Creating Accessible Learning Materials

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You can download this handout from <https://www.aber.ac.uk/en/accessibility/guidance-staff/>. **UKPSF mapping**: A2, A4, K4, V1, V3

# Description

Choices you make when creating learning materials can make a big difference for your students, especially those with a disability or specific learning difference. There is no one formula that is perfectly suited for all students, but you can easily make your documents as accessible as possible for as many students as possible. Moreover, accessible documents are simply easier to use, which helps all students learn better.

This session covers Word documents, PowerPoint, PDF, and media files that staff make available electronically through Blackboard or elsewhere. We work through the [Digital Accessibility Checklist](https://www.aber.ac.uk/en/media/departmental/accessibility/Accessible-document-checklist.docx) and explain how small changes can help your students.

Besides helping our students, we also need to make documents accessible to comply with the [Public Sector Bodies (Websites and Mobile Applications) (No.2) Accessibility Regulations 2018](http://www.legislation.gov.uk/uksi/2018/952/introduction/made). This law not only applies to web pages but also to materials uploaded onto VLEs such as Blackboard. See the [Accessible Virtual Learning Environments Report](https://www.policyconnect.org.uk/research/accessible-virtual-learning-environments-making-most-new-regulations) for information about how we can make our modules more accessible and inclusive.

The session is taught by LTEU staff and Student Support Services. For queries about the session, please contact LTEU (LTEU@aber.ac.uk). For queries about specific accessibility issues, please contact Accessibility Services in Student Support Services by email (disability@aber.ac.uk) or telephone (01970 62)1761.

## After this session, participants should be able to:

1. Use the **Accessibility Checker** when creating MS Office documents
2. Use **Styles** to make the structure of your material clear to students
3. Use appropriate **colour** choices and contrast to make documents readable
4. Use appropriate settings when creating **PDF** files from MS Office documents

# Why do students need accessible documents?

A significant number of students in our university need accessible materials: 16% of the student population have disclosed a disability, while the UK average is 12%. At least [1 in 5 people in the UK have a long-term illness, impairment or disability](https://www.scope.org.uk/media/disability-facts-figures). Many more have a temporary disability.

Accessible materials will help people who have any of the following:

* **Visual impairment** – severely sight impaired (blind), sight impaired (partially sighted) or colour blind
* **Hearing impairment** – deaf or hard of hearing
* **Mobility problems** – people who find it difficult to use a mouse or keyboard
* **Specific learning differences (SpLD)** – dyslexia, dyspraxia, attention deficit hyperactivity disorder (ADHD)
* **Autistic spectrum** – autism, Asperger’s
* **Other factors requiring accessibility:**
	+ **Situational impairments** – conditions (e.g. bright sunlight, lack of headphones, noisy environment, etc) that make it harder to see, hear, concentrate, or use an electronic device
	+ **Mental health issues** – may make it hard to concentrate or participate in class activities
	+ **Second language** – a student studying through a non-native language may have many of the same needs as a student with SpLD

Here are some tasks that students might need to do in order to access materials:

* Change colour or contrast in order to see clearly
* Change font size and line spacing or use a screen magnifier in order to read
* Rely on a transcript or closed captioning to understand recorded audio or video
* Navigate through a long document easily to find relevant information
* Rely on screen reader software for reading or voice recognition software for writing:
* [**JAWS**](https://www.freedomscientific.com/products/software/jaws/) – a screen reader for persons with visual impairments or reading disabilities. Text and links on the computer’s screen are read aloud.
* [**Dragon Naturally Speaking**](http://www.nuance.com/for-business/by-industry/education/dragon-education-solutions/index.htm) – a voice recognition input system for persons with manual (hand/arm) impairments or written expression learning disabilities. Users enter text with punctuation into the computer by speaking rather than by keyboarding. Users can also control computer operations with voice commands.
* [**TextHelp Read&Write**](https://www.texthelp.com/en-us/products/read-and-write-family/read-write-for-education.aspx) – a software program with dictionary, thesaurus and word prediction features designed to aid students with composing, spelling, writing, and grammar. This program reads the text on the computer screen and highlights each word as it is read.

Accessibility means making your content and design clear and simple enough so that most people can use it as is, while supporting those who do need to adapt things.

# How does using the Accessibility Checker help students?

The [MS Office Accessibility Checker](https://support.office.com/en-us/article/rules-for-the-accessibility-checker-651e08f2-0fc3-4e10-aaca-74b4a67101c1) scans your Office document to identify areas where accessibility can be improved. It gives you the reason why those changes should be made, and shows you how to do it. While it doesn’t check everything, it is a good place to start.

People who rely on a screen reader will benefit from alternative text on images, meaningful hyperlinks rather than long URLs, identifying table header rows, and more. Using text wrapping around an image can cause a screen reader to read out the image description in the wrong place, so the guidelines advise placing images in line with text. A screen reader will read these elements out loud in a way that helps students to understand them.

# How does using Styles help students?

Using the Styles feature in MS Office helps visually-impaired students, those with SpLD, and others. Using Styles for headings creates an interactive table of contents. Students can see the document structure at a glance and navigate to the section they wish to read.

Do not use formatting (such as large font or bold text) to indicate headings and sections in the document, because screen reader software will read out the text as if there were no headings. If you use Styles to indicate headings at appropriate levels, the software will identify the structure of the document when reading it out loud.

Dyslexic students often experience difficulties with reading. These may be cognitive (difficulties in decoding the meaning from text), visual (difficulty seeing letters clearly on a certain background), or both. Some rely on screen readers. Using styles for headings allows students to access information by touch to activate text reading.

# How does appropriate colour and contrast help students?

Poor colour choices and contrast can make text difficult to decipher. Students with colour blindness need good contrast in order to read. Use colour together with bold to signal emphasis. Use colour along with text to signal meaning. Students with visual impairments also need good contrast. A plain, sans serif font is usually clearer.

There are slightly different considerations for presentation software such as PowerPoint, as opposed to documents students read on their own computers. Students can adjust the background colour of a Word and PDF document, but they cannot control the colours of your PowerPoint while you are teaching. Those on the autistic spectrum may have significant sensitivity to light, sound, and colour. A soft background colour in your PowerPoint is better than using stark black text on a pure white background.

# Accessible teaching in general

General recommendations that will help all learners, regardless of disabilities include:

* A clear outline of each lesson
* Clear, unambiguous language (e.g. Plain English guidelines)
* Information in a variety of forms (e.g. Universal Design for Learning)
* Repetition
* Minimise text-heavy resources and activities
* Signpost changes to routines, group or class work, and new content or concepts

(Note: The checklist above is adapted from **Jisc** – [Meeting the requirements of learners with special educational needs](https://www.jisc.ac.uk/full-guide/meeting-the-requirements-of-learners-with-special-educational-needs))

# What about video and lecture recordings?

The HE sector does not have clear guidance from the Government Digital Service (GDS) about providing captioning or transcripts for lecture recordings. This may become classified as a ‘disproportionate burden’ on universities. You can do something to make your Panopto recordings more accessible, however. Panopto has an [automatic captioning tool](https://faqs.aber.ac.uk/index.php?id=2769). The quality of the captioning depends on clarity of the speech recorded in the lecture capture. Also, this software feature doesn’t work well with Welsh. Within these parameters, you can help your students by enabling automatic captioning in Panopto.

If you write speaker’s notes for yourself anyway, you can also help your students by putting them into the Speaker Notes section of your PowerPoint. At the start of term, be sure to show them how to find the notes.

If you wish to use recordings of radio or television programmes, you can use [Box of Broadcasts](https://learningonscreen.ac.uk/ondemand/). The university subscribes to this service, which provides off-air clips that are already formatted for accessibility.

# Other resources

* **Jisc mailing list** – [Digital accessibility regulations for education](https://www.jiscmail.ac.uk/cgi-bin/webadmin?A0=DIGITALACCESSIBILITYREGULATIONS)
* **Jisc guide** – [Meeting the requirements of learners with special educational needs](https://www.jisc.ac.uk/full-guide/meeting-the-requirements-of-learners-with-special-educational-needs)
* **LaTeX user group** – [Create accessible PDF from LaTeX](http://www.tug.org/twg/accessibility/)
* **Microsoft guide (styles and more)** – [Make Your Word Documents Accessible](https://support.office.com/en-us/article/make-your-word-documents-accessible-d9bf3683-87ac-47ea-b91a-78dcacb3c66d)
* **Universal Design for Learning** - [UDL](http://udlguidelines.cast.org/) is an accessible learning framework
* **University of Hull** – [Designing for diverse learners poster](https://leefallin.co.uk/2018/07/designing-for-diverse-learners/)
* **W3C** – [Web Content Accessibility Guidelines 2.1 Checklist](https://www.w3.org/WAI/WCAG21/quickref/?showtechniques=148%2C244%2C246%2C2410%2C111#top)
* **Wright State University** – [Accessibility for online course content translated for regular folks](http://blogs.wright.edu/learn/accessibility/)

# Digital Accessibility Checklist (rev. 5/8/2019)

## Word documents

| Yes  | Item | Detail |
| --- | --- | --- |
|  | **Accessibility checker** | Use the accessibility checker and resolve any issues. See [accessibility checker video](https://support.office.com/en-us/article/video-check-the-accessibility-of-your-document-9d660cba-1fcd-45ad-a9d1-c4f4b5eb5b7d). |
|  | **ALT text** | Put alternative text on images, [tables](https://support.office.com/en-us/article/video-create-accessible-tables-in-word-cb464015-59dc-46a0-ac01-6217c62210e5?ui=en-US&rs=en-US&ad=US), and diagrams. Use [POET image description tool](https://poet.diagramcenter.org/) for guidance. |
|  | **Colour** | Avoid using colour alone to communicate an idea. Use colour plus a textual or graphic cue (e.g. red plus ‘stop’). Avoid using red and green for contrast. |
|  | **Colour contrast** | Make sure there is enough contrast between text and background. Aim for 10:1 ratio. Use [contrast checker](https://www.levelaccess.com/color-contrast-checker/). |
|  | **Font** | Use a sans-serif font such as Arial, at least 12 point in size. Use bold for emphasis. Avoid italics, fancy formats, and all caps. Avoid underline except for hyperlinks. |
|  | **Heading styles**  | Use the [Styles tool](https://support.office.com/en-gb/article/video-using-styles-in-word-9db4c0f4-2754-4294-9758-c14a0abd8cfa) rather than formatting to indicate document structure through headings |
|  | **Layout** | Use white space to avoid crowding text. Put images in-line with text rather than wrapping. Avoid using columns. |
|  | **Line spacing** | In general, use 1.5 line spacing. Make sure it is clear where new paragraphs start. |
|  | **Links** | Use meaningful text for hyperlinks. Avoid using the full URL. Use a URL shortener such as [bit.ly](https://bitly.com/) if needed. |
|  | **Paragraph format** | Use Align-left setting for paragraphs. Avoid centred, align-right, and justified settings for paragraphs. |
|  | **Plain English** | Use the [Plain English guidance](http://www.plainenglish.co.uk/free-guides.html) to make your language as clear as possible. |
|  | **Text over images** | Avoid using textured backgrounds behind text. Either place the text over a solid colour area of the image, or use [Shape Fill](https://support.office.com/en-us/article/add-a-fill-or-effect-to-a-shape-or-text-box-28d8dc7f-5bc2-4f83-bb07-615f84ca77d1) to provide a solid background.  |

## PowerPoint presentations

Follow the guidance for Word documents, plus the items below:

| Yes  | Item | Detail |
| --- | --- | --- |
|  | **Amount of text** | Keep the text on screen to a minimal level. Use short phrases or words rather than block paragraphs whenever possible. |
|  | **Colour** | Avoid using a pure white or black background. Use pastel colours for the background with a dark colour for the text. |
|  | **Font size** | Use at least 18 point for body text; larger size for headings.  |
|  | **Speaker notes** | If possible, your lecture notes in the [Speaker Notes](https://support.office.com/en-gb/article/add-speaker-notes-to-your-slides-26985155-35f5-45ba-812b-e1bd3c48928e) section of the PowerPoint document.  |

## PDF documents

| Yes  | Item | Detail |
| --- | --- | --- |
|  | **Starting document** | Start with an accessible Word document or PowerPoint presentation. |
|  | **Save to PDF**  | * Choose **Save as** and select **PDF.**
* Click the **Options** button.
* Tick **Document structure tags for accessibility.**
* Tick **ISO 19005-1 compliant (PDF/A).**
 |
|  | **Provide both Word and PDF**  | For maximum accessibility, provide both PDF and the original Word document.  |
|  | **Scanned material** | For journal articles or book chapters, do not scan to PDF because it won’t be accessible. Instead, request that [Information Services staff digitise your document](https://www.aber.ac.uk/en/is/library-services/digitisation/).  |

## Audio and Video clips

| Yes  | Item | Detail |
| --- | --- | --- |
|  | **Formatting** | Follow the guidance for Word and PowerPoint. |
|  | **Transcript**  | Provide either a transcript or captioning.  |
|  | **Playback** | Allow users to control the playback and pause of any clip |