

Accessible websites

Introduction

Students and prospective students depend on the information offered on university websites when choosing and following a course of study. The same applies to university facilities and organisations. However, these websites are not easily accessible to every student. Students with disabilities sometimes have difficulty accessing the information offered on the websites due to the nature of their disability. This may concern students with a visual impairment (including colour blindness), students with an auditory impairment, students with a motor disability, students with dyslexia and students with ADHD or an autism spectrum disorder.

The same problem exists in society. In order to guarantee digital accessibility for people with disabilities, guidelines have been drawn up for the design of websites and mobile applications. These guidelines can be found in the Web Content Accessibility Guidelines (WCAG) version 2.1.

Tips for improving accessibility

The WCAG has four principles; Operable, Perceivable, Understandable and Robust.

Controllable

- **Be consistent.** Make sure the order of the menu items is the same on every page. That way, even visitors who don't have a visual overview of the entire page know where they stand.
- **Keyboard control.** Blind students do not use a mouse but the keyboard to navigate. Make sure that the website (and all content such as forms) can be operated via the keyboard.
- **Headings.** Make sure that headings give a good description of the content. Students with screen readers sometimes scan a headline list with all the headlines. They need this to get an overview. Blind students, for example, cannot scan a text. Headings must therefore convey clear and accurate information.
- **Skiplinks.** Skiplinks are inline links to a particular content section on the page. The use of skiplinks ensures that users with screen readers do not have to go through the entire menu to reach a certain section.
- **Page title.** When using speech software, the page title that appears at the top of the browser tab is the first thing that is read out. It is therefore important that the title is unique and covers the content.
- **Images and links.** Sometimes an image is also a link. For a blind student, it is then impossible to read where the link goes. In that case, put the link as alt text under the image.
- **Flashing content.** Students with epilepsy may have a seizure from flashes of light. Make sure that components do not flash more than three times in one second.

Observable

- **Design.** Some students with disabilities benefit from quiet web pages. Students with ADHD or autism benefit from a quiet layout.
- **Images.** Images are not perceivable by visually impaired students using screen readers. Make sure that images are accompanied by alternative, descriptive text. The same applies to graphics, input fields on forms and capitals. Avoid using text in images as the only method of

conveying information. Otherwise, provide a brief description of the image in the alternative text and state the presence and purpose of the text.

- **Subtitling and audio description videos.** For students with a hearing impairment, it is important that recorded videos are subtitled. Live videos can often be subtitled simultaneously using the options provided by the tool. An audio transcription describes the visual details that cannot be perceived through sound. These may include actions, characters, settings and texts that can be seen on screen. See the fact sheet 'Subtitling of lesson materials' by ECIO (below).
- **Audio.** In the case of an audio recording (only), offer the written text directly below the audio file.
- **Colour use and colour contrast.** References based on colour (red or blue button) are not perceptible for students who are colour-blind. Add an alternative text. Provide sufficient contrast between text colour and background colour. For graphs, use shading rather than colour shading.
- **Magnification.** Provides the possibility to enlarge text.
- **Hyperlinks.** Add relevant text for hyperlinks and screen info. Do not use 'click here'. Students with screen readers sometimes scan a link list with all the hyperlink texts. They need this to get an overview. Blind students, for example, cannot scan a text. Hyperlinks must therefore convey clear and accurate information.
- **Downloads.** For downloads, specify the file type and size.
- **E-mail links.** Please enter the full e-mail address for e-mail links.
- **Tables.** Use the th element and scope element for row and column headings. Give tables a title.
- **Formulas.** The best way to write formulas is with MathML. If that does not work, the formulas can also be written out.

Understandable

- **Text.** Put the most important information followed by a good summary at the top. Use simple Dutch that is similar to well-maintained colloquialisms. Choose the words of the visitors. Preferably no official or organisation-specific words.
- **Font and font size.** Preferably use sans serif fonts such as Helvetica, Arial, Verdana or Calibri, font size 12, line spacing 1.5.
- **Abbreviations.** Use abbreviations as little as possible.
- **Numbers.** Write numbers as numerals except when they do not represent specific facts (several hundreds). The same applies to ordinal numbers (2nd and 3rd).
- **Quotations.** For long quotations, use the blockquote element.
- **Visual images instead of text.** For students who have difficulty reading a lot of text, the use of icons and summary images is helpful. However, do not forget to provide alternative text under the visuals for students with visual impairments. Inclusiveness is provided if the information is offered both in text and in a visual image.
- **Define headings and paragraphs.** Define information about the structure of a text (headings, paragraphs) in the HTML code. This makes the structure and text accessible to screen readers.
- **Clear headings and titles.** Make sure that headings and titles clearly describe the content. Discuss one topic per page.
- **Different language or text direction.** Record a change of language for words or sentences in the CMS. This also applies to the text direction. Only then does the software read out the

text in the correct language and order. Preferably use one language. Students with dyslexia sometimes have difficulty with other languages.

- **Hyperlinks.** Use hyperlinks to refer to other content. This saves the visitor having to click through too much. Add relevant text for hyperlinks and screen info. Do not use 'click here'. Students with screen readers sometimes scan a list of links. Links should therefore convey clear and accurate information.

Robust

- **Parsing.** Ensure HTML code is error-free. Screen readers often stumble over grammatical errors. So make sure you have complete start and end tags.
- **Name, role, value.** Ensure consistent use of name, role and value. For self-programmed elements on websites it is important that they behave like the original; name, role and value should have the same behaviour.

More information:

- [Digitoegankelijk.nl](https://www.digitoegankelijk.nl)
- [Handbook of accessible writing for the web](#)
- [ECIO Subtitling of teaching materials](#)
- [W3C Math Home](#)
- [Writing out formulas](#)

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