

# DIGITAL ACCESSIBILITY

General guidelines for digital content



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# PURPOSE

The purpose of this guide is to help ensure that all students part of our university community, have equal access to our digital educational materials and resources. The aim is to empower content creators with the knowledge and tools necessary to design and develop content that is not only compliant with accessibility standards but also fosters an inclusive learning environment where every student, regardless of their abilities – whether visual, auditory, motor, or cognitive impairments – can flourish.



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# 1. GLOSSARY

## Digital accessibility

Digital accessibility, or web accessibility, means ensuring that websites, social media, mobile apps, electronic documents, learning management systems (LMS), and online learning materials are designed and developed in such a way that allows all people – including those users who have visual, auditory, motor, or cognitive disabilities – to navigate and comprehend them without difficulty.

## Alternative (or Alt) text

Alt text, also known as alternative text, briefly describes non-text content like photos, graphs, and tables. It is essential for users who are visually impaired and rely on screen readers to interpret web content when these elements cannot be displayed.

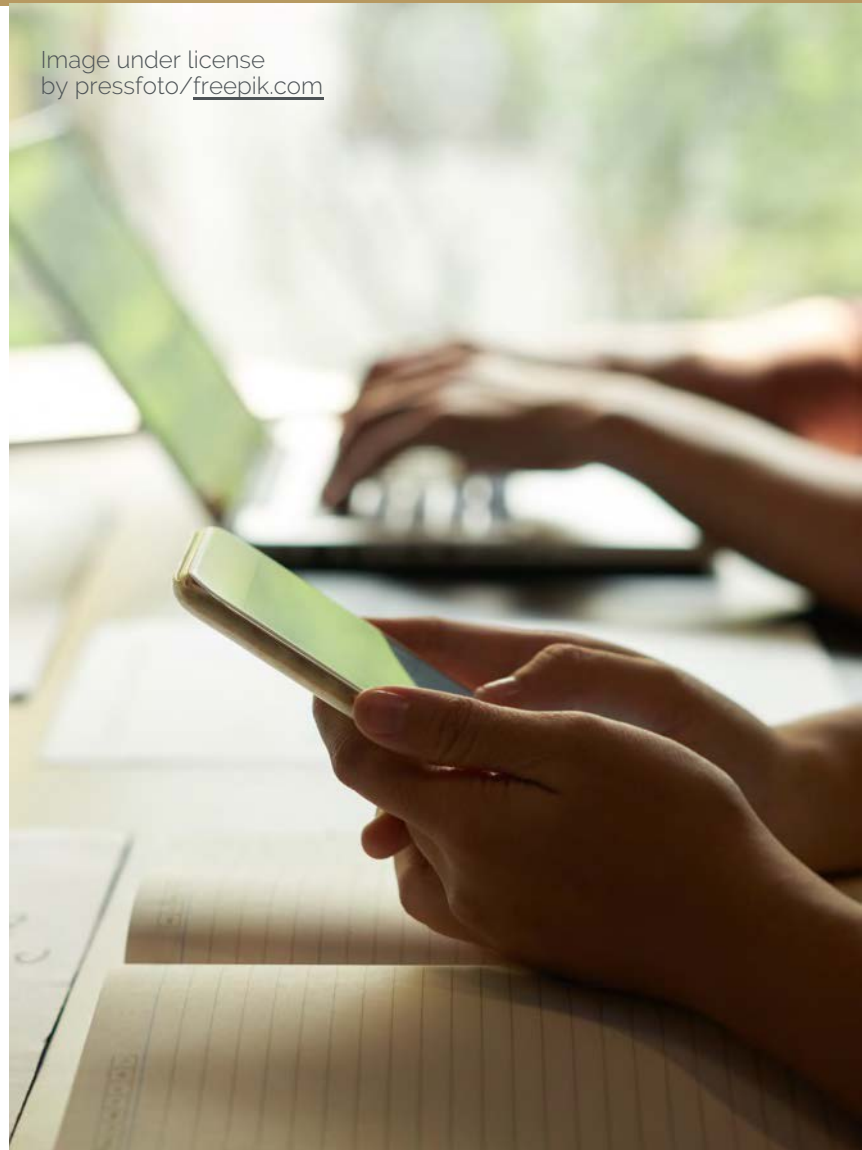


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# 1. GLOSSARY

## Closed captions

Textual transcripts that are displayed in synchronisation with a video's dialogue, sound effects, and music. They are primarily used to help viewers who have auditory disabilities and are unable to hear the audio of the video.

## Transcript

A transcript is a written record of speech and other relevant non-speech information needed to understand a video, typically capturing dialogue verbatim and also including descriptions of the visual presentation within a video. Additionally, in the case of images, transcripts can offer a more detailed description compared to alt text alone. While alt text typically provides a brief description of an image, transcripts offer a more comprehensive explanation-particularly useful for complex images – providing additional context, details, or interpretations that may not be conveyed effectively through alt text alone.

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# 1. GLOSSARY

## Screen reader

A software application that interprets and converts digital text into synthesised speech or Braille output, enabling individuals who are blind or visually impaired to access and navigate digital content.

## Web Content Accessibility Guidelines (WCAG)

It is a set of internationally recognised guidelines developed by the World Wide Web Consortium (W3C) to ensure that digital content is accessible to people with disabilities.



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## 2. FOUR PRINCIPLES OF DIGITAL ACCESSIBILITY

The four principles of digital accessibility, as outlined in the Web Content Accessibility Guidelines (WCAG), are known by the acronym POUR and are the foundations for accessible web content. They are as follows (World Wide Web Consortium. W3C, 2023):

### Perceivable

Information and user interface components must be presented in a way that users can identify them, regardless of their sensory abilities.

### Operable

User interface components and navigation must be usable by users, regardless of their device or method of interaction

### Understandable

Information and operation of the user interface must be understandable by users, including those with cognitive or language disabilities.

### Robust

Content must be robust enough to be interpreted reliably by a wide variety of user agents, including assistive technologies such as screen readers, magnifiers, and voice recognition software.

## 3. DIGITAL ACCESSIBILITY TIPS

In this document, we will provide you with a list of key themes (1–5 below) for enhancing content accessibility. These changes can typically be made without compromising the overall appearance and style of your content.

# 1

### Content



# 2

### Font



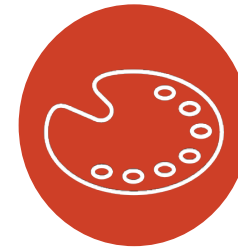
# 3

### Multimedia



# 4

### Colour



# 5

### Language



Icons Icons by Microsoft PowerPoint/[microsoft.com](https://www.microsoft.com)



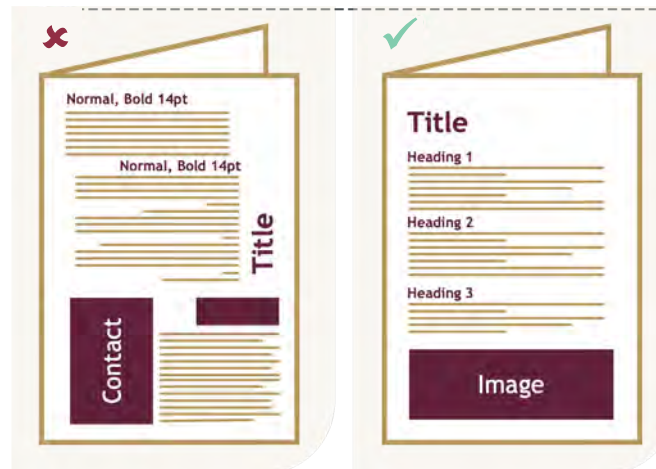
# 3.1 CONTENT STRUCTURE

## Key tips to follow for accessible text structure and organisation

- **Use marked-up headings and subheadings (e.g., Heading 1, Heading 2, Heading 3, etc.) with a logical hierarchical structure.** This ensures that a screen reader can understand and read out the hierarchy of the page.
- **Ensure that headings accurately describe the content they precede and follow a consistent order throughout the course.** This allows for a clear hierarchical structure that can be comprehended by screen readers.
  - Avoid skipping heading levels (e.g., no <h2> between <h1> and <h3>).
- **Keep text left-aligned.** Avoid using justified text which adds extra spaces to your text to achieve straight edges on both sides of your paragraph. These extra spaces can make it difficult to read.

- **Hyperlinked text should be comprehensible even when taken out of context and should offer meaningful information regarding the linked content.** Link text like 'click here' is not helpful or informative for users using assistive devices, such as screen readers. Instead of 'Click here for more information', use 'Read the accessibility guidelines' for hyperlinks.

### Example



## Bad example

✗ Multiple text alignment (left and justified text) are used with multiple text directions, which makes the text difficult to read. Additionally, the headings have not been marked up with a logical hierarchical structure.

## Good example

✓ Left-aligned text with defined headings and hierarchical structure.

## Resources

### Structuring content to be accessible

Web Accessibility Initiative, [web accessibility tutorials](#).  
The A11Y Project [Accessible heading structure](#)  
Usability & Web Accessibility [Headings](#)

# 3.1 CONTENT STRUCTURE

## Key tips to follow for accessible text structure and organisation

- **Use the table built-in function in your LMS text editor to insert or format all tables.** Do not create tables using tabs and spaces or by drawing boxes and lines. Tables with unusual cell sizes and formatting is difficult for screen readers to read.
- **Specify the header on columns or rows (<th> elements within <tr>) to enable screen readers to announce them correctly to users.** This makes it easier for users relying on assistive technologies to comprehend and navigate the table's content.
- **Keep tables simple.** Complex tables can pose challenges for individuals using assistive technologies.
- **Avoid empty cells and merged cells.** These can confuse screen readers and disrupt the flow of information.

### Example

#### Bad example

✖ This is a simple table design however the table is without specified header rows/columns and contains some empty cells.

Content	Content	Content
Content	Content	
Content		Content

### Good example

✓ This is a simple table design that includes a title/caption and specified header rows.

Table title

Header	Header	Header
Content	Content	Content
Content	Content	Content

### Resources

#### Structuring tables to be accessible

WebAIM, [Creating Accessible Tables](#)  
Web accessibility, [Tables](#)  
Accessibility guidelines, [Building Accessible Tables](#)

## 3.2 FONT

### Key tips for accessible use of font

- **Avoid using all caps.** All caps reduce the readability of text because every word has the same rectangular shape, making it impossible for screen readers to distinguish words based on their shape.
- **Don't underline text.** Reserve underlining for identifying links.
- **Publish text with a minimum font size of 12 pt.** This ensures that content remains legible and readable for users, particularly those with visual impairments or who may need to adjust text size for better readability.
- **Use clean and readable typography.** For example, use Sans-serif fonts (e.g. Verdana, Arial, Calibri, etc.) that are simple and familiar. This ensures that content is easily legible and understandable for all users, including those with visual impairments or reading difficulties.

- **Use responsive typography.** Ensure that your typography is responsive and adjusts appropriately to different screen sizes and devices. Test your font sizes and spacing on various devices to ensure readability across different platforms.

### 💡 Testing font accessibility

A font is considered more accessible when it enables clear differentiation between similar characters such as:

**Z and 2**  
**S and 5**  
**I, l and 1** (I, L and One)

A font is considered accessible when it provides adequate spacing between letters in a word, such as:

**m and rn**  
**oa and oo**  
**cl and d**

### Resources

#### Accessible fonts and typography

WebAIM, [Typefaces and Fonts](#)  
Readability & accessibility, [Introducing accessibility in typography](#)  
Design & Develop, [Understanding Accessible Fonts and Typography](#)  
British Dyslexia Association [Dyslexia-Friendly Formatting](#)



## 3.3 MULTIMEDIA

### Key tips for accessible images

- **Add 'alternative text' (alt text) to informative images.** It ensures that users who are unable to see the visual content can still obtain the conveyed information.
  - Alt text should provide a comprehensive, text-based version of all pertinent and distinctive instructional content contained within an image.
- **Is alt text enough?** Complex or detailed images may require a more comprehensive description than what is typically feasible within the constraints of alt text, which is usually limited to a maximum length of around 125 words. In such instances, provide a hyperlink to a detailed text description that fully conveys the meaning of the item. You could include a hyperlink near the image with text that reads, 'Access a detailed description of this image'.
- **Avoid using pixilated images.**

- **Avoid using images of text.** Screen readers cannot read the text on these images.

### 💡 Example of alt text

#### See alt text at the bottom of the image



Photo by Centre for Learning Technologies

A group of Stellenbosch students with backpacks walking on a university campus pathway.

### ➡ Resources

#### Alternative text

WebAIM, [Alternative Text](#)

DIS23, [Creating Accessible Figures and Tables](#)

Web Accessibility Guidelines v1.0, [Images](#)

WebAIM, [Accessible Images](#)

WCAG, [Good Alt Text, Bad Alt Text – Making Your Content Perceivable](#)

## 3.3 MULTIMEDIA

### Key tips for accessible audio and/or videos

- **Provide transcripts for audio and video content.** Transcripts should include all spoken words, along with relevant non-verbal information like sound effects and speaker identification.
- **Provide closed captions for prerecorded multimedia content, such as videos.** Closed captions display both the spoken content and relevant non-verbal information, ensuring accessibility for users who are deaf or hard of hearing.
- **Provide options for adjusting the playback speed, volume, and other multimedia settings.** This accommodates individual user preferences and accessibility requirements.

### Example

#### Closed captions for a video

The closed captions are the text displayed with a grey background at the bottom of the video frame, appearing synchronously with the video, as demonstrated on the video screenshot below.



### Resources

#### Captioning, transcribing, and playback

WebAIM, [Captions, Transcripts, and Audio Descriptions](#)  
W3C Web accessibility, [Captions/Subtitles](#)  
Digital accessibility office, [Video and Audio](#)






## 3.4 COLOUR

### Key tips for accessible use of colour

- **Ensure that colour is not the only way information is conveyed.** Include other visual cues like text labels or patterns alongside colour to convey meaning.
- **Ensure there is sufficient colour contrast between text and background colours.** This improves the readability for users with low vision or colour blindness.
  - If you're not sure about the contrast, use a contrast checker tool such as the [WebAim contrast checker](#) to check.

### Example

#### Good vs bad colour contrast ratios

Ratio 1.61:1		FAIL
Ratio 1.44:1		FAIL
Ratio 2.87:1		FAIL
Ratio 4.02:1		FAIL
Ratio 7.78:8		PASS

**Note:** The colour contrast ratio for standard-size text should be a ratio of 4.5:1 or greater.

### Resources

#### Accessible colour contrast and graphics

WebAim, [Contrast Checker](#)  
Web Accessibility Guidelines v1.0, [Contrast & Color](#)



## 3.5 LANGUAGE

### Key tips for accessible language

- **Use short, simple and clear sentences.**  
Ensure to keep sentences short. Use bullet points and simple punctuation.
- **Use active voice.** Using the active voice allows you to trim unnecessary words and simplify the language making it less complex.

### Example

#### Original text

✖ Companies that prioritize digital inclusion have higher shareholder returns, higher revenue, and better performance in economic profit margins. Although we don't need a business case to use accessible language, it is proved to be financially beneficial.

#### Rewritten for accessibility

- ✓ Companies focusing on digital inclusion see:
- better shareholder returns,
  - higher revenue, and
  - improved profit margins.

Using accessible language is not just ethically sound; it also brings financial benefits.

**Explanation:** The rewritten version simplifies the language, breaking down complex sentences into shorter, clearer ones with bullet points. It removes unnecessary words and jargon, making the content more accessible to a wider audience. Furthermore, it is also rewritten in the active voice instead of the passive voice.

### Resources

#### Accessible language

Change, [How To Make Information Accessible](#)  
WebAIM, [Writing Clearly and Simply](#)  
Stellenbosch University Language Centre,  
[English Style Guide](#)

# NEED MORE HELP?

If you have a query or would like to get involved in further discussion in digital accessibility, please let us know and feel free to contact Grazelde Langeveldt at the Centre for Learning Technologies via email at:

[glangeveldt@sun.ac.za](mailto:glangeveldt@sun.ac.za)

She will refer you to the right resources and provide consultation.



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