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Guide to VLE Inclusive Practice

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Introduction

This is a guide to making content on your VLE more accessible. It is divided into sections for specific types of content, such as video, images, or text, which should be referred to when adding these to your VLE. It also includes a section on inclusive best practice.

This guide focuses on Moodle as this is the VLE we use for our programmes.

We would like to thank all those who have supported the creation of this document and give a special mention to Birkbeck for All, University of London and Launchpad Assistive Technology (2016), who have allowed us to reproduce some of their content. Further information can be accessed here: Birkbeck for All (link).

If you have any questions, comments or feedback on the contents of this document, or would like more advice or information, please contact the Learning Technology Team on lttsupport@london.ac.uk.

Awareness of content and planning

The VLE Inclusive Practice Policy recommends that teams responsible for the content of their VLEs keep a record of the types of content which may need to be made more accessible by adjusting or providing in alternative formats. We have therefore provided an example table that could be used to record content by type, best practice would be to keep this updated on a regular basis. All staff who add content to the VLE should be made aware of this record so it can be updated as and when content is added.

An example of how this could be implemented is given on the next page.

Record of content: an example

Keeping a record of content in a spreadsheet or database would be ideal.

The record includes *where* to find content, a brief *description* or title of the content, any *updates or changes* that are needed or have been done to make it more accessible, *the date* of any changes, and an indicator of *the status* of the content (in this case Red (R), Amber (A), Green (G), but numbering or other letters could be used).

Location (i.e. module, section)	Content which needs adjustments or additions, separated by type:				
	Video	Audio	Files	Images, photos, figures and graphs	3rd party apps, tools or plugins
LTT010 - Topic 1	Module intro video: Transcript provided (G) 2/1/18 Subtitle file needed (A)		PDF of Subject guide: Checked using screen reader technology (A) 4/3/18; Made more compatible with screen readers (G) 5/6/18		
- Topic 2		Audio Lecture 01: Transcript needed (R)			
LTT020 - Topic 10				Graph of percentages: Needs a text description of the content (R)	

Content by type

Video

When creating videos or adding them to the VLE, consideration must be made for all users including those with visual and hearing impairments.

Transcripts or captions can benefit all users accessing video content. These alternative formats also make it possible to view video or audio content in very noisy or quiet environments as well as allowing users to search for and find key terms in a video. Finally, students with slow download speeds may be unable to stream or download video or audio content at times, and providing text versions of these will allow them to access these resources.

Making video content more accessible

- Provide a text alternative to audio content in the video for users with hearing impairments (see further guidance on audio within video below).

- Visual information on screen should be described in a way that allows users with visual impairments to access equivalent information.

- Audio quality should be good, with background noise or interference at a minimum.

- If text is on screen, ensure it is also part of the audio.

- If text in videos is placed directly over images or patterns, ensure that the text can be read easily and there is enough contrast.

- Provide downloadable files for any slides or images that are displayed as part of the video- these can be converted to alternative formats by the user.

- If your videos are very large, consider converting them into different resolutions allowing users the choice of watching the smaller, lower resolution version.

Making audio within video more accessible

Most videos have audio as speech with the visuals. To make this audio accessible to users, it must be presented in an alternative format, usually text. Providing text alternatives to audio makes content

more accessible to those with hearing impairments as well as students with English as a second language.

- Provide a full text transcript that can be downloaded in a common file format such as Word or PDF.
- Provide closed captions, to display text synchronised with the audio text on screen, where possible. Closed captions require a certain file type such as VTT or SRT (see information on closed captions below).
- Transcripts can be made manually or using a transcription service. If you are confident using YouTube you can use their auto-generated captions to create a transcript file (see 'Using YouTube to generate transcripts' instructions below).
- If the video author has provided a script for filming, you can upload this alongside the video as an alternative solution to providing a full transcript.

Transcripts, subtitles or closed captions

Text transcripts

For transcripts we recommend making the document available to download in a common file format alongside the video.

To produce text transcripts you can do it manually by using a script written by the video author, or by using one of the many transcription services available online.

How to use a transcription service

Transcription services mainly differ in terms of price, quality and accuracy, and turnaround time. Some examples include (note that we do not endorse, promote, or support any of these external services): GoTranscript (link), Rev (link), Sonix (link), Trint (link), VerbIT (link).

Using a transcription service would generally involve:

- Creating an account with the transcription service.
- Uploading the video to the transcription service site.
- Selecting the transcription options you need (e.g. number of speakers, turnaround time).
- Paying for the service.
- Waiting for the file to be produced (usually a few days but can be quicker).
- Downloading the file.

- Uploading it to the VLE.

Interactive transcripts

Depending on the output of the video it may also be possible to provide interactive transcripts, which highlight the section of the transcript as it is being spoken on the video. They can be searchable and clickable to jump to a specific place or word in the video.

Whilst interactive transcripts provide more functionality, they require more investment. If you are interested in having interactive transcripts, please contact the Learning Technology Team to discuss.

Closed captions or subtitles

Closed captions or subtitles display the spoken word, and sometimes audio descriptions, on screen in time with the visuals. Closed caption files can be generated and included with certain video players. There are many ways to create closed caption files such as using 3rd party transcription services, manually adding captions on to the video after filming, or using YouTube's automatic captioning option.

How to add a closed captions file to a video in Moodle

If you have created a closed captions file, there are several options for adding the captions to the video content.

If you have a closed caption file in WebVTT or .vtt format (created using a transcription service or using YouTube process), this can be uploaded directly to Moodle with a video. WebVTT files have time stamps alongside the text and therefore can display the text on-screen at the correct time.

Steps adapted from Moodle.org Video page (link):

1. When you have your finished video and transcript/closed captions file, go to the place in your Moodle VLE where you want to add them.
2. With your editing turned on, and add a Label or Page. Click into the Atto editor text box where you wish to embed your video.
3. Click the Moodle media icon as in the following screenshot:
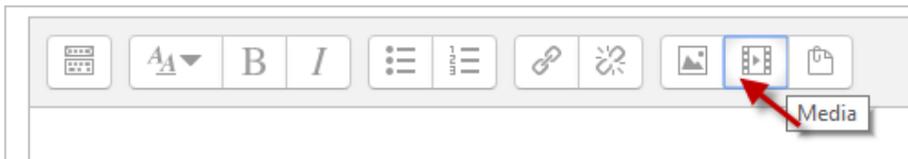
4. If your video is one you want to upload, click the Video tab and Browse to the file to find it. If your video is online, paste its URL in to the Source URL box.
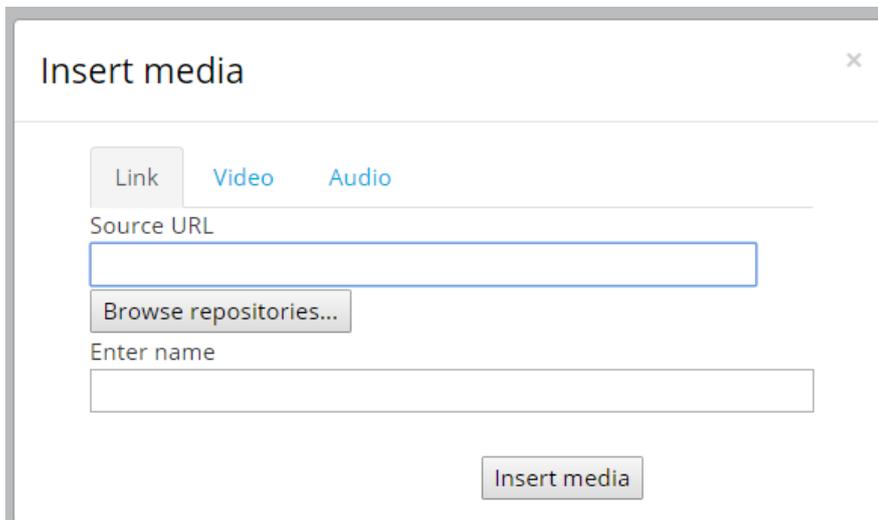
5. Upload the VTT file containing the transcript/closed captions file where it says **Subtitles and captions**.
6. Click the insert media button when ready
7. The video will not appear in the preview, only after you have saved the changes in the text editor.

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Visual information within video content

If you have content within a video which is only represented visually, it may be necessary to provide an audio description of the on-screen content for those with visual impairments.

The need for audio descriptions can be avoided by including information in the audio equivalent to the visual information.

An audio description is typically created alongside the original video, but can be added later. Talk to the Learning Technology Team if you want to know more about this type of content.

Flashing visuals

If videos or animations contain any flashing images, such as strobe affects, include a clear warning on screen before the content begins playing.

Do not allow content containing flashing images to play automatically.

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How to use YouTube to generate transcript or closed caption files

If you are comfortable using YouTube you may want to use an alternative method for generating your own transcripts or closed caption files using automatic speech-recognition. The benefit of this is it is free to use, but accuracy is relatively low and the captions would need to be edited before being used. Please note that we do not recommend hosting your videos on YouTube because certain countries block access. Using YouTube to generate caption files is fine.

The instructions below have been adapted from YouTube's own support pages Add your own subtitles & closed captions (link) and Edit or remove captions (link).

Steps for generating auto-captions:

1. Upload your video to a YouTube account (you do not have to make it public).
2. Go to your Video Manager by clicking your account in the top right > Creator Studio > Video Manager > Videos.
3. Next to the video that you want to add captions or subtitles to, click the drop-down menu next to the Edit button.
4. Select Subtitles/CC.
5. Click the Add new subtitles or CC button.
6. Choose automatic captioning to create captions for you video.

To view the captions:

1. Go to your Video Manager by clicking your account in the top right > Creator Studio > Video Manager > Videos.
2. Next to the video you want to add captions or subtitles to, click the drop-down menu next to the Edit button.
3. Select Subtitles and CC.
4. If automatic captions are available, you'll see Language (Automatic) in the "Published" section to the right of the video.

Because this process uses automatic speech-recognition technology it will contain errors. To review automatic captions to edit or remove any parts:

1. Go to your Video Manager.
2. Next to the video you want to edit captions for, click Edit > Subtitles and CC.
3. Click on the caption track you want to edit.

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4. Click inside any line in the caption track panel and edit the text.

5. Click Save changes.

You can also edit the captions by downloading the file and using a plain text (.txt) editing program like TextEdit or Notepad to edit the captions. To download the file:

1. Go to your Video Manager.

2. Next to the video you want to edit captions for, click Edit > Subtitles and CC.

3. Select the caption track you want to download.

4. Click the Actions drop-down menu

5. Click the captions file format you need. Learn more about caption file formats.

6. Your browser will download a file containing the captions track. Edit the file and save it.

Hosting videos

There are many ways people can upload and share video content, directly on the VLE or in an external video hosting service. Different video hosting sites and media players can have different accessibility features.

If you want to use an external hosting service consider these aspects:

- Does the media player have easy-to-access controls for playback, volume, speed and caption settings?
- Is it possible to add a transcript or closed caption file to the media player to display alongside the video?
- Can the video be downloaded for viewing when not using an internet connection?

Using YouTube videos in your VLE

YouTube is *not fully available* in several countries; currently China, North Korea and Iran. Avoid using YouTube videos as essential learning materials, where possible, find alternative sources or create your own. If you have to include YouTube videos, use them as supporting materials, and summarise the content in another format.

Hosting videos on the cloud

Many videos in our VLEs are stored online outside of the VLE. If you are uploading videos directly to the Moodle, consider the size of the files. Moodle does not handle lots of large videos very well and users with slower internet speeds will struggle to access large files. It can be a better option to host your videos externally to the VLE and link to them or embed them.

Contact the Learning Technology Team for details on how to upload your video to a cloud storage service for easy access for students in different geographic locations across the world and to reduce file size stored on the VLE.

How to embed external videos in Moodle

1. Turn editing on and select where you would like the video to appear in your course
2. Copy the embed code from where the content is located (this will depend on whether the content has been uploaded to Amazon by the Learning Technology Team or whether you are hosting via YouTube etc)
3. Back in Moodle, click on the Edit icon next to your page or label where you want to place your video. In the text editor, click on the HTML button **<>** to see the underlying code.
4. Decide where you want the video to go then paste the code in.
5. Click Save and return to course and you will see the video is embedded and ready to play.

Audio content

Audio content in this section refers to any audio which is not part of videos, and includes podcasts, audio files, interview recordings, etc.

- Provide a text transcript of the audio content for users with hearing impairments.
- Transcripts should be made available in Word, PDF or another common file format.
- Make sure audio quality is good. Background noise or interference should be at a minimum.
- Provide audio description text where there is audio other than speech.

**How to add an audio file with a transcript to Moodle**

Make sure your file is one of the following formats: mp3, .aac, .flac, .m4a, .oga, .ogg, .wav

You can embed an audio file anywhere Moodle's text editor is available, such as a Label or a Page.

1. Select 'Turn editing on' in the Course Administration settings, if it isn't already.
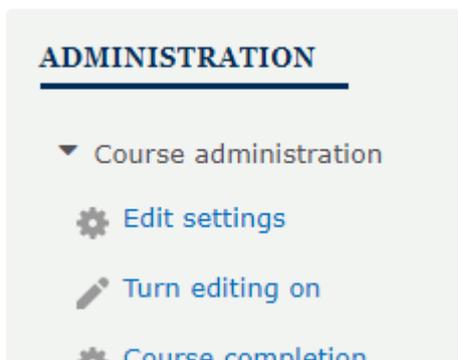
2. Add a new resource or activity, or edit an existing one.
3. Within the text editor options, select the Media button.
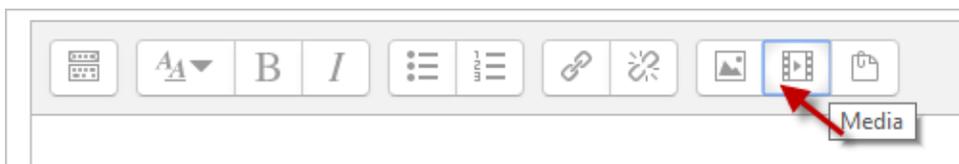
4. In the pop-up which appears first select the 'Video' tab, **not** the 'Audio' tab (Note: video options allow captions to be displayed on screen).
5. Select 'Browse repositories' to find the file, and then upload it. A Moodle address will appear in the 'Video Source URL'

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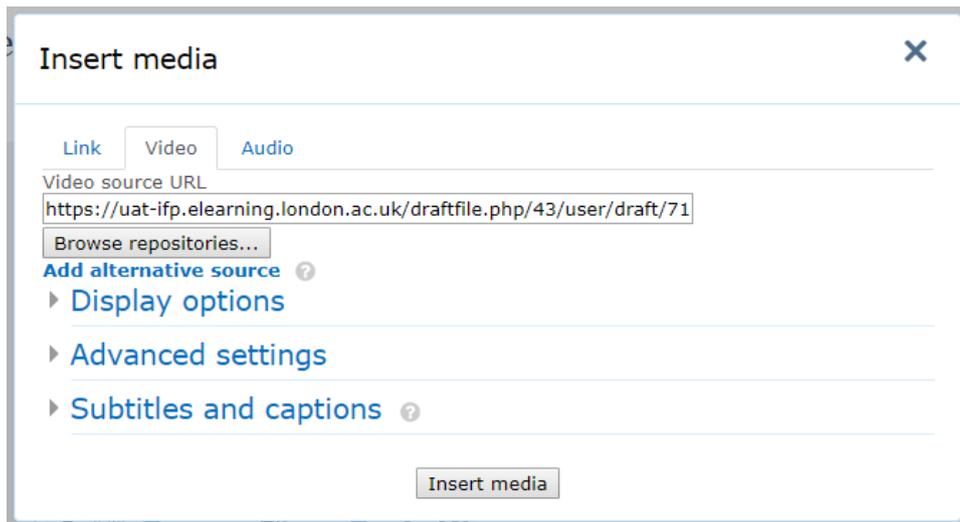
6. Expand the 'Subtitles and captions' section by selecting it and then select the 'Captions' tab.
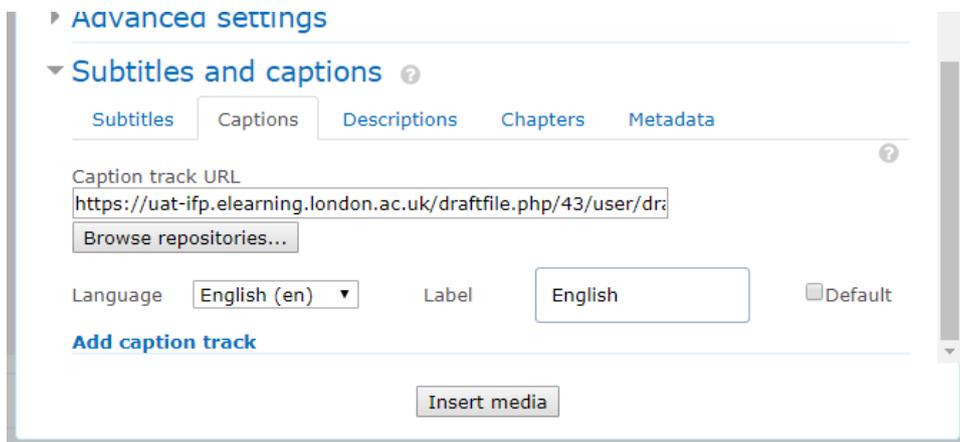
7. Use 'Browse repositories' to find and upload a captions file, such as VTT or SRT format.

8. Select 'Insert media' to see a preview of the audio player. You can play it here to check it is working.

9. Select 'Save and return to course' to finish

In the VLE you should see a play button. Selecting this will play the audio. To display captions, select the button labelled 'CC' and then the language e.g. 'english'.

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Screenshots of audio content with play button and caption settings:

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![University of London Worldwide logo]
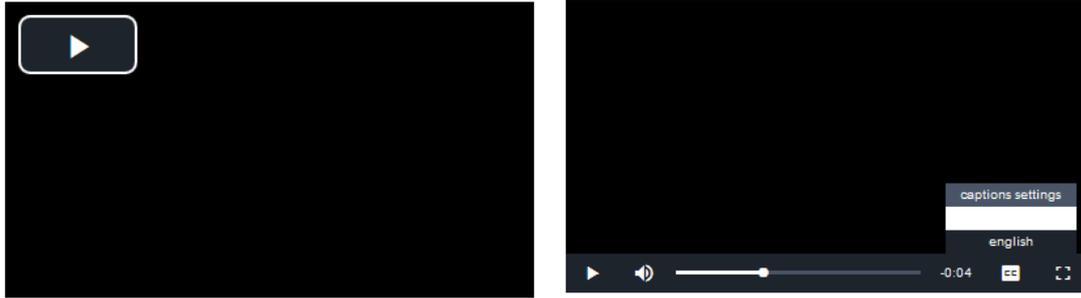
Images

(Photos, tables, graphs and figures)

Images and visuals can enhance text and communicate certain information more effectively and can be particularly useful for students with hearing impairments, dyslexia, or English as a second language. Please bear in mind, however, that images can be a barrier for those with visual impairments.

Making images more accessible

- Include meaningful descriptions for every image which provides information.
- Provide a text equivalent to images and graphics in the form of *alternative text,* known as *Alt Text.*
- *Be accurate and equivalent* in presenting the same content and function of the image. For example, charts and graphs are often used to display research results or demonstrate trends, so try to summarise these in the Alt Text.
- Avoid use of the phrases "image of ..." or "graphic of ..." to describe the image.
- Position the image in a logical order with the text; this makes it easier for screen readers to pick up the image.

How to add images with alternative text in Moodle:

1. Turn editing on and select the section where you wish to add the image.
2. Click on the in-built Moodle Text Editor.
3. Decide where you want to place your image and click on the Insert/edit image icon in the toolbar.

4. Once the Insert/edit Image window appears , click on 'Find or upload an image'
5. Use 'Browse repositories' to select a file. The image should now be displayed in the preview window.
6. **Add an Image description** (ensure the description is meaningful and equivalent to the visual information to make it accessible to visually impaired users).
   a. Only for images that are purely decorative, select the option 'Description not

necessary' if it is available (this creates a blank alternative text attribute <img alt=""> and screen readers ignore them).
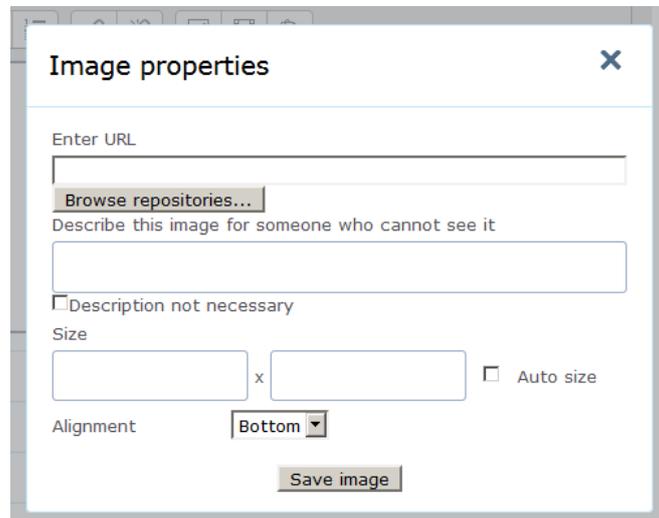
7. Resize the image if necessary to make all information clearly visible at 100% zoom.
8. Click 'Save image' to add your image.
9. Click on 'Save and display' to see your changes.

Decorative images

For purely decorative images which do not provide information relevant to the learning, it is helpful to add a blank alternative text attribute e.g. See step 6a in *How to add images with alternative text in Moodle*.

How to add text descriptions to existing images

1. Select 'Edit settings' for the resource or activity.
2. Select the image and then select the 'Image' button in the text editor options.

3. Enter or edit the description and save changes.

Making graphs and figures more accessible

Images such as charts, graphs, figures, and maps can convey complex visual information to users but this information is not available to visually impaired users.

- Add a detailed description for every figure or graph.
- Add the description on screen directly above or below the image so it is clearly associated with the image.
- Alternative text, also known as Alt Text (see ***How to add images with alternative text in Moodle***), can be added when uploading a figure or graph. This does not display on screen but can be accessed by screen reader technology.
- Create graphs and figures which are readable in black and white.
- Use symbols, patterns, line styles, or shades rather than relying on colour as the only visual means of conveying information.

Text (adding, editing and formatting) in Moodle

This section covers adding, editing, and formatting of text directly in Moodle to make it more accessible. The Documents section covers text within Word, PDF, and other documents and how to make those more accessible.

- Always use a solid colour as background and avoid decorative, picture or watermarked backgrounds.
- Format your text content using the inbuilt styles within the text editor. Give the content structure using headings rather than just making them bold and increasing the font size.
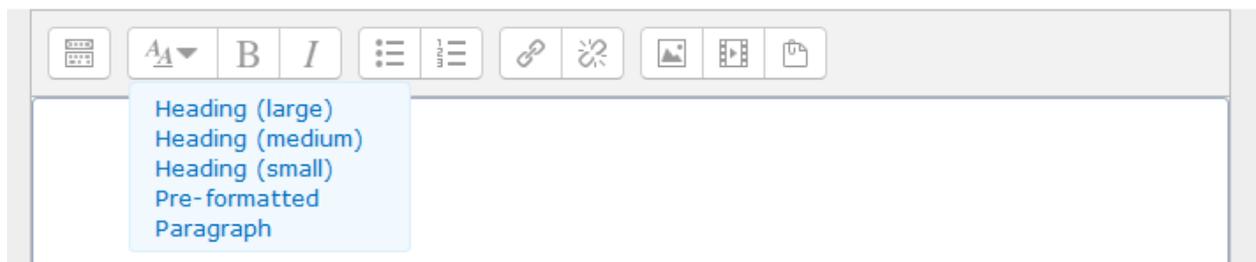
- Line spacing should be at least 1.5 within paragraphs, and that paragraph spacing is at least larger than the line spacing.
- Use sufficient contrast for text and background colours: If your document has a high level of contrast between text and background, more people can see and use the content

Layout

- Clearly label sections, resources and activities
- Use descriptive section names (rather than simply Topic 1 or Week 1 for example). This makes the content easier to navigate and ensure compatibility with screen readers
- Remember that screen readers will **not** pick up on enlarged text, words entirely in uppercase or coloured text so should not be used for emphasis.
- Keep the page clutter free, remove unused blocks or sections where possible.
- Apply Paragraph styling within the Text Editor, such as Heading1, Heading2, Paragraph, etc. This is helpful for students using screen-readers and makes text formatting consistent.
- Utilise labels when setting up courses, these add both structure and attractiveness

Hyperlinks

Links can direct students to internal or external pages. You can create them within the Text Editor or add a URL (web address) resource to a Moodle course page.

Aim to:

- Provide a unique and descriptive link which is of benefit to all of your users

- Avoid pasting in lengthy web addresses or using non-descriptive links such as 'click here'

- Avoid creating links that are too short as student with limited dexterity may find a small link more difficult to click on

- Make sure all hyperlinks use the underline format and do not underline text which is *not* a hyperlink

- For more detailed information regarding creating accessible links can be found at WebAIM

How to add URL as a separate resource

1. Turn editing on and go to 'Add an Activity or Resource', from the list select 'URL'.
2. Add a descriptive title with the word link in brackets at the end e.g. 'Ten wonders of the world article (link)'. Avoid writing simply 'Click here' or 'Link to article' because it may not be clear to students using a screen reader where the link directs to.
3. Type or paste in a full URL for the site.
4. You can also add a longer description and tick the 'Display description on course page' option, this will appear below the link.
5. Use the Open in same window display option for links within the VLE.
6. You can use the Open in new window option for external links and documents.
7. Click on Save and return to course.

How to create links in your content

1. Turn editing on and either add a new or edit an existing resource of activity
2. Within the text editor area select where you want to place the hyperlink
3. Select the add link option in the text editor buttons

Documents

Documents added to Moodle should be available to download or view online.

PDFs

All PDFs must meet Level AA of the Web Content Accessibility Guidelines (WCAG) 2.0 (link) to ensure that they are compatible with screen readers.

PDFs that have been generated by *scanning pages* creating text as an image, should not be used unless the content can be converted to accessible formats for those that need them. It is important to be aware of any content you have which consists of scanned pages.

Adobe provides guidance on creating accessible PDFs, starting with considering accessibility before converting to PDF. Therefore it is important to follow guidance on creating accessibility documents in programmes such as Microsoft Word *before* saving them as PDFs.

Guidance on Creating accessible PDFs can be found at: Workflow for creating accessible PDFs (link)

Word documents

Microsoft Word has many features to help people with different abilities to create and read documents and has a very useful Accessibility Checker.

Microsoft provide detailed guidance on how to make Word documents more accessible which can be found at Make your Word documents accessible (link)

Guidance on using the accessibility checker in Word can be found at the following sites:

Use the Accessibility Checker on your Windows desktop (link)

Use the Accessibility Checker on your Mac (link)

PowerPoint presentations

Authors should always use the notes field to provide key information for each slide. This helps learners who are unable to see the visuals and allows all users to export the document to Word.

Make your PowerPoint presentations accessible (link)

Tables

Screen readers read tables by using header information to identify rows and columns and they keep track of their location in a table by counting table cells.

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- Use as simple a structure as possible

- Make sure header rows and columns are clearly labelled and repeated as necessary if the table appears over many pages

- Avoid nesting tables within other tables and cells and splitting or merging cells

- Avoid inserting unnecessary blank cells into a table as this could mislead someone using a screen reader into thinking that there is nothing more in the table

Excel workbooks and charts

Appropriate formatting and design considerations will create effective navigation for all users as well as improving accessibility for those who are visually impaired.

Give all sheet tabs unique names, and remove blank sheets. Screen readers read sheet names, which provide information about what is found on the worksheet, making it easier to understand the contents of a workbook and to navigate through it

Make your Excel spreadsheets accessible (link)

Third Party Content

In the context of the VLE Inclusive Practice Policy and this document, third party content refers to any content on the VLE which is provided by or created by someone other than Moodle or yourselves. This could be an app, software, plugins, blocks, etc. It is important to consider the accessibility of third party services and products because they may not follow the same standards or guidelines that Moodle does. Therefore it is the responsibility of VLE content providers to be aware of the accessibility features in third party content. Below are some examples of types of third party content.

If you consider using third party content, make sure you:

- Ask the provider for their accessibility policy or a list of accessibility features and how to use them.
- Consider a range of impairments and how users with these would access the content you are providing. This includes, but is not limited to: visual impairments, hearing impairments, learning difficulties, dyslexia, physical impairments preventing use of a mouse or keyboard.

E-books

There are a number of options to provide text books in non-physical formats. E-Books can provide flexible options to download and read on the go and they are extremely easy to use.

If you want to use e-books or an e-books provider, find out whether these aspects or feature are included:

Consult with the Online Library team for information and confirmation that materials are available in accessible formats.

Apps and interactive content

Using content which users can interact with, such as simulations, external websites, or apps, is a great way for student's to experience learning tools. These types of content do not fit within the categories above but inclusive practice must still be considered.

If the content is essential to the course and aspects cannot be made more accessible, you must consider what reasonable adjustments you can make to ensure students with impairments are not

disadvantaged or discriminated against.

Considerations

- Information or instructions within the content as text or audio should be available in an alternative format.
- For third party content request accessibility policies and features from the provider. For example, if the content is provided by a third party do they follow the [Web Content Accessibility Guidelines (WCAG) (link)](link)
- Consider what alternatives are available to students who cannot access the same learning experience. This must be done as an anticipatory measure and not an afterthought when a student requests access.
- Check whether the application or platform is compatible with screen-reader technology.

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VLE inclusive good practice

This section will continue to be improved and updated on a regular basis. If you have anything you would like to add as an example of good practice, please contact the Learning Technology Team.

Below are some links to resources and websites that provide guidance on web accessibility, assistive software, screen readers, tools and technologies:

UK Association for Accessible Formats website

Web2Access

AtBar

Accessibility Support for Microsoft Office

Blackboard Ally

FANGS Mozilla Firefox screen reader add on

Web Content Accessibility Guidelines (WCAG) 2.0 (link)

Birkbeck for All (link).

https://support.office.com/en-GB/article/Office-Accessibility-Center-Resources-for-people-with-disabilities-ecab0fcf-d143-4fe8-a2ff-6cd596bddc6d