such as sound effects or speaker identification to enhance accessibility.	Aegisub: <a href="https://aegisub.org/">https://aegisub.org/</a> Subtitle Edit: <a href="https://www.nikse.dk/subtitleedit">https://www.nikse.dk/subtitleedit</a>
Level 3	Use paid software to create professional-grade subtitles. These tools provide advanced features, such as precise timecoding, speaker identification, and options for customising the appearance of subtitles, to ensure high-quality and accurate accessibility.	EZtitles: <a href="https://www.eztitles.com/">https://www.eztitles.com/</a> Ooona: <a href="https://www.ooona.net/ooona-tools/">https://www.ooona.net/ooona-tools/</a>

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TECHNICAL ASPECTS	RECOMMENDATION	EXAMPLE
<p><b>COLOURS</b></p>	<p>If you use colours for subtitles, ensure they contrast with the video background to avoid visual fatigue.</p> <p>To check this, you can use, for example, Colour Contrast Analyser (<a href="https://www.tpgi.com/color-contrast-checker/">https://www.tpgi.com/color-contrast-checker/</a>)</p>	<p>Example: use yellow on a black background.</p> <p><b>Yellow on a black background</b></p> <p>If the colour of the character matches the background, the subtitle can be framed in a coloured box to obtain sufficient contrast.</p> <p><b>White on a black background</b></p>
<p><b>FONT</b></p>	<p>The choice of font must respond to the criteria of maximum legibility.</p>	<p>Example: Arial or Calibri are legible types of fonts.</p> <p><b>Calibri as a legible type of font</b> <b>Arial as a legible type of font</b></p>
<p><b>SUBTITLE ENTRY AND EXIT TIME</b></p>	<p>The entry time or start time of a subtitle and the exit time or end time of a subtitle must coincide with the lip movement of the characters or people talking. It should also coincide with the sound information.</p>	
<p><b>DURATION</b></p>	<p>The duration of a subtitle, that is, the time it remains on the screen, must allow it to be read without difficulty. The maximum recommended speed is 12 characters per second.</p>	
<p><b>LENGTH</b></p>	<p>Subtitles must occupy two lines maximum and, in exceptional cases, three.</p>	<p><b>Subtitles must occupy two lines and, exceptionally, three.</b></p>
<p><b>DIVISION IN LINES</b></p>	<p>When dividing a subtitle into lines, you should:</p> <ul style="list-style-type: none"> <li>- take advantage of speech pauses and silences,</li> <li>- take advantage of grammatical pauses or punctuation marks,</li> <li>- write the conjunctions and connections on the bottom line.</li> </ul>	

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TECHNICAL ASPECTS	RECOMMENDATION	EXAMPLE
	<p>These subtitles should not be separated into two lines:</p> <p>syllables of the same word, nominal, verbal and prepositional phrases.</p>	
<p><b>CHARACTERS NUMBER</b></p>	<p>The maximum number of characters per line should range between 37 and 42 characters for a general adult audience.</p> <p>Keep in mind that children and young audiences have a lower reading speed than adults, so it is recommended to reduce the number of characters. The priority is that the student can read the subtitles displayed on the screen.</p>	
<p><b>POSITION</b></p>	<p>Subtitles should appear at the bottom of the screen. If the subtitle obscures relevant information displayed at the bottom of the screen, then you may move the subtitle box.</p>	
TEXT	RECOMMENDATION	EXAMPLE
<p><b>SPELLING AND GRAMMAR</b></p>	<p>Subtitles must be spelling and grammatically correct.</p> <p>Inaccuracies in speech should be corrected, except when they are relevant to the argument. In that case, they must be enclosed in quotes.</p>	<p>Original spoken text (with dialect/accent): <i>I ain't got no idea where he went.</i></p> <p>Corrected subtitle (if pronunciation is not relevant to understanding): <i>I have no idea where he went.</i></p> <p>Subtitle with inaccuracy: <i>I ain't got no 'idear' where he went.</i></p>

## EQui-T - European Quality Development System for Inclusive Education and Teacher Training

### Recommendations

TEXT	RECOMMENDATION	EXAMPLE
<b>NUMBERS AND SYMBOLS</b>	Natural numbers from zero to ten, inclusive, must be written in letters, except when accompanied by abbreviations, signs or symbols.	ten sheep 10 €
<b>WORDING</b>	Subtitles should be as literal as possible.	
<b>SUMMARY</b>	If you need to reduce or eliminate information from the dialogue, try to remove less relevant or unimportant information. You could also condense the content as effectively as possible.	

  

CONTENT: CHARACTERS; DIALOGUES; MUSIC AND SOUND	RECOMMENDATION	EXAMPLE
<b>CHARACTERS IDENTIFICATION</b>	The different characters involved in the audiovisual text must be identified. Use a different colour for each character or include their name in parentheses and in capital letters.	- Hello! - Hi! - [MARIA] Hello! - [GEORGE] Hi!
<b>DIALOGS</b>	In dialogues, a new line must be started for each participant. You can use dashes to differentiate between characters.	- Character 1 - Character 2
<b>VOICE OVERS</b>	Voice-overs (i.e., those emitted by characters who do not appear on screen) must be subtitled. You can use a label [voice-over] or italics to indicate the dialogue in the voice-over.	[voice-over] You can use this label. [voice-over] You can use this label.

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CONTENT: CHARACTERS; DIALOGUES; MUSIC AND SOUND	RECOMMENDATION	EXAMPLE
CONTEXTUAL INFORMATION	Contextual information must be included, in parentheses and in capital letters or square brackets and lower-case letters, before the text to which it applies and on the same line.	<p data-bbox="1368 363 1861 427"><i>You can write the voice-over in italics.</i></p> <p data-bbox="1357 451 2056 544">Examples of contextual information are: (SHOUTS), (SARCASTIC), (FRENCH ACCENT), (BOTH), (ALL) or [shouts], [sarcastic], [French accent], [both], [all].</p> <div data-bbox="1357 560 1659 683"> <p data-bbox="1368 584 1570 616">- Good morning!</p> <p data-bbox="1368 632 1637 663">- (ALL) Good morning!</p> </div> <div data-bbox="1682 560 1984 683"> <p data-bbox="1704 584 1906 616">- Good morning!</p> <p data-bbox="1704 632 1973 663">- [all] Good morning!</p> </div>
SOUND EFFECTS AND MUSIC	Describe sound elements if they are relevant for the understanding of the message: music, background noises, sounds of animals or things. The information should be provided in parentheses or brackets, with the first letter in capital letters and the rest in lowercase. This enables a differentiation from the rest of the dialogue.	<p data-bbox="1357 711 1727 743">Example: (Doorbell) or [Doorbell].</p>