



## How can you make your websites more accessible?

### Introduction

Students and prospective students depend on the information available on the university websites in choosing and following a study programme. The same applies to university facilities and organisations. However, these websites are not always accessible for all students. Students with a functional impairment sometimes have trouble deciphering the information provided on the websites due to the nature of their impairment. These are students with a visual impairment (including colour blindness), students with a hearing impairment, students with a motor impairment, students with dyslexia, and students with ADHD or an autism spectrum disorder.

The same problem arises elsewhere in society. To ensure digital accessibility for persons with an impairment, guidelines were therefore formulated for designing websites and mobile applications. These guidelines can be found in the [Web Content Accessibility Guidelines \(WCAG\), Version 2.1.](#)

### Tips for improving accessibility

WCAG is based on four principles: operable, perceivable, understandable, and robust.

#### Operable

- **Be consistent.** Make sure the order of menu items is the same on all pages. That way, visitors who do not have a visual overview of the page can still know where they are.
- **Keyboard control.** Blind students do not use a mouse but a keyboard to navigate. Make sure that the website (and all content, such as forms) can be operated by keyboard.
- **Heading list.** Make sure that your headings accurately describe the content. Students who use screen readers sometimes scan a heading list with all heading texts. They need to do so to get an overview. Blind students, for example, cannot scan a text. Headings should therefore convey clear and accurate information.
- **Skiplinks.** Skiplinks are in-line links to specific content section on the page. By using skiplinks you can save users with screen readers from having to go through the entire menu to access a specific section.
- **Page title.** When using speech software, the page title at the top of the browser tab is the first thing that is read out. It is therefore important to make this title unique and representative of the content.
- **Images and links.** Sometimes, an image is also at the same time a link. A blind student, however, cannot read where this link leads to. In such cases, include the link as alt-text under the image.
- **Flashing content.** Students with epilepsy can get a seizure from light flashes. Make sure that elements do not flash more than three times per second.



### Perceivable

- **Lay-out.** Some students with a disability benefit from a calm web page. Students with ADHD or autism benefit from a calm lay-out.
- **Images.** Images cannot be perceived by students with a visual impairment who use supporting reading software. Make sure your images are accompanied by descriptive alt text. The same applies to graphs, input fields on forms, and captchas. Avoid using text in images as the only way to convey information. You can always use the alt text to provide a description of the image and point to the presence and function of the text.
- **Subtitles and audio descriptions of videos.** For students with a hearing impairment, it is important that videos are subtitled. Live videos can be supplemented with live captions, using the options offered by this tool. An audio description describes visual details that cannot be perceived via sound. These include actions, characters, settings, and texts that are visible on screen. For more information on this topic, see the ECIO fact sheet 'Captioning of lesson materials' (below).
- **Audio.** For audio files, provide a transcription of the text under the audio file.
- **Colour use and contrast.** References based on colour (red or blue button) cannot be perceived by students who are colour-blind. Add alt text. Provide enough contrast between text and background colour. Opt for shading contrast rather than colour contrast for graphs.
- **Zoom.** Offer the option of zooming in.
- **Hyperlinks.** Add relevant text for hyperlinks and screen information. Don't use 'Click here'. Students who use screen readers sometimes scan a link list with all hyperlink texts. They need to do so to get an overview. Blind students, for example, cannot scan a text. Hyperlinks should therefore convey clear and accurate information.
- **Downloads.** Indicate the file type and size of downloads.
- **E-mail links.** For e-mail links, indicate the full e-mail address
- **Tables.** Use the th element and scope element for row and column headings. Give tables a title.
- **Formulas.** The best tool for writing formulas is MathML. If that does not work, you can also write out the formulas.

### Understandable

- **Text.** Put the most important information, followed by a good summary, at the top. Use simple language, akin to polite informal language. Opt for words used by your visitors. Try to avoid bureaucratic jargon or words known only to the organisation.
- **Font type and size.** Preferably use fonts such as Helvetica, Arial, Verdana or Calibri, font size 12, line spacing 1.5.
- **Abbreviations.** Use as few abbreviations as possible.
- **Numbers.** Write figures as numbers, unless they do not refer to specific facts (a few hundred). The same applies to ordinal numbers (2nd and 3rd).
- **Quotes.** For longer quotes, use the block-quote element.
- **Visual images instead of text.** For students who struggle to read longer texts, the use of icons and summarising images can help. Remember, however, to include alt text under



images for students with a visual impairment. You can be more inclusive by providing information both as text and as an image.

- **Creating headings and sections.** Capture information about the structure of a text (headings, sections) in the HTML code. This makes the structure and text accessible for screen readers.
- **Clear headings and titles.** Make sure that your headings and titles accurately describe the content. Discuss one topic per page.
- **Different language or text structure.** Code a change of language in words or sentences in the CMS. The same applies to your text structure. Only then will the reading software read the text in the right language and order. Preferably use a single language. Students with dyslexia sometimes have trouble with multiple languages.
- **Hyperlinks.** Use hyperlinks to refer to other content. This saves the visitor search work and ensures that they do not have to click too much. Add relevant text for hyperlinks and screen information. Don't use 'Click here'. Students who use screen readers sometimes scan a list with links. Links should therefore convey clear and accurate information.

### Robust

- **Parsing.** Make sure your HTML code is faultless. Screen readers sometimes stumble over grammatical errors, so make sure you have full start and end tags.
- **Name, role, value.** Make sure you are consistent in your use of name, role, and value. It is important that self-programmed elements on websites behave as the original: name, role, and value should all display the same behaviour.

### More information:

[Digitoegankelijk.nl](#) (Dutch only)

[Manual on how to write accessibly for the web](#) (Dutch only)

[ECIO Captioning of lesson materials](#) (Dutch only)

[Contrast and Colour Accessibility](#)

[W3C Maths Home](#)

[Writing out formulas](#)

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