



**Accessible E-Learning and Teaching**

**Checklist for Creating and Reviewing  
Accessible Word Documents**

**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. Creating accessible content: Word

This chapter helps you create accessible Word documents. It is a good idea to read through subchapter 1.1 “[Implementation in Word](#)” before creating Word documents. This allows barriers to be prevented from the outset, eliminating the need to correct them afterwards. The criteria have been broken down thematically to improve orientation. An accessible Word document should consider all criteria equally, where possible. Existing Word documents can be reviewed using the “[Checklist for Word](#)” in subchapter 1.2.

The function “Check accessibility” has only been available in Word versions from 2013 and will be covered later. However, this guide can also be used to create accessible Word documents without this function.

### 1.1. Implementation in Word

#### Text formatting with format templates

The information described here should help you structure your Word document appropriately and accessibly using Word format templates, making it easily legible for everyone.

With the Word document open, you can implement the following settings step by step using the Word menu bar. If the functions cannot be found in the location described, you can find them using the search function in the menu bar.

#### a) Format templates:

For people with visual impairments, it is necessary to design text using format templates in Word for navigation using screen readers. This clearly defines selected text elements as (sub)headings or as (body) text, which can then be read out. Format templates are selected via “Home – Format templates.” This is also where changes can be made to standard format templates and where user-defined format templates are created. A range of format attributes can be configured using the format templates: font style, paragraph, tab stop, frame, language, position frame, numbering, key combinations, and text effects. To apply a format template, mark the text passage, and select the corresponding format template. Conversely, you can also format a text passage, mark it, and

then press “right click on format template – update [name of format template].”

This saves your manual settings in the respective format template.

**b) Font:**

To make sure the font is legible, a common sans-serif font style like Arial should be used. The font size must be 12 pt. Employees of the University of Bremen use the fonts defined in the corporate design (Sharp Sans or Arial).

**c) Line spacing:**

In order to ensure the text is also legible with limited eyesight, the line spacing should amount to at least 1.25 or ideally 1.5.

**d) Text alignment:**

Texts must be left-aligned and unjustified for legibility. Margin justification that is typically used can distort the text and make it unreadable.

**e) Special formatting:**

Highlighting should be used sparingly in format templates, because this can quickly make specially formatted text illegible. It is particularly important to ensure that the whole document is formatted with Word functions (Layout – Breaks). Please note: manual formatting with Enter and Tab should be avoided, as these entries are read out individually by some screen readers, which significantly disrupts the reading flow. Instead of placing breaks with Enter, breaks can be inserted via “Layout – Breaks – Continuous” if necessary.

Otherwise, it is best to configure spacing directly in the format template: “Menu – Format template – Format – Paragraph – Indents and spacing – Spacing.” Using the key combination “Ctrl + \*” the existing paragraph marks and other formatting symbols can be shown and checked.

## **Text structure**

Text structure is essential for designing accessible text files. Your document can be structured into columns, lists, or continuous text using Word functions. This not only improves the general overview, it also facilitates text design. The following information is also intended to ensure correct legibility for screen readers.

**a) Structure:**

The document must be structured clearly and consistently for the text to be logical and legible for everyone. The correct structure can be checked in the

outline view (View – Outline). An incorrect structure will result in the wrong reading sequence for screen readers.

**b) Columns:**

It is also important not to create text columns manually for the above reasons. Automatic columns should be used (Layout – Columns – Column number). The text is divided into the chosen number of columns, and the width and spacing can be adjusted individually.

**c) Lists:**

Lists and bullet points need to be configured using the corresponding functions to ensure screen readers can recognize the text as a type of list and read it out correctly. Do not use manual lists. Instead, different types can be selected and adjusted via “Home”: bullet points, numbering, and multi-level lists. Roman numerals should be avoided as bullet points.

**d) Page numbers:**

These are indispensable for orientation and should always be inserted (Insert – Header and footer – Page number).

**e) Table of contents:**

An automatic table of contents is necessary for various functions and screen readers. The table of contents is integrated and adjusted by Word (References – Table of contents). The interactive table of contents is based on heading levels defined by format templates.

**f) Headers and footers:**

These are not legible for a number of screen readers and should not therefore contain any information relevant for understanding.

**g) Hyphenation:**

Manual and automatic hyphenation for splitting words must be deactivated (Home – Layout – Hyphenation). This is for several reasons: It is not always correctly applied when converted to PDF files, sometimes screen readers read out hyphens as “hyphen”, and hyphens can impair legibility for people with learning difficulties or reading and writing disabilities.

## **Pictures, tables, and web links**

To ensure the contents of pictures and tables can be understood non-visually, certain settings must be kept in mind. These are explained below and improve accessibility for everyone.

### **a) Image properties**

The images used should be clear to everyone. It is important to use a suitable size and resolution. Black and white content should also still be recognizable.

### **b) Graphic layout:**

To place embedded images in the correct sequence for screen readers, select the option “In line with text” as an image property (right click on the image – Layout options).

### **c) Tables:**

For compatibility with a screen reader, tables need to contain a defined header line (Table tools – Table information options – activate checkmark for “header line”) in addition to an alternative text for complex tables (right click on the table – Edit alternative text or Table properties – Alternative text). Moreover, tables should only be used for tabular data and not for layout design. Since screen readers read out tables row by row, each row must contain the same number of columns. Adding a description (right click on the table – Insert label) identifies the purpose of the table and is necessary for an automatic table of contents.

### **d) Alternative text:**

All information from graphic elements and tables also has to be provided via a non-visual channel, in accordance with the multi-channel principle. Alternative text can be inserted in Word for this purpose (right click on the image – Edit alternative text). Logos, symbols, pictograms, photos, diagrams, and other types of graphics likewise require an alternative text. Where images are only intended for layout design, they should be marked as “decorative” (right click on the image – Format image – Alternative text – activate the checkmark for “Mark as decorative”). This is necessary so that people with impaired vision can have a screen reader read out relevant content. An alternative text should be worded briefly, precisely, and objectively to describe the core message of the image. Everything that can be seen on the image should be described objectively, so

that people with and without vision experience the same content. In principle, image descriptions should be structured consistently, starting with general information before going into detail. Do not use the automatic function “Generate description for me,” as the result will not meet requirements.

e) **Links:**

Links and references should be recognizable as such in the text. They must be formatted accordingly as a link and labeled with link text and a screen tip (select link – right click – Link – Text to display and screen tip). The link text and screen tip should contain a suitable name for the webpage destination. Make sure a working link is entered.

## **Document properties**

At this level, you can find information on settings that you should configure regardless of the content of your documents in order to increase the accessibility of your text. These points are particularly essential for files intended for publication.

a) **Meta information:**

Accessibility requires certain document properties (File – Information). At least a document title and the author should be entered here. Tags and comments can also be helpful, especially for retrievability on the internet (via search engines).

b) **Document language:**

Correctly configured document languages are important for a text document to be correctly interpreted by screen readers. They can be assigned individually to every document (Review – Language – Language settings). The defined document language must be identical to the language of the text content, otherwise this can result in readout errors with screen readers. Individual paragraphs in the document can be assigned a different language setting. To do so, select the text in the foreign language and change the language via “Menu – Review – Language – Set proofing language.” The option “Detect language automatically” can also be activated for this purpose.

## **Additional information for accessibility**

Further general criteria are listed here that are intended to increase the accessibility of your document and help you dismantle any remaining barriers.

a) **Language:**

The language you use should be determined by the target group. However, to make sure everyone can understand the language, simple language is important. Sentences should be clear and unconvoluted. Abbreviations and foreign words should be explained or listed in a glossary, and a gender-appropriate language should be considered.

b) **Contrast:**

All content must have a sufficient color contrast between the foreground and background. Low-contrast content represents a barrier for people with color blindness. The combination of red and green should generally be avoided. Under "[Further information](#)," you can find a tool for automatically testing contrasts. The contrast ratio should be at least 4.5:1. Highlighting should follow the multi-channel principle: a color effect should be combined with bold print or similar. This makes the highlighted content also recognizable in black and white.

c) **Checking accessibility:**

The function "Check accessibility" (Home – Review – Check accessibility) in Word reveals a number of typical mistakes and should always be used after creating content. Once the check is done, the errors detected must be corrected.

## 1.2. Checklist for Word

Here you can find information for reviewing your Word document. This information is intended to help you check existing material for any barriers that may exist. Open your Word document and check all the listed settings step by step. If a point is unclear or incorrect, you can consult the previous chapter to resolve the issue.

### Text formatting and format templates

**Have you formatted your text with format templates?**

Check whether you have formatted all content using pre-configured format templates.

**Have you used a sans-serif font with a size of at least 12 pt?**

Have you used a common, sans-serif font type like Arial? The font size should also be at least 12 pt.

**Does your line spacing amount to 1.5?**

For a standard body of text, the line spacing should ideally be 1.5 and should not fall below 1.25.

**Is your text left-aligned and unjustified?**

Format your text left-aligned and unjustified. Text justification can lead to difficulties reading the content.

**Have you used special formatting sparingly and automatically?**

Avoid manual formatting with spaces and empty rows using the Enter key. Instead, use the corresponding Word functions.

**Is your document structure logical and consistent in the outline view?**

Check for the correct structure in the outline view. An incorrect structure will result in the wrong reading sequence for screen readers.

**Have you configured text columns automatically?**

Text columns should not be configured manually. Work with automatic columns instead.

**Have you inserted all lists using list/numbering options?**

Lists and bullet points must be configured using the corresponding functions to allow screen readers to recognize and read them out properly.

**Does your document have complete, automatic page numbering?**

Page numbers are indispensable for orientation.

**Do you have an automatic table of contents?**

Did you insert and adjust the automatic table of contents using Word?

**Do the header and footer not contain any relevant information?**

Headers and footers are illegible for some screen readers. For this reason, make sure they do not contain any information relevant for understanding.

**Have you deactivated hyphenation?**

Hyphenation should be deactivated to improve legibility and compatibility with screen readers.

### **Pictures, tables, and web links**

**Are all your images embedded in sufficient size and resolution?**

Generally, you should only use images when their size and resolution satisfy an accessible standard of quality. Information should also still be discernable in black and white.

**Are all your images inserted in line?**

Check whether images have been inserted in line with text.

**Have you marked layout graphics as decorative?**

If images are only intended for layout design, they must be marked as “decorative.”

**Do all your images have an appropriate alternative text?**

Following the multi-channel principle, information in graphics must also be available via a non-visual channel. Each image should therefore have an alternative text as an image description.

**Do all your tables have a header line, label, and alternative text?**

Review the alternative text for complex tables, make sure all tables have a defined header line, and check whether a correct label is added so that the tables can be read out correctly by a screen reader.

**Do you only use tables for tabular data?**

Tables should only be used for tabular data and not for layout design.

**Do all your rows have an identical number of columns?**

Since screen readers read out tables line by line, each row in your table should have the same number of columns.

**Do all your links have a link text and screen tip?**

Are all links formatted as a link and are they labeled with a link text and screen tip? Both must reflect the content or destination of the link.

### **Document properties**

**Have you entered the main meta information?**

Are document properties correctly configured? If necessary, add at least a document title and the author.

**Have you configured the document language correctly?**

The defined document language should be identical to the language of your text content. This goes for the complete document as well as for any sections in a foreign language.

### **Additional information for accessibility**

**Have you used language appropriate for the target group?**

The language used should be based on the target groups and also meet the normal requirements of the University of Bremen.

**Is your language easy to understand?**

Make sure your content is written in a clear language with easy-to-understand

sentences or bullet points. This facilitates teaching and learning, also in a university setting.

**Are abbreviations and foreign words explained or listed in a glossary?**

Have you explained all abbreviations and foreign words or listed them in a glossary?

**Is your color contrast high enough (minimum ratio: 4.5:1)?**

Check your content has enough contrast – both in black and white and for color content. No red/green contrasts may exist, and the content should still be recognizable in black and white.

**Is color highlighting combined with a second type of formatting?**

Highlighting should follow the multi-channel principle. Do not just use a color effect but also bold print, etc.

**Have you performed an accessibility check and corrected any errors?**

After creating the content, use the accessibility check in Word and correct any errors detected.

## 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>