



**Accessible E-Learning and Teaching**

**Checklist for Creating and Reviewing  
Accessible Information Videos**

**University of Bremen**  
**The BALLON Project – Accessibility in E-Learning and  
Teaching**

These checklists were created as part of the BALLON Project (Accessibility in E-Learning and Teaching), which was launched at the University of Bremen in January 2021. The aim of the project is to develop a support system for teaching staff and students for accessible digital learning and teaching at Bremen universities as part of the implementation of digital and hybrid studies. Further information and support are available directly from the BALLON Project. This document contains descriptions on how to implement accessible design as well as checklists for reviewing different formats and materials: Word, PDF documents, PowerPoint, websites, online classes, and information videos. You can also download the checklists separately on the BALLON website under “Checklists and Tools”:

[Checklist for accessible Word documents](#)

[Checklist for accessible PDF documents](#)

[Checklist for accessible PowerPoint slides](#)

[Checklist for accessible online classes](#)

[Checklist for accessible websites](#)

[Checklist for accessible information videos](#)

Checklists for Creating and Reviewing Accessible Digital Content

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## Introduction

### Barriers at universities

There are a wide range of different hurdles at universities that result in unequal access to university education and can even prevent access in the first place. These barriers are distributed across different inequality dimensions such as age, background, gender, disability, and other aspects. The resulting disadvantages experienced by some students have become further exacerbated since 2020 in the course of the COVID-19 pandemic and the associated switch to digital learning and teaching formats. This transformation posed a challenge to students, teaching staff, and the administration alike – and continues to do so in some cases. Disadvantages, including greater social distance, limited communication, and sometimes poor technological infrastructure, constitute barriers for all students, but affect students of already marginalized groups in particular. The **barriers** in e-learning and teaching raise a number of questions:

- *How should I study for an exam if the learning material is only available as an audio file, which is inaccessible to me due to my deafness?*
- *Home alone with a poor internet connection and/or with German as a foreign language – how will I ever be able to pass the course?*
- *My student is unable to read the slides – how can I make them compatible for a screen reader?*
- *What exactly are digital barriers?*

### Aim and target group of the checklists

The checklists provide general **information on creating and reviewing accessible digital content**.

The checklists are aimed at everyone who is interested in supporting equal-opportunity access to digital content, with a particular focus on accessible e-learning and teaching. For this reason, they are intended especially for **teaching and administrative staff** who play a decisive role in student access to digital studies. The aim is to raise awareness of the topic of digital accessibility and provide a guide to

creating, designing, and reviewing Word and PDF documents, PowerPoint slides, websites, online classes, and information videos. Moreover, the checklists refer to helpful tools and further information. Accessible study material from teaching staff, work from students, and information material from administrative staff contribute toward a diverse and inclusive university and should be the norm. From easy-to-use forms and PDFs legible to screen readers, to high-quality online videos with live subtitles: every barrier prevented and dismantled ultimately benefits *everyone*.

## Legal foundation

In some areas of university, full accessibility is already **legally mandated** – for example, by the UN Convention on the Rights of Persons with Disabilities, the Basic Law of Germany, the German Higher Education Framework Act, the Bremen University Act, and other legislation. You can find details about the legislation under “[Further Information](#)” in the “Guide for Teaching Staff: Supporting Fully Accessible Teaching” (KIS, University of Bremen, 2018). The foundation for accessible online content is provided by the global standards of the [Web Content Accessibility Guidelines \(WCAG\) 2.1](#), upon which the German [Accessible Information Technology Regulation \(BITV\) 2.0](#) is also based. These standards are currently outdated and a draft of the [WCAG 3.0](#) has already been published. As a result, Bremen universities are obligated to enable equal access to studies for all students – irrespective of social dimensions such as disabilities or illnesses.

## How to use the checklists

The checklists can be accessed or used in two ways:

1. Are you about to start designing or creating materials and would like to make sure they are accessible? In this case, pay attention to the sections titled “**Implementation**” in the documents. Here you can find the aspects that should be kept in mind as well as information on specific settings in the relevant programs.
2. Have you already created your materials and would like to test their accessibility? You can review your materials yourself using the “**Checklists**.” Cross off the applicable checkpoints and use the information under “**Implementation**” to work through aspects that have not yet been fulfilled.

The checklists refer to work with the programs **Microsoft 365 Professional Plus 2019** and **Adobe Acrobat Pro**. Your software versions may differ in terms of the respective functions or presentations. You can find support at [Microsoft: Make your Word documents accessible to people with disabilities](#) and [Adobe: Create and verify PDF accessibility \(Adobe Pro\)](#).

Alternatively, you can use OpenOffice or LibreOffice. You can find guides for these programs here: [Accessible PDFs with OpenOffice and LibreOffice](#). In addition to Adobe Acrobat Pro, you can also use [axesPDF](#) and [Kofax Power PDF](#).

## 1. Information videos

Information videos are generally characterized by the fact that they provide information for an unknown audience and do not have a direct target group. This means that they cannot be adjusted to a target group or specific situation. For this reason, accessible video design is paramount. All information should be provided accessibly, clearly, and comprehensively. Information videos are a format suitable for providing information about starting studies, important news at university, cooperation projects of the institutes, or classes. Subsequent corrections for existing information videos are only possible to a limited extent. For this reason, please make sure you consider accessibility from the very beginning. Subchapter 6.1 "[Implementation of information videos](#)" provides a step-by-step guide through creating your own videos. Subchapter 6.2 "[Checklist for information videos](#)" helps you review existing videos for any potential barriers.

### 1.1. Implementation of information videos

#### Production of video material

Here you can find information for producing image material in your information video. This is intended to help you eliminate barriers in production and optimize the quality of information accessibility.

a) **Background:**

Make sure your video is recorded against a neutral-colored, static, and high-contrast background. Everything should be clearly recognizable, and distractions should be kept to a minimum.

b) **Visibility:**

The speaker in the video should be clearly visible where possible. This refers to the position in front of the camera, good lighting in the environment, and contrast with the background. When speaking, people should face the camera to facilitate lip reading. This is important for people with hearing impairments. A good camera helps achieve a sufficient quality of image resolution for videos.

c) **Text / image design:**

If information is embedded in the form of visual content in the video (such as texts or images), it needs to be designed in an accessible manner: sans-serif

font style, legible font size of at least 14 pt, high color contrasts, and no red/green combinations. This is covered in detail in chapter 1 “[Creating accessible content: Word.](#)”

d) **Translation into sign language:**

Depending on the reach, the information video should contain a video layer that shows an interpreter. (German) sign language increases the accessibility tremendously, especially for deaf people. You do not need to interpret yourself; you can hire an external expert.

e) **DGS logo:**

When integrating sign language, it is necessary to add the corresponding symbol to the relevant video.

f) **Effects:**

As enticing as advanced video effects may be, you should avoid fast video transitions, flickering lights that flash more than three times a second (due to epilepsy), and overloaded scenes in order to improve accessibility.

## **Production of audio material**

Important aspects also need to be considered when producing the audio track to your video in order to increase the accessibility of content.

a) **Simple language:**

Depending on the content, it may still be advisable to convey information in a simple language in the university setting, such as the “simple language” website of the University of Bremen.

b) **Speaking:**

Voice recordings must be clear. The sound quality can be improved using a microphone. Make sure all audio content has the same volume.

c) **Subtitles:**

Subtitles are not only helpful as an additional information channel for people with hearing impairments or no hearing at all, as well as non-native speakers, they also improve understanding for everyone. This is especially important for muted viewing on mobile devices. Always add subtitles whenever acoustic information is provided in the video. They can be embedded manually or automatically. The options and quality of automatic subtitles depend on the

playback media used (open or closed captions, subtitle settings, etc.). However, the quality of manual subtitles is always better than that of automatic subtitles. For this reason, you should use manual subtitles if possible.

d) **Audio description:**

While subtitles primarily convey spoken content, audio descriptions are an additional sound track in the video that describes the visual content. They are used to describe everything that is presented visually. This is necessary to ensure the information is also conveyed to people with visual impairments, for example. Depending on the type of video, the audio description may not be required if the video already includes verbal explanations of what can be seen visually.

e) **Audio track:**

An audio track in the information video must contain subtitles and/or an audio description, as mentioned earlier.

## **General production aspects**

The points described here refer to accessibility aspects that concern both the video material as well as the audio track.

a) **Multi-channel principle:**

The multi-channel principle is important especially for information videos. All information needs to be conveyed via multiple channels at the same time. This ensures at least one form of communication channel is understood. For instance, a blind person cannot see the images shown but can hear the audio track.

b) **Audio and image quality:**

Visual and listening comprehension strongly depends on the content quality for people with visual or hearing impairments. Therefore, please make sure the quality and resolution of the content are sufficient.

c) **Environment:**

Record the audio track in a quiet environment free from disruptive noises. Prefer static over moving recordings (lip reading is generally impaired when the speaker moves in the video).

## Playback and download

Here we would like to explain some criteria that you should consider when selecting a suitable playback medium and when publishing video material on websites.

a) **Playback medium:**

Please note that different settings are available depending on the playback medium, which affect accessibility. Find out which playback medium is most appropriate, since the video player should be usable for everyone, including via keyboard and for people with visual impairments. Make sure playback media are identifiable and labeled.

b) **YouTube:**

YouTube is a special case. The platform enables the activation of automatic subtitles (closed captions). However, these subtitles are prone to algorithmic errors, especially for technical terms and content in German. For this reason, you should use manually produced subtitles. You could consider editing automatically created subtitles to this end.

c) **Legal provisions:**

Since information videos are typically integrated on websites, they are subject to rules on accessible online content. You can read about these rules under "[Information](#)" and in chapter 4 "[Creating accessible content: websites.](#)" This document is geared toward these rules. They are based on [WCAG 2.1: Chapter 1.2 Time-based media](#).

d) **Download:**

Enabling information videos to be downloaded can also improve accessibility. This has to be configured accordingly, with information provided on file size and video length.

## 1.2. Checklist for information videos

Here you can find information for reviewing the image material in your information video. This checklist is intended to help you review existing material for any barriers that may exist. Open your information video and check all the listed settings during playback. We not only recommend testing the file on your computer, but also from the perspective of recipients, such as on a tablet or smartphone. Also test the information video where you publish it.

### Production of video material

**Is your video background high-contrast, static, and neutral?**

Visually check the background of your video for color neutrality, high contrast, and static images, and make sure it is free from any distractions.

**Are you clearly visible, including your mouth for lip reading?**

Look at the person talking and consider aspects related to their visibility: position, lighting, possibility of lip reading, contrast with the background, eye contact, as well as image resolution.

**Are your images and texts legible and accessible?**

Integrated content should also be checked. Ensure the use of a sans-serif font and lack of red/green combinations, for example. This is explained in detail in chapter 1 "[Creating accessible content: Word.](#)"

**Does your video include a sign language interpreter?**

Check whether an interpreter for (German) sign language is clearly shown in a sufficient size.

**Is your information video labeled with the DGS logo?**

Make sure the DGS logo is displayed as a reference to the translation in the video and video description.

**Are creative effects using sparingly?**

Watch the full video and look for any barriers like creative slide transitions or strobe lighting.

## **Production of audio material**

**Is information provided in simple language?**

Depending on the content, it may be appropriate to convey information in simple language also in a university setting, for example to summarize key content.

**Do you speak clearly into a microphone?**

Voice recordings should be clear, and audio content should have the same volume. The voice quality can be improved using a microphone.

**Are subtitles available for all spoken content?**

Check in the video whether subtitles are available and whether they actually convey the spoken content. You should also make sure the subtitles are legible. If subtitles are not available as standard, an option must be provided to activate them (closed captions).

**Is an audio description available for all visual content?**

Compare all visual content with the available audio descriptions and amend them if necessary. Both the visual and audio channels should provide the same information.

**Are visual elements described verbally?**

Where there is no audio description, check whether all visual content is described verbally in the video.

## **General production aspects**

**Have you followed the multi-channel principle when it comes to the information provided?**

The multi-channel principle is important especially for information videos. All information needs to be conveyed via multiple channels at the same time. This ensures that people can understand at least one communication channel.

**Is the quality of your audio and images suitable?**

Make sure the quality and resolution of audio and image material are sufficient.

**Did you produce the video in a quiet environment?**

Also check the audio track. It must be comprehensible for everyone and should not

contain any disruptive noises or quality shortcomings. In addition, it is important that the person speaking can be seen at all times.

## **Playback and download**

**Is the playback medium accessible?**

This includes all aspects concerning accessibility. Subtitles should be available including with customizable options such as the size of subtitles. The video player should be controllable via keyboard and the video data recognizable for screen readers.

**Do YouTube videos contain edited subtitles?**

If you share your content on YouTube, activated subtitles (closed captions) should be available. These subtitles should be prepared manually (no auto captions).

**Does your video meet the legal requirements on accessibility?**

It is important that your video meets the legal requirements. Adhere to binding specifications that often cover most potential barriers. These rules are described in detail here: [WCAG 2.1: 1.2 Time-based media](#).

**Have you provided video details for downloadable videos?**

Check whether the full details about your video are available on the playback platform. These include the content, author, file size, duration, etc. You should also make sure the video is actually available to download.

## Further information

Contrast Checker:

<https://contrastchecker.com>

Corporate design of the University of Bremen:

<http://www.uni-bremen.de/corporatedesign>

KIS and kivi, University of Bremen (2020): Guide for Teaching Staff.

[LoB Broschuere 2020.pdf \(uni-bremen.de\)](#)

ZMML, University of Bremen (2021): Accessible Digital Teaching. Tips for Teaching Staff: General, Lectures and Seminars, Accessible Documents and PowerPoint Presentations:

<https://www.uni-bremen.de/zmml/lehre-digital/zugaengliche-digitale-lehre>

## List of links

Create and verify Adobe PDF accessibility (Adobe Pro):

<https://helpx.adobe.com/de/acrobat/using/create-verify-pdf-accessibility.html>

BALLON:

<https://www.uni-bremen.de/digitale-transformation/cdo-projekte/ballon>

Accessible Information Technology Regulation (BITV) 2.0:

[https://www.gesetze-im-internet.de/bitv\\_2\\_0/BJNR184300011.html](https://www.gesetze-im-internet.de/bitv_2_0/BJNR184300011.html)

Accessible PDFs with OpenOffice and LibreOffice:

<https://www.netz-barrierefrei.de/wordpress/barrierefreies-publizieren/barrierefreie-pdfs/barrierefreie-pdfs-mit-openoffice-und-libreoffice/>

Microsoft: Make your Word documents accessible to people with disabilities:

<https://support.microsoft.com/de-de/topic/gestalten-barrierefreier-word-dokumente-f%C3%BCr-personen-mit-behinderungen-d9bf3683-87ac-47ea-b91a-78dcacb3c66d>

Web Content Accessibility Guidelines (WCAG) 2.1:

<https://www.w3.org/TR/WCAG21/%23contrast-minimum>

Web Content Accessibility Guidelines (WCAG) 3:

<https://www.w3.org/WAI/standards-guidelines/wcag/wcag3-intro/>

How to meet WCAG 2.0. A customizable quick reference on Web Content

Accessibility Guidelines (WCAG) 2.0 requirements (success criteria) and techniques:

<https://www.w3.org/WAI/WCAG21/quickref/?versions=2.0>