# Implementation guide for an accessible Video

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## 1. Audio track

### 1.1 Communication is at a moderate pace and uses short sentences.

#### What is meant by this?

The speaking speed of the person presenting information in a video should be slow and easy to understand. The use of short sentences further increases comprehensibility.

#### Why is it important?

For recipients who (only) absorb information auditorily or have difficulty following the German spoken language, a fast pace of speech and long, convoluted sentences can lead to comprehension problems or loss of content. A slow pace of speech and short sentences, on the other hand, can benefit staff, people with hearing impairments or people who speak German as a second language, for example.

#### How can I implement/check it?

The following steps can help to implement a moderate speaking tempo and short sentences in videos:

* Script: Create a detailed script that structures the content of the video and provides clear and concise information.
* Speech pauses: Pauses between sentences can also be helpful.
* Linguistic simplicity: Use simple and clear language to explain complex information. Avoid technical terms or jargon.
* Speed: Adjust the speed of the audio track if it is not possible to maintain the desired speaking tempo during recording to ensure slow pronunciation.

### 1.2 The pronunciation is clear and distinct.

#### What is meant by this?

The person presenting information in a video should articulate the words and sentences clearly and understandably.

#### Why is it important?

In order to support recipients who rely heavily on auditory information or have difficulties with spoken German, it is crucial to use clear and precise pronunciation in videos to improve listening comprehension. This measure benefits people with hearing impairments as well as those whose native language is not German and facilitates listening comprehension in general.

#### How can I implement/check it?

The following steps can be helpful in realising clear and distinct pronunciation in videos:

* Preparation: The person speaking should prepare the content of the video thoroughly and familiarise themselves with the most important terms and expressions.
* Articulation: The person speaking should speak clearly and emphasise the words correctly. An appropriate speed and pauses between sentences can also contribute to comprehensibility.
* Emphasis: Important information or key terms should be emphasised appropriately to facilitate understanding.

### 1.3 Relevant information can be perceived auditorily.

#### What is meant by this?

It is of great importance that the sound and speech in videos are clear and distinct to ensure that all relevant information can be perceived and understood acoustically. To ensure this, it is important that information is not only presented visually, but also aurally.

#### Why is it important?

The provision of audibly perceptible information in videos ensures that staff, people who primarily absorb information acoustically, have approval of the content. This applies in particular to people with visual impairments or those who cannot fully understand visual content.

#### How can I implement/check it?

To ensure that relevant information in videos is audible, the following measures can be taken:

* Clear sound recording: Make sure that the sound in the video is of good quality and does not contain any background noise or breakdowns. Professional recording equipment and a high-quality microphone are recommended for this.
* Clear language: The person presenting the information in the video should speak clearly and distinctly. Appropriate intonation and speaking speed are also important.
* Check the sound quality: Test the video on different devices and in different environments to ensure that the sound is audible to all viewers.
* Filter noises: Video programmes often offer the option of filtering sounds and subsequently removing background noise.
* Audio description: Depending on the software, it is possible to switch optional audio descriptions on or off.
* Test: It is advisable to watch the video once without visual support to check whether all important information is conveyed audibly.

### 1.4 There are sufficient breaks after information that is only visually accessible.

#### What is meant by this?

If information is presented purely visually in videos, sufficient pauses must be built in. This creates enough time to process the visual information or use alternative approvals such as audio description.

#### Why is it important?

By maintaining sufficient pauses in videos, staff, people who are dependent on auditory information are given the opportunity to process visual information or use alternative assistive technologies such as audio description. This particularly affects people with visual impairments or those who cannot fully understand visual content.

#### How can I implement/check it?

To ensure that there are sufficient pauses in videos, the following measure can be taken:

* Timing and rhythm: When creating the video, plan sufficient pauses between the visual information to give viewers time to process it.

## 2. Video track

### 2.1 The background is rich in contrast to other elements and neutral overall.

#### What is meant by this?

The background in videos should be clearly differentiated from other visual elements and should not contain any distracting elements. A neutral background means that it is not overly patterned or detailed so as not to distract attention from the main content. Such a background can consist of a solid colour or a simple pattern that draws the focus to the main content of the video and minimises visual distractions.

#### Why is it important?

### A neutral video background helps easily distracted staff, people to concentrate on the content. In addition, a clear contrast to other elements helps staff, people who cannot perceive colours clearly, to better recognise and understand the content.

#### How can I implement/check it?

The following measures can be taken to realise a neutral background with contrast to the elements used in videos:

* Colour choice: Use neutral colours for the background and make sure it stands out clearly from other elements. Avoid background patterns that are too complex or distracting.
* Contrast check: Check the contrast between the background and the text or other visual elements to ensure that it is sufficiently clear.
* Neutral background: Choose a neutral background that is not too dominant and does not distract the focus from the actual content. A simple and uniform background can help to draw attention to the speaker or the material being presented.

### 2.2 The person speaking and the mouth image are clearly visible.

#### What is meant by this?

In videos, care should be taken to ensure that the person speaking is clearly recognisable and that their mouth image is clearly visible. This serves as visual support for the auditory information intake. By emphasising the mouth image, lip movements and mouth shapes, for example, can be better recognised, which makes it easier to understand the spoken content.

#### Why is it important?

The visual highlighting of the person speaking and their mouth image supports recipients who are dependent on visual cues when taking in auditory information. This applies in particular to people with hearing impairments who may be dependent on reading lip movements in order to better understand what is being said.

#### How can I implement/check it?

To ensure that the person speaking and the mouth image are clearly visible, the following measures can be taken:

* Camera settings: Make sure that the camera clearly captures the person speaking and that the mouth image is clearly recognisable. Avoid excessive zooming or unclear shots.
* Lighting: Ensure sufficient lighting so that the face of the person speaking is clearly visible. Avoid strong backlighting or shadows that could impair the mouth image.
* Emphasise mouth movements: The person speaking should take care to speak clearly and intelligibly. Emphasising mouth movements and pronunciation can help to make the mouth image more recognisable.

### 2.3 Relevant information can be perceived visually.

#### What is meant by this?

In videos, the relevant information should be presented in a visually clear way. This means that key spoken information should also be conveyed using visual elements such as text, graphics, diagrams or animations.

#### Why is it important?

The visual presentation of relevant information in videos supports staff, people who primarily absorb information visually. This applies, for example, to people with hearing impairments or those who have difficulty processing information through their hearing. It is also a relief for people who are unable to play the video with sound due to spatial conditions or ambient noise.

#### How can I implement/check it?

To ensure that relevant information is visually perceptible, the following measures can be taken:

* Clear and high-contrast text: Use legible fonts and ensure that the text has sufficient contrast with the background to ensure good legibility.
* Graphics and diagrams: Use visual representations such as graphs, diagrams or infographics to convey information clearly. Pay attention to a clear structure and label the elements clearly.
* Transcription and audio description: Provide a transcription of the spoken content that is displayed in the video or provided as an additional text document. If required, also add an audio description to make visual information for visually impaired staff, people.
* Image descriptions: Add image descriptions or alternative texts that give staff, people with visual impairments a description of the visual content.

### 2.4 Subtitles describe acoustic information.

#### What is meant by this?

Subtitles should be used in videos to provide the spoken content in written form. These subtitles serve as visual support and reproduce the spoken text verbatim. If necessary, they can also describe background noises, music or other auditory information.

#### Why is it important?

The use of subtitles describing acoustic information supports staff, people who are dependent on visual information or require visual support to process information. This applies, for example, to people with hearing impairments who cannot or can only partially understand the spoken content, as well as staff, people with learning difficulties or cognitive impairments who benefit from additional visual cues.

#### How can I implement/check it?

To ensure that subtitles adequately describe acoustic information, the following measures can be taken:

* Accurate transcription: Create an accurate transcription of the spoken content that includes background noise, music or other relevant auditory information.
* Clear formatting: Make sure that the subtitles are clear and easy to read. Use an appropriate font size and colour and ensure sufficient contrast between the subtitle text and the background.
* Timing and synchronisation: Make sure that the subtitles are displayed in sync with the spoken content and that they have enough time to be read.
* Comprehensibility: Use a precise and appropriate subtitle that corresponds to the auditory information.

### 2.5 Visual information is available in text and image form.

#### What is meant by this?

Information should not only be conveyed visually, but should also be presented in written form and through visualisations such as images, graphics, diagrams or videos. Text and image information is therefore used in addition to improve communication and understanding.

#### Why is it important?

It is important to provide visual information in text and image form to ensure that information is conveyed to all recipients. Not all staff, people have the same way of processing information. Some staff, people are visually orientated and can understand information better if they can see it. By combining speech, text and images, staff, people who have difficulty relying solely on auditory information can better understand and absorb the content. Providing visual information such as subtitles, transcripts or image descriptions will ensure that people with different abilities and learning styles can understand the content of the video.

#### How can I implement/check it?

Visual information can be converted into videos in various ways:

* Insert images, graphics or diagrams that support or illustrate the spoken content.
* Insert image descriptions: If images or graphics are used in the video, image descriptions should be provided to describe what can be seen in the images. This can be done either as subtitles or as separate descriptive texts.

### 2.6 Contrasts are sufficiently high, especially for images (ratio is at least 4.5:1).

#### What is meant by this?

When creating videos, it is important to ensure that the contrasts are sufficiently high, especially for images. A sufficiently high contrast means that there is enough difference between the colours to enable clear visual differentiation.

If images are used, they must have a minimum contrast of 4.5:1 to the background.

#### Why is it important?

It is important to provide sufficiently high contrast in videos to facilitate approval of information for people who cannot clearly perceive all colours. High contrast enables these staff, people to better recognise and understand visual content.

#### How can I implement/check it?

To realise sufficiently high contrast in videos, you can take the following measures:

* Choose colour combinations where there is sufficient contrast between the background and text or images.
* Use light text colours on a dark background or dark text colours on a light background to achieve a clear contrast.
* Make sure that the contrast between the colours is clearly visible even with different screens and lighting conditions.
* Test the contrast by displaying the video on different devices and screens and making sure that the content is clearly visible.
* Consider contrast when using graphics or diagrams to ensure that the information is clearly recognisable for all users.

A contrast ratio tool can be used to check for sufficient contrast. There are various online tools or software that can be used to measure the ratio between the colours. The recommended ratio is 4.5:1. By comparing the contrast ratio with this standard value, you can check whether the contrasts are sufficiently high.

### 2.7 There are no flashing images.

#### What is meant by this?

In videos, care must be taken not to use images that flash frequently or flash in quick succession. It is recommended that an image flashes no more than three times within one second.

When an image flashes, this means that it switches on and off very quickly and repeatedly or switches between different brightness levels. This can be achieved by rapidly changing the image content, background colours or brightness levels. The result is a flickering or flashing effect in which the image becomes visible and invisible at short intervals or changes greatly in brightness.

#### Why is it important?

It is important to avoid flashing images in videos, as staff, people who are sensitive to light stimuli may experience unpleasant or even health problems due to flickering or flashing images. Staff, people with epilepsy or light-sensitive migraines are particularly at risk. Avoiding flashing images will ensure that the videos are safe and approvable for all users.

#### How can I implement/check it?

To avoid flashing images in accessible videos, you can take the following measures:

* Flashing effects: Do not use fast, repeated flashing effects or animated images with strong contrast changes.
* Animations: If animations are used, make sure they are slow and smooth, without sudden flashes.
* Transitions and effects: Check all visual elements of the video, including transitions and effects, to ensure that they do not contain any flickering or flashing elements.
* Light changes: Make sure that the visual elements in your videos are calming and pleasant for the eyes, without rapid and intense light changes.

### 2.8 The integration of sign language is possible.

#### What is meant by this?

It must be possible to use sign language in videos. This means that one or more sign language interpreters translate the spoken content into sign language and communicate in front of the camera.

#### Why is it important?

The integration of sign language is important to give staff, people who use German Sign Language (DGS), approval of information and content in digital educational videos. Sign language is the primary or preferred form of communication for many staff, people with hearing impairments. Through the integration of sign language, these staff, people are able to better understand the content of the videos and participate fully.

#### How can I implement/check it?

You can either integrate sign language directly via the video playback tool or leave space in the image during planning and admission so that sign language speakers can be added to the video later.

### 2.9 There are few or no visual design effects.

#### What is meant by this?

Excessive visual effects and animations should be deliberately avoided in videos. The design elements, such as effects, movements or animations, are used minimally or not at all in order to reduce distraction.

#### Why is it important?

It is important to reduce the number of visual effects in videos to allow staff, people who are easily distracted or who perceive visual stimuli more strongly, to concentrate better on the content. Excessive visual effects can cause these staff, people to have difficulty focussing on the actual content and miss important information. Reducing visual distractions improves the approval and comprehensibility of the videos.

#### How can I implement/check it?

To implement the reduction of visual effects in accessible videos, you can take the following measures:

* Avoid excessive use of animations, movements or visual effects that do not directly contribute to understanding the content.
* Keep the design of the videos simple and clear to minimise visual distractions.
* Ensure a clear structure and easy-to-read text to draw attention to the content.

## 3. Playback/ download

### 3.1 Options such as subtitles, DGS translation, volume, video player etc. can be switched on and off.

#### What is meant by this?

Options such as subtitles, DGS translation (German Sign Language), volume and video player settings can be switched on and off during playback. The various options allow users to customise the videos according to their needs.

#### Why is this important?

In digital teaching, these options are particularly helpful for staff, people who need individual adaptations. For example, staff, people with hearing impairments can switch on subtitles to read the text content. While deaf staff, people benefit from DGS translation to understand the content in their preferred language form. Adjusting the volume is important for people with hearing difficulties or to compensate for ambient noise. By providing customisation options, videos can be made accessible to a wider audience, including staff, people with individual needs.

#### How can I implement/check it?

Take your time to familiarise yourself with the programmes used by your university and choose the one that best suits your needs. If necessary, do not hesitate to contact support for further information.

### 3.2 Metadata (content, authors, data size, runtime) are available.

#### What is meant by this?

Metadata is additional information, such as the content of the video, the names of the authors, the file size and the running time, which can be assigned to a video. This data should be available for videos and provide information to ensure approval of the content.

#### Why is this important?

It is important to provide metadata for videos to improve approval for staff, people with different needs. For example, a voice-over can use the metadata to lecture the content of the video and convey important information for the video. Staff, people using the video outside of its publishing context can use the metadata to identify and search the video.

#### How can I implement/check it?

You can manually check whether the relevant metadata such as content, authors, data size and runtime are correct and complete. Checking the relevant metadata can usually be done in the software or platform you used to create or upload the file or item. Here are some possible places where you can check this metadata:

* In the file manager: For example, if you have created a file on your computer, you can check the file properties to ensure that relevant metadata such as file name, author, size and project duration are correct.
* In the media editing software: When it comes to multimedia content, such as videos or audio files, you can often check the metadata in the media editing software. There you can adjust information such as title, author, description and project duration.
* On online platforms: If you upload content online, such as on social media or video platforms, you can usually specify the metadata directly during the upload process or edit it afterwards via the options or settings.

### 3.3 The possibility of a download exists.

#### What is meant by this?

With the option of a download, videos can be downloaded.

#### Why is this important?

The download option is particularly helpful for staff, people who want to customise their approval of the video, for example due to slow internet connections or to watch the video at a time that suits them.

#### How can I implement/check it?

The implementation of the download option for videos requires technical support. The platform or learning management system on which the videos are provided should offer a function for downloading videos. This can be done by adding a download button or a corresponding option.

## Sources

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