# VLE Inclusive Practice Policy

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Last update: Changes to structure and formatting; fixed broken hyperlinks.

Previous updates: Added reference to cited page; Added cover page, copyright statement, citation line, running footer, references cited page; updated section '2.3.7 Third-party content' to include content created by content managers or providers and reference to other accessibility policies.

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# Contents

# 1. Introduction

Many students choose an online distance education programme because it reduces the need to travel to a place of study and allows them to study when it is most suitable to them. This can benefit a wide range of students including those with impairments. Online distance education programmes have the potential to reach the widest possible audience as it is relatively easy, compared to traditional campus programmes, to provide tools, features, or alternative formats which make the learning content more accessible to all.

For programmes provided by University of London Worldwide (formally University of London International Programmes), all reasonable steps should be taken to ensure that learning content, including content delivered via a Virtual Learning Environment (VLE), should be accessible to all students in order to comply with Chapter 2 of the Equality Act 2010 (link). Among other things, the act requires higher education providers to "make reasonable adjustments" and "not to discriminate against people" who are enrolled on our courses. This policy, therefore, sets out how to comply with the Equality Act 2010 in regard of VLE content and inclusive practice.

This document highlights our (UOL Worldwide and Member Institutions) commitment to complying with the Equality Act 2010 by aiming to meet the requirements listed in the Web Content Accessibility Guidelines (WCAG) 2.0 (link) which are relevant to our VLE content. There is a companion document '**VLE Inclusive Practice Guide'** to this policy which sets out in more detail how to achieve inclusive good practice relevant to VLE provision for the our programmes and should be used as a 'How to' reference guide.

This policy applies to new and existing programmes.

## 1.1 Background and context

All students studying our programmes are expected to interact with their course materials via their VLE during their studies. Therefore, it is vital that all content on these VLEs is accessible to as many people as possible, regardless of impairment.

During 2016 it was considered beneficial to create a single document for accessibility and inclusive practice related to VLE content. A document was created based on the Web Content Accessibility

Guidelines (WCAG), which are generally accepted as the standard for web content and inclusive practice. It was agreed at an Inclusive Practice Panel committee meeting that this document should be expanded to become an accepted policy document for all our programmes, along with a companion document on how to make VLE content more inclusive.

In attempting to create a policy for VLE inclusive practice, it should be noted that the WCAG are a set of recommendations to make content more accessible and it is accepted that not everything can be achieved. For example, the WCAG does not cover "all types, degrees, and combinations of disability". Our own policy and supporting document are relevant to UOL Worldwide programmes and apply to all our existing VLE content and expected future content.

The accessibility section of the Annual Programme Planning and Review (APPR) process should complement this policy document.

## 1.2  Stakeholders and roles

'Content managers' in this policy refers to groups or individuals who are responsible for any content which is accessed on UOL Worldwide VLEs. This includes programme teams at member institutions (e.g. programme directors, module leaders, and programme administrators) and UOL Worldwide staff (Learning Solutions Team, Publications, Track C and internal programme teams).

'Content providers' in this policy refers to groups or individuals who add content to a VLE, and includes students, online tutors, administrators, etc, but are not ultimately responsible.
The range of stakeholders related to this policy include:

1. Students
2. Member institutions (e.g. programme directors, module leaders, administrators, online tutors, course convenors, learning technologists, or anyone who adds content to a UOL Worldwide VLE)
3. UOL Worldwide staff (Inclusive Practice Panel, Inclusive Practice Manager, Learning Solutions Team, Academic Committee, Quality Assurance and Governance, internal or Track C programme teams, and anyone who adds content to a UOL Worldwide VLE)
4. Teaching Institution staff

Groups 2 and 3 above should be aware of and aim to comply with this policy. Group 4 should be aware
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of this policy and the issues related to VLE inclusive practice.

Most items in this Policy and the Guide are described at the level of a general user, but some items have an additional level of description for more technical users (e.g. Learning Technologists, web content managers).

## 1.3  VLE Accessibility

Moodle is currently the Virtual Learning Environment (VLE) used for delivery of online teaching content for all our programmes. Moodle's own statement (link) on accessibility indicates they conform to the following relevant standards:

- Web Content Accessibility Guidelines (WCAG) 2.0 (link)

- Authoring Tool Accessibility Guidelines (ATAG) 2.0 (link)

- Accessible Rich Internet Applications (WAI-ARIA) 1.0 (link)

By providing content via Moodle, tools and content created by the Moodle community should conform to these standards, in particular the 'core' tools and activities. However, because Moodle is an open source platform, assumptions should not be made about the accessibility of all tools and activities developed for Moodle.

Other platforms may be used in the future and the accessibility guidelines which they conform to should be noted. It should be a requirement that any platform used for our programmes should aim to conform to the WCAG.

Although the VLE platform and its core tools and activities may aim to conform to certain standards, content provided by staff (e.g. teachers, tutors, programme directors, admin staff, etc) or students is not under the same controls and may not meet the relevant accessibility standards. This document and supporting guide aim to help everyone providing or managing VLE content to meet these standards.

# 2. Achieving an inclusive VLE

## 2.1 Overall aims

- Educate and raise awareness of issues related to inclusive practice and content accessed via our VLEs
- Clarify our responsibility to students and legal duty related to providing content via our VLEs
- Help content managers and providers to make adjustments to improve accessibility of content by providing information and guidance
- Improve the accessibility and inclusivity of VLE content where necessary

## 2.2 Planning and process

Ensuring that all teaching and learning content on a VLE is fully accessible is a long term challenge, which may be broken down into incremental improvements rather than a major one-off change. To help achieve these improvements, different levels of planning can be identified which will aid the implementation of fully accessible content.

### 2.2.1 Ensure that all new content meets accessibility standards

This can be considered the first step in the overall process of making all content accessible.

Ensuring new content is fully accessible should be part of the planning phase and not an afterthought with adjustments to be made at a later date.

Content managers and content providers should familiarise themselves with this policy, in particular the section on types of content and related accessibility standards.

Before adding content to the VLE, the Guide should be used as a reference to ensure that content is made accessible at the time it is added.

### 2.2.2 Recording and knowledge of content

It is important for content managers to have full knowledge of the content on their VLEs, and of this content, which needs to be adjusted or provided in alternative formats so it can be accessed by all.

Knowledge and a record of the content alone would allow a more rapid and directed response to the

registration of a student with an impairment to ensure discrimination does not occur. It also serves as a basis for further steps below.

This knowledge should be recorded in a format which would allow review at regular intervals.

It is recommended that all programme teams are aware of the number, location and types of content on their VLE by keeping a record. For example, this could be in the form of a table listing all modules and the content they contain. This only needs to include content which they are responsible for, i.e. content added or created by staff.

This record should include information on the following:

- text on screen added by users

- video content

- audio content

- hyperlinks

- files, such as PDFs and MS Office documents

- Images, photos, figures, and graphs

- apps, tools or plugins which are not part of Moodle

This Policy and the Guide should be used to help identify these types of content and to understand how to make this content more accessible.

As new content is added to a VLE, the record of content should also be updated.

### 2.2.3  Construct a plan for improving VLE content

It is recommended that a plan is created for the continued improvement of existing content, with timescales.

This step could follow point 2.2.2 above because content managers would be aware of the number and types of content in the VLE and the improvements needed, and therefore, would be able to estimate the effort and time to make these improvements.

### 2.2.4   Implement changes and review

The plan created should be implemented making changes to improve the accessibility of existing VLE content.

To ensure continued improvement the plan and list of content (point 2.2.2) should be reviewed and updated at regular intervals (possibly as part of the APPR process).

## 2.3   VLE content and accessibility guidance

This section outlines:

- the main types of content which can be added to VLEs;

- the issues related to these in terms of inclusive practice and accessibility;

- and the general guidance when including these types of content.

The headings and subheadings within this section directly relate to the companion Guide, so easy reference can be made between them.

Appendix A lists details of Web Content Accessibility Guidelines (WCAG) which are relevant to this policy and content on our VLEs. Additionally, links within the text direct readers to the relevant section in the WCAG.

### 2.3.1   Video

**Information conveyed through video must be accessible to all users.**

All non-text content (e.g. audio, images, animations) that is presented to the user must have a text alternative that serves the equivalent purpose, e.g. transcripts, audio description.

Text alternatives must be provided for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.

Captions should be provided for all pre-recorded audio content, including video with audio, except when the media is a media alternative for text and is clearly labeled as such, e.g. voice over repeating

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text already on screen.

Instructions provided for understanding and operating content must not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound.

Pre-recorded video should be made accessible by providing transcripts, captions, or both for all content with has audio information or speech.

Because of the challenges of captioning live video, such as live streaming or web conferencing, these should be recorded, transcribed, and made available to all students with text alternatives within a reasonable time period, e.g. during a study session, not after it.

Web Content Accessibility Guidelines success criteria relevant to video content, with links:

Guideline 1.1 Text Alternatives

Success criterion 1.1.1 Non-text Content

Guideline 1.2 Time-based media

Success Criterion 1.2.2 Captions (Pre-recorded)

Guideline 1.3 Adaptable

Success Criterion 1.3.3 Sensory Characteristics

Guideline 1.4 Distinguishable

Success Criterion 1.4.1 Use of Colour

Success Criterion 1.4.3 Contrast (Minimum)

Guideline 2.3 Seizures

Success Criterion 2.3.1 Three flashes or below threshold

### 2.3.2  Audio

**Information conveyed through audio must be accessible to all users.**

All audio content that is presented to the user must have a text alternative that serves the equivalent

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purpose, e.g. text transcripts, audio description.

Text alternatives must be provided for any non-text content so that it can be changed into other forms people need, such as large print, braille, symbols or simpler language.

For pre-recorded audio content, documents or text on screen should be provided that present equivalent information in a correctly sequenced order, e.g. time-stamped transcript and/or audio description.

Audio description should be provided for pre-recorded audio content where the information is not covered by text transcripts of speech alone.

Instructions provided for understanding and operating content must not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound.

For live audio content, such as streaming or web conferencing, this should be recorded, transcribed, and made available to all students with text alternatives within a reasonable time period, e.g. during a study session, not after it.

Web Content Accessibility Guidelines relevant to audio content:

[Guideline 1.1 Text Alternatives](#)

[Success criterion 1.1.1 Non-text Content](#)

[Guideline 1.2 Time-based media](#)

[Success criterion 1.2.1 Audio-only and Video-only (Pre-recorded)](#)

[Success criterion 1.2.3 Audio Description or Media Alternative (Pre-recorded)](#)

[Guideline 1.3 Adaptable](#)

[Success Criterion 1.3.3 Sensory Characteristics](#)

### 2.3.3  Images

**Information conveyed in a visual form, including photos, drawings, figures, and graphs, must be**
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**accessible to all users.**

Text alternatives for any images must be provided so they can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.

All images that are presented to the user must have a text alternative that serves the equivalent purpose. The only exception to this are images used purely for decoration.

Where information is displayed in visual format, ensure there is sufficient contrast between foreground and background so users of all visual abilities can discern differences.

Do not use colour alone as a means to identify differences or communicate information. Flashing or rapidly blinking visuals must not be used because of the risk of triggering seizures.
Instructions provided for understanding and operating content must not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound.

Web Content Accessibility Guidelines relevant to images:

Guideline 1.1 Text Alternatives

Success criterion 1.1.1 Non-text Content

Guideline 1.3 Adaptable

Success Criterion 1.3.3 Sensory Characteristics

Guideline 1.4 Distinguishable

Success Criterion 1.4.3 Contrast (Minimum)

Success Criterion 1.4.1 Use of Colour

Guideline 2.3 Seizures

Success Criterion 2.3.1 Three flashes or below threshold

## 2.3.4  Text (adding, editing, and formatting)

**Text information on screen must be accessible to users and easy to follow, using standardised formatting.**

Refers to all content where text is added on-screen within the VLE, which includes forum posts, site news, activity summaries and descriptions, and labels.

Standard text formatting conventions for headings, paragraphs, lists, tables should be adhered to when adding text via a text editor.

When copying and pasting text into a text editor, the formatting should be cleared to remove any unintentional formatting from the original source, e.g. pasting from Word documents can add extra formatting which can confuse text-to-speech technology.

When the sequence in which content is presented affects its meaning, e.g. a table, list, or series of headings, a correct reading sequence should be determined and applied using formatting.

Text should never appear as an image; the only exceptions are within logos or for purely decorative images. These exceptions should be tagged using alternative text to indicate their purpose to users using text-to-speech technology.

Do not use colour alone as a means to identify differences or communicate information.

Instructions provided for understanding and operating content must not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound.

Web Content Accessibility Guidelines relevant to text:

Guideline 1.3 Adaptable

Success Criterion 1.3.1 Info and relationships

Success Criterion 1.3.3 Sensory Characteristics

Guideline 1.4 Distinguishable

Success Criterion 1.4.3 Contrast (Minimum)

Success Criterion 1.4.1 Use of Colour

## 2.3.5 Hyperlinks

**Hyperlinks should be easy to read, understand and access**

Full hyperlinks are very difficult for people to process, particularly if using text-to-speech technology, therefore hyperlinks should be applied to descriptive text which informs the user of the purpose or location.

The purpose of each link should be determined from the link text alone or from the link text together with its context, e.g. a link within a sentence which is relevant to the link or a link directly underneath a heading.

Links should be visually evident, but colour alone must not be used to indicate links e.g. links are underlined.

Where there are links to documents or other websites as part of the teaching resources, the same standards should be applied to these final locations in terms of accessibility e.g. if linking to a video with audio, text transcript is available at source or provided on the VLE.

Web Content Accessibility Guidelines relevant to hyperlinks:

Guideline 1.4 Distinguishable

Success Criterion 1.4.3 Contrast (Minimum)

Success Criterion 1.4.1 Use of Colour

Guideline 2.4 Navigable

Success Criterion 2.4.4 Link Purpose (In Context)

Success Criterion 2.4.9 Link Purpose (Link Only)

## 2.3.6  Documents

**Information in documents must be accessible to all students or provided in alternative formats.**

PDF documents generated from other sources (e.g. saved as PDF from Word or Google Docs) must have used standard text formatting conventions for headings, paragraphs, lists, and tables.

Documents should be created using standard text formatting conventions for headings, paragraphs, lists, and tables.

Documents must not be scanned images of pages, which users are unable to access in full using text-to-speech technology, unless the same information is conveyed in an alternative format e.g. audio.

Names of documents should be descriptive so that users can clearly identify specific documents without confusion with similar documents on the VLE.

Links or references to documents which are part of the teaching materials should be available in alternative formats or can be accessed by text-to-speech technology, with the same requirements as if they were provided directly on the VLE.

Images in documents should follow the same accessibility requirements as for images in the VLE (refer to section 2.3.3 Images).

Overall, all content within documents accessed from the VLE must follow the same rules as for content directly in the VLE, e.g. videos or audio embedded in PowerPoint documents, images or text in Word documents.

Use of and access to specific document types must be specified in the regulations to ensure accessibility standards can be checked.

Web Content Accessibility Guidelines relevant to documents:

Guideline 1.1 Text Alternatives

Success criterion 1.1.1 Non-text Content

Guideline 1.3 Adaptable

Success Criterion 1.3.1 Info and relationships

Success Criterion 1.3.3 Sensory Characteristics

Guideline 1.4 Distinguishable

Success Criterion 1.4.3 Contrast (Minimum)

Success Criterion 1.4.1 Use of Colour

Guideline 2.3 Seizures

Success Criterion 2.3.1 Three flashes or below threshold

### 2.3.7   Third-party content

**Ensure third-party content or tools meet equivalent accessibility standards, and be aware of their accessibility policies if they exist.**

Third-party content refers to content which is not part of the VLE (e.g. Moodle, Coursera) and includes content created by the content managers or providers, as well as external parties.

Third-party content may include, but not limited to, apps, e-book providers, simulations, or external educational resources.

Where third-party content is accessed from the VLE and is part of the teaching and learning content, check that the provider has an accessibility policy at least equivalent to the WCAG standards.

Be able to refer to the accessibility policy, if it exists, for all third-party content or tools.

Where third-party content does not meet all relevant accessibility standards, adjustments must be made by the programme team to provide an equivalent experience which does not discriminate against users with impairments.

## 2.4   VLE inclusive good practice

To further improve the experience for students with impairments studying online, assistive software and accessibility tools can be promoted or provided. These provide features or functionality, often at no cost, to increase the accessibility of learning and teaching content. For example, for students with visual impairments, accessing text content can be made possible using screen magnifiers or text-to-speech software.

Examples of assistive tools and software will be described in the Guide. These tools do not have to be

provided by UOL Worldwide or the Member Institutions, but awareness and promotion of these tools when necessary is encouraged.

# 3. Appendix A: WCAG content relevant to VLE content

This section lists the principles, guidelines and criteria from the Web Content Accessibility Guidelines 2.0 which are considered relevant to content currently in our VLEs. This does not include guidelines which are only relevant to Moodle's own functionality and structure. Content which is the responsibility of the programme team should conform to these guidelines.

## Principle 1: Perceivable

Information and user interface components must be presentable to users in ways they can perceive.

### Guideline 1.1 Text Alternatives (link to WCAG)

Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.

#### 1.1.1 Non-text Content (link to WCAG)

All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below. (Level A)

Specific Benefits of Success Criterion 1.1.1:

- This Success Criterion helps people who have difficulty perceiving visual content. Assistive technology can read text aloud, present it visually, or convert it to braille.

- Text alternatives may help some people who have difficulty understanding the meaning of photographs, drawings, and other images (e.g., line drawings, graphic designs, paintings, three-dimensional representations), graphs, charts, animations, etc.

- People who are deaf, are hard of hearing, or who are having trouble understanding audio information for any reason can read the text presentation. Research is ongoing regarding automatic translation of text into sign language.

- People who are deaf-blind can read the text in braille.

- Additionally, text alternatives support the ability to search for non-text content and to repurpose content in a variety of ways.

## Guideline 1.2 Time-based Media (link to WCAG)

Provide alternatives for time-based media.

### 1.2.1   Audio-only and Video-only (Prerecorded) (link to WCAG)

For prerecorded audio-only and prerecorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labeled as such: (Level A)

- Prerecorded Audio-only: An alternative for time-based media is provided that presents equivalent information for prerecorded audio-only content.

- Prerecorded Video-only: Either an alternative for time-based media or an audio track is provided that presents equivalent information for prerecorded video-only content.

Specific Benefits of Success Criterion 1.2.1:

- This Success Criterion helps people who have difficulty perceiving visual content. Assistive technology can read text alternatives aloud, present them visually, or convert them to braille.

- Alternatives for timed-based media that are text based may help some people who have difficulty understanding the meaning of prerecorded video content.

- People who are deaf, are hard of hearing, or who are having trouble understanding audio information for any reason can read the text presentation. Research is ongoing regarding automatic translation of text into sign language.

- People who are deaf-blind can read the text in braille.

- Additionally, text supports the ability to search for non-text content and to repurpose content in a variety of ways.

### 1.2.2  Captions (Prerecorded) ([Link to WCAG](#))

Captions are provided for all prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such. (Level A) - People who are deaf or have a hearing loss can access the auditory information in the synchronized media content through captions.

Specific Benefits of Success Criterion 1.2.2:

- People who are deaf or have a hearing loss can access the auditory information in the synchronized media content through captions.

### 1.2.4  Captions (Live) ([Link to WCAG](#))

[Captions](#) are provided for all [live audio](#) content in [synchronized media](#). (Level AA) - People who are deaf or have a hearing loss can access the auditory information in the synchronized media content through captions.

Specific Benefits of Success Criterion 1.2.4:

- People who are deaf or have a hearing loss can access the auditory information in the synchronized media content through captions.

### 1.2.5  Audio Description (Prerecorded) ([Link to WCAG](#))

[Audio description](#) is provided for all [prerecorded video](#) content in [synchronized media](#). (Level AA) - People who are blind or have low vision as well as those with cognitive limitations who have difficulty interpreting visually what is happening benefit from audio description of visual information.

Specific Benefits of Success Criterion 1.2.5:

- People who are blind or have low vision as well as those with cognitive limitations who have difficulty interpreting visually what is happening benefit from audio description of visual information.

# Guideline 1.3 Adaptable (**Link to WCAG**)

Create content that can be presented in different ways (for example simpler layout) without losing information or structure.

### 1.3.1   Info and Relationships (**Link to WCAG**)

Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

- This Success Criterion helps people with different disabilities by allowing user agents to adapt content according to the needs of individual users.

- Users who are blind (using a screen reader) benefit when information conveyed through color is also available in text (including text alternatives for images that use color to convey information).

- Users who are deaf-blind using braille (text) refreshable displays may be unable to access color-dependent information.

### 1.3.2   Meaningful Sequence (**Link to WCAG**)

When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined. - may help people who rely on assistive technologies that read content aloud. The meaning evident in the sequencing of the information in the default presentation will be the same when the content is presented in spoken form.

Specific Benefits of Success Criterion 1.3.2:

- This Success Criterion may help people who rely on assistive technologies that read content aloud. The meaning evident in the sequencing of the information in the default presentation will be the same when the content is presented in spoken form.

### 1.3.3 Sensory Characteristics (link to WCAG)

Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound. - People who are blind and people who have low vision may not be able to understand information if it is conveyed by shape and/or location. Providing additional information other than shape and/or location will allow them to understand the information conveyed by shape and/or alone.

Specific Benefits of Success Criterion 1.3.3:

- People who are blind and people who have low vision may not be able to understand information if it is conveyed by shape and/or location. Providing additional information other than shape and/or location will allow them to understand the information conveyed by shape and/or alone.

## Guideline 1.4 Distinguishable (link to WCAG)

Make it easier for users to see and hear content including separating foreground from background.

### 1.4.1 Use of Color (link to WCAG)

Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. (Level A)

Specific Benefits of Success Criterion 1.4.1:

- Users with partial sight often experience limited color vision.

- Some older users may not be able to see color well.

- Users who have color-blindness benefit when information conveyed by color is available in other visual ways.

- People using text-only, limited color, or monochrome displays may be unable to access color- dependent information.

- Users who have problems distinguishing between colors can look or listen for text cues.

- People using Braille displays or other tactile interfaces can detect text cues by touch.

### 1.4.2   Audio Control ([link to WCAG](#))

If any audio on a Web page plays automatically for more than 3 seconds, either a [mechanism](#) is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level. (Level A)

Specific Benefits of Success Criterion 1.4.2:

- Individuals who use screen reading technologies can hear the screen reader without other sounds playing. This is especially important for those who are hard of hearing and for those whose screen readers use the system volume (so they cannot turn sound down and screen reader up).

- This Success Criterion also benefits people who have difficulty focusing on visual content (including text) when audio is playing.

### 1.4.3   Contrast (Minimum) (link to WCAG)

The visual presentation of [text](#) and [images of text](#) has a [contrast ratio](#) of at least 4.5:1, except for the following: (Level AA)

- Large Text: Large-scale text and images of large-scale text have a contrast ratio of at least 3:1;

- Incidental: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement.

- Logotypes: Text that is part of a logo or brand name has no minimum contrast requirement.

Specific Benefits of Success Criterion 1.4.3:

- People with low vision often have difficulty reading text that does not contrast with its background. This can be exacerbated if the person has a color vision deficiency that lowers the contrast even further. Providing a minimum luminance contrast ratio between the text and its background can make the text more readable even if the person does not see the full range of colors. It also works for the rare individuals who see no color.

### 1.4.4 Resize text (link to WCAG)

Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality. (Level AA)

Specific Benefits of Success Criterion 1.4.4:

- This Success Criterion helps people with low vision by letting them increase text size in content so that they can read it.

### 1.4.5 Images of Text (link to WCAG)

If the technologies being used can achieve the visual presentation, text is used to convey information

rather than images of text except for the following: (Level AA)

- Customizable: The image of text can be visually customized to the user's requirements;

- Essential: A particular presentation of text is essential to the information being conveyed.

Note: Logotypes (text that is part of a logo or brand name) are considered essential. Specific Benefits of Success Criterion 1.4.5:

- People with low vision (who may have trouble reading the text with the authored font family, size and/or color).

- People with visual tracking problems (who may have trouble reading the text with the authored line spacing and/or alignment).

- People with cognitive disabilities that affect reading.

### 1.4.7   Low or No Background Audio (link to WCAG)

For prerecorded audio-only content that (1) contains primarily speech in the foreground, (2) is not an audio CAPTCHA or audio logo, and (3) is not vocalization intended to be primarily musical expression such as singing or rapping, at least one of the following is true: (Level AAA)

- No Background: The audio does not contain background sounds.

- Turn Off: The background sounds can be turned off.

- 20 dB: The background sounds are at least 20 decibels lower than the foreground speech content, with the exception of occasional sounds that last for only one or two seconds.

- Note: Per the definition of "decibel," background sound that meets this requirement will be approximately four times quieter than the foreground speech content.

Specific Benefits of Success Criterion 1.4.7:

- People who are hard of hearing often have great difficulty separating speech from background sound.

### 1.4.8   Visual Presentation ([link to WCAG](#))

For the visual presentation of [blocks of text](#), a [mechanism](#) is available to achieve the following: (Level AAA)

- Foreground and background colors can be selected by the user.

- Width is no more than 80 characters or glyphs (40 if CJK).

- Text is not justified (aligned to both the left and the right margins).

- Line spacing (leading) is at least space-and-a-half within paragraphs, and paragraph spacing is at least 1.5 times larger than the line spacing.

- Text can be resized without assistive technology up to 200 percent in a way that does not require the user to scroll horizontally to read a line of text [on a full-screen window](#).

Specific Benefits of Success Criterion 1.4.8:

This Success Criterion helps low vision users by letting them see text without distracting presentational features. It lets them configure text in ways that will be easier for them to see by letting them control the color and size of blocks of text.

This Success Criterion helps people with cognitive, language and learning disabilities perceive text and track their location within blocks of text.

- People with some cognitive disabilities can read text better when they select their own foreground and background color combinations.

- People with some cognitive disabilities can track their locations more easily when blocks of text are narrow and when they can configure the amount of space between

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lines and paragraphs.

- People with some cognitive disabilities can read text more easily when the spacing between words is regular.

### 1.4.9   Images of Text (No Exception) ([link to WCAG](#))

[Images of text](#) are only used for [pure decoration](#) or where a particular presentation of [text](#) is [essential](#) to the information being conveyed. (Level AAA)

Note: Logotypes (text that is part of a logo or brand name) are considered essential. Specific Benefits of Success Criterion 1.4.9:

- People with low vision (who may have trouble reading the text with the authored font family, size and/or color).

- People with visual tracking problems (who may have trouble reading the text with the authored line spacing and/or alignment).

- People with cognitive disabilities that affect reading.

# Principle 2: Operable

User interface components and navigation must be operable.

## Guideline 2.2 Enough Time ([link to WCAG](#))

Provide users enough time to read and use content.

### 2.2.1   Timing Adjustable (link to WCAG)

For each time limit that is set by the content, at least one of the following is true: (Level A)

- Turn off: The user is allowed to turn off the time limit before encountering it; or

- Adjust: The user is allowed to adjust the time limit before encountering it over a wide range that is at least ten times the length of the default setting; or

- Extend: The user is warned before time expires and given at least 20 seconds to extend the time limit with a simple action (for example, "press the space bar"), and the user is allowed to extend the time limit at least ten times; or

- Real-time Exception: The time limit is a required part of a real-time event (for example, an auction), and no alternative to the time limit is possible; or

- Essential Exception: The time limit is essential and extending it would invalidate the activity; or

- 20 Hour Exception: The time limit is longer than 20 hours.

Note: This success criterion helps ensure that users can complete tasks without unexpected changes in content or context that are a result of a time limit. This success criterion should be considered in conjunction with Success Criterion 3.2.1, which puts limits on changes of content or context as a result of user action.

Specific Benefits of Success Criterion 2.2.1:

- People with physical disabilities often need more time to react, to type and to complete activities. People with low vision need more time to locate things on screen and to read. People who are blind and using screen readers may need more time to understand screen layouts, to find information and to operate controls. People who have cognitive or language limitations need more time to read and to understand. People who are deaf and communicate in sign language may need more time to read information printed in text (which may be a second language for some).

- In circumstances where a sign-language interpreter may be relating audio content to a user who is deaf, control over time limits is also important.

- People with reading disabilities, cognitive limitations, and learning disabilities who may need more time to read or comprehend information can have additional time to read the information by pausing the content.

### 2.2.2 Pause, Stop, Hide (link to WCAG)

For moving, blinking, scrolling, or auto-updating information, all of the following are true: (Level A)

- Moving, blinking, scrolling: For any moving, blinking or scrolling information that (1) starts automatically, (2) lasts more than five seconds, and (3) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it unless the movement, blinking, or scrolling is part of an activity where it is essential; and

- Auto-updating: For any auto-updating information that (1) starts automatically and (2) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it or to control the frequency of the update unless the auto-updating is part of an activity where it is essential.

Specific Benefits of Success Criterion 2.2.2:

- Providing content that stops blinking after five seconds or providing a mechanism for users to stop blinking content allows people with certain disabilities to interact with the Web page.

- One use of content that blinks is to draw the visitor's attention to that content. Although this is an effective technique for all users with vision, it can be a problem for some users if it persists. For certain groups, including people with low literacy, reading and intellectual disabilities, and people with attention deficit disorders, content that blinks may make it difficult or even impossible to interact with the rest of the Web page.

## Guideline 2.3 Seizures (link to WCAG)

Do not design content in a way that is known to cause seizures.

### 2.3.2 Three Flashes (link to WCAG)

Web pages do not contain anything that flashes more than three times in any one second period.

(Level AAA)

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Specific Benefits of Success Criterion 2.3.2:

● Individuals who have seizures when viewing flashing material will be able to view all of the material on a site without having a seizure and without having to miss the full experience of the content by being limited to text alternatives. This includes people with photosensitive epilepsy as well as other photosensitive seizure disorders.

## Guideline 2.4 Navigable (link to WCAG)

Provide ways to help users navigate, find content, and determine where they are.

### 2.4.3   Focus Order (link to WCAG)

If a Web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability. (Level A)

These techniques benefit keyboard users who navigate documents sequentially and expect the focus order to be consistent with the sequential reading order.

● People with mobility impairments who must rely on keyboard access for operating a page benefit from a logical, usable focus order.

● People with disabilities that make reading difficult can become disoriented when tabbing takes focus someplace unexpected. They benefit from a logical focus order.

● People with visual impairments can become disoriented when tabbing takes focus someplace unexpected or when they cannot easily find the content surrounding an interactive element.

● Only a small portion of the page may be visible to an individual using a screen magnifier at a high level of magnification. Such a user may interpret a field in the wrong context if the focus order is not logical.

### 2.4.4   Link Purpose (In Context) (**link to WCAG**)

The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general. (Level A)

Specific Benefits of Success Criterion 2.4.4:

- This Success Criterion helps people with motion impairment by letting them skip links that they are not interested in, avoiding the keystrokes needed to visit the referenced content and then returning to the current content.

- People with cognitive limitations will not become disoriented by multiple means of navigation to and from content they are not interested in.

- People with visual disabilities will be able to determine the purpose of a link by exploring the link's context.

### 2.4.6   Headings and Labels (**link to WCAG**)

Headings and labels describe topic or purpose. (Level AA)

- Descriptive headings are especially helpful for users who have disabilities that make reading slow and for people with limited short-term memory. These people benefit when section titles make it possible to predict what each section contains.

- People who have difficulty using their hands or who experience pain when doing so will benefit from techniques that reduce the number of keystrokes required to reach the content they need.

- This Success Criterion helps people who use screen readers by ensuring that labels and headings are meaningful when read out of context, for example, in a Table of Contents, or when jumping from heading to heading within a page.

- This Success Criterion may also help users with low vision who can see only a few words at a time.

### 2.4.9    Link Purpose (Link Only) ([link to WCAG](#))

A [mechanism](#) is available to allow the purpose of each link to be identified from link text alone, except where the purpose of the link would be [ambiguous to users in general](#). (Level AAA)

Specific Benefits of Success Criterion 2.4.9:

- This Success Criterion helps people with motion impairment by letting them skip Web pages that they are not interested in, avoiding the keystrokes needed to visit the referenced content and then return to the current content.

- People with cognitive limitations will not become disoriented by extra navigation to and from content they are not interested in.

- People with visual disabilities will benefit from not losing their place in the content when they return to the original page. The screen reader's list of links is more useful for finding information because the target of the links are described.

### 2.4.10   Section Headings ([link to WCAG](#))

[Section](#) headings are used to organize the content. (Level AAA)

Note 1: "Heading" is used in its general sense and includes titles and other ways to add a heading to different types of content.

Note 2: This success criterion covers sections within writing, not [user interface components](#).

Specific Benefits of Success Criterion 2.4.10:

- People who are blind will know when they have moved from one section of a Web page to another and will know the purpose of each section.

- People with some learning disabilities will be able to use the headings to understand the overall organization of the page content more easily.

- People who navigate content by keyboard will be able to jump the focus from heading to heading, enabling them to find quickly content of interest.

- In pages where content in part of the page updates, headings can be used to quickly access updated content.

# Principle 3: Understandable

Information and the operation of user interface must be understandable.

## Guideline 3.1 Readable (link to WCAG)

Make text content readable and understandable.

### 3.1.3   Unusual Words (link to WCAG)

A mechanism is available for identifying specific definitions of words or phrases used in an unusual or restricted way, including idioms and jargon. (Level AAA)

Specific Benefits of Success Criterion 3.1.3:

This Success Criterion may help people with cognitive, language and learning disabilities who:

- have difficulty decoding words

- have difficulty understanding words and phrases

- have difficulty using context to aid understanding

It would also help people with visual disabilities who:

- lose context when zoomed-in with a screen magnifier

### 3.1.4   Abbreviations (link to WCAG)

A mechanism for identifying the expanded form or meaning of abbreviations is available. (Level AAA)

Specific Benefits of Success Criterion 3.1.4:

This Success Criterion may help people who:

- have difficulty decoding words;

- rely on screen magnifiers (magnification may reduce contextual cues);

- have limited memory;

- have difficulty using context to aid understanding.

Abbreviations may confuse some readers in different ways:

- Some abbreviations do not look like normal words and cannot be pronounced according to the usual rules of the language. For example, the English word "room" is abbreviated as "rm," which does not correspond to any English word or phoneme. The user has to know that "rm" is an abbreviation for the word "room" in order to say it correctly.

- Sometimes, the same abbreviation means different things in different contexts. For example, in the English sentence "Dr. Johnson lives on Boswell Dr.," the first "Dr." is an abbreviation for "Doctor" and the second instance is an abbreviation for the word "Drive" (a word that means "street"). Users must be able to understand the context in order to know what the abbreviations mean.

- Some acronyms spell common words but are used in different ways. For example, "JAWS" is an acronym for a screen reader whose full name is "Job Access with Speech." It is also a common English word referring to the part of the mouth that holds the teeth. The acronym is used differently than the common word.

- Some acronyms sound like common words but are spelled differently. For example, the acronym for Synchronized Multimedia Integration Language, S M I L, is pronounced like the English word "smile."

It would also help people with visual disabilities who:

- Lose context when zoomed-in with a screen magnifier

### 3.1.6  Pronunciation ([link to WCAG](link))

A [mechanism](link) is available for identifying specific pronunciation of words where meaning of the words, in context, is ambiguous without knowing the pronunciation. (Level AAA)

Specific Benefits of Success Criterion 3.1.6

This Success Criterion may help people who:

- have difficulty decoding words

- have difficulty using context to aid understanding

- use technologies that read the words aloud

## Guideline 3.3 Input Assistance ([link to WCAG](link))

Help users avoid and correct mistakes.

### 3.3.2  Labels or Instructions ([link to WCAG](link))

[Labels](link) or instructions are provided when content requires user input. (Level A)

Specific Benefits of Success Criterion 3.3.2:

- When label elements are associated with input elements the label is spoken by screen readers when the field receives focus and users with impaired motor control are helped by a larger clickable area for the control, since clicking on the label or the control will activate the control.

- Field labels located in close proximity to the associated field assist users of screen magnifiers because the field and label are more likely to visible within the magnified area of the page.

- Providing examples of expected data formats help users with cognitive, language and

learning disabilities to enter information correctly.

- Clearly identifying required fields prevents a keyboard only user from submitting an incomplete form and having to navigate the redisplayed form to find the uncompleted field and provide the missing information.

# 4. Appendix B: References

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