

Accessible PDF documents

Introduction

PDF files are often seen as the ideal file format for documents. Format and layout are locked so that every user sees the same file. In addition, PDF is a safe file format because it is not easily editable.

However, a PDF file can sometimes be inaccessible for students with disabilities. Screen readers sometimes cannot handle PDF files. These students are therefore better served with a Word file.

Tips for improving accessibility

- **Guidelines for websites.** All guidelines that apply to accessible websites also apply to PDF files.
- **Accessibility check.** When creating the source document in Word, use the accessibility check (Check > Check Accessibility).
- **Title.** Give the PDF file a clear title that clearly conveys the information it contains.
- **Headings.** Make sure that the source document is well-structured. Provide headings at the appropriate heading level. Do not designate headings but use the official Word headings of the template. This allows screen readers to recognise the headings.
- **Lists.** In the source document, use Word's list option and do not just indicate lists with, for example, the minus (-) sign.
- **Bookmarks.** For longer documents, create bookmarks so that parts of the document are marked, for example chapters. The visitor (with or without screenreader) can then easily jump to another part via the bookmarks.
- **Language.** Preferably use one language. Students with dyslexia sometimes have difficulty with other languages. Try not to make sentences too long. Long sentences are often difficult for students with dyslexia to follow. Explain complex situations that require a lot of text using pictures. Divide the topics into paragraphs and regularly include white spaces to distinguish between them. Use short, clear and concise sentences for examination questions and examination instructions. Students who have difficulties in processing information suffer even more from examination stress.
- **Font and font size.** Avoid changing the font and size in order to make parts of the text stand out. Preferably use sans serif fonts such as Helvetica, Arial, Verdana or Calibri, font size .12, line spacing 1.5.
- **Images.** Ensure that images are accompanied by alternative descriptive text. Images are not discernible to visually impaired students using assistive reading software. 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.
- **Numbers.** Write numbers as numerals except when they do not represent specific facts (several hundreds). The same applies to ordinal numbers (2nd and 3rd).
- **Formulas.** The best way to write formulas is with MathML. If that does not work, the formulas can also be written out.
- **Hyperlinks.** 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.

- **Colour contrast.** Make sure there is sufficient contrast between foreground and background colours. Make sure that colour is not the only means of conveying text. For graphics, use shading rather than colour contrast.
- **Tables.** Keep tables as simple as possible and split them up if necessary so that there are no 'headings of headings' within the table.
- **Convert.** Convert the source document by saving it as a PDF file. Never use a PDF printer, as the code layer will be discarded during conversion. If you do want to convert from paper, use Optical Character Recognition.
- **Post-processing.** Sometimes the document needs to be post-processed in Acrobat Pro. For example to set the tab order or to mark the row headers in a table. Adobe also offers the possibility to test accessibility (Advanced menu > Advanced > Accessibility > Full Check).

More information:

- Digitoegankelijk.nl
- ECIO
- Contrast and Colour Accessibility
- W3C Math Home
- Writing out formulas

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www.student.universiteitleiden.nl/functiebeperking